27th Annual Conference on

Distance Teaching & Learning

CONFERENCE

2011 Proceedings & Resources

TEACH ○ LEARN ○ CONNECT

Allison Rossett

KEYNOTE SPEAKERS

Clark Quinn

Lee Crockett

August 3-5, 2011
Madison, Wisconsin

WISCONSIN
UNIVERSITY OF WISCONSIN–MADISON

Updates and details at
http://depd.wisc.edu/info

Table of Contents

This publication includes 94 three-to-five page proceedings papers and 100 one-page summary sheets. The proceedings papers are a **requirement** of e-Poster and Information Session presenters. Presenters from other presentation formats were required to submit a one-page summary sheet OR a proceedings paper. Also included in this publication are papers submitted by alternate presenters (selected to present if a presenter is unable to attend).

The links below take you to pages with brief session descriptions of all papers. Click on the session title to view the paper.

Visit Conference Web site for Updates

Many presenters will be providing PowerPoint slides and handouts from their sessions. We will post these additional resources in the Resource Library on the conference website by mid-September.

http://www.uwex.edu/disted/conference

e-Poster Research Sessions

E-1 Student perceptions regarding blending face-to-face and online learning

Cengiz Hakan Aydin, Associate Professor, Anadolu University

This presentation will reveal the results of a research study in which students' perceptions regarding use of online learning tools in a face-to-face class were investigated. It was found that students who are more comfortable with technology asked more in online interaction while those who are less comfortable enjoyed the access to content presentations.

E-2 Millennials and their experience toward learning in a virtual world

Marija Franetovic, Course Developer and New Media Specialist, Lawrence Technological University

This qualitative study has implications for designers and faculty interested in creating real world learning experiences using the affordances of a virtual world environment. It is especially relevant for illuminating instructional design considerations when creating this method of instruction for millennial learners. The session will inspire research feedback and enhance corroborative findings.

E-3 Characterizing inquiries about the UIS Environmental Studies Online Degree Program

Lenore Killam, Online Coordinator, University of Illinois Springfield

This presentation summarizes evaluation of 1300 online program inquiries with respect to place of origin. The purpose of the characterization is to plan targeted recruitment campaigns for the online degree program. Additional information characterizes whether the inquiries are regional or correlated with population centers, and which populations are over-represented and under-represented.

E-4 Nurturing a disposition for social justice in an online environment

James Koschoreck, Associate Professor, University of Cincinnati and **James Allen**, Associate Professor, Northern Kentucky University

The presenters will summarize the key findings of a research project that was designed to nurture positive dispositions for social justice in an online class. This study will have significant implications for principal preparation programs seeking to better assess candidate dispositions and make programmatic adjustments whether they are seeking NCATE accreditation or are seeking to assess "the broad range of characteristics important to transformative, democratic leadership-commitment to social justice, community building, risk-taking behaviors, and concern for diversity" (Cambron-McCabe, 2006, p.113).

E-5 Course design: The impact of an online instructor training

Kristin Koepke, Instructional Designer, University of Wisconsin–La Crosse

An Online Instructor Training program at the University of Wisconsin–La Crosse provides a three-week asynchronous training about how to design, deliver, and facilitate online courses. Results of a study of training participants address how the training impacted attitudes toward common online education misconceptions, and the impact of this training to the overall pedagogical approaches in both online and face-to-face courses.

E-6 Designing the online laboratory

Mary Mawn, Assistant Professor and **Ken Charuk**, Coordinator of Curriculum and Instructional Design, SUNY Empire State College

Laboratory experiments are an integral part of science courses, and the distributed nature of distance learning presents some challenges. This session looks at how hands-on and field-based activities can develop scientific process skills in students working at a distance and makes several recommendations related to the design of laboratory experiments for distance learning.

E-7 Digital literacy and e-Learning: Is there a faculty-student disconnect?

Laura Crittenden, Manager, Office of Academic Outreach and **Jodi Roberts**, Distance Learning Coordinator, Mississippi State University

Researchers will share the results of the Digital Literacy & e-Learning study designed to discover (a) the level of digital literacy among distance learning students, (b) the level of digital literacy among faculty who teach distance learning courses, and (c) the level of connectedness or disconnectedness between the digital literacy of distance learning students and the faculty who teach them.

E-8 Needs assessments: Investigating the learning effectiveness of an online course

Kadriye Lewis, Associate Professor, Cincinnati Children's Hospital Medical Center and **Bo Zhang**, Associate Professor, University of Wisconsin–Milwaukee

This presentation will provide information on how pre- and post-course needs assessments were used as analytical tools for planning course content. Impact of the data-driven decision-making on the effectiveness and success of the online course "Applying Technology for Effective Learning" offered by the Online Masters Degree in Education for Healthcare Professionals, will be shared.

E-9 Inter-organizational collaboration in instructional technology development and implementation

Robin Wyatt, Instructional Developer, Senior Status, Governors State University

This presentation discusses the study of a large-scale multimedia development project that occurred over ten years. The data collection, methodology and activity systems analysis will be summed up briefly. The majority of the presentation will then focus on the synergy of instructional technology development and how each organization's contribution joined unique skill-sets which no single agency could have accomplished alone.

E-10 Implementing a transformation zone: Conditions for successful online program conversion

Rita Poth, Academic Director and **Dani Peterson**, Associate, University of Cincinnati

While many programs are fading away in recent economic times, many colleges have identified the financial and academic advantages of online course delivery. This presentation will describe a bachelor's degree program transition from an on-campus and video teleconferencing format to a program delivered fully online using a Transformation Zone Model for implementing systems change.

E-11 Best practices for e-connectivity in online courses

Andree Swanson, Alumni, University of Phoenix

This will be a brief presentation on the results of a dissertation, "Establishing the Best Practices for Social Interaction and E-Connectivity in Online Higher Education Classes." This was a qualitative study to establish best practices for social interaction/e-connectivity in the online classroom. In this presentation, the findings will be discussed.

E-12 Library services for the distance learner

Stefanie Buck, Ecampus/Instructional Design Librarian, Oregon State University

Distance learning students are often at a disadvantage when it comes to using library resources, and yet they need these sources to successfully complete their research. What distance students don't know about the library can hurt them academically. This SESSION presents the findings from a needs assessment and offers suggestions about how distance learning programs can increase student success.

Information Sessions (organized by track)

Assessment Track

I-40 Screencasting: Results of a pilot study and practical applications

Kathleen Mathieson, Assistant Professor, A.T. Still University

This presentation will provide an overview of a pilot study comparing text-only feedback to text-plus-audiovisual feedback provided by screencasting in two post-professional, online courses. Although students much preferred text-plus-audiovisual feedback, this mode took twice as much instructor time to implement. Implications and potential practical applications for screencasting in an online environment will be discussed.

I-48 LASA's: A competency-based approach to assessing student learning

Jan Tucker, Associate Dean, Undergraduate Business and **Colleen Miron**, Associate Dean, General Education & Liberal Arts, Argosy University

A competency-based, standardized assessment system which includes standardized assignments within courses to assess student learning of the program's outcomes will be discussed. Two high-stakes, application-oriented assessments, titled LASAs (Learning Assessment System Assignment), directly measure all course objectives. Using a detailed rubric, faculty members assign a grade for the assignment that assesses individual student performance in the course.

I-56 Multi-sensory online assessment: Techniques, research results, and student feedback

Tena Crews, Professor, University of South Carolina and **Kelly Wilkinson**, Director, Center for Instruction, Research, and Technology, Indiana State University

Instructors can provide students with meaningful, multisensory feedback by adding auditory and visual components. A study was conducted to determine students' preference as to the type of assessment provided by instructors. The assessment techniques, research results, and feedback from students will be discussed. Examples of the multisensory assessment will be provided along with a discussion of ways to implement such assessment.

I-64 E-FACT: A method for assessing your online course

Samantha Penney, Programming Manager; **Gina Berridge**, Assistant Professor and Coordinator of Intermediate Block; and **Judith Wells**, Instructor in Mathematics and Coordinator of Instructors, University of Southern Indiana

Electronic Formative Assessment for Classroom Teaching (E-FACT) is an assessment process that provides feedback mid semester to the instructor from the students in the distance education course through a third party consultant, who is a faculty member from a different college or department.

Design/Development Track

I-6 A case for the self-paced online course

Steven Weiland, Professor of Higher Education, Michigan State University

The completely self-paced course represents a significant departure from current practices in most credit-bearing online education, though it is common in non-credit learning. This session explores historical, theoretical, and practical dimensions of the self-paced course and concludes with evidence for success in using the format in a fully online MA program.

I-14 Quality design standards for publisher courses

Ronald Legon, Executive Director, Quality Matters Program of MarylandOnline and **Rich Pirozzi**, Director of Customer Development, Higher Education Division, John Wiley & Sons, Publishers

The Quality Matters program, in collaboration with Wiley Publishers, has developed a version of its widely used course design standards to evaluate publisher courses for potential adoption by faculty and departments concerned about quality design standards. This session will describe the process by which this new QM Publisher Rubric was developed and the major elements of these design standards.

I-22 Learning design for student-owned learner-engagement (SOLE)

Simon Atkinson, Associate Dean of Learning and Teaching (Teaching Enhancement), BPP University College and **Kevin Burden**, Director for PostGraduate Professional Development (TDA), The University of Hull

This session will be a hands-on design session using the SOLE model and toolkit. The model is diagnostic, descriptive, developmental, and evaluative, and it embodies and embeds pedagogical theories and practices. Participants will explore notions of engagement and 'ownership.' Embedding constructively aligned learning design in a holistic visualization of learner experience, participants will share their design processes with each other and their potential learners.

I-30 Make the most of your LMS: Applying user-centered design strategies

Lisa Torrescano, Senior Instructional Design Consultant and **Dee Schmidgall,** Multimedia Designer, DePaul University

User-centered design results in a better user experience both for students and faculty by reducing cognitive load; allowing both to concentrate on course content rather than the course interface. This presentation will explain user-centered design methodologies and their application to create a consistent and scalable course design model.

I-38 Building a blended class: Face-to-face, online, anytime

Robert Keel, Teaching Professor, University of Missouri-St. Louis

The presentation, based on 15 years of research, of a blended class model including multiple modes of teaching and learning allowing students to learn on their own time and in their own way, yet still providing a structure for consistency and community.

I-46 Real life, real time: Engage students through experiential learning

David Clarke, Vice President, Learning Solutions, Toolwire

Higher education institutions have a tremendous opportunity to engage and retain more students through innovative online experiential learning environments. This capability re-imagines what it means to learn in REAL LIFE, REAL TIME. Explore the theory behind why students learn better by doing and examine three experiential learning environments.

I-54 Transitioning to hybrid instruction: A tool, techniques … a teachable moment

Tonya Amankwatia, Director of Distance Education and Instructional Technology, DeSales University

This session details the tools and resources that were developed to help faculty understand the nature of hybrid instruction, the affordances of the Web, and active student learning in order to transform their face-to-face instructional activities. Participants will be introduced to the Interaction Matrix and its role in helping faculty redesign instructional activities and incorporate technology tools.

I-62 Using social media to foster learning connections

Sharon Stoerger, Instructional Design Consultant and **Dylan Barth**, Instructional Design Consultant, University of Wisconsin–Milwaukee

This presentation will examine the use of social media to foster learning connections. The presenters will begin by focusing on the use of Facebook to support guided discussions among students in a blended course. Next, they will investigate the ways students in an online course expanded their learning network by making connections with individuals outside the classroom through social media.

DE Solutions Track

I-5 MCNY DL case-study: Paradigm-shift in serving predominantly black minority students

Jaya Kannan, Director, Learning Centre and **Tilokie Depoo**, Director, Business Programs, Metropolitan College of New York

This case-study presents the challenges of implementing fully online courses targeting underprepared minority students (predominantly black) enrolled in a business degree. Tackling issues of administrative skepticism, structural weakness, student expectations, and technology support, the presenters will provide evidence that underprepared minority students can achieve a high degree of satisfaction and perform academically well in online courses.

I-13 Creating a support community for new faculty teaching online

Tim Walker, Manager, Classroom Technology Support and **Bruce Montes,** Director, Academic Technology Services, Loyola University Chicago

Faculty new to online teaching significantly benefit from strong collegial support and access to a variety of instructional resources. This session presents a model for creating a support community that assists faculty transitioning into this role. It was recently implemented at Loyola University Chicago as part of an initiative to increase the number of online course offerings.

I-21 Online communities for collaborative work and collaborative learning: Lessons learned

Deb Wisniewski, Consultant, Sharing Common Ground and **Theresa Kulow**, Assistant Director, Employment Resources, Inc.

Online communities can be used to provide an avenue for people to come together to learn and work collaboratively around topics of mutual interest. This session will focus on the lessons learned through the process of developing and managing three such communities using Ning as a platform. These particular communities are designed to be open to all who are interested.

I-29 Managing workforce training: Get the most with the minimum

Eric Roe, Director, Employ Florida Banner Center for Advanced Manufacturing and **Glenn Goonis**, Coordinator, Manufacturing Education Grants, State College of Florida

Presenters will share their experiences with creating a blended-learning program that leads to a nationally recognized certification and can lead to academic credit. They will discuss the challenges of submitting a winning grant proposal, and how to effectively manage the project and related grant deliverables. Challenges of partnering with private and public sector entities to provide training will also be shared.

I-37 Building an online professional learning community

Robin Greenler, Outreach Coordinator and **Kitch Barnicle**, Network Coordinator, Center for the Integration of Research, Teaching, and Learning (CIRTL), University of Wisconsin–Madison

How do you build a national learning community? The Center for the Integration of Research, Teaching and Learning (CIRTL) has started a national online conversation on teaching and learning--a conversation that includes graduate students, faculty, and researchers, all sharing about their teaching practices, challenges, and successes. Find out how this was done and how it is working.

I-45 Project Delta: Improving student learning through interactive course design

Peter Shapiro, Director of Creative Learning Services and **Rick Granger**, Director of Marketing and Sales, Florida State College at Jacksonville

This presentation will describe Project DELTA, a FIPSE-funded endeavor that addresses the need for postsecondary change in the approach to student learning. Through a national consortium of colleges, Project DELTA provides a complete, customizable course-materials solution and faculty development program. The program develops research-based, highly creative, interactive, low-cost courses and course materials for online, hybrid/blended, or face-to-face delivery.

I-53 Helping confused students and saving your sanity

Kathryn Ley, Associate Professor, University of Houston–Clear Lake

Online faculty can be challenged by argumentative, sometimes hostile learners who are confused about assignments, evaluations, or course features. This session introduces online faculty to easily applied techniques and communication principles to mitigate learner anxiety and hostility while increasing learner motivation. Participants will receive online self-regulation support strategies, motivating communications principles, and templates to implement the communication principles.

I-61 Online lab-science offerings: AMS Weather, Ocean, and Climate Studies

James Brey, Director, Education Program and **Joseph Moran,** Associate Director, American Meteorological Society

This presentation showcases implementation of online lab science courses at institutions throughout the U.S. using AMS Weather Studies, AMS Ocean Studies, and AMS Climate Studies as examples. The session will also discuss the benefits of working with near real-time data. In addition, the lead presenter will share his personal experiences of offering AMS Weather Studies in an online offering.

Essentials for Online Teaching Track

I-1 Using peer review and analytics to incrementally improve online courses

Scott Day, Chair and **Leonard Bogle**, Assistant Professor, Department of Educational Leadership, University of Illinois Springfield

This presentation will show how online courses can be improved through initial Quality Matters peer review and ongoing "tweaking" based on student responses to the Community of Inquiry survey. The incremental redesign of one course will be used as an example and program-wide implementation of such processes will be discussed.

I-9 Developing cognitive, social, and teacher presence online

Tina Stavredes, Chair, Psychology, Capella University

Cognitive, social, and instructor presence interact to facilitate online learning. Cognitive presence is the ability of learners to construct knowledge through sustained communications. Social presence establishes learners as individuals. Instructor presence supports cognitive and social presence and the achievement of course outcomes. Participants will consider strategies to establish cognitive, social, and teacher presence using a variety of communication tools.

I-17 Ensuring the instructor's voice is present in online, asynchronous classrooms

Cynthia Witz, Instructional Designer and **Caitlin Frano**, Assistant Director, Office of Distance Education, School of Continuing Studies, Northwestern University

This presentation focuses specifically on methods by which an instructor maintains his or her distinct voice in an online, asynchronous classroom environment devoid of lecture. Discussion will include approaches for transforming lecture content into more engaging, professional, reusable, and easily consumable asynchronous formats. Also discussed will be techniques of course facilitation that allows the instructor's voice to permeate the classroom.

I-25 Cultural issues in distance teaching and learning

Michael Mariasingam, Independent Consultant, Quality Learning Global Consultancy and **Ari-Matti Auvinen**, Senior Partner, HCI Productions Oy

Cultural diversity that exists globally affects all aspects of teaching and learning in distance learning. It affects the way distance learning content is developed, delivered, and learned. For distance teaching and learning to be effective it is essential that all aspects of teaching and learning should be subjected to cultural adaptation and cultural contextualization. This presentation will cover these issues.

Faculty Support & Development Track

I-34 Introducing faculty peer reviews into online teaching

Ann Taylor, Acting Director, Dutton e-Education Institute, Penn State University

Participants will learn about the issues and challenges associated with the peer review of online teaching. A Peer Review Guide developed by the presenter will be shared to elicit a discussion of how this instrument, and the corresponding peer review process, might be adapted for use at other institutions.

I-42 Designing content specific communities of practice for e-learning faculty

M. Aaron Bond, Coordinator, Faculty Development and Support Services, Institute for Distance and Distributed Learning and **Peter Macedo**, Director, Distance Learning and Summer Sessions, Virginia Tech

Faculty who teach at a distance often report feelings of isolation or being disconnected from their colleagues. Providing opportunities for online teaching faculty to interact, collaborate, and learn from one another should be incorporated as part of any distance learning faculty professional development program. This session will provide tips for creating discipline specific communities of practice for online teaching faculty.

I-50 Creating a faculty professional development program devoted to critical thinking

Paula Jones, Instructional Designer and **MaryAnn Kolloff,** Assistant Professor, Eastern Kentucky University

The purpose of this presentation is to summarize how one university created a successful faculty professional development program that offered training on how to develop student critical thinking skills. Selected literature related to building student critical thinking skills through online environments will be briefly reviewed. Participants will see an overview of the professional development program and the incentives offered.

I-58 Online course quality: 10-point system of faculty support and development

Karen Bellnier, Instructional Designer and **Janet Houser**, Instructional Designer, Johnson & Wales University

Johnson & Wales University faculty are, for the most part, new to online learning and LMSs. To meet their needs, we have developed a system of development that integrates strong practices and connects them to our office throughout their online experience - from an initial Foundations course, through course development and delivery, to ongoing course management and advanced training.

Learner Supports & Retention Track

I-2 Conducting an online Student Support Services Inventory to maximize success

Johanna Dvorak, Director, Educational Support Services and **Laura Pedrick**, Special Assistant to the Provost, University of Wisconsin–Milwaukee

As universities expand their online offerings, it is essential that online students have access to high-quality support services. This session will cover UW-Milwaukee's 2010 Online Student Support Services Inventory, which helped the university benchmark services for online students, document best practices at other institutions, and identify gaps in services that are guiding resource investment decisions.

I-10 Implementing integrated multicultural instructional design in blended courses

Jeanne Higbee, Professor; **Irene Duranczyk**, Associate Professor; and **Linda Buturian**, Teaching Specialist, Department of Postsecondary Teaching and Learning, University of Minnesota-Twin Cities

This session will introduce integrated multicultural instructional design (IMID), a model for inclusive teaching and learning that considers the diverse social identities of postsecondary students today. The presenters will then provide specific examples of ways in which they have implemented IMID online to ensure that students with diverse ways of knowing have the opportunity to learn and demonstrate their knowledge.

I-18 Comprehensive assessment of student retention in online programs

Wally Boston, President and CEO and **Phil Ice**, Associate VP of Research and Development, American Public University System

With attrition rates significantly higher than in face-to-face programs, the development of models to explain online retention is imperative. This study moves in that direction by exploring the relationship between student demographics and interactions, and retention at a large online university (n = 20,569). Analysis of data illustrated the importance of transfer credit and consistency of activity in predicting retention.

I-26 Improving student outcomes through enhanced student services

Maria del Pilar Toral, Academic Computing Director & Title V Project Director, University of Puerto Rico at Carolina and **Ruben Garcia**, Title V Project Director, University of Puerto Rico, Medical Sciences Campus

The presenters will describe how two university campuses established the Student Resource and Assistance Center to increase student academic achievement, courses' passing rates, and retention; and to decrease repeating rates of gateway/bottleneck courses. They will focus on the implementation strategy, results, and how both institutions united resources and expertise for optimal outcomes.

PK-12 Virtual Schooling Track

I-8 Is online and blended learning cost-effective?

Fiona Hollands, Researcher, Center for Technology and School Change, Teachers College, Columbia University

This presentation will review what is currently known regarding the cost-effectiveness of online and blended learning. Referring to specific existing models such as the School-of-One and the use of iPads to deliver online courses, the presenter will provide decision-makers and administrators with a framework to assess costs and benefits of online and blended learning opportunities.

I-16 Virtual schooling for students at risk: Interventions for success

Cathy Cavanaugh, Associate Professor; **Nicola Wayer**, Instructional Designer; and **Jeanne Repetto**, Associate Professor, University of Florida

From literature on at-risk students, the presenters identified five areas that enhance student engagement. These 5 Cs are learner Control, a flexible and rigorous Curriculum, a safe Climate, a Caring Community, and Connection to students and their future goals. Analysis of online teaching standards and Council for Exceptional Children's standards demonstrates overlap for meeting needs of at-risk students through virtual schooling.

I-24 Meeting high school highly qualified teacher requirements through distance learning

Karen Kaminski, Assistant Professor and Chair, Instructional Leadership, Colorado State University

High schools in rural Colorado use Interactive Video to share highly qualified teachers and offer broader learning opportunities for 41 school districts and 8,000 students. The presenter will share the planning and implementation process, successes, challenges, and teachers' best practices, plus future goals.

I-32 Structuring online learning as a response to intervention

Greg Bishop, Intervention Specialist, Education 2020

Participants in the sessions will learn how online learning can be used as an effective Response to Intervention for struggling learners. Participants will learn how setting power standards, common assessments, and appropriate interventions can lead to success with students in an online learning environment.

Program Administration and Management Track

I-4 Regents Online Campus Collaborative and the Complete College Act

Patrick Wilson, Executive Director of Programs and **Raylean Henry**, Associate Vice Chancellor, Tennessee Board of Regents, ROCC

For the last ten years, Tennessee Board of Regents colleges and universities have collaborated through the Regents Online Campus Collaborative to offer more choice and flexibility in higher education to Tennesseans. Today, the Collaborative serves approximately 20,000 students across Tennessee and is well positioned to contribute to the State's ambitious goals in the Complete College Tennessee Act of 2010.

I-12 Demystifying academic analytics

Charlene Douglas, Marketing Manager, North America Higher Education, Desire2Learn Inc.

Applying the principles of analytics to academia promises to improve student success, retention, and graduation rates and demonstrate institutional accountability. A relationship may exist between student performance as defined by grades and activity in the campus learning management system. This presentation will provide examples of how academic analytics is assisting in student retention and higher student graduation rates.

I-20 Managing rapid growth of online programs: State of the practice

Carlos Morales, Vice Chancellor for Academic Affairs, Sistema Universitario Ana G. Mendez

This presentation will discuss the process, challenges, and outcomes of developing a sustained model for growing distance education programs. Since 2008 our distance education enterprise has seen an increase of student enrollments and course offerings by 20% and 24% annually respectively. Strategies and best practices will be presented including faculty preparation and support, funding, programming, and course and program selection.

I-28 Recruit, train, sustain: The adjunct value in distance learning

Jennifer Cutts, CEO and **Jessica Gammon**, President, Spectrum Higher Education

The purpose of this presentation is to share best practices and new innovations in the field of adjunct faculty recruitment, training, and retention. The presenters will demonstrate the methodologies to recruit top-tier qualified individuals, create a training platform that seamlessly integrates new faculty into an institution and results in a faculty community that achieves a learning partnership between the adjunct and the institution.

I-36 Strategic distance learning leadership in higher education

Pam Northrup, Dean, University of West Florida

This presentation will provide the process used to take institutional policy and an overarching conceptual framework for distance learning quality and deeply investigate how the policy can be translated into tangible practice within a college and within academic program areas based on programmatic need, refining the role of the department, the department chair, and faculty member.

I-44 Improving retention in online classes: What the research tells us

Karen Swan, Professor and **Daniel Matthews**, Associate Professor, University of Illinois Springfield

This presentation will draw from research findings on student retention to identify factors that support student persistence and success in online courses at all levels. Specific strategies to improve student retention/success will be related to these factors with audience participation encouraged.

I-52 Best practices in interactive marketing and new technologies

Brad Gibbs, Chief Growth Officer, PlattForm Higher Education and **Marcelo Parravicini**, Director of Marketing, Post University

This interactive presentation will cover best practices for developing an effective interactive marketing strategy, the different types of interactive marketing media, as well as evaluating which are the right fit. In addition, new trends and technologies will be discussed and explored. The presenters will also share success stories and discuss challenges unique to interactive marketing.

I-60 No professor left behind: Transforming the hesitant campus

Angela Velez-Solic, Coordinator of Learning Technologies and **Jane Peller,** Professor, Northeastern Illinois University

Participants will learn how to encourage the acceptance of online learning at hesitant campuses. The actions taken to earn administrative and faculty support, including the challenges faced during the process will be shared. In addition, tips will be discussed about preparing resistant faculty, informing administrators, and encouraging quality from the start.

Research Track

I-3 A replicable model of online mentoring: An ongoing study

Rana Khan Director, Biotechnology Program and **Arhonda Gogos**, External Evaluator, University of Maryland University College

The Professional Science Master's Biotechnology Program at the University of Maryland University College (UMUC) developed a novel online mentoring program that pairs students with mentors from the biotechnology industry, with the goal of improving student retention and students' career prospects. The presenters will provide data on its current impact and information on how this model can be adopted by other institutions.

I-11 Defining quality: An examination of international standards for distance education

Ross Perkins, Assistant Professor, Educational Technology/COE, Boise State University

How does one know if an online course or program is effectively designed? Many organizations have established standards that detail the essential qualities of effective distance programming. This qualitative investigation examines trends, commonalities, and differences among national and international organizations with regard to defining quality distance learning experiences.

I-19 Adult learner assessment trending: A study of distance learning populations

Jeff Stevens, VP of Research, Leadership Education Solutions

The landscape as well as the horizon of higher education has forever changed with the emergence of the adult learner. This longitudinal study covered more than three years and spanned across the United States. The ALAT Study focused on a number of major aspects that encompass the new adult learning population within the United States in a distance learning environment.

I-27 An adaptation of MARS-R for online math students

Arfe Ozcan, Full-time Doctoral Research Faculty and **Susan Brewer**, Director, Instructional Assessment, University of Phoenix

This study examined adapting MARS-R to online adult students and investigated whether the academic success in math reduces math anxiety at the end of a math course. The results showed that adapted MARS-R, which consisted of 17 items, is a valid and reliable measure for online adult students. Academic success in a math course reduced the students' post math anxiety scores.

I-35 The Interaction Equivalency Theorem: Research potential and application in teaching

Terumi Miyazoe, Associate Professor, Tokyo Denki University and **Terry Anderson,** Professor, Athabasca University

This session will share information on the Interaction Equivalency Theorem posited by Terry Anderson (2003), including the definition of the Theorem, related literature, and research by the presenters, in order to demonstrate an example of the Theorem's application in a real context. Based on these, the session will proceed with a discussion on the wider applicability of the Theorem.

I-43 Developing technologies for learning objects on mobile platforms

Moses Wolfenstein, Associate Director of Research, Academic ADL Co-Lab

In this presentation you will view the Mobile Instructional Learning Keeper, Creator, and Repository Tool (MILKCaRT). This tool provides an authoring environment and architecture for

the storage and distribution of learning objects on mobile platforms (e.g. iOS, Android). The presenter will describe the capabilities of this open source initiative, while providing a look at the research and design processes in the development of this tool.

I-51 e-Coaching and feedback practices to promote higher order thinking online

David Stein, Associate Professor and **Connie Wanstreet**, Adjunct Assistant Professor, The Ohio State University

Many universities use coaching to help students efficiently handle course content or set goals for their education (Robinson & Gahagan, 2010). However, coaching students to improve their higher order thinking skills online is less prevalent. What if the instructor or co-instructor "e-coached" students on the process of developing higher order thinking skills? Join us to find out what happened.

Teaching/Training Strategies Track

I-33 What faculty can do to build connections and community

Hilda Glazer, Chair and **Mary Breslin**, Faculty Development Supervisor, Capella University

A first step in building classroom communities is fostering connections among learners and between learners and faculty. However, connection is personal before it is communal. This presentation will provide a model for the faculty role in developing and supporting personal and interdependent connections in an online classroom. Data from a qualitative study of online faculty will inform the presentation.

I-41 Fostering better instructor presence in your online programs

Lauren Wright, Program Development Manager and **Courtney Moke**, Program Development Manager, Deltak-Innovation

Studies (Garrison, 2007; Anderson & Elloumi, 2004; Shea, Pickett & Pelz, 2003) show that a higher degree of faculty engagement positively influences student satisfaction and retention. However, online faculty members often report a shortage of time and resources to truly reach their students. This session will offer quick and easy suggestions to establish impactful faculty engagement and drive results.

I-49 Presentation by the 2011 Schullo Best Distance Teaching Practices Award Recipient

Betsy Bannier, Assistant Professor of Chemistry and Mathematics Online, Lake Region State College

Betsy Bannier was awarded the Schullo Award for her 2010 conference paper and Information Session presentation, "Understanding our adult, undergraduate learners: Designing courses for success." She highlighted a three-year, mixed-methods, research-to-practice loop centered on understanding the learning needs of adults enrolled in online, undergraduate courses. In recognition of her award she was invited to present an Information Session at this year's conference. Her presentation, "Climbing the trellis: Using a theoretical examination of online communication patterns for course improvement," will explore how a new understanding of the ways in which online communication patterns differ between the highest achieving online students and their lesser achieving peers might steer online educators toward straightforward and effective course improvements.

I-57 Eliciting substantive discussions: Socratic and divergent questioning

Rebecca Sisk, Associate Professor, Chamberlain College of Nursing

Eliciting substantive discussions in online courses is an important faculty function. This presentation is a review of the literature on the use of Socratic and divergent questioning to stimulate student thinking in online threaded discussions. A model of the relationship between Socratic and divergent thinking will be presented, along with examples of faculty questions that stimulate critical thinking in students.

Tools, Media, & Technology Track

I-7 Expanding our anytime, anywhere with mobile learning

Alicia Swaggerty, Instructional Designer and **Jin Sung An**, Multimedia Specialist, World Campus Learning Design, Penn State World Campus

Within Penn State World Campus, a team was tasked to investigate mobile learning, review the literature (nationally/internationally), and pilot mobile approaches in select courses. An applied research white paper on the findings and experiences, as well as recommendations for further mobile learning development and mobile learning activities, will be presented.

I-15 Education, multimedia, and social media: Are we ready for showtime?

Marianne Castano Bishop, Distance Learning Director and **Jim Yocom**, Instructional Media Services Director, Indiana University South Bend

We will explore the benefits and considerations for assigning multimedia projects, particularly video-based coursework, and for using social media for video sharing. We will discuss whether advances in technology now make this practical. With this information, it is our hope that instructors will be encouraged to provide students with opportunities to collaborate on multimedia-enhanced projects to promote optimal learning.

I-23 Integration of Google Apps and Maps in interactive learning

Lee Ann Gillen, Instructional Designer, DELTA, North Carolina State University

Google Docs? Google Sites? Google Maps? Google API's? Learn how to use these tools to allow your students to become survey takers, interns in a consulting firm, biological agricultural engineers designing swine lagoons, and other interactive learning activities. Through a series of examples and handouts, learn how to design these activities and more, using some of these tools from Google.

I-31 Web 2.0 tools to support digital storytelling

Katherine Hayden, Associate Professor, California State University San Marcos

This session prepares educators to apply principles of digital storytelling to implement a variety of movie sequences applying project-based learning elements emphasized in education today. Copyright issues and collaborative strategies for group projects will be presented. Web-based tools offer teachers and students frictionless access to digital images and materials that enable them to construct compelling personal narratives.

I-39 Meeting distance learning challenges at the USAF Squadron Officer College

Fil Arenas, Professor, Organizational Leadership and **Peter Axt**, Director of Operations for Distance Learning, Squadron Officer College, Maxwell AFB

Distance Learning programs are challenging in any environment, especially within the U.S. military! This session will focus on the Squadron Officer College (SOC) DL programs within the USAF community. This overview will outline the major DL programs, their audiences, impact, and course descriptions, plus feature some current innovative 3D virtual learning developments to support learner growth.

I-47 Using mobile technology to empower student learning

Rena Palloff, Faculty, Fielding Graduate University; **Keith Pratt,** Faculty, Walden University; and **George Engel**, Teacher, State University at Albany and Clarkstown School District

The use of mobile technology is almost ubiquitous among university students. Rather than struggle against the use of mobile devices in the classroom, this technology can be harnessed to support and promote student learning. Participants in this session will learn how to harness

mobile technologies to promote collaboration and learning in online classes.

I-55 Using iTunes U to teach public speaking online and more!

Amanda Ireland, Instructional Designer and **Kristin Bittner**, Instructional Designer, Penn State University

Did you know over 350,000 free lectures, videos, and podcasts from institutions worldwide are available on iTunes U? Do you know how to effectively incorporate these resources into your online courses? Do you know how to use iTunes U to teach courses like public speaking? This presentation will demonstrate how Penn State World Campus incorporates iTunes U in online courses.

I-63 Ten things we've learned in ten years

Jay Stulo, Software Developer and **Ann Del Ponte**, Editor, Wisc-Online, Fox Valley Technical College

The subtitle for this presentation is "What You Should Know About Learning Objects." The presenters will share some of the lessons they've learned in building a repository of digital learning objects so instructors and school administrators can enhance their own online offerings.

Demonstrations

D-1 Developing interprofessionalism in healthcare students: From online to clinical practice

Catherine Gierman-Riblon, Assistant Professor and **Sandra Salloway**, Professor and Associate Dean, Rosalind Franklin University of Medicine & Science

Health care professional students are expected to develop inter-professional attitudes and behaviors. As more programs move toward incorporating online courses in health care programs, it becomes difficult to foster, teach, and assess attitudes. This demonstration will provide one example of online content, activities, and assessment methods that can meet this professional expectation.

D-2 VetICE: A cooperative approach to veterinary medical education

Jeannette McDonald, Director and **Eileen Horn**, Instructional Designer, School of Veterinary Medicine, University of Wisconsin–Madison

View lessons learned from VetICE, a cooperative of veterinary colleges formed to address the problems of faculty shortages and budget constraints. By sharing courses, students have access to a wider range of courses and faculty expertise in a variety of specialties. The presenters will demonstrate this new model of sharing courses that deals with unique institutional challenges.

D-3 Real-world practice makes perfect

Katy Little, Assistant Curriculum Manager and **Melissa Meltzer**, Assistant Faculty Manager, Weston Distance Learning

We all know that real-world experience beats the classroom any day. But, sometimes, internships just aren't an option. So how can you ensure you are best preparing your students for their future careers? Use what technology has to offer! Explore ideas and examples of how you can provide real-world practice in your courses.

D-4 Case study for using mobile telepresence in academia

Michael Clark, Adjunct Professor, Institute for Software Research, Carnegie Mellon University and **Trevor Blackwell**, CEO, Anybots Inc

We will share survey results, videos of the avatar, and where these devices will likely be seen in 2011. The case-study provides optimism for educational avatars, especially as their underlying core technologies in streaming video, voice, mobile bandwidth, and software architecture improve. These issues are addressed throughout the presentation along with insights on technology limitations.

D-5 Bringing the library to the student in a blended course

Beena George, Associate Professor and **Mary Kelleher,** Public Services Librarian, University of St. Thomas

View tools and techniques used by an instructor-librarian team to provide contextual and relevant learner support to students in a blended course. Working with the instructor, the librarian developed a Research Guide for the course. Student performance on assignments improved and students learned information literacy skills that could be used in other assignments and courses.

D-6 Course development for teaching non-traditional subjects: AutoCAD and freehand sketching

Matthew Kubik, Associate Professor and **DJ Marshall**, Associate Professor of Architectural Engineering Technology, Indiana University-Purdue University Fort Wayne

View design strategies for courses usually taught in a computer lab or design studio. Using software and video, the presenters will demonstrate samples of online course materials and resulting student work.

D-7 JD-Consult: Ten years of experience in two hours

Jeannette McDonald, Project Director and **Eileen Horn**, Web course developer, School of Veterinary Medicine, University of Wisconsin–Madison

The presenters will demonstrate the JD-Consult game, a novel and useful tool for modeling expert behavior and helping veterinary students gain clinical experience with control of Johne's Disease (JD) in a virtual farm setting. Speakers will discuss the technologies used to create the game, student game-play data, and insights from an expert review of the game.

D-8 A virtual environment for geologic education integrating mathematics and chemistry

Brian Slator, Professor, North Dakota State University

The presenter will demonstrate an environmental Geology Education Online (eGEO) game used to teach juniors and seniors in high school and will share results of testing for learning gains in the context of exploratory science-based discovery.

D-9 Challenges of developing three health studies online accelerated courses

Paula Griswold, Assistant Professor and **Annette Tommerdahl**, Assistant Professor, University of Louisiana at Monroe

View a demonstration of the development, layout, and delivery of three accelerated online courses in health studies: Research Design for Healthcare, Healthcare Ethics, and Practicum II. The presenters will provide insight into the challenges of online course development and teaching. Participants will gain suggestions for the development and delivery of health studies courses as well as course management using the Moodle platform.

D-10 Explore, select, and apply: Advanced learning technologies integration tool

Nada Dabbagh, Associate Professor and **Kevin Clark**, Associate Professor, George Mason University

This presenter will demonstrate a patent-pending and award-winning performance support tool that enables faculty and staff to integrate Advanced Learning Technologies (ALT) such as social media, mobile technologies, games, simulations, and virtual worlds into their online and technology-supported course designs. A detailed demonstration of the tool's three components: Explore Research, Select Best Technology, and Apply Technology will be provided.

D-11 Consistency in online course development

Katy Little, Assistant Curriculum Manager and **Melissa Meltzer**, Assistant Faculty Manager, Weston Distance Learning

One instructor loads all course content into the learning management system home page. Another instructor divides content into online weekly books. This instructor requires one discussion per week, while that instructor requires five. All the while, students struggle to navigate these different course set-ups. Does this sound familiar to you? Perhaps it's time to strive for consistency in online courses.

D-12 Second Life as an educational tool

Don Bickley, Virtual Worlds Designer and **Julie Fronzuto**, Assistant Professor of Biology, Prince William Sound Community College

There are many ways to experience a virtual world, from objects that perform tasks upon touch to flowers that only open in the daytime. Without this interaction, nothing can happen. See examples that highlight the degree of customization that is possible within Second Life.

D-13 e-Journaling within a course management system

Daniel Keefer, Associate Professor, Millersville University

e-Journaling can be used as a reflective and/or behavioral analysis tool for learning in all types of educational environments. This presentation will demonstrate the transition from paper student behavioral journals to a fully online e-Journal and its effectiveness.

D-14 Using Photovoice in distance education to creatively accomplish course objectives

Damian Hanft Assistant Professor and **Edward Harris**, Associate Professor, University of Wisconsin–Stout

The Photovoice technique has morphed into a power learning technique that can be applied across disciplines. Through the use of this technique, students take photographic images related to a particular staged question for specific course objectives. This process creates a unique opportunity for the learner to gain new perspectives on a particular piece of the curriculum.

D-15 Visual rhetoric, comic art, and Voicethread

Kathleen Dunley, Faculty Chair, English, Rio Salado College

Using Voicethread as the primary technology, this demonstration will provide tips on integrating learning activities in any context where visual rhetoric is utilized. The presentation stems from the experience of teaching distance comic art seminars and workshops and the challenge of developing ways for students to engage the visuals outside of a synchronous lecture experience.

D-16 CollegeAnywhere: Streaming media, content resources, and management

John Kahler, Director of Communications and Manager, Media Center/Instructional Design, The Lutheran Theological Seminary at Philadelphia (for College Anywhere Consortium)

The presenter will demonstrate resources offered by the CollegeAnywhere consortium, providing faculty and institutions with tools to integrate media content into online courses. View examples of the variety of resources available and discuss their value to online teaching and learning.

D-17 Using Jing to add video feedback in your online courses

Joseph Zisk, Professor/Coordinator, California University of Pennsylvania

Audio and visual feedback is an effective way to communicate with students. Video comments can be used to introduce assignments, give feedback on assignments, and make general statements to the class. In this session, the presenter will demonstrate development of flash video comments and illustrate instructional strategies using Jing in online courses.

D-18 Can lecture capture make you a better professor?

Diane Zorn, Course Director, Department of Humanities and Course Coordinator, Schulich School of Business, York University

The presenter will demonstrate how teaching engineering in a smart classroom, using lecture capture, has made her a better instructor and will share what she has learned about making faculty comfortable with lecture capture.

D-19 Treks transform: Professional development model for hybrid course development

Caroline Hilk, Instructional Technology Fellow, College of Education and Human Development and **Jennifer Cherry**, Program Coordinator/Teaching Specialist, University of Minnesota

In the summer of 2010, fifteen University of Minnesota faculty from across diverse programs were accepted into the Treks Transform program and set off to explore the development of hybrid online courses. This session will demonstrate the design of the innovative Treks Transform program and some of the projects that were completed by the participants.

D-20 Self-paced faculty training course: Learning a new LMS

Emily Stone, Senior Instructional Technology Consultant, DePaul University

This demonstration will highlight the design principles and features of a self-paced training course for faculty migrating their BlackBoard courses to Desire2Learn. The use of online training as one component of an overall LMS migration training strategy will be discussed, including lessons learned and implications for future training needs.

D-21 Outreach to your students with innovative (and free) technology!

Penny Lorenzo, Assistant Dean of Faculty, Kaplan University

Students in distance education programs should never feel isolated in their learning. While they may not tell you, they want to hear from you. Come and learn some fun and easy-to-develop technologies that are innovative ways to provide outreach to your students.

D-22 Designing mobile learning experiences using ARIS

David Gagnon, Instructional Designer and **John Martin**, Instructional Consultant, University of Wisconsin–Madison

Mobile devices provide more than a small screen to repackage existing forms of e-learning modules; they allow us to create new kinds of locative educational experiences. In this demonstration you will view a working place-based, narrative mobile learning game that uses physical contexts to illuminate systemic concepts.

D-23 Developing technologies for learning objects on mobile platforms

Moses Wolfenstein, Associate Director of Research, Academic ADL Co-Lab

In this demonstration you will view the Mobile Instructional Learning Keeper, Creator and Repository Tool (MILKCaRT). This tool provides an authoring environment and architecture for the storage and distribution of learning objects on mobile platforms (e.g. iOS, Android). The presenter will describe the capabilities of this open source initiative, while providing a look at the research and design processes in the development of this tool.

D-24 Satellite-enabled, mobile instructional software and its impact on synchronous learning

Phil Peters, Associate Professor and **Alex Katsaros**, Research Associate and Doctoral Candidate, University of Central Florida

The presenters will demonstrate a synchronous, online media delivery solution enabling remote experts to facilitate high-impact, field-based skills training for learners worldwide. To make field research more accessible to place-bound students, this network combines real-time, remote, mobile, interactive software applications with custom hardware configurations.

Discussions

Author Discussions

A-1 Living on the Future Edge
Lee Crockett, Managing Partner, 21st Century Fluency Project

Visit with this author as he shares a pragmatic view of the realities of today's digital world. This book takes readers to the edge of technological innovation and provides a glimpse of a blueprint to advance 21st century skills in today's students.

A-2 Quality in Online Learning: A new Comprehensive Approach to Quality Assessment and Assurance
Michael Mariasingam, Independent Consultant, Quality Learning Global Consultancy

Discuss quality with this author who has developed a comprehensive set of quality standards in terms of rigorous measurable benchmarks for assessment of the quality of online degree programs. The framework is a major contribution to the field that adds a new dimension to the concept of quality and quality assurance, and provides a new tool for precise measurement and assessment of quality and quality assurance.

A-3 The Excellent Online Instructor: Strategies for Professional Development
Rena Palloff, Faculty, Fielding Graduate University and **Keith Pratt**, Faculty, Walden University

Join these well-respected authors as they discuss how their book provides a guide for new and seasoned faculty who teach online, for those responsible for training and developing online instructors, and for administrators who must evaluate online faculty performance. This comprehensive resource describes the qualities of and explains how one can become an excellent online instructor.

A-4 Engaging the Online Learner
Rita-Marie Conrad, Online Educator & Consultant, RMC eDesign and **J. Ana Donaldson**, Faculty, Walden, University

Visit with the authors of this updated edition that includes an innovative framework, Phases of Engagement, helping learners become more involved as knowledge generators and co-facilitators of a course. The book also provides specific ideas for tested activities, collected from experienced online instructors across the nation, which can go a long way to improving online learning.

A-5 The Online Teaching Survival Guide: Simple & Practical Pedagogical Tips
Judith Boettcher, Consultant, DesigningforLearning and **Rita-Marie Conrad**, Online Educator & Consultant, RMC eDesign

Join in a discussion of the wide array of theory-based techniques designed for online teaching and technology-enhanced courses. Written by two pioneers in distance education, the book includes information on a range of topics such as course management, social presence, community building, and assessment. Those with little knowledge of educational theory and those well versed in pedagogy will find this resource essential for developing their online teaching skills.

A-6 The Professor's Guide to Taming Technology: Leveraging Digital Media, Web 2.0

Kathleen King, Professor of Higher Education, University of South Florida

Meet with the author of this new book to discuss ways faculty experts across different disciplines use digital media in higher education settings. The book includes clear descriptions of such activities, why to develop and implement them, and how to do so for your specific needs.

A-7 Conquering the Content: A Step-by-Step Guide to Online Course Design

Robin Smith, Coordinator for eLearning, University of Arkansas for Medical Sciences

This author will discuss step-by-step instructions for creating online learning experiences that are manageable, effective, and of the highest quality. The book is a practical resource for faculty who tackle overwhelming amounts of course content that must be tailored for online learning. Templates, learning guides, and sample files that can be easily applied to construct and manage course content are included.

A-8 Managing Online Instructor Workload: Strategies for Finding Balance & Success

Simone Conceição, Associate Professor, University of Wisconsin–Milwaukee and **Rosemary Lehman**, Consultant, eInterface

This focus of this book is about workload management for online instructors and offers practical strategies, advice, and examples for how to prioritize, balance, and manage an online teaching workload. Based on surveys and interviews, the timely and comprehensive insight in this book is essential for online instructors, instructional designers, faculty developers, and others involved in online learning.

A-9 Designing mLearning: Tapping into the Mobile Revolution for Organizational Performance

Clark Quinn, Executive Director, Quinnovation

Join this author in a discussion of step-by-step guidance in designing, delivering, and deploying mobile solutions. This newly published book defines the opportunities for mobile; contains real-world, illustrative examples; and addresses implementation concerns. The author provides a systematic and integrated suite of conceptual frameworks to guide designers to pragmatic and effective mobile solutions.

A-10 Creating a Sense of Presence in Online Teaching

Rosemary Lehman, Consultant, eInterface and **Simone Conceição**, Associate Professor, University of Wisconsin–Milwaukee

Join the authors in a discussion of this important resource showing how a strong sense of online presence contributes to greater student satisfaction and retention. The authors will explore the psychological and social aspects of online presence. Based on solid research and extensive experience, the book is filled with suggested methods, illustrative case scenarios, and effective activities for creating, maintaining, and evaluating presence throughout an online course.

A-11 Cases on Quality Assessment & Assurance in Online Learning: Global Approaches & Experiences

Michael Mariasingam, Independent Consultant, Quality Learning Global Consultancy

Join this author as he discusses cases that illustrate use of rigorous measurable benchmarks for assessment of the quality of online degree programs.

A-12 Learning to Learn with Integrative Learning Technologies (ILT): A Practical Guide for Academic Success

Nada Dabbagh, Associate Professor, George Mason University

Join this author to discuss ways to envision, plan for, and implement customized instructional and curricular designs that foster learning to learn and motivate students to take ownership of their own learning. Using Learning Management Systems (LMS) as well as emerging technologies and social software, learning tasks and course assignments can support and promote student goal-setting, self-evaluation, time management, requests for help, and motivation to learn.

A-13 First Things Fast

Allison Rossett, Professor of Education Technology, San Diego State University

Join this author for a discussion regarding her hands-on guide to planning and consultation, with an emphasis on tools, tales, templates, speed, sources, and systems. The author offers priceless tips on accelerating performance analysis; overcoming organizational obstacles; communicating with experts, clients, and colleagues; and presenting recommendations.

A-14 Effective Online Teaching: Foundations and Strategies for Student Success

Tina Stavredes, Department Chair, Psychology, Capella University

The author of this new book will discuss how cognition and learning theory applies to an online learning environment. Through behaviorist, constructivist, and cognitive approaches, the author will provide strategies for incorporating this knowledge into effective learner-centered teaching practice.

A-15 Teaching Online: A Practical Guide

Susan Ko, Consultant and Author

Meet the author of this practical, concise guide for educators teaching online. The author will discuss advice on the "hows" and "whys" of implementation, including teaching examples, faculty interviews, and updated resources.

A-16 What Works in K-12 Online Learning

Cathy Cavanaugh, Associate Professor, University of Florida and **Robert Blomeyer**, President and Co-Founder, Online Teaching Associates Ltd.

This book provides a comprehensive overview of effective online teaching and learning practices. Based on extensive experience and research, chapters cover a full spectrum of topics including virtual course development, online learning in elementary classrooms, differentiating instruction online, professional development for teachers of virtual courses, and the challenges that virtual schools will face in the future.

Roundtable Discussions

R-1 Health Science clinical faculty attitudes toward online and blended education

Cathy Cavanaugh, Associate Professor, University of Florida

The presenters will share and discuss a survey of clinical faculty used to gauge their needs, abilities, and attitudes toward online and blended education. The resulting faculty development program improved preparation of medical practitioners for online and blended clinical instruction.

R-2 From an evaluator's point of view: A case study

Camille Dickson-Deane, PhD Candidate, SISLT and **Joi Moore,** Associate Professor, University of Missouri–Columbia

Discuss why determining course quality can be difficult given available measures. Several e-learning evaluation instruments provide a myriad of assessment elements. However, these instruments have varying units of analysis, contradicting definitions of those units, and vague descriptors which allow for multiple interpretations of the required elements. Share strategies for effectively evaluating e-learning course quality.

R-3 A support system for retention: The key to student success

Robert Harper, Assistant Academic Director and **Ann Millacci**, Director, University of Cincinnati

Join this session to discuss best practices designed to promote student retention. For many students, entering an online program is their first experience with distance learning. Many feel unprepared, isolated, and unsure of the expectations of online coursework. Programs need to have strategies in place to address these issues and support student success.

R-4 Online learning: Fostering presence and participation

Joanne Gozawa, Assistant Professor, California Institute of Integral Studies

The presenter will facilitate a discussion with other online educators for whom real student presence and deep and engaged participation are primary considerations. Learn how integral pedagogy and course design, rather than ever-changing technologies, can foster quality presence and participation among students.

R-5 Managing cognitive load in a synchronous instructional encounter

Thomas Birk, Senior Educational Designer, University of Nebraska Medical Center

This discussion will focus on the principles of managing extraneous cognitive load when dealing with a synchronous online learning environment. Share your examples and participate in a collaborative design exercise to illustrate ways to manage cognitive load.

R-6 Computer self-efficacy and adult, online distance education

Andrea Gregg, Senior Instructional Designer, Penn State University

Adults make up the largest percentage of online education students yet are also regarded as less technologically savvy than their traditional-aged counterparts. In this discussion we will explore computer self-efficacy, specifically the impact of adults' beliefs about their computer abilities on their engagement with online learning.

R-7 Designing online learning for success: Reducing student attrition
David Magill, Professor/Program Manager, Naval War College

Join this session to discuss a number of factors, both positive and negative, that affect student retention in the online learning environment. Share strategies to design and deliver online courses that create an atmosphere of success for learners.

R-8 How to teach online/distance education courses successfully
Sunah Cho, Instructional Designer/Project Manager, University of British Columbia

Many educators have emphasized the significance of the instructor's role in delivering successful online/distance education courses. In this session, the presenter will share and discuss guidelines suggested for instructors to build an active and interactive learning environment.

R-9 Teacher cyberbullying: Prevention and coping strategies for online instructors
Cynthia Grant, Assistant Professor of Research, Concordia University Chicago

Teacher bullying by students is a difficult experience for online instructors. Join this discussion to explore prevention, identification, intervention and coping strategies for the distance educator. The presenter will offer a unique interdisciplinary, research-based perspective of how to respond to instructor cyberbulling and encourage additional suggestions for how to cope with such behavior.

R-10 Diverse faculty teaching a diverse student body: Managing the program
Brian Blodgett, Director, History and Military History Programs, American Public University System

In this session we will discuss how online directors of programs can manage a diverse faculty spread throughout the United States and abroad and ways to ensure that the students, who live in various nations around the world, receive a consistent and balanced education that helps ensure academic advancement.

R-11 Intercultural learning online: Challenges, opportunities, and design strategies
Erin McCloskey, Director of Curriculum, Distance Education Professional Development, University of Wisconsin–Madison

How do educators from around the world experience the intercultural dimension of learning together online? Do they display or develop intercultural competence? What are the implications for designing online learning? Join this presenter who will share her findings from a qualitative study investigating these questions. Discuss strategies for designing online courses that have culturally diverse participants and/or intercultural learning objectives.

R-12 Online capstone course with industry-sponsored projects: Two case studies
Rana Khan, Director, Biotechnology Program, University of Maryland University College

Join this discussion comparing capstone projects from two different specializations: bioinformatics and biotechnology management. The PSM in biotechnology at the University of Maryland University College (UMUC) offers capstone courses with specialization-specific projects conducted in collaboration with external organizations. Results demonstrate that irrespective of the specialization, online group projects can be successfully conducted and completed.

R-13 Creating online graduate programs in a college of education

Carolyn Awalt, Online Program Advisor, College of Education, University of Texas at El Paso

Building online programs requires more than ambition and enthusiasm, it requires planning, money, and perseverance. The presenter will briefly describe one college of education's journey to build three online master's level programs over five years and the challenges encountered. Join in the discussion of perseverance and creative solutions needed to complete such online graduate programs.

R-14 Improving communication in online learning

Emily McWorthy, Instructional Designer/Instructor and **Alan Peterka**, Department Coordinator/Instructional Designer, Kirkwood Community College

Content analysis of Kirkwood's online course evaluations has provided a rich resource of student expectations. We will share and discuss methods to improve communication in online courses via instructor feedback, content, instructor/student interaction, discussions, and student-to-student interaction.

R-15 Distance education and international and/or minority students: Key behavioral patterns

Kaninika Bhatnagar, Assistant Professor, Eastern Illinois University

Join this discussion of the suitability of distance education in the context of international and/or minority students. The discussion will address behavioral issues related to online classes, specifically those resulting from the absence of visual and auditory cues in various online learning situations.

R-16 Online learning for all: Accessibility for students with disabilities

Yolyndra Green, Online Faculty, University of Phoenix Online

Join this discussion regarding what is useful when working with students with disabilities. Insecurities about interactions will be replaced with positive strategies and resources that can be used within the online environment.

Lightning Sessions

L-1 What's the big idea? Turn information into stories

Mary Bertun, E-Learning Program Director, Wisconsin Department of Corrections

When you transform information into a story, you effectively illustrate one big message. Stories are easy to remember and demand our attention.

L-2 Another way to watch: Video-based student teacher supervision

Erica Hamilton, Doctoral Student, Teacher Education, Michigan State University

This presentation centers on the use of video-based field instruction and supervision as an augmentation to a traditional, on-site model of student teacher supervision. This presentation will share the results of a recently completed study which examined participants' various uses of video within a traditional pre-service teacher supervision model.

L-3 Tech tools to enhance online presence & learning

Sheila Berg, Health & Physical Education Teacher, Department Lead, and iAchieve Advisor, Insight School of Minnesota

This presentation will highlight FREE technology tools that can be used to enhance the presence of online teachers in their courses and provide additional options for use by the learners.

L-4 Supervising dissertation research in emerging online doctorate programs

Amanda Maddocks, Associate Professor & Executive Director of Doctoral Programs, Concordia University Chicago

This presentation will explore the role of professional organizations as partners to the university in the development, supervision, and evaluation of research conducted by students in online professional doctorate programs. The use of Blackboard course shells and discussion boards will be described as they relate to the dissertation supervision process. Defenses using Adobe Connect will be described as examples.

L-5 Influencing attitude change in online training

Brian Tencza, Lead Health Educator, Centers for Disease Control and Prevention

Effective attitude change in instruction is a difficult task. This session demonstrates an efficient and effective process for improving attitude change in online instruction. Features include balancing objectives geared toward knowledge and skill development with attitude change, sample instruction with attitudinal objectives, and media best for attitude change. Participants will receive a job aid for developing instruction that influences attitude change.

L-6 Student experiences with immersive learning at PWSCC

Julie Fronzuto, Assistant Professor of Biology, Prince William Sound Community College

This lightning session looks at student feedback relating to Biology Labs conducted in Second Life. Results are taken from usability questionnaires, unsolicited comments, and personal observations. Students' ability to relate to the virtual environment and get the most out of the labs was dependent on two factors: How well they relate to their avatar and their ability to locate and manipulate objects in the virtual environment.

L-7 Academic honesty: A proactive online assignment

Kathryn Ley, Associate Professor, University of Houston–Clear Lake

This lightning session will describe how to proactively set the tone for academic honesty in an online course but with a minimal amount of instructor time and effort.

L-8 Not lost in translation! Addressing and embracing learners' cultural diversity

Afsaneh Sharif, Project Manager/Instructional Designer, University of British Columbia

This session will focus on the exploration of accessibility in terms of culture in online classrooms. It is important to understand the culture that we teach/learn in as well as the cultures of the individuals involved. The presenter will highlight tools and resources that can be incorporated to increase the efficiency of teaching and learning in different online learning environments.

L-9 Physical avatars in education

Michael Clark, Adjunct Professor, Institute of Software Research, Carnegie Mellon University

A physical avatar is a mobile platform that represents its human operator so that he/she can see, hear, speak, and move; its design empowers the operator to interact with people from a distance. We will describe several variations of immersing a tele-operated mobile platform on campus and in a distance course.

L-10 The technology of the question

Brad Hokanson, Professor, University of Minnesota

Instructional methods are the differentiating factors in learning, and the most essential piece of any instructional method is the question. It is the questioning that makes for effective education; questions are the central elements in the larger technology of education, they are the silicon chips of instruction. This presentation focuses on the use of the question by teachers and learners.

L-11 Creating an international joint certificate in IT administration

Peter Wolcott, Associate Professor, University of Nebraska at Omaha

The University of Nebraska at Omaha (UNO) and the University of Agder (UiA), Norway, are collaborating on the creation of a new undergraduate certificate in Information Technology Administration. Courses will be offered online, using a variety of collaboration tools and teaching techniques that reflect the best of current practice. Students will take courses taught by both UNO and UiA instructors.

L-12 Build engaging interactive content

Jeannine Burgess, Coordinator of Instructional Technology, Palm Beach State College

In this session the attendees will learn how to create interactive content without writing code using Adobe Flash Catalyst. The attendees will learn how to transform static graphics and turn them into a something fully interactive and functional.

L-13 Collaborating with content experts: Lessons from successful and less-successful ventures

Eileen Horn, Web Course Developer, School of Veterinary Medicine, University of Wisconsin–Madison

This lightning session will quickly summarize the lessons learned from working on a wide variety of collaborative projects with content experts.

L-14 What teachers can learn from Rock Band, Facebook, and Angry Birds
David Gagnon, Instructional Designer, University of Wisconsin–Madison

In this rapid-fire, three part presentation, we will explore contemporary examples of how new medias are changing not only the way students are learning but also how knowing itself is becoming increasingly experiential, distributed, and socially-mediated. Pop culture and education scholarship will be mixed together, using an appreciative approach to reveal the educational principles behind current technology phenomena.

L-15 Why online students withdraw at MCC: Comparing 2010 to 2001
Leo Hirner, Director, Distance Education, Metropolitan Community College

MCC's Distance Education Department took at look at why students in online courses withdrew at a higher rate than traditional students in 2001. Now it is 2010 and it was time to once again ask students why they withdrew. This presentation will provide a brief overview of what was first identified in 2001 and then in 2010, plus interventions planned.

L-16 Free online tools and applications to improve teaching and learning
Zoaib Mirza, Director, Adler Online, Adler School of Professional Psychology

Know which free and famous online tools are successfully used in on-campus, hybrid, and online courses. The key is to know your needs and then find the available technology to support it.

L-17 Building oral communication skills across the curriculum
Stefanie Forster, Faculty Development Coordinator, York County Community College

The ability to communicate clearly in diverse situations is a necessary skill for college graduates and has become an Institutional Learning Outcome for many colleges and Universities. Creating projects that build these skills can be challenging in the online environment. This presentation will provide instructors with project ideas that promote oral and technological communication skills across the online curriculum.

L-18 Electronic me: Digital identity in the online classroom
Kurt Hochenauer, English professor, University of Central Oklahoma

The presentation will suggest ideas and methods to empower students and faculty to create useful and productive digital identities in the online classroom.

L-19 Advantages of inviting embedded librarians into distance education classes
Jim Frutchey, Research Librarian/Assistant Professor, Marywood University

With distance education rapidly growing in popularity, it is vital to obtain the assistance of a knowledgeable librarian in order to enhance the virtual classroom experience. This presentation will provide an overview of the benefits of enlisting an embedded librarian for those teaching distance education courses.

L-20 Bloom's Taxonomy in the digital age: An instructional planning tool
Emily Hixon, Assistant Professor of Education & Instructional Design Consultant, Purdue University Calumet

The presenter will share an instructional planning tool showing how Bloom's taxonomy can be used as a framework for realizing and articulating the educational potential of emerging technologies. Participants will learn how the tool is being used to aid faculty members developing online, hybrid, and technology-enhanced courses, and they will be encouraged to consider its uses in their own contexts.

L-21 Online faculty staffing model

David Nemitz, Director, Center for the Advancement of Faculty Excellence, Liberty University

Meaningful engagement and retention of adjunct faculty for online programs is an essential element to the overall success. Designing an oversight model that is lean and yet effective is crucial for any University. The presentation will convey an administrative staffing model that help provides reasonable and effective trigger points for online programs.

L-22 Cloud-computing to support your professional online life

Kathryn Ley, Associate Professor, University of Houston–Clear Lake

This lightning session will describe how a free, highly rated, cloud-computing productivity tool may be used to record, store, access, retrieve, format, and distribute data to keep an online professional organized. Each example will reveal how to use the full-featured cloud storage application to save valuable time especially in online instructional and professional activities.

VideoShare Sessions

V-1 Putting the student in SOLE charge of their learning
Simon Atkinson, Associate Dean of Learning and Teaching (Teaching Enhancement), BPP University College

View the Student-Owned Learning-Engagement (SOLE) model that prioritizes engagement and sharing of design processes with learners. Discuss ways that SOLE supports professional development within practice.

V-2 Video objects: Providing connectedness in an online course
Suguna Chundur, Assistant Professor, University of Cincinnati Clermont College

A key element in an online environment is building a community of learners. This is best achieved by fostering a sense of connectedness, collaboration, and interaction between participants. Technology makes it possible for us to bridge the physical gap between participants. View a simple video tool used to provide connectedness in an online class and discuss its impacts on community-building.

V-3 MyWritingLab: Accelerating remediation for adult learners
Mike Mendenhall, Assistant Director, Special Projects, Indiana Wesleyan University

As adult learners start college, they may discover a gap in their writing skills. This issue is exacerbated when the student pursues a degree via accelerated delivery modes. In this session, view MyWritingLab, a web-based resource providing grammar skill remediation utilizing Camtasia and YouTube in conjunction with Blackboard.

V-4 Performing a virtual science lab
Don Bickley, Virtual Worlds Designer, Prince William Sound Community College

Watch a biology lab utilizing our Second Life laboratory. View how the various types of interactivity and building capability in Second Life come together for a real world project. Then discuss the pedagogy of this laboratory learning environment.

V-5 Increasing engagement through narrative and choice in an online course
Jon Friskics, Instructor of Digital Media, University of Central Florida

View ways to use narrative and student choice to promote undergraduate students' emerging media competencies and interviews with the course designers and participants. The presenter will share results of engagement surveys, student learning artifacts, and focus groups and lead a discussion of the project's applicability to other settings.

V-6 Educational authoring: A conceptual framework
John Muehl, Assistant Professor, Education, Argosy University

People of all ages and cultures are free to post text, audio, video, graphics, photos, etc. to the Internet. Unfortunately, this media content often offers poor intellectual and stylistic literacy. This animated video presentation will introduce a framework for understanding what is at the core of the mercurial world of self-publishing and how educators can positively impact Internet authoring.

V-7 How do I easily create a graphic syllabus?

Robin Smith, Coordinator of eLearning, University of Arkansas for Medical Sciences

Do your students get the big picture of your course? Do they know how to effectively store and retrieve content from your course? This video presentation will provide information about creating a graphic syllabus. Then discuss the pedagogical benefits of providing students with a graphic syllabus.

V-8 Developing high-quality online courses: A model that works!

Emily Hixon, Assistant Professor of Education & Instructional Design Consultant, Purdue University Calumet

Watch a short video showcasing factors impacting the success of a mentoring-based faculty program and the program's broader impact on participants' pedagogical beliefs about high-quality online instruction. Discuss ways to adapt this program for other contexts.

V-9 Creating instructor presence in an online course

Sharon Stoerger, Instructional Design Consultant, University of Wisconsin–Milwaukee

While technology can enable anytime, anywhere learning, it can pose challenges in creating teacher presence. This presentation will examine the use of video content to create teacher presence in a fully online course. Short videos, created with an inexpensive Flip camcorder, enabled students to see, hear, and share experiences with their instructor.

Workshops

Full-day Workshop

FD-1 Lights, camera, teamwork! Beginner video production for distance teaching

Richard Harrison, Production/Program Manager, ITV Channel 16, San Diego County Office of Education

Emmy award-winning producer/director Richard Harrison leads this animated, hands-on workshop (a perennial conference favorite) for first-time directors, on-screen faculty presenters, and producers. You will learn the essential elements of video production for both Internet and television delivery, such as studio set-up, camera work, lighting, on-camera talent, storyboarding, learning styles and collaboration. You will also experience the power of teamwork by co-designing and producing an instructional video segment suitable for diverse learning styles.

Half-day Workshops

AM-1 Quality assessment and quality assurance in online programs

Michael Mariasingam, Consultant, Quality Learning Global Consultancy and **Eva Tsang**, Senior Course Designer, Open University of Hong Kong

Traditional approaches to quality assurance in online education suffer from serious limitations, gaps and inadequacies. In this interactive workshop, you will develop a robust understanding of all aspects of quality assessment and assurance. By working with frameworks, case studies, and each other, you will learn a new, comprehensive approach to quality, one that considers quality from the perspectives of all stakeholders and at multiple levels. You will leave the workshop with knowledge of cutting-edge tools, procedures and benchmarks for quality assurance, as well as the ability to identify specific strategies for implementing a systematic process for quality assurance in your programs.

AM-2 Sustaining and retaining students in an online program

Ray Schroeder, Director and **Emily Boles**, Senior Instructional Developer, Center for Online Learning, Research and Service, University of Illinois Springfield

Sustaining online students requires more than the mere provision of content-rich courses. A solid plan for retaining and sustaining students in online programs requires engagement, advocacy, responsiveness, accessibility, progress monitoring, and modeling. In this workshop you will learn the unique role that instructors, program coordinators, and peer mentors play in sustaining online students. You will also develop an action plan that integrates these different roles into a comprehensive set of strategies to ensure your students' continued and successful involvement in your online program.

AM-3 Designing online teaching with a sense of presence

Rosemary Lehman, Partner, eInterface and **Simone Conceição**, Associate Professor, School of Education, University of Wisconsin–Milwaukee

In a world of increasingly omnipresent technology, integrating the human factor into the online learning experience is critical. But developing presence online does not happen without careful planning and a deep understanding of what constitutes true presence online. Join us in our session to explore the 'Being There for the Online Learner' Model and the framework for 'Designing Online Courses with a Sense of Presence.' You will discover how the framework's elements, such as content focus, technological choices, or interactive strategies, may be used as tools for creating presence online. You will also gain practical knowledge of how to apply the framework by working actively with the framework on case studies and other examples.

AM-4 Using competency models to guide online curriculum development

Thomas Smith, Program Director and **Carl Vieth**, Director of Corporate Education, Department of Engineering Professional Development, University of Wisconsin–Madison

Competency modeling has enjoyed a recent surge of popularity as a foundation for professional development, aligning well with both the structured approach of certificate programs and the talent management paradigm used in business and industry. This workshop will provide an overview of competency modeling, its current and emerging applications, and its particular relevance for the development of online curriculum across various educational settings. Through discussions, exploration of case studies, and guided exercises, you will leave the session knowing the steps involved in developing and verifying a competency model for educational purposes.

AM-5 A hunting we will go! Frolicking with online scavenger hunts

Ellen Smyth, Instructor and **Marcy Dickson**, CMS Manager, Austin Peay State University

Online scavenger hunts offer an engaging, effective way for students to interact with content, problem-solve, and discover online resources and information. In this highly interactive session, you will learn the potential benefits of including an online scavenger hunt in your program or course, and you will understand the key elements of quality design. By participating in a popular online scavenger hunt and considering other examples, you will discover how to effectively utilize riddles, puzzles, and clues to provide intellectual challenge. You will also understand the importance of purpose, audience, theme and venue. Finally, you will apply the principles as you begin to storyboard an online scavenger hunt that meets your organizational or instructional goals.

AM-6 Reaching all distance learners with universal design

Alice Anderson, Technology Accessibility Program and **Todd Schwanke**, Adaptive Technology Specialist, University of Wisconsin–Madison; **Kathleen King**, Professor of Higher Education, University of South Florida; and **Neal Ewers**, Musician, Consultant, and Application Developer

Discover universal design principles and how to put them into practice immediately. Together we will explore how to reach a broader audience by creating a learning environment that meets the needs of all learners. We will explore strategies, impacts and benefits of universal design for aging generations, people with disabilities, workforce diversity and more. This interactive workshop will focus on accessible content design. We will illustrate how accessibility improves learning for all. You will also take home examples of successful teaching strategies using digital media across disciplines.

AM-7 Homer 2.0: Creating powerful learning through digital storytelling

John Orlando, eLearning Director, National Life Group and **Lee Ann Orlando**, Teacher Leader, Burlington School District

Called a ‘modern expression of the ancient art,’ digital stories weave together audio, imagery, and text to create a potent narrative of ideas and experiences. Digital stories can be used in all subjects and at all levels of education, allowing students to work creatively and deeply with their insights, combine various modes of expression, and produce a memorable final product. Join us as we explore the pedagogical power of digital storytelling projects. In this workshop you will view and discuss model projects, learn how to implement them and evaluate student work, and build your own digital story using free applications such as Audacity and MovieMaker.

AM-8 Facebook, Twitter, and YouTube: Social media for educators

Tanya Joosten, Associate Director, Learning Technology Center and **Sharon Stoerger**, Learning Technology Consultant, University of Wisconsin–Milwaukee

Social media tools are changing the way that people across the globe communicate, share ideas, and build networks, offering powerful levers for student learning and for educators' own professional development. When carefully purposed, social media tools can meet various pedagogical and professional needs. They can deliver content and announcements, provide means for backchannel communications and feedback, and facilitate experiential learning activities such as role plays and simulations. By engaging in small group discussions, seeing demonstrations, exploring examples and designing activities, workshop participants will learn both best practices for social media integration and how to develop a social media plan that promotes their students' learning and their own professional growth.

AM-9 The visual connection

Bobbe Baggio, Director, Instructional Technologies Management Masters Degree Program, La Salle University

Good learning environments, be they face-to-face workshops, online training modules, or LMS-based courses, are supported by good visuals. This lively workshop will show you how to use the power of visuals to support specific learning goals in your educational setting. By exploring such concepts as visual learning styles, the role of imagination, cognitive load and chunking, you will discover the elements of good visual design for learning. Through interactive discussions, hands-on activities, and individual practice, you will develop your understanding of how quality visuals promote specific learning goals and then apply these ideas by designing a visual strategy to implement in your own projects.

AM-10 Collaborative group work using mobile devices

Rena Palloff, Professor, Fielding Graduate University; **Keith Pratt,** Professor, Walden University; and **George Engel**, Teacher, State University at Albany and Clarkstown High School South

Join us to experience the flexibility of mobile learning, the collective knowledge-building capacity of wikis, and the power of combining the two! This workshop introduces the concepts of mobile technology and wikis, and it offers hands-on practice with mobile-based wiki-creation. Using the World Café approach and mobile devices, participants will collaboratively explore the issues and trends emerging in online education. You will move between small groups, discussing different topics related to online education, brainstorming ideas and harvesting insights. You will then use your mobile phones to post these ideas to a wiki, to which you will have access during and after the workshop.

PM-1 Designing mLearning: Tapping into the 'magic' of mobile

Clark Quinn, Executive Director, Quinnovation

To truly take advantage of mobile, you need to think differently. You need to get a handle on the 4C's of mobile, and map that into supporting learning. In this workshop, we will couple the concepts behind mobile learning with some exercises to really 'get' the opportunities that mobile provides. We'll review the devices, consider examples, abstract the principles, and explore the possibilities. Come explore the future of learning!

PM-2 Introduction to analytics for online learning

Phil Ice, Associate VP of Research and Development, American Public University System

In the current economic climate, solutions to distance learning challenges such as student retention, program effectiveness, or institutional productivity must produce significant, measurable outcomes and also be cost-effective. This workshop will present methodologies for

establishing robust systems of data aggregation and analysis in order to unlock answers to your institution's most pressing problems. You will learn about available data sources, analytic frameworks, and models adaptable for your institution. You will also gain hands-on practice with these concepts by applying them to actual data. Finally, you will have the chance to bring prepared questions about your own program's analytic needs and processes.

PM-3 Improving the instructional design process through micro-collaboration

Jon Aleckson, CEO, Web Courseworks and **Penny Ralston-Berg**, Instructional Designer, Penn State World Campus

Partnerships between instructional designers and content experts have become a common model for online course development in both university and corporate settings. However, these partnerships can be fraught with communication breakdowns and confusion about roles. New formal and informal leadership techniques are needed to manage course development projects. In this workshop you will learn techniques for promoting a more productive and higher-quality design process through micro-collaboration. This includes pro-collaboration policies established at the program level. Through discussion, games, and examples from educational, corporate and non-profit settings, you will discover what micro-collaboration is and how it can flatten power relationships, and you will develop a strategy for implementing micro-collaborative techniques in your institution. This workshop is intended for instructional designers as well as managers/administrators.

PM-4 Designing an engaged learning course in an online environment

Rita-Marie Conrad, Online Educator, Author, and Consultant, RMC eDesign and **J. Ana Donaldson**, Professor, Walden University

"Engagement" has become an omnipresent buzzword in online education—we all want to capture, retain, and capitalize on students' engagement in online courses. But what does engaged learning really mean? What does it look like? This workshop will provide research- and practice-based answers to those questions, plus a step-by-step process for developing activities that promote truly engaged learning online. After an introductory discussion of the Phases of Engagement model, you will learn how specific activities promote engagement within each phase and then practice adapting these activity models to fit your unique instructional audiences and objectives.

PM-5 Webinars: Interaction strategies to increase social presence

Michael Henry, Lecturer and eMentor, University of Missouri–Kansas City

How do you engage participants in a synchronous learning event? How can you tell when they are bored? What if they are multitasking? Is anyone even out there? In this workshop you will discover answers to these questions and more, as you explore the theory and practice of decreasing isolation by increasing social presence. Through large group discussions of social presence theory and collaborative group activities conducted in an actual webinar, you will learn how to implement social presence strategies that will keep your learners' attention, increase their interaction, enhance collaborations, and ultimately improve performance.

PM-6 Solving real problems with Google Apps for Education

Bonnie Thurber, Faculty Support Services and **Brian Nielsen**, Project Manager for Faculty Initiatives, Northwestern University

Google Apps for Education (GAE) offer instructors an intuitive, flexible set of tools to facilitate activities that promote student collaboration, reflection, and interaction, as well as streamline administrative tasks, both inside and outside of a learning management system. Through discussions, modeling, and hands-on group practice, you will learn how to employ GAE for activities such as group blogging and collaborative peer review of writing. You will also share ideas for a wide variety of additional uses of GAE and create examples during the workshop.

PM-7 DiAL-e Framework: Optimizing media for engagement at a distance

Kevin Burden, Director for Post-Graduate Professional Development, The University of Hull and **Simon Atkinson**, Associate Dean of Learning and Teaching (Teaching Enhancement), BPP University College

Despite the abundance of digital media and communication tools now available to educators, it remains a challenge to use media effectively to promote learner engagement and higher order thinking skills. Join this lively, interactive and hands-on workshop to learn the Digital Artifacts for Learner Engagement (DiAL-e) Framework for distance learning design and how to adapt it to your particular discipline and institutional setting. Through exemplars and problem-solving scenarios, you will explore how digital artifacts from a range of worldwide video archives can be used to develop higher levels of engagement, critical thinking and student independence. This workshop will also demonstrate how Web 2.0 tools support effective interactions around digital artifacts. Finally, you will develop your own ideas and exemplars for immediate application.

PM-8 Alternate reality games: The ABCs of ARGs

Koreen Olbrish, CEO, Tandem Learning

Alternate reality games, or ARGs, offer an engaging way to leverage game dynamics for learning in lower cost, lower tech environments. Join this exciting session to learn what ARGs are, how they have been used in corporate and university settings, the benefits of immersive experiences for learners, and essential game design principles. After an introductory presentation and discussion, this workshop offers hands-on practice with the concepts through a team-based, game-design challenge, ultimately leaving participants prepared to design ARGs for their own educational settings.

PM-9 Online multimedia coursework: Designing and assessing multimedia projects

Jim Yocom, Director, Instructional Media Services and **Marianne Castano Bishop**, Distance Learning Director, Indiana University South Bend

Collaborative, multimedia project assignments can be a powerful learning tool, but they also present many pedagogical and organizational challenges. Learn how to design projects that a) establish clear objectives, group roles, and assessment criteria, b) encourage student engagement and success, and c) reflect the reality of resources, time, and students' skills. Through the use of role-play, video clips, discussion, free online tools, and guided practice, participants will leave this workshop with practical tips, knowledge of best practices, and a list of resources for the creation and implementation of multimedia projects.

Alternates

e-Poster Research Session
Maximizing learning using online student assessment
Patrice Boyles, Assistant Professor, Chicago State University

Statistics report more universities are offering distance education courses. This research examined the perceptions of pre-service teachers' attitudes toward online assessment. Using a quantitative method data collection and analysis, it addresses questions about the relationship between student learning and online assessment. Findings include documentation of impact on teaching performance, preferred mode of trainin, and training.

Lightning session
A randomized experimental design for evaluating online learning
Jihye Kam, Ph.D. Student, Teachers College, Columbia University

This presentation describes in detail a randomized experimental design for accurately evaluating web courses as compared to classroom. Furthermore, assuming existence of data obtained from the randomized experiment, this study shows how to apply that data to the econometric model for assessing the effect of distance learning versus in-person class learning and identifying the most efficient model of online learning.

Roundtable Discussion
Instructor self-disclosure in online education
Eldon Strickland, Associate Director, Boston University

This discussion is about levels of self-disclosure (high, medium, and low) and the effects these have on student motivation and creation of affective learning environments. The presenter will discuss the literature on self-disclosure and online identity as well as tools used to create an online presence.

VideoShare Session
Inspiring innovation: T4LT video podcast for faculty development
Alan Peterka, Department Coordinator/Instructional Designer, Kirkwood Community College

Through quick and informative video podcasts, Technology for Learners and Teachers (T4LT) aims to inspire educators to innovate using technology in their courses. Select episodes will demonstrate the program's format and production process. Discussion will encourage participants to explore methods they can use at their own institutions.

Information Session
Experiential learning: Faculty as online students
Judy Ann Serwatka, Professor of MIS, Purdue University North Central

Faculty training for online courses can be a touchy subject. We need to find a better way to train faculty for online teaching and experiential learning may be the best way to do this. If faculty participate as a learner in an online course they can see what the students experience in such a course.

Information Session
Implementing an online synchronous tutoring program: design, delivery, and results
Johanna Dvorak, Director, Educational Support Services and **Kevin Roessger**, Graduate Project Assistant, University of Wisconsin–Milwaukee

This presentation focuses on how an online synchronous peer tutoring program was successfully implemented at a Midwestern university. An overview of the web conferencing platform will be

given, followed by a discussion of the training program. Changes in tutor attitudes and self-efficacy will be discussed. Examples of successful sessions are provided, as well as student and tutor survey responses.

Roundtable Discussion
Wikis, Blogs, and Facebook, oh, my! Using Web 2.0 effectively
Rena Palloff, Faculty, Fielding Graduate University and **Keith Pratt**, Faculty, Walden University

Web 2.0 technologies can prove daunting to master and incorporate into online courses. Concerns regarding privacy and appropriate levels of professional distance accompany their use. In this session participants will explore innovative ways to create community in an online course by using threaded discussion, blogs, social networking sites, and virtual worlds and will discuss pros and cons of their use.

Lightning session
Instructor video updates in speech online: Get over it
Sarah Noreen, Communications Instructor, Wisconsin Indianhead Technical College

The presenter will briefly explain her experiences using video updates in an online speech class. As instructors, we may be intimidated by the technology and be uncomfortable with our own digital images. We may decide that videos won't work for us or be uneasy about having our images recorded and never pursue this valuable learning tool.

VideoShare Session
A dynamic accounting simulation
Louise Miller, Accounting Faculty, South University Online

This video will present an accounting problem in Microsoft Excel that involves the simulation of many possible scenarios in a real-life management accounting case. Discuss possible uses of such simulations with varying input parameters, dynamic graphing, and accompanying audio explanation.

Lightning session
Faculty voice during the formation of distance learning programs
Amanda Maddocks, Associate Professor and Executive Director of Doctoral Programs, Concordia University Chicago

This presentation will report on the results of a year-long qualitative study examining the impact of a college reorganization on the changes made to online and face-to-face programs, policies, and faculty responsibilities at a mid-sized university. Recommendations for inclusion of faculty will be discussed. This research will benefit those engaging in new or changing distance programming.

Information Session
From print to digital: Lessons learned in course delivery
Peter Shapiro, Director of Creative Learning Services, Florida State College at Jacksonville

Printed textbooks have traditionally been the bedrock of college courses. Florida State College at Jacksonville has been providing low-cost printed book materials with highly interactive online and hybrid courses. In the past year, we began to phase in Follett's CaféScribe to replace printed materials. This began our journey towards digital delivery to students. Follow our journey and the lessons learned.

Cancelled Information Session

Best practices, leadership strategies, and a model for online implementation

Sangeetha Gopalakrishnan, Director, Wayne State University

The presenter will describe best practices and leadership strategies that are effective in bringing about institution-wide online implementation, and a leadership and change model that encapsulates these practices and strategies. Eleven institutions successful in online education participated in a study from which these practices and strategies emerged.

e-Poster Research Sessions

Student Perceptions Regarding Blending Face-to-Face and Online Learning

Cengiz Hakan AYDIN, PhD
Director, Center for Research and Development in Distance Education
Anadolu University, Turkey

Introduction

Integration of information and communication technologies into learning-teaching processes to help students learn better has become one of the main objectives of the education systems in all levels from preschool to higher education to lifelong learning services. Especially rapid developments in learning management systems (LMSs) and Web 2.0 tools provided tremendous opportunities for not only open and distance learning providers but also traditional institutions to integrate technology into classrooms. Today, a big majority of the higher education institutions either requires or encourages their professors to enhance their classroom learning-teaching processes with online technologies, such as Web.

Web-enhance instruction refers to use of computers and computer-mediated communication technologies, including Web, e-mail, LMS, and so forth, to enhance classroom instruction. According to Sloan Consortium, a Web-enhanced course is the one that "uses web-based technology to facilitate what is essentially a face-to-face course; and may use a course management system (CMS) or web pages to post the syllabus and assignments" (Allen & Seaman, 2010, p. 5). This enhancement can be static, such as course syllabi, assignment, lecture notes as well as be interactive through the use of synchronous or asynchronous online communication tools. In other words, an instructor may choose to publish her/his course materials and resources (text, audio, video, multimedia software, etc.) to be used by the students who could not join the in-class activities or who could not understand the lectures well during the in-class session. On the other hand, another one may decide to use web as a means to provide individual practice opportunity to her/his students or to create a social interaction environment among students and her- or himself or to help students to access herself or himself to communicate during after class hours.

Literature provides advantages and disadvantages of Web-enhanced instruction for students and instructors. Online resources and course materials can help those students who could not attend the in-class sessions follow the course. Therefore, it may help decreasing the dropout rate in a course. Also, online assignments can provide individual practice opportunity for students, which may result better learning. Additionally traditional courses often result in an instructor-dominated information exchange with little opportunity for active student participation. Online communication tools can promote dialogue between a student and instructor and foster collaboration between student groups or among an entire class. Furthermore, "archival records of student and instructor participation that can be triangulated with student perceptions to create richer measures of student participation and involvement" (Arbaugh, 2000, p. 215). Moreover, research shows that enhancing instruction with technology increases the students' satisfaction with the course (Dondlinger, et al, 2007; Hermans, Haytko, & Mott-Stenerson, 2009).

However, a big majority of the literature covers studies conducted in Western cultures where students come to class with better technology skills and prior experience in technology-enhanced learning. In emerging countries such as Turkey, the situation may not be the same. First of all, although it is improving, a big number of students are still not comfortable about using technology. Also, almost all come from a very traditional education model that forces them to be very competitive. Facing new teaching models increases their anxiety about success. Meanwhile there is limited number of studies, the majority of which conducted with small number of participants and have concluded with hard to generalize results. It would not be wrong to say that there is a need for detailed investigation in enhancing instruction with technology in Turkey.

Research Questions

The goal of this research is to investigate students' perceptions concerning blending face-to-face instruction with online learning. More precisely, it examines the Turkish students' experiences about enhancing face-to-face instruction with online technology. The study aimed to answer the following research questions:

1. How valuable do students find the LMS and the Web 2.0 tools (Wikispaces and SlideShare) used in the course to enrich the face-to-face activities?
2. Is there a relationship between learners' demographic characteristics (gender and age) and their satisfaction with;
    a. LMS and
    b. Web 2.0 tools used in the course.
3. Is there a relationship between learners' previous computer experience and their satisfaction with;
    a. LMS and
    b. Web 2.0 tools used in the course.

Methodology

In this descriptive study, both qualitative and quantitative data were gathered via a survey and a series of personal interviews in the ILT 366 Presentation Techniques course, offered in different colleges of Anadolu University of Turkey that aimed to help learners acquire skills need to plan, conduct and evaluate effective presentation in different settings and in different languages. Every semester approximately 300 students from College of Business Management, College of Physical Education, and School of Communication Sciences take this course. In the course, the instructor used Sakai LMS, Wikispaces, and SlideShare to enhance in-class activities. Sakai was used mainly sharing of resources, announcements, lecture notes and communication among the students and between the students and the instructor. Wikispaces and SlideShare were used for students' collaborative as well as individual assignments. Students were shared their slides via SlideShare and their presentation plans via Wikispaces and provided feedback to their peers' works via these tools.

This study was conducted in this course during Spring 2009-2010 and Fall 2010-2011 academic years with the voluntarily participation of 412 students. The statistics concerning the learners' demographics and previous computer experiences can be observed in Table 1. The data were gathered via a paper-pencil based questionnaire and personal unstructured interviews with 8 students. The questionnaire was administered at the end of each semester. It included both close and open-ended questions to learn learners' satisfaction and perception regarding usefulness of LMS and the tools used.

Results

The study has overall shown that although a considerable amount of student was not comfortable with technology and was skeptical about effectiveness of the technology used in the course during the beginning, they were quite satisfied with course and the technology used in the course. Accessing the class notes, communicating with each other and the instructor, observing each other's work and the previous learners' works, eliminating the paper-based submissions were among the advantages of use of technology students often mentioned. On the other hand, students expressed the need for technological support in order to get maximum benefit of these technologies.

Table 1. Statistics About the Learners

Variables								
Age		**19**	**20**	**21**	**22**	**23**	**24**	**25**	***Total***
	N	8	42	133	122	68	23	16	*412*
	%	1,9	10,2	32,3	29,6	16,5	5,6	3,9	
Gender		**Female**	**Male**	***Total***					
	N	192	220	*412*					
	%	46,6	53,4						
Nationality		**Turkish**	**Other**	***Total***					
	N	379	33	*412*					
	%	92	8						
Computer Experience		**No Experience**	**Beginner**	**Intermediate**	**Advance**	**Expert**	***Total***		
	N	-	31	270	103	8	*412*		
	%	-	7,5	65,5	25	1,9			

As can be observed in Table 2, a big majority of the learners found the learning management system used in the course to enrich the face-to-face learning experiences as quite useful (64,6%). The learners' answers to the open-ended questions in the questionnaire as well as collected during the interviews have supported this finding. The common comments given by the learners have shown that learners liked to use LMS to access the course instructor, course lecture notes, readings and other resources, and info about course progress. A 23-year-old female learner gave one of the common comments:

> *I think Sakai [LMS] was very useful. I enjoyed being able to access the instructor and y classmates easily. It also helped me follow the course progress. Sometimes I cannot join the class sessions and it is hard to find a friend to learn what happened during the session. But Sakai helped me easily learn what happened and where are we now. Additionally, I like the modular class notes. They really helped me learn the content.*

On the other hand, almost one third of the learners did not find the LMS usage as valuable experience as others. These learners indicated technical problems, limited access to the Internet, complexity of Sakai environment, and text-based class notes as the reasons for their perceptions. A 22-year-old male student among these learners stated that:

> *I live in an apartment with couple of my friends and we do not have Internet at home. I have to go to either to an Internet Café or the lab in the school. So I have limited time to access Sakai. But Sakai [materials, activities in the LMS] requires spending hours: reading class notes and communicating with classmates and the instructor, and so forth. I cannot spend all these time in front of a computer in a Lab or Café. Also, I have hard time to figure out how to use the Sakai. I had to ask my friends' support a lot.*

Similar results have been observed regarding the Web 2.0 tools (Wikispaces and SlideShare) used in the course (Figure 2). In other words, almost the same amount of learners (66 percent) found integration of these tools as quite valuable for their learning experiences. They especially liked to be able to reach each others' and previous learners' works as well as other examples. Almost all of these students including those who did not find these tools as useful as others indicated that these tools were useful to access examples of the works they were expected to accomplish.

Table 2. The Learners' Perceptions About How Valuable They Found the LMS and Web 2.0 Tools

Technologies							
LMS		**Not at all**	**Not much**	**Moderate**	**Useful**	**Very much**	***Total***
	N	14	70	62	70	196	*412*
	%	3,4	17	15	17	47,6	
Web 2.0 Tools		**Not at all**	**Not much**	**Moderate**	**Useful**	**Very much**	***Total***
	N	7	55	78	158	114	*412*
	%	1,7	13,3	18,9	38,3	27,7	

One of the main concerns regarding these tools indicated by the learners was the language. A big majority of these students had limited English language ability and the tools were all in English. Therefore, they noted that they had problems in navigating and using these tools especially at the beginning. On the other hand, analyses have shown that male learners, learners from other countries rather than Turkey, and learners with intermediate level computer experiences found the LMS and the Web 2.0 tools more useful compare to females, Turkish students and learners with advance or expert level computer experiences.

References

Agarwal, R., & Day, A.E. (1998). The impact of the Internet on economic education. *Research in Economic Education*, pp. 99-110.

Allen, I. E., & Seaman, J. (2010). Class differences: Online education in the United States, 2010. Retrieved from http://sloanconsortium.org/publications/survey/class_differences

Arbaugh, J. B. (2000). Virtual classroom characteristics and student satisfaction in internet-based MBA courses. *Journal of Management Education, 24*(1), 32-54.

Dondlinger, M. J., Crawford, C., Willis, D. A., Carlsen, R., Gibson, I., McFerrin, K., Price, J., et al. (2007). *Technology based learning environments and student satisfaction* (pp. 297-301). AACE.

Hermans, C. M., Haytko, D. L., & Mott-Stenerson, B. (2009). Student satisfaction in Web-enhanced learning environments. *Journal of Instructional, 1*, 1-19. Retrieved from http://aabri.com/manuscripts/09147.pdf

About the Presenter

Cengiz Hakan AYDIN, Ph.D. is an associate professor at Anadolu University of Turkey and serves as the director of the Centre for Research and Development in Distance Education. His studies and fields of interests focus on various aspects of open and distance learning including design and development ODL systems and courses, accreditation, evaluation, and research. He also serves as senior instructional designer on instructional media production team. He is currently on the editorial board of the International Review of Research in Open and Distance Learning (IRRODL) and the Educational Media International (EMI).

Address: Anadolu University
Open Education Faculty, Office # 625
Eskisehir, TURKEY, 26470
E-mail: chaydin@anadolu.edu.tr
Phone: +90 532 237 2821
Fax: +90 222 320 4520

Millennials and Their Experience Toward Learning in a Virtual World

Marija Franetovic
Course Developer and New Media Specialist
Lawrence Technological University

Introduction

This qualitative research study sought to understand Millennial experiences toward learning through a virtual world, which was designed using an authentic learning framework. The participants were a unique subset of the Millennial generation, the majority of whom were gamers familiar with using 3-D environments with multiple communication capabilities. However, they had never used Second Life for the purposes of formal learning.

Background

Though there is a lot of research with applications of Second Life; a holistic qualitative case study, involving a cross-section of a higher education course of Millennial students, which utilized the virtual world of Second Life designed as an authentic learning environment, is non-existent. Per recent Pew Research Study (Taylor et al, 2010), Millennials are a generation between the ages of 18-29, who are characterized by being very adept at using new media technologies. The research problem arose out of a practice environment of a game development course that was being redesigned toward a more real-world focus (Brown et al., 1989), which was piloting the virtual world of Second Life. The redesign of the game development course included a large team project in which students developed a simulated game in Second Life that they enacted as NPCs (non-player characters) with a random student player.

Methodology

Research Design

This was a single embedded case study design (Yin, 1994), bound by a course facilitated through Second Life. The unit of analysis was the class of 18 participants. Other units of analysis emerged through the study as research became more focused, resulting in the individual unit of analysis and phases of a project unit of analysis.

Participants and Research Setting

The 18 participants were Millennials in the age range of 18-25, the majority of whom were white male freshmen, majoring in computer science with a concentration in game development. Participation in the study was voluntary and students could ask to review any aspects of the data. All real names were replaced by pseudonyms to protect the identity of the participants. The study took place in a game development course through SL, during the second portion of the fall 2009 semester. The course was designed per guidelines for creating an authentic learning environment, which had been put forth by Herrington and Oliver (2000).

Data Collection Methods

Data collection consisted of ethnographic methods including participant observation, journals, interviews, and focus groups (Spradley, 1980). Participant observation allowed for the observation of behavior and actions through and the substantiation of claims made through other data methods. A range of data was provided by 75 journal entries. A total of 12 interviews with 6 key participants allowed for an in-depth evaluation of student experiences. Four focus groups, consisting of 4-5 members each, further corroborated evidence and an experience of the students in their teams.

Data Analysis Methods and Trustworthiness
Analysis consisted of domain analysis and taxonomic analysis, and theme analysis (Spradley, 1980). Also, grounded theory methods were utilized such as the constant comparative method (Corbin & Strauss, 1998). Data was triangulated through different sources and methods. Member checks were employed, as was random data pulling. A case study data trail and a researcher journal were used to document processes and researcher reflections.

Findings and Discussion

The authentic learning framework (Herrington and Oliver, 2000) was used to initially structure the data findings, however, as the study progressed, the case study scene was consolidated to the following eight components.

Active Learning
Per student data, the participation in the virtual world had slightly increased as compared to that which it had been during the course when it was face-to-face. Group activities were more active than individual activities were. Millennial active learning strategies were tracked over the 3 phases of the team project. The data showed that there was a wide variety of active learning strategies utilized over the 3 phases, however, this was not necessarily the case for all of students, nor was it the case for class sessions which did not facilitate much interactivity. The active learning strategies were categorized according to learning domains, including lower and higher level cognitive domains, and the affective domain. The virtual world appeared more conducive to higher level cognitive and affective domains, as compared to the lower level cognitive domain learning.

Reflective Learning
Authentic learning in a virtual world facilitated personal and student-to-student reflection opportunities. Reflections were clustered into 5 different types. They were distributed over a range of low, medium, and high levels of self-reflection. The majority of the Millennials were not used to being asked to write self-reflections.

Collaborative Learning
At the onset, students were optimistic about working together, however, this became more challenging when they all had to both contribute and negotiate the look and feel, and enactment of their team game project. They reported that this was different from their previous experience with face-to-face group projects, as it necessitated actual collaboration. Students shared that team members' behaviors didn't change in the transition from face-to-face to the virtual world, only became more transparent. In parallel, collaborative strategies that were used closely resembled face-to-face teamwork strategies.

Authentic Activities
Students worked on activities that were native to their game development field of study. Foremost, they worked on a real-world game development project, simulating working on a real world game development team. This facilitated virtual world communication and collaboration skills, and negotiation skills toward a common goal. Additionally, since the environment was a new technology and the majority of the students on their career pathway of becoming computer scientists; the experience allowed for solving real, incidental, and design problems. Through the experience of enacting the game, they were able to 'learn by doing' about game components and the need for their consistency.

Authentic Assessment
Authentic assessment paralleled authentic activities'. The role-play of the game was easy to assess through the use of a checklist, as long as outcomes were clear and indications as to how they were going to be measured in a virtual world. All of the team game projects produced innovative results on a

number of different levels. In retrospect, team milestone checklists would have further aided the assessment of the team game projects. Authentic assessment also included the use of rubrics, and SL tools such as saved chats and snapshots. Students also demonstrated learning through individual assessments. Millennials appeared to take pride when positive reinforcements were used in reaction to their efforts.

Multiple Roles and Perspectives

The activities included the experience of learning from different roles and perspectives. This was facilitated in three ways. First, the students themselves had different backgrounds and experiences that they were bringing to the team projects. For this particular class, the students were categorized into the following learner types: a gamer who is a team leader, gamer, non-gamer, non-gamer female, underrepresented student, and a student with low motivation. Secondly, there was differentiation through team roles. Third, activities facilitated learning about and through the experience of different perspectives. Examples of these activities included interviews, role-plays, simulation, and debates.

Modeling, Coaching, and Scaffolding

Though Millennials wanted more 'learning by doing' opportunities, that didn't imply they didn't want feedback. In fact, focus group sessions indicated a need for more examples, guidance, and scaffolding.

Environment

The course utilized the virtual world of Second Life (SL), as it is the most widely used virtual world, thus rendering it the most authentic at representing current social reality. There were many different places Millennial attention could reside in; screen, online applications, Second Life outside of class, different communication methods (instant messaging and texting), and the real-world computing area. Therefore, it was important to continuously gauge student learning engagement through various methods, such as classroom assessment techniques, role-play, or scavenger hunt activities which were characterized by requiring time on task and documentation. Though the Millennials appeared to desire more structure, it was inferred that they did not have much experience in open learning environments in their previous formal learning experience, nor in some of the more conventional games. Though structure was somewhat increased, the use of too much structure might have affected the open ended nature of the team project. Earlier field reconnaissance indicated that SL enabled greater collaboration than the use of a tool such as Game Maker for learning about beginning game development concepts. Though communication in a virtual world toward learning tasks was something that required assimilation; Millennials became more engaged as it came closer to the final role-play of their team game project. As the student-created identities, the 3-D environment of the classroom and games, and the collaboration on the project grew; the entire environment became more active and started to resemble more of an authentic learning community.

Conclusion

This case study has implications for instructional designers and higher education faculty interested in creating real world learning experiences with opportunities for interaction and immersion through the affordances of virtual world social media. The case study findings illuminate instructional design factors and strategies to consider when creating this method of instruction for Millennials.

References

Brown, J. S., Collins, A. & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32-42.

Corbin, J,. & Strauss, A. (1998). *Basics of qualitative research. techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.

Herrington J., & Oliver. R. (2000). An instructional design framework for authentic learning environments. *Educational Technology Research and Development*, 3, 23-48.

Spradley, J. P. (1980). *Participant observation*. Fort Worth, TX: Holt, Rinehart and Winston.

Taylor P., & Keeter S. (Eds.). (2010). *Millennials: A portrait of generation next. confident. connected. open to change*. Pew Research Center.

Yin, R. K. (1994). *Case study research*. Thousand Oaks, CA: Sage

About the Presenter

Marija Franetovic is a PhD Candidate in Instructional Technology at Wayne State University where she earned her M.Ed. in Instructional Technology in 2004. She completed her B.S. at the University of Michigan in 1995 double majoring in Cellular, Molecular and Developmental Biology and Art History. She is a Course Developer and New Media Specialist at Lawrence Technological University. She has over 12 years of professional consulting experience in instructional design and new media integration. Her research interests include authentic learning, instructional design within virtual worlds and online games, and critical mass communication studies in relation to cognition and new media.

Address: 21311 Civic Center Drive
Southfield MI 48076
Phone: 248-204-3758
E-mail: mfranetov@ltu.edu
URL: https://sites.google.com/a/ltu.edu/elearning/blogs/Course_Development

Evaluation of Inquiries about the UIS Environmental Studies Online Master's Degree Program

Lenore Killam
Hung-Lung Wei
Dennis R. Ruez, Jr.
University of Illinois at Springfield

Introduction

The Department of Environmental Studies has maintained information about inquiries concerning the ENS MA Online Degree program since its inception in 2006. The inquiries include those submitted from the University of Illinois Online Web site, Illinois Virtual Campus Web site, various academic search engine inquiries, independent e-mail inquiries, and telephone inquiries. The database includes six categories of information:

- name
- e-mail address
- home address
- telephone number
- date of response
- comments such as preferred term of entry or current education level

The information was analyzed to develop the following:

- the total number of inquiries since 2006
- the number of inquiries per month
- the number of inquiries annually identified by state and country
- the number of persons requesting information who ultimately apply

Number of Inquiries

During the four years of 2006-2009, the online coordinator has responded to 1269 requests for information. The total number of inquiries is slightly higher, but does not include informal telephone and school fair inquiries where identifying information was not collected. The highest monthly total is 52 in January 2008. The lowest monthly total is 9 in June 2006. The average number is 26 inquiries per month. The average monthly totals reveal that the peak month for inquiries is January, with an average of 38 inquiries. June has the lowest average total with 21 inquiries per month. (Appendix A).

Inquiries Identified by Location

Of the 1269 inquires, 900 (70.9%) provide address information. This information shows that 821 of these addresses (91.2%) are within the USA. Nearly half of the inquiries with US addresses (49.6%) were from 6 states: Illinois (24.4%), California (9.4%), Florida (4.6%), Pennsylvania (3.9%), New York (3.7%) and Texas (3.7%). There are three states from which no inquiries were made: Delaware, North Dakota, and South Dakota, (Appendix B).

There are a few notable findings from the tables. Illinois showed an unusual spike in inquiries during 2008. Florida, Indiana, and New Mexico showed increases in 2009. Two states to show a trend decline are Missouri and Mississippi. However, these trends may be an artifact of the small number of inquiries from each state.

There are 79 international inquiries identified by address, representing 6.2% of the total inquiries. No one country dominates the international inquiry total. There are 6 each from Canada and India, and Nigeria, 4 each from Germany and UAE, and 3 each from China, Greece, Pakistan and Puerto Rico (Appendix C).

Inquirers Who Become Applicants

Of the 146 applicants for academic years 2006-2010, 88 (60.3%) had requested information prior to filing their application. These 88 applicants represent 7.1% of the total number of inquiries (Appendix D).

Summary

These data suggest that most of our applicants contact us before filing their application, and online inquiries are more closely related to state population than proximity to Illinois. These states are good candidates for future marketing efforts.

Appendix A

The Number of Inquiries per Month

Month	2006	2007	2008	2009	Average
Jan	21	33	52	44	38
Feb	33	19	32	25	27
Mar	14	22	31	22	22
Apr	17	37	26	21	25
May	9	29	45	28	28
June	17	22	32	12	21
July	26	31	22	24	26
Aug	30	35	34	20	30
Sep	31	33	23	26	28
Oct	29	34	25	29	29
Nov	25	27	18	17	22
Dec	24	13	30	20	22
	276	335	370	288	

Cumulative Total 1269

Appendix B

Inquiries by State Ranked By Frequency					
State	**2006**	**2007**	**2008**	**2009**	**Total**
IL	46	45	63	46	200
CA	21	20	16	20	77
FL	10	6	6	16	38
PA	6	14	6	6	32
NY	3	11	7	9	30
TX	9	6	7	8	30
VA	6	10	5	6	27
MO	10	6	5	4	25
MI	6	6	7	5	24
NC	4	5	6	6	21
CO	5	6	3	5	19
GA	6	4	5	3	18
NJ	2	3	9	4	18
AZ	4	2	4	7	17
IN	5	2	2	8	17
OH	2	5	5	5	17
MA	3	7	3	1	14
WI	4	5	3	1	13
NM	2	3		7	12
AL	3	5	2	1	11
KS	2	4	4	1	11
WA	3		6	2	11
IA	2	1	5	2	10
LA	4	3	1	2	10
MD	3	5	2		10
NV	2	2	4	2	10
TN	3		4	3	10
KY	2	2	2	3	9
MN		3	5	1	9
MS	6	1	1		8
AR	1	3	1	2	7
SC	3	1	3		7
AK	3	1	2		6
HI	1		2	2	5
MT		1	1	3	5
OR	2	1	1	1	5
UT	1	2	1		4
CT			2	1	3
ME	1			2	3
NE		2	1		3
Washington D.C.			1	2	3
WY	1		1	1	3
NH		1		1	2
OK		2			2
RI		2			2
ID		1			1

VT				1	1
WV				1	1
Totals	**197**	**209**	**214**	**201**	**821**

Appendix C

International Inquiries Ranked By Frequency

Country	2006	2007	2008	2009	Total
Canada	3		3		6
India	2		1	3	6
Nigeria		2	2	2	6
Germany		2		2	4
UAE		2	2		4
China			1	2	3
Greece	1	2			3
Pakistan			2	1	3
Puerto Rico		2	1		3
Chile		1		1	2
Columbia		1	1		2
Korea (R.O.)		1		1	2
Malaysia		1	1		2
UK		1	1		2
Afghanistan		1			1
Barbados		1			1
Bermuda	1				1
Bosnia-Hercegovina				1	1
Brazil		1			1
Burundi				1	1
Costa Rica		1			1
Denmark				1	1
Ecuador		1			1
Egypt		1			1
Ethiopia		1			1
France			1		1
Gabon				1	1
Ghana			1		1
Guyana		1			1
Italy	1				1
Jamaica			1		1
Japan		1			1
Jordan				1	1
Kenya		1			1
Mexico	1				1
Namibia			1		1
Oman				1	1
Panama				1	1
Peru	1				1
Philippines		1			1
Russia				1	1

Saudi Arabia			1		1
Senegal	1				1
Switzerland				1	1
Uganda			1		1
Total					**79**

Appendix D

Number of Applicants Who Had Previously Filed Inquiries			
Academic Year	**Applicant Status**	**Applicant Total**	**Applicants Who Inquired Before Submittal**
2006	Admitted	25	16
2007	Admitted	26	18
	Denied	2	2
2008	Admitted	26	17
	Denied	28	14
2009	Admitted	27	16
	Denied	9	5
2010	Pending	3	0
Totals		**146**	**88**
Percentage of applicants who filed inquiries 60.3%			
Percentage of total inquiries (from Appendix A) converted to applicants 7.1%			

Note. These data include only those applicants denied by the program. It does not include the applicants denied by the Office of Admissions before notification to the program.

About the Presenter

Lenore Killam is an Online Coordinator for the University of Illinois at Springfield, College of Public Affairs and Administration. She is the first point of contact for students interested in admission to the Department of Environmental Studies online degree program. She earned a Bachelor's degree in biology and a Master's degree in Environmental Studies from Sangamon State University, which is now UIS. In addition to her position at the University, she is a student in the UIS Doctor of Public Administration program.

Address: 1 University Plaza, PAC 308
Springfield, IL 62703
Phone: 217-206-6083
Email: lkill2@uis.edu

Nurturing a Disposition for Social Justice in an Online Environment: Ethical Considerations and the Challenges of Making a Difference

James W. Koschoreck
Associate Professor, Educational Leadership Program
University of Cincinnati

Robert E. Harper
Assistant Academic Director, Educational Leadership Distance Learning Program
University of Cincinnati

Introduction

Educational leadership programs across the country are charged with providing appropriate pedagogical and practical experiences that will prepare future school leaders with the knowledge and skills to lead schools. Most state or national accreditation processes require that these programs collect data on key assessments and licensing examinations in order to demonstrate success in these areas of knowledge and skills. For those programs seeking accreditation with the National Council for Accreditation of Teacher Education—an organization that also evaluates the effectiveness of leadership preparation programs—candidate dispositions must be assessed as well. According to the Interstate School Leaders Licensure Consortium (ISLLC), dispositions are the statements that principal candidates are supposed to believe in, value, and are committed to within the context of the broader standards. For example, "the principal believes in, values, and is committed to the inclusion of all members of the school community" (Council of Chief State School Officers, 1996).

Purpose of This Presentation

The purpose of this presentation was to examine how an online course environment could be used to collect the necessary data for a research project and how to overcome some of the key ethical concerns related to research with human subjects. Additionally, we seek to reflect on the complexities of changing beliefs and attitudes in an online environment.

Research Design and Methodology

As we have explained elsewhere (Allen, Harper, & Koschoreck, 2009), we conducted a study in an advanced level Foundations of Educational Leadership course in an online environment. After obtaining appropriate authorization from the Institutional Review Board in order to ensure that proper measures were in place to protect the students' interests, e-mails were sent to the 188 students who were enrolled in the course to invite them to participate in the study. Of these 188 students, 117 granted consent to be included in the research, 9 opted not to participate, and 62 did not respond to our request.

On the first day of the class, students were instructed that they would be required to write two short essays—one at the beginning and one at the end of the course. The first essay instructions were as follows:

> One scholar has said that "making social justice concerns a priority in schools requires leaders not only to understand and name unjust practices that deprive individuals of their rights and dignity, but also necessitates that they take action to change the structures that perpetuate the injustices" (Cambron-McCabe, 2006, p. 123). Discuss your understanding of social justice as it relates to the rights and dignity of individuals, and elaborate on the roles and responsibilities of educational leaders to make social justice concerns a priority.

At the end of the course, students were asked to write an additional essay on the following topic:

> Early in the course you wrote an essay about your understanding of social justice and the roles and responsibilities of educational leaders to make social justice concerns a priority. How has your thinking developed through this course? What are the roles and responsibilities of educational leaders as they relate to racial issues? To class issues? To issues of sexuality? Be sure to express your ideas concerning all these questions thoroughly and thoughtfully.

To ground our analyses, we used the forty-three ISLLC dispositions as the foundation of our study with particular attention to those associated with social justice issues. While most of the ISLLC dispositions are stated in general terms related to the standards, it is our hope to overcome the notion that such administrator licensure standards "do not 'explicitly' establish social justice expectations" (Cambron-McCabe, 2006, p. 121) by examining our students' written reflections.

The data obtained from these essays were analyzed using conventional methods of qualitative inquiry in order to identify major themes.

Findings

The particular findings for this study as regards the effects of nurturing dispositions for social justice in an online environment have previously been reported elsewhere (see Allen, Harper, & Koschoreck, 2009). We reported there that our efforts yielded mixed results inasmuch as we were able to note that some students did, indeed, change their thinking in a positive manner. Others, unfortunately, did not demonstrate that their thinking about matters of social justice was significantly changed by the course or its curriculum.

These particular findings notwithstanding, we believe that we learned valuable lessons regarding the conducting of research in an online course. First and foremost, we came to understand the importance of finding multiple ways to eliminate any possibility of coercion on the part of the professor of the course. Working closely with the Institutional Review Board of the university, we were very clear at the outset that a student's participation or lack thereof would not influence his or her class grades. It was also made clear that the student could withdraw at any time from the study without penalty. The class was structured in such a way that the professor was unaware of those students who opted to participate in the study. A graduate student was assigned to collect the informed consents from the students and to archive each of the essays submitted, removing any reference that might identify a particular student. Finally, these data were not made available to the professor until after the end of the course when final grades had actually been submitted to the registrar.

Implications

This study has significant implications for principal preparation programs seeking to better assess candidate dispositions and make programmatic adjustments whether they are seeking NCATE accreditation or are seeking to assess "the broad range of characteristics important to transformative, democratic leadership—commitment to social justice, community building, risk-taking behaviors, and concern for diversity" (Cambron-McCabe, 2006, p. 113). Related to the knowledge and skills that our future principals need as they exit our programs, "dispositions are the soul of intelligence, without which the understanding and know-how do little good" (Perkins, 1995, p. 278 as cited in Council of Chief State School Officers, 1996).

Further implications include a deep understanding of the importance of protecting the rights of students in an online class where research is being conducted.

References

Allen, J. G., Harper, R. E., & Koschoreck, J. W. (2009). Fostering positive dispositions about LGBTIQ matters: The effects of a social justice curriculum on future educational leaders. In J. W. Koschoreck & A. K. Tooms (Eds.), *Sexuality matters: Paradigms and policies for educational leaders*. Lanham, MD: Rowman & Littlefield.

Cambron-McCabe, N. (2006). Preparation and development of school leaders: Implications for social justice policies. In C. Marshall & M. Oliva (Eds.), *Leadership for social justice: Making revolutions in education.* Boston, MA: Pearson.

Council of Chief State School Officers. (1996). *Interstate school leaders licensure consortium: Standards for school leaders.* Author.

About the Presenters

Dr. James W. Koschoreck is an Associate Professor in the Educational Leadership Program at the University of Cincinnati. He holds degrees from The University of Texas at Austin, Purdue University, and the University of Wisconsin-Madison. His research interests include policy analysis and gay/lesbian issues in educational leadership. Currently, he serves as Graduate Program Director for the doctoral program in Urban Educational Leadership. For the year 2008-09, he was honored to serve in a national leadership role as president of the University Council for Educational Administration.

Address: University of Cincinnati
PO Box 210049
Cincinnati OH 45221-0049
Phone: +1 513 556 6622
Email: james.koschoreck@uc.edu

Dr. Robert E. Harper is the Assistant Academic Director for the Educational Leadership Distance Learning Program at the University of Cincinnati. He graduated from the Urban Educational Leadership Doctoral Program at the University of Cincinnati in 2008. His research interests include online professional development, technology and leadership, and change.

Address: University of Cincinnati
PO Box 210049
Cincinnati OH 45221-0049
Phone: +1 513 556 3615
Email: robert.harper@uc.edu

Course Design: The Impact of an Online Instructor Training

Kristin Koepke
Instructional Designer
University of Wisconsin-La Crosse

The University of Wisconsin-La Crosse (UW-L) is a primarily brick-and-mortar institution where online education has grown in demand due to faculty and student interests. Faculty interested in teaching online were originally self-taught until in January 2010 when an asynchronous Online Instructor Training (OIT) was offered in a fully online format within the UW-L learning management system, Desire2Learn (D2L). Yang and Cornelious (2005) indicate that the training should be conducted online as to provide a similar learning environment as to the experience of their students. The importance of faculty training programs for online and distance faculty has been indicated by many researchers (Gold, 2001; Levy, 2003; McKenzie, Mims, Bennett & Waugh, 2000; Yang & Cornelious, 2005). Teaching online can be viewed by faculty as an opportunity to assess the appropriateness and success of various teaching strategies. Often times, teaching online challenges beliefs about established ways of teaching (Gold, 2001; Levy, 2003; Bates, 2000). Levy (2003) indicates that staff training and support is critical to online program success and further implies that training should be focused on instructional design principles and application to the new teaching environment. Such training opportunities should ultimately benefit students. Sun, et. al. (2008) (as cited in Ray n.d.) conducted a study in which student satisfaction is most highly associated with the quality of the online course. Clay (1999) identifies four stages for distance faculty development: awareness, consideration, implementation, and innovation. The UW-L OIT program helps faculty development throughout the awareness, consideration, and implementation stages.

UW-L Online Instructor Training Program

The OIT program at the UW-L was started in January 2010. The OIT provides an opportunity for faculty and staff members interested in online learning to complete a three-week asynchronous training about how to design, deliver, and facilitate online courses. The OIT is designed to familiarize instructors with best practices in online teaching, and employs an active learning approach in which participants engage in an online learning environment while applying principles of course design and delivery to a course s/he is preparing to teach online. In addition, the OIT allows for interdisciplinary discussions about effective course design. The training places the instructor in the role of an online student. Curriculum is focused on defining and creating a quality online learning experience, effective design of content and activities, implementation of successful assessment and feedback techniques, and defining and understanding the instructor role as facilitator. The OIT competencies and objectives can be seen below in Table 1.1.

During 2010, 40 faculty and staff have voluntarily and successfully completed the demanding training, and 83% of these instructors had not taught online previously. During 2011 OIT sessions were offered in January, March, June, and July. Nineteen (19) additional faulty have completed the training during January and March of 2011, and 84% of these instructors had not taught online before taking the OIT. Two additional OITs are scheduled for June and August of 2011.

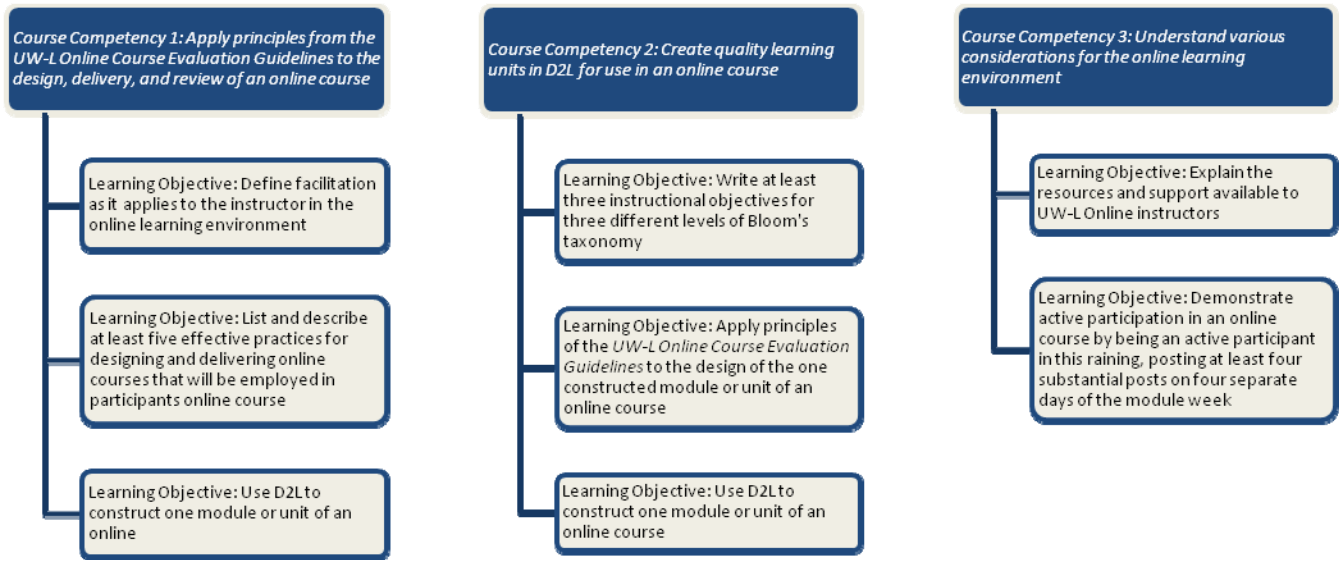


Figure 1. *Online Instructor Training Competencies and Objectives*

Study Methodology

After completing the OIT, a summative survey is sent to all participants asking them to reflect on the training experience, training curriculum, and identify areas of implementation. Various comments from this survey indicated changes to how those that completed the OIT will design and deliver their online courses, as well as pedagogical changes they hope to implement in their face-to-face courses. In addition, several informal conversations took place with training participants and the training facilitator that resulted in learning about ways participants were thinking differently about their teaching approach based on their experience in the OIT and how their attitudes toward online education changed as a result of the OIT and/or teaching online. These informal means of collecting information lead to the formation of this three phase study.

Phase I: Conceptions of Online Education - Survey

This survey was administered as a pre-test and post-test with the same set of questions. The pre-test was administered a week before the start of the OIT to all participants. The post-test was administered a week after the completion of the OIT to all participants that successfully completed all assigned tasks for the training. The 10 questions on the survey were based on common conceptions of online education, often referred to as "myths" in the literature. However, "myths" was left out of the survey name, questions, and description as to avoid any inherent biases associated with that word (conceptions was used). The ten conceptions selected for the survey were conceptions commonly, but informally, heard from faculty through the university. Only those that met the parameters to complete the post-test survey are included in the results (sixteen total). The survey was intended to measure possible attitudinal change toward online education as a result of completing the OIT.

Phase II: Pedagogical Implications of Online Instructor Training - Survey

This survey was administered to all 2010 and 2011* participants that successfully completed all assigned tasks for the training. Survey logic was built-in to the electronic survey to end the survey for individuals that had taken the training but not yet taught online, leaving completed participants as those that have taken the OIT and taught online at UW-L since taking the training. The survey asked questions about pedagogical implementations in three areas: technology, course design, and course delivery. These three areas are three keys curriculum areas in the OIT. Each question presents a side-by-side identification of changes made in his/her online course and his/her face-to-face course. Short-answer questions are also

included to allow participants to provide examples of technology, course design, and course delivery changes as a result of the OIT. The survey was intended to show indicators of instructional design principles learned in the OIT and applied to both online and face-to-face teaching. Eighteen people have completed the survey, to date.
**Note: This paper was written in May 2011. At the conference, another set of trainees (from June 2011) will be included in the data set. The final training group will be in August 2011 and not included in the conference data presentation.*

Phase III: Pedagogical Implications of Online Instructor Training – Interviews
The final question of the "Pedagogical Implications of Online Instructor Training–Survey" asked if the participant would be willing to complete a face-to-face interview with the study's principal investigator. Those that responded "yes" to that question completed a 30-minute one-on-one interview. Eight interviews were conducted, to date. Questions during the interview focused on getting greater details on provided examples of changed teaching practices listed in the survey, and identifying ways of changed thinking toward teaching and learning as a result of the OIT. The interviews were intended to delve deeper into the ways the OIT may or may not have impacted thinking and acting differently with technology integration, course design, and course delivery in both online and face-to-face courses as a result of the OIT.

Findings

Phase I: Conceptions of Online Education - Survey
This survey was intended to measure possible attitude changes toward online education after participating in the OIT. Of the ten questions, four had the most noticeable changes in responses. First, when asked to respond to "students get less attention from their instructor in an online course," 58% strongly disagreed or disagreed before the training and 67% after the training. This indicated that the OIT enlightened participants to the various ways instructors interact with students in an online course. Second, when asked "online courses lack academic rigor," 75% strongly disagreed or disagreed before the training and 83% after the training. This indicated that the OIT showed ways in which content could be presented in a challenging way online. Third, when asked "all students will want to take online courses versus face-to-face courses," 83% strongly disagreed or disagreed before the training and 58% after the training. This indicated that the OIT emphasized that different learning modalities fit the needs of different students. Finally, when asked, "instructors that teach online need to be extremely technically savvy in order to offer a quality course," 44% strongly disagreed or disagreed before the training and 55% after the training. This indicated that the OIT encouraged faculty to be comfortable in the learning management system but could learn additional technologies as their experience teaching online continued.

Phase II: Pedagogical Implications of Online Instructor Training-Survey
The findings of this survey are best reported based on the categories of the survey: technology, course design, and course delivery and changes made as a result of taking the OIT. With technology, 78% of respondents reported trying new features in D2L for their online class, and 40% for their face-to-face class. In addition, 37% indicated they added media to their online course, and 33% added media to their face-to-face courses. This indicates an increased comfort with the tools in D2L and an appreciation of the benefits of these tools for all students regardless of the mode of instruction. With course design, 89% indicated that they wrote measureable objectives for their online course, and 25% wrote them for their face-to-face course. Also, 89% indicated they concentrated on aligning course objectives with activities and assessments for their online course, and 25% for their face-to-face course. This indicated a greater awareness of how objectives can help map a course to the corresponding activities to meet the objectives. Finally, with course delivery, 56% said they made efforts to be more available and accessible for their online students, and 67% for their face-to-face students. And, 67% indicated an increased frequency of student feedback for their online students and 33% for their face-to-face students. This indicates a

stronger awareness of accessibility to students and the ability to use various technologies to assist students in both learning delivery modes.

Phase III: Pedagogical Implications of Online Instructor Training–Interviews

All those that were interviewed commented on three common themes. First, participants indicated some level of change in teaching approach regarding writing objectives and mapping them to the various activities and assessment incorporated into their classroom. This change applied to both online and face-to-face courses. Second, participants indicated that if time were not a factor, they would create and integrate more media into their online and face-to-face courses. Third, participants indicated that they think differently about their teaching approaches and practices as a result of taking the OIT program.

Flaws in the Study

The survey designed for phase II had some flaws. First, there was general confusion about how to answer questions to compare the same course in the online and face-to-face environment. Some did not complete the face-to-face portion because they did not teach that same class face-to-face, only online. Second, some did not indicate anything or indicated the opposite intended response when a question was asked about implementation in face-to-face courses and the respondent identified as having already done that but not as a result of the training.

Next Steps

This is intended to be an on-going study through the 2011-2012 academic year. Follow-up steps include continuation of the Phase I survey being distributed to all OIT participants during June and August 2011, and all 2012 training sessions. Data will be merged with existing data. In September 2011, the Phase II survey will be distributed to those that have taught online during the summer terms in 2011. Interviews will be scheduled based on the results of those surveys. This process will happen again with the Phase II survey being distributed in February 2012 and September 2012. All finalized data will be merged and reported after October 2012.

References

Bates, A. W. (2000). *Managing technological change: Strategies for college and university leaders.* San Francisco, CA: Jossey-Bass.

Clay, M. (1999). Development of training and support programs for distance education instructors. *Online Journal of Distance Learning Administrators, 2*(3). Retrieved from http://www.westga.edu/~distance/clay23.html.

Gold, S. (2001). A constructivist approach to online training for online teachers. *Journal of Asynchronous Learning Networks, 5*(1), 35-57.

Levy, S. (2003). Six factors to consider when planning online distance learning programs in higher education. *Online Journal of Distance Learning Administrators, 6*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring61/levy61.htm.

McKenzie, B. K., Mims, N., Bennett, E., & Waugh, M. (2000, July). Needs, concerns and practices of online instructors. *Online Journal of Distance Learning Administrators, 3*(3). Retrieved from http://distance.westga.edu/~distance/ojdla/fall33/mckenzie33.html.

Ray, S. L. (2011). *Factors contributing to distance learning faculty changing their teaching practices.* Unpublished doctoral dissertation, University of Wisconsin-Madison.

Sun, P., Tsai, R. J., Finger, G., Chen, Y., & Yeh, D. (2008). What drives a successful e-learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education, 50*(4), 1183-1202.

Yang, Y., & Cornelious, L. F. (2005). Preparing instructors for quality online instruction. *Online Journal of Distance Learning Administrators, 8*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring81/yang81.htm

About the Presenter

Kristin Koepke is an Instructional Designer at the University of Wisconsin-La Crosse in the Center for Advancing Teaching and Learning. In this position, she collaborates with faculty to apply effective online pedagogy and offers development workshops and training seminars for faculty and staff interested in teaching online, integrating technology into the classroom, and using instructional design principles. Koepke has served in various eLearning Instructional Design positions in the past including management and consultant roles at various types of organizations including non-profit and for-profit companies.

Address: Center for Advancing Teaching and Learning
University of Wisconsin-La Crosse
182 Wing Technology Center
1725 State Street
La Crosse, WI 54601
Phone: 608-785-6873
Email: koepke.kris@uwlax.edu

Designing the Online Laboratory

Mary V. Mawn, Assistant Professor
SUNY Empire State College

Ken Charuk, Coordinator of Instructional Design
SUNY Empire State College

Introduction

Scientific experimentation is often considered a cornerstone of science courses. Such experiences provide students with real-world contexts for applying scientific concepts, while also developing critical thinking skills and promoting scientific literacy. Traditionally, such processes are taught in a laboratory environment. In recent years, however, a growing number of campuses have moved their instruction to the online environment. The current growth in online coursework presents unique challenges to science educators. Consideration needs to be given not only to the teaching and learning of science content, but also of scientific processes. As a result, studies are needed to determine best practices for integrating labs with online instruction.

The distributed nature of the online environment presents both challenges and opportunities. In the traditional laboratory, access to equipment and materials may be readily available. However, such experiments are often limited by time and space. This can result in "cookbook" activities that need to be completed during a lab session. These boundaries are lessened in the online environment since students can experiment on their own schedules and from their own locations. This provides the time and space needed for students to engage in scientific inquiry. Also, unlike typical face-to-face courses where exchanges are limited in duration and where every voice may not be heard, asynchronous online interactions provide opportunities for sharing, support, and reflection among all students (Mawn & Emery, 2007).

This study explored how laboratory activities can be integrated with science content in an online learning environment, and the ways in which online students engaged in scientific investigations outside of a physical laboratory setting.

Study Methodology

Data were collected from three multi-section, multi-semester online science courses offered between Fall 2007 through Spring 2009. Hands-on and lab-based activities from each online science course were identified, and three experiments were selected for in-depth analysis. These experiments provided students with opportunities to participate in the process of doing science while also learning key scientific concepts and making connections to real-world experiences.

Course documents and student submissions were analyzed to determine the types of scientific process skills utilized by online students. To this end, a modified version of *Essential Features of Classroom Inquiry and their Variations* (NRC, 2000, p. 29) was used as a tool when identifying these process skills. This instrument, *Elements of Scientific Inquiry*, categorized sixteen key features of scientific inquiry observed in an online learning environment. Descriptors were written for each element to ensure consistent interpretation of the study data (Mawn et al, 2011). Course documents and student submissions were coded according to inquiry skill, and findings were categorized by each element's relative use.

Study Findings

Scientific Inquiry

This research study explored how online students engaged in scientific processes while conducting hands-on and field-based experiments. Findings revealed that it is possible to integrate traditionally "laboratory-based" activities with online content. A modified version of the *Essential Features of Classroom Inquiry and their Variations* (National Research Council, 2000; Mawn, 2007) was developed for this study, which identified sixteen *Elements of Scientific Inquiry* (Mawn et al, 2011). The scientific process elements identified in this study are summarized in Table 1.

Table 1: Elements of Scientific Inquiry

E-01	Learner engages in a **scientific investigation**.	E-09	Learner identifies **variables**.
E-02	Learner investigates a **testable question**.	E-10	Learner formulates **explanations**.
E-03	Learner makes **predictions**.	E-11	Learner formulates a **testable hypothesis**.
E-04	Learner makes **observations**.	E-12	Learner **extends** the investigation.
E-05	Learner **collects** data.	E-13	Learner **communicates** with others.
E-06	Learner **analyzes** data.	E-14	Learner makes connections to **prior learning.**
E-07	Learner uses **qualitative** methods.	E-15	Learner makes connections to **scientific knowledge**.
E-08	Learner uses **quantitative** methods.	E-16	Learner demonstrates **conceptual understanding**.

Scientific Investigations

Analysis of lab activities and student submissions from three online courses showed that science process skills can be successfully taught using several approaches, including hands-on and field-based activities.

In an environmental science course, online students participated in a field activity as they learned about human population growth. They visited a cemetery in their local community, collected data from people born before 1900, and plotted and compared survivorship curves for two human populations born in different decades. Students hypothesized why the survivorship curves might be similar or different; made predictions about how the shape of survivorship curves may be linked to environmental variables; and identified variables that might influence their findings. Finally, students synthesized and evaluated information as they reported and analyzed their experimental findings.

In a physical science course, students conducted experiments with hand-generators and solar cells while learning about various forms of energy and how they can be transformed into usable forms. Students completed a series of instructor-suggested activities, but also asked and explored their own questions while collecting data and testing variables. When students reported their findings, they hypothesized why it was harder to turn the crank when the light bulb was in the generator; they discussed what happened to the voltage when the bulb is removed; and they developed a model for how their hand-held generator could light a bulb. Students were also found to use higher cognitive skills when making connections between their experiment and wind turbines, and when comparing and contrasting wind turbines to solar cells.

In a third course (also a physical science course, but with a focus on invention and design), students learned about force, momentum, and friction by building a LEGO® racecar model that consistently traveled a distance of at least five feet. Students designed controlled experiments to test their designs, and collected and replicated their data. After conducting initial experiments, students were asked to identify and control for variables, collect data from 20 trials, and enter their measurements into a spreadsheet to determine the average, min/max, and standard deviation. Students were able to discuss various aspects racecar design and identify variables related to their experimental set-up. They also demonstrated an

understanding of force and momentum while evaluating and analyzing data and synthesizing their findings. Finally, drawing on their first-hand experiences, students were able to respond to a prompt where they distinguished between precision and accuracy.

Overall, we found that online students readily conducted experiments, collected data, and analyzed their findings. They developed models to explain their observations, and made connections between their observations and scientific concepts. These students generally followed the activity instructions and, in many cases, went beyond these guidelines by independently making connections to prior learning and external scientific knowledge.

A summary of these findings, which demonstrate the application of the *Elements of Scientific Inquiry*, comparing activity instructions and student work, is shown in Table 2. Areas where student work differed from the activity instructions are highlighted.

Recommendations

This study demonstrates that online students can conduct experiments and engage in the processes of scientific inquiry, even though they are not in a physical laboratory setting. Building on this work, we make several recommendations for the use of laboratories in online learning environments.
First, we highlight the need for open-ended questions in laboratory write-ups. If the questions posed to the students are too narrow, they tend to do the work to answer the questions and do not explore further. Online students have the opportunity to conduct investigations that are not bound by the space and time constraints of the face-to-face laboratory setting. Making experiments more open-ended may foster exploration and a deeper understanding of the concepts being explored.

A second recommendation is to increase opportunities for students to discuss their findings with other students, much as they would when collaborating within a small lab group. In practice, scientists share their work with other scientists, benefitting from an intellectual give and take, while students frequently submit lab reports directly to their instructors. By providing them with opportunities to discuss and compare experimental findings, this would extend student learning beyond the individual experience. Finally, when designing online laboratories, attention should be paid to building a clear progression of process skills development from one lab to the next. Labs are often driven by content, but could benefit from an approach that builds on scientific process skills. In early experiments, students might investigate questions posed by the instructor, while subsequent labs might be more open-ended and encourage students to develop and test their own questions. This approach would encourage students to use higher-level cognitive skills as they engage in authentic explorations and apply the elements of scientific inquiry.

Table 2: Overall Application of the Elements of Scientific Inquiry

ELEMENTS of SCIENTIFIC INQUIRY		Activity instructions			Student work		
		Always	Often	Never	Always	Often	Never
E-01	Learner engages in a **scientific investigation**.	Y			Y		
E-02	Learner investigates a **testable question**.		Y			Y	
E-03	Learner makes **predictions**.	**Y**				**Y**	
E-04	Learner makes **observations**.	**Y**				**Y**	
E-05	Learner **collects** data.	Y			Y		

E-06	Learner **analyzes** data.	Y			Y		
E-07	Learner uses **qualitative** methods.			Y			Y
E-08	Learner uses **quantitative** methods.	Y			Y		
E-09	Learner identifies **variables**.		Y			Y	
E-10	Learner formulates **explanations**.	**Y**				**Y**	
E-11	Learner formulates a **testable hypothesis**.			Y			Y
E-12	Learner **extends** the investigation.		Y			Y	
E-13	Learner **communicates** with others.	Y			Y		
E-14	Learner makes connections to **prior learning.**			**Y**		**Y**	
E-15	Learner makes connections to **scientific knowledge**.			**Y**		**Y**	
E-16	Learner demonstrates **conceptual understanding**.			**Y**		**Y**	

References

Mawn, M. V., & Emery, C. (2007). Inquiry and the teaching of electricity and magnetism: An online course for teachers. *Proceedings of the Association for Science Teacher Education*, Clearwater: FL.

Mawn, M. V., Carrico, P., Charuk, K., Stote, K. S., & Lawrence, B. (2011). Hands-on and online: scientific explorations through distance learning. *Open Learning: The Journal of Open, Distance and e-Learning, 26*(2), 139-150.

National Research Council. (2000) Inquiry and the National Science Education Standards: A guide for teaching and learning. Washington, DC: National Academy Press

About the Presenters

Dr. Mary Mawn is an Assistant Professor and Academic Area Coordinator at the Center for Distance Learning, SUNY Empire State College, where she teaches online biology courses and supports adjunct science and math faculty. Her research interests include studying the online professional development of science teachers, and identifying ways to teach scientific process skills through distance learning. She has a Ph.D. in Molecular and Cellular Biology and a M.Ed. in Educational Technology.

Address: Center for Distance Learning
SUNY Empire State College
113 West Avenue
Saratoga Springs, NY 12866
Email: mary.mawn@esc.edu
Phone: 518-587-2100 Ext. 2587

Ken Charuk is a Coordinator of Curriculum and Instructional Design and an adjunct instructor at SUNY Empire State College. In addition to a Masters in Curriculum Development and Instructional Technology, he holds a Masters in Environmental Science and has over 12 years of experience with environmental impact analysis in the public and private sectors. Mr. Charuk has 10 years of full-time college teaching experience and five years of adjunct online teaching experience, and has experience as a course developer Mr. Charuk's focus is on authentic learning experiences in the online environment, particularly with regard to science for adult students.

Address: Center for Distance Learning
SUNY Empire State College
113 West Avenue
Saratoga Springs, NY 12866
Email: ken.charuk@esc.edu
Phone: 518-587-2100 ext. 2760

Digital Literacy and e-Learning: Is There a Disconnect Between Faculty and Students?

Jodi B. Roberts
Distance Learning Coordinator
Mississippi State University

Laura A. Crittenden, Ph.D.
Manager, Academic Outreach
Mississippi State University

Literature Review

Newer Web 2.0 technologies are beginning to emerge within online course delivery. Much of this newer technology is web-based, user-friendly, and allows faculty and students to interact in a more collaborative manner, providing an educational atmosphere where the students can play an integral part in the e-learning process. Web 2.0 technologies focus on e-communication, or the ability to interconnect with content, ideas, and with those who create them online, and utilizing a Web 2.0 framework may set the stage for a student-centered collaborative learning environment (Delich, Kelly, & McIntosh, 2008). While the use of Web 2.0 technologies can increase a student's ability to succeed in today's digital society, the question as to whether or not faculty who teach online courses and the students enrolled in them have the same degree of digital literacy is important to investigate in terms of perceived e-learning satisfaction and success.

In regards to the difference between digital literacy and the digital divide, recent research concerning the digital divide most often puts forth the view that a division exists between students who have and have not had access to technology, as well as how this access has influenced their academic success (Goode, 2010; Goodfellow & Wade, 2007; Hawkins & Oblinger, 2006; Hundley & Shyles, 2010; Vie, 2008; Waycott, Bennett, Kennedy, Dalgarno & Gray, 2010). While contradicting findings as to whether or not students have the upper hand on faculty with regards to technology have been discovered, Vie (2008) argued that "students are often more technologically adept than their instructors" because of their early ongoing access to technology, indicating that faculty need to utilize these same technologies in order to not be left behind (p. 9).

This call to action for faculty to upgrade their skills and knowledge of the digital natives they are teaching, as well as to possess the ability to troubleshoot strategies on the technologies used in their e-learning courses, is due to the need for them to keep pace with their students (Prensky, 2001; Volery & Lord, 2000). While it may be true that students are more exposed to technology today than in the past merely because it is interwoven into their private and academic activities, it does not mean that they are digitally literate when entering higher education (Bennett, Maton & Kervin, 2008; Hawkins & Oblinger, 2006; Keengwe, 2007; and Kennedy, Judd, Churchward, Gray, & Krause, 2008). In addition, modeling effective technology uses, while beneficial to both faculty and students, does not guarantee that either group has the technological skills required to maximize their educational benefits.

For the purposes of this research digital literacy, on the other hand, is defined as "a useful concept for discussing users' knowledge about digital tools in areas ranging from basic skills in using computers and operating systems to more esoteric issues such as what can and cannot be done by means of digital media" (Karlstrom, Cerratto-Pargaman, & Knutsson, 2008, p. 98). Since digital technologies are becoming more commonplace in education, digital literacy is not just a requirement for e-learning faculty and students but is just as vital for traditional students who are increasingly faced with a digital environment from admissions and registration processes to accessing course materials to purchasing

textbooks online. Volery & Lord (2000) found three technology-related factors critical for the success of online courses: (1) the proper use of the technology within the course, (2) the student's previous use of the technology, and (3) the competence of the instructor integrating the technology into the course. Additionally, Osika, Johnson, and Buteau (2009) reported that faculty who use technology successfully outside traditional classroom settings are more inclined to apply it in their e-learning courses.

Purpose of the Study

The purpose of this study was to explore the level of (a) digital literacy among e-learning learners, (b) digital literacy among faculty who teach e-learning courses, and (c) connectedness or disconnectedness between the digital literacy of e-learning learners and the faculty who teach them.

Survey Instrument

Prior approval was obtained by Jones, Lindner, Murphy, and Dooley (2002) to use their Distance Education: Competency, Value, and Educational Technology Support Survey. The original survey questions were not modified for the faculty survey; however, with permission, the learner survey was modified slightly to accommodate terms better suited to a learner's perspective. Since the meaning and content of the original questions were not altered, the surveys' original reliability rating of .82 was assumed for the faculty and learner versions. The survey presented 28 questions on a 4-point Likert scale designed to determine the philosophical view of faculty and learners regarding e-learning as broken into the following three categories: competency (11 questions), value (9 questions), and information technology and support (8 questions).

Participants

During the fall 2010 semester at a mid-sized University in the southeastern United States, the learner participants (n= 1,900) were selected if they were currently admitted to any e-learning program (degree or certificate), and the faculty participants (n = 100) were selected if they were currently teaching e-learning courses.

Methodology

Once IRB approval was obtained, the researchers disseminated the survey online. Faculty and learner invitations to participate were sent via their official University e-mail addresses. The final results of the data collected were analyzed using t-tests, as were the original survey findings.

Results

Competency

On the competency sections, both the faculty and learner participants either strongly agreed or agreed that they were capable of performing all the tasks presented to them with the exception of two (2) items on the faculty survey and one (1) item on the learner survey. For the two exceptions, the majority of faculty participants either strongly disagreed (35.3%) or disagreed (41.2%) that they were comfortable with creating their own WWW page. In addition, a weak majority (37.5%) disagreed that they sent most of their most important and confidential documents through e-mail. In examining the top four items in which faculty felt most comfortable with performing, the percentage distribution of faculty participant responses, overall, were smaller and more varied than the learner responses as follows: 64.7% indicated they are familiar with teaching styles appropriate for distance learning; another 64.7% indicated they were comfortable connecting a computer to various output devices; 58.8% indicated they use email for almost all correspondence; and three items were tied at 52.9% indicating they were able to (a) scan photographs

into digital files, (b) manipulate digital images using software, and (c) confidently deliver their courses online.

For the one exception on the learner survey, the majority of participants either strongly disagreed (22.8%) or disagreed (46.5%) that they were comfortable creating their own WWW page. Of the 10 items with which they were comfortable performing, the top four percentages were as follows: 74% indicated they use email for almost all of their correspondence; 60.6% indicated they were confident working in their University's online learning management system; 62.7% indicated they were able to scan photographs into digital files; and 60.6% indicated they were comfortable connecting a computer to various output devices.

Value

On the value sections, both the faculty and learner participants either strongly agree or agreed that they valued the specific digital literacy skills presented to them, as well as valued the perceived benefits and impact such skills will have on the future of education and the manner in which students learn, with the exception of one (1) item on the faculty survey. The one value item with which the largest percentage (35.3%) of faculty disagreed was in regards to electronic communication and information drastically affecting what they will teach in the next five years. It should be noted that, overall, 23.5% strongly agreed and 23.5% agreed with this same value item. For the remaining 8 value items, the top three with the largest percentage distribution were as follows: 76.5% strongly agreed that the Internet/WWW is a convenient way to access information; 62.5% agreed that students today prefer a more visual learning experience; and 50.0% agreed that animated graphics increase student interest and retention. Interestingly, the latter two items ask the faculty to perceive the value their online students place on them. Learners responded overwhelmingly to these same two items with 82.7% indicating they either agreed or strongly agreed that animation increases interest and retention and 92.8% indicating they either agreed or strongly agreed that they prefer a more visual experience. Whether or not faculty are integrating such technology into their online courses is unknown; however, both learners (95.2%) and faculty (82.4%) indicated that they either agreed or strongly agreed that they should.

On the learner survey, of the 9 items presented, the top three items in which participants indicated the highest value percentage distribution were as follows: 89.7% strongly agreed that the Internet is a convenient way to access information; 68.8% strongly agreed that electronic communication will drastically alter how they learn in the next five years; and 61.3% strongly agreed that electronic information technologies provide students with instantly available, supplemental course and research materials.

Information Technology & Support (ITS)

On the information and technology support sections, the majority of faculty and learners either strongly agreed or agreed that they were knowledgeable about the technical support and services available to them with the exception of one (1) item on the faculty survey in which the percentage distribution was split with 47.1% agreeing and another 47.1% disagreeing that there are enough faculty workshops and training regarding distance learning best practices. The counter-question for students was whether or not they agreed or disagreed that faculty who teach via distance provide quality instruction, and despite the faculty perception of being somewhat underprepared, a strong majority of their students (88.5%) either agreed or strongly agreed that faculty are, indeed, providing them with a positive academic experience. The following items received the top three largest percentage distributions: 58.8% agreed that there are ample opportunities to develop distance learning courses in their department; 56.3% strongly agreed that they have access to technical assistance when teaching distance learning courses; and two items were tied with 52.9% indicating they agreed with being aware of distance learning policies and procedures and the time spent developing distance learning course materials is valued by their departments.

On the learner survey, the largest percentage of participants either agreed or strongly agreed with all 8 items. Of the 8 items presented, the following top three had the largest percentage distribution: 54.9% agreed that the faculty who teach distance learning courses are responsive to their questions and concerns; another 54.9% agreed that the faculty who teach distance learning courses provide quality instruction; and 50.8% agreed that they have access to technical assistance while taking distance learning courses.

References

Bennett, S., Maton, K., & Kervin, L. (2008). The "digital natives" debate: A critical review of the evidence. *British Journal of Educational Technology, 39(5),* 775-786. doi:10.1111/j.1467-8535.2007.00793.x.

Delich, P., Kelly, K., & McIntosh, D. (2008). Emerging technology in e-learning. In D. Harper (Ed.), *Education for a digital world: Advice, guidelines, and effective practice from around the globe* (pp.17-34).

Goode, J. (2010). The digital identity divide: How technology knowledge impacts college students. *New Media & Society, 12(3),* 497-513. doi:10.1177/1461444809343560.

Goodfellow, M., & Wade, B. (2007). The digital divide and first-year students. *Journal of College Student Retention, 8(4),* 425-438.

Hawkins, B. L., & Oblinger, D.G. (2006, July August). The myth about the digital divide: We have overcome the digital divide. *Educause Review,* 12-13.

Hundley, H.L., & Shyles, L. (2010). US teenagers' perceptions and awareness of digital technology: A focus group approach. *New Media & Society, 12(3),* 417-433. doi:10.1177/14611444809342558.

Jones, E.T., Lindner, J.R., Murphy, T. H., & Dooley, K.E. (2002, Spring). Faculty philosophical position toward distance: Competency, value, and educational technology support. *Online Journal of Distance Learning Administration, V(1).*

Karlstrom, P., Cerratto-Pargman, T., & Knutsson, O. (2008). Literate tools or tools for literacy? *Digital Kompetanse, 3,* 97-112.

Keengwe, J. (2007). Faculty integration of technology into instruction and students' perceptions of computer technology to improve student learning. *Journal of Information Technology Education, 6,* 171-180.

Kennedy, G.E., Judd, T.S., Churchward, A., Gray, K., & Krause, K.L. (2008). First year students' experiences with technology: Are they really digital natives? *Australasian Journal of Educational Technology, 24(1),* 108-122.

Osika, E. R., Johnson, R.Y., & Buteau, R. (2009). Factors influencing faculty use of technology in online instruction: A case study. *Online Journal of Distance Learning Administration, XII(I).*

Prenksy, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9(5).* Retrieved from http://web.me.com/nancyoung/visual_literacy/site_map_and_resources_files/Digital_Natives_Digital_Immigrants.pdf.

Vie, S. (2008). Digital divide 2.0: "Generation M" and online social networking sites in the composition classroom. *Computers and Composition, 25,* 9-23. doi:10.1016/j.compcom.2007.09.004.

Volery, T., & Lord, D. (2000). Critical success factors in online education. *The International Journal of Educational Management, 14(5),* 216-223. doi:10.1108/09513540010344731.

Waycott, J., Bennett, S., Kennedy, G., Dalgarno, B., & Gray, K. (2010). Digital divides? Student and staff perceptions of information and communication technologies. *Computers & Education, 54,* 1202-1211. doi:10.1016/j.compedu.2009.11.006.

About the Presenters

Ms. Jodi B. Roberts is the Distance Learning Coordinator for the Office of Academic Outreach at Mississippi State University with more than six years of experience in the distance learning field.

Address: Academic Outreach
365 Barr Avenue
Mississippi State, MS 39762
E-mail: jroberts@aoce.msstate.edu
URL: www.distance.msstate.edu
Phone: 662-325-0238
Fax: 662-325-2657

Dr. Laura A. Crittenden is the Manager of Academic Outreach at Mississippi State University, overseeing all its distance learning endeavors, and has more than ten years of experience specifically in the field of distance education.

Address: Academic Outreach
365 Barr Avenue
Mississippi State, MS 39762
E-mail: lcrittenden@aoce.msstate.edu
URL: www.distance.msstate.edu
Phone: 662-325-9092
Fax: 662-325-2657

Needs Assessments: Investigating the Learning Effectiveness of an Online Course

Kadriye O. Lewis, Ed.D., Associate Professor of Pediatrics
University of Cincinnati College of Medicine, Department of Pediatrics,
Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Bo Zhang, Ph.D., Associate Professor
University of Wisconsin, Department of Educational Psychology
University of Wisconsin, Milwaukee, WI

Introduction

Online teaching and learning technology is promoting fundamental changes in how we teach and learn. While various aspects of this technology offer new choices and opportunities for instructors and students, the assessment of student needs related to the course content before and after the course is not a common practice. Most instructors start their teaching without identifying students' level of perceived knowledge and skills on the topics to be taught and the priorities of areas to be focused in depth. Assessing students' needs can be valuable in terms of course improvement as well as capturing information about the content areas that are most effective. Students' needs in a course can be measured in a number of ways, but one effective method can be applying pre-and post needs assessments.

A needs assessment tool has been used for decades in the areas of planning program development and instructional design in order to examine a defined population's needs and identify priorities for future action (Barbazette, 2006; Dick et al., 2008; Morrison et al., 2006). A need is generally considered to be a gap between "what is the current situation" and "what should be the desired situation." In a sense, this is a diagnostic tool for many contexts of improvement efforts. Recognizing the power of the needs assessment, we adopted this strategic tool in identifying the actual and perceived learning needs of a group of online students who took the Applying Technology for Effective Learning course offered by the Online Masters Degree in Education for Healthcare Professionals program.

The purpose of this longitudinal study was to examine the results of the last three years of data that were collected through the pre-and post needs assessments from the online masters program students who came from various disciplines in medicine. The research questions for this study were as follows:

- How proficient were the students technologically before they took the Applying Technology for Effective Learning course (Pre-Course Needs Assessment)?
- How proficient were the students technologically after they took the Applying Technology for Effective Learning course (Post Course Needs Assessment)?
- In what areas did students make significant improvement?

Background Information

The Online Master's Program for Healthcare Professionals, developed as a joint project between the Division of General and Community Pediatrics at Cincinnati Children's Hospital Medical Center and the School of Education at the University of Cincinnati, has been offered nationally and internationally since 2002 (Lewis & Baker, 2005; Lewis & Baker, 2006). This 45-credit-hour program focuses on the three educational themes—adult learning, curriculum and instruction—and educational research and evaluation. The online format provides flexibility and accessibility, which permits medical professionals with full-time clinical and teaching responsibilities to access classes around their work schedule regardless of geographic location.

The Applying Technology for Effective Learning course is one of the 12 core-curriculum courses offered through this online master's program. This course is designed for healthcare professionals to provide instruction on how computer technology tools can enhance their communication and instructional techniques for medical education. The course covers a variety of medical technology tools and technology teaching related theories, including how to create collaborative teaching and learning environments with the focus on e-Learning courses and media-enhanced presentations using specific software and/or Web 2.0 tools (e.g., Blogs, Wikis, Social Networks, Social Bookmarks, Podcasts, RSS Feeds, and Mashups). In addition, this course addresses potential legal and ethical issues regarding computer-based technologies.

The course has evolved and improved tremendously over the last 10 years by integrating sound pedagogical practices with innovative assessment methods. One of the approaches was to apply the needs assessment to obtain a clear vision of the optimal and actual state of the course by identifying the gap between the actual and perceived learning needs in terms of the content covered and skills learned in this course.

Description of the Pre-and Post Needs Assessment Tools

In 2007, our survey tool was designed based on the expected outcome of the course content and competencies to be gained. Survey items included five demographics questions, and 24 close-ended and Likert-type questions including one open-ended question for other comments. Close-ended and Likert-type questions covered the areas of computer literacy levels, years of experience in using computers, frequency of using computers, type of operating system used, type of internet connection, type of training received, rating the skills on specific tasks both on hardware and software programs, basic online communication skills and knowledge, course platform experience, typing skills, internet search skills, instructional design, handheld devices, simulation programs, and Web 2.0 tools. The survey items were piloted with the course participants in the same year and appropriate modification was done. Content and face validity of the survey also obtained through three experts in the area of instructional design and technology.

Samples

Our sample size was 56 for pre-tests and 43 for post-tests. These students spread over three years (2008, 2009, and 2010). This is not a random sample as students self-selected this online course. In both pre-and post-tests, females took a higher percentage than males (55% vs. 45% for pre and 58% vs. 42% for post). The average age of this sample is 37 with one standard deviation at about 7. Also on average, these students had about 20 years experience with computer use with standard deviation around 5.5. They spent about 30 hours per week (standard deviation around 13) on the computer.

Data Collection Process

A week before the course, students were asked to complete the Pre-Course Needs Assessment survey. This assessment helped the course instructor capture the needs and/or the gap between the course content to be covered and the participants' perceived technology skills, and course content knowledge. This survey was not anonymous since the course targeted to provide extra help or materials for individual students' needs. This process was also helpful in identifying the course concentration areas that would help students build their technology skills and increase their comfort level. At the end of the course, in order to determine whether student learning had expanded or improved, the Post-Course Needs Assessment survey was completed by the students. Overall, the goal of both assessments was to support data-driven decision-making and measure knowledge, skills, and abilities against defined learning outcomes in the computer technology course. In addition, both of the Pre-and Post-Course Needs

Assessments were included in the grading scheme to increase the participation (each needs assessment worth 2%, which is a total of 4% of grading).

Data Analysis and Interpretation

Needs were assessed by student skills in four areas: hardware, software, online communications, and course platform (Blackboard in this case). Questions measuring specific skills in these areas used a four-point Likert scale with the following categories: 1-*basic*, 2-*good,* 3-*proficient* and 4-*experts*. Using the statistical software package SPSS, mean value was calculated for each hardware skill, and it was interpreted with reference to the original scale. For example, a mean of 2.5 indicates, on average, students' skill is between good and proficient.

Hardware Skills

The pre-test assessed their needs and the post-test demonstrated how much that need had been fulfilled by this class confounded with other improvements they had made during the class duration. All hardware skills improved from pre to post. In other words, their needs were partially fulfilled. The top five skills and their corresponding average gain were: 1) using Help Menus (.52); 2) the primary function of input, storage, and output (.44); 3) basic computer system parts and concepts (.42); 4) mouse menu functions (.36) and 5) opening, closing, resizing and moving windows (.34). All these were certainly very important skills for this course.

Software Skill

The results for the software skills showed that all changes were positive, indicating gain of the skill occurred for all categories. The largest change was seen for the skill to save different types of files (.70). The other dramatic gains seen included: 1) recognizing the two basic types of software, operating system software and application software (.67); 2) legal aspects of ethical and copyright issues of the software use, images and other copyrighted materials (.62); 3) managing basic Mac OS commands (.60); and 4) creating files that are compatible to both MAC OS2 and Windows systems (.49).

Online Communications

The results showed that there were some dramatic gains from the pre to post measurements. For example, the mean skill rating for using collaboration tools rose to 2.74 from 1.63. Recall the rating scale is 1-basic, 2-good, 3-proficient and 4 experts. This 1.11 change put most students into a higher proficiency level. The other four top areas that students reached the proficiency level were: 1) understanding difference between Search Engines and Directories (1.01); 2) evaluating and citing information on the Internet (0.70); 2) describing the functions and features of major types of electronic communications (0.70); 3) using gathered information from the Internet without violating copyright laws (0.71); and 4) ensuring online privacy and computer security (0.63)

Course Platform (Blackboard)

The skills and knowledge in using the course platform were itemized in the needs assessment tool in the same manner as in the previous domains of the survey (1-basic, 2-good, 3-proficient and 4 experts). Again, for all skills, students believed that they made some gains. The largest improvements were in the email (0.68) and chat (0.65) functions of the system. The next set followed these were using Student Tools (Digital Dropbox, File Share, Gradebook, Electric Blackboard) (0.42), and file attachment functions to the Discussion Board (0.35).

Next, we tested whether the gains observed in the above four areas were significant. To achieve that, we computed a sum of ratings for each area by simply adding the ratings to each question. Due to the pre- and post-test nature, a paired *t*-test was run for each sum score. Results are given in Table 1. For all areas, the gain is significantly higher for the post-test at .05 significance level.

Table 1. Significance Testing for Gains

Domain Areas	Mean Difference	*t*	*df*	Sig. (2-tailed)
Hardware Skills	5.09	2.85	38	.01
Software Skills	6.83	3.74	38	.00
Online Skills	8.71	5.34	38	.00
Platform Skills	2.50	2.35	38	.02

$p<.05$

Finally, we looked at what specific computer skills for which students indicated that they would like to receive more training. Analysis of pre and post results shows that, on average, students experienced a decrease in their needs for more training, or in other words, their pre-instruction needs had been partially fulfilled. The top three skills and their corresponding decrease of percentage of students who need more training are: database skill (38%), spreadsheet skill (26%), and collaboration tools skill (23%). These skills seem the ones student benefited most from this course.

The following were the excerpts from qualitative data that showed students' satisfaction with this course:

"Excellent Class, I learned so much. The knowledge from this class has already been put to use. Thank you"

"This course has opened my eyes! I was previously intimidated by the use of Web 2.0 tools and Web design. Through the week assignments, I have surprised myself at designing a Wiki and using other tools such as delicious, google docs, google sites, etc. It was a great learning experience and I have built the tools to continue applying this knowledge to my daily professional and personal life."

"Enjoyed tremendously this course. I am excited to apply what I learned to my project. Thank you."

Conclusion

Needs assessment provides critical information about our learners' knowledge and perceived needs in an education effort. To attain the course objectives and increase the learning effectiveness in an online environment it is crucial to identify students' leaning needs in order to create learning plans accordingly. The results of this study suggest that the needs assessment of the learners benefit teaching and learning most effectively when considered as part of course effectiveness assessment, rather than as a discrete entity. There is then likely to be substantial impact on both learning processes and learning outcomes.

References

Barbazette, J. (2006). *Training needs assessment: Methods, tools, and techniques.* San Francisco: Pfeiffer.

Dick, W., Carey, L., & Carey, J. O. (2008). *The systematic design of instruction* (7th ed.). Allyn & Bacon.

Lewis, K.O., & Baker, R.C. (2005). Development and implementation of an online master's degree in education for healthcare professionals program. *Academic Medicine, 80*(2), 141-146.

Lewis, K.O., & Baker, R.C. (2006). Physician contribution developing an online master's degree in education program for health care professionals. *The Journal of Educators Online, 3*(1).

Morrison, G. R., Ross, S., M., & Kemp, J. E. (2006). *Designing effective instruction* (5th ed.). JohnWiley & Sons.

About the Presenters

Kadriye O Lewis, Ed.D is Associate Professor of Pediatrics and is the adjunct faculty of the University of Cincinnati. She coordinates and supervises the educational activities within Division of General Pediatrics of the Cincinnati Children's Hospital Medical Center, including program development, curriculum and evaluation. In collaboration with the College of Education at the University of Cincinnati, she and her colleague, Dr. Raymond C. Baker have developed an online Master's Degree in Education for Physicians and Other Healthcare Professionals, which has been offered both nationally and internationally since 2002. Also, she is actively involved in the medical center's faculty development program.

Address: Cincinnati Children's Hospital Medical Center
Division of General and Community Pediatrics
3333 Burnet Avenue (MLC 2011), Cincinnati, Ohio 45229-3039
Email: kadriye.lewis@cchmc.org
URL: http://www.cincinnatichildrens.org/svc/find-professional/l/kadriye-lewis.htm
www.cincinnatichildrens.org/mastersineducation
www.cincinnatichildrens.org/faculty-dev
Phone: 513-636-7258
Fax: 513-636-7247

Bo Zhang, Ph.D is associate professor in the Department of Educational Psychology at the University of Wisconsin-Milwaukee. Dr. Zhang has been working in the field of educational assessment and evaluation. His overall research interest is to improve the accuracy in measuring student learning. This includes the theoretical exploration of various aspects of advanced measurement models, such as model data fit, the impact of missing data, and estimation methods. His research also focuses on the advance of assessment in everyday classroom and program evaluation. One example along this line is that he explored the process of student group work and proposed new ways to evaluate group work. He has acted as an evaluator for multiple large-scale projects that directly impacted students' learning in various settings. Results of his research have appeared in major journals in the educational measurement field, such as Applied Psychological Measurement and Journal of Educational Measurement.

Address: University of Wisconsin-Milwaukee
Department of Educational Psychology
P.O. Box 413
Milwaukee, WI 53201
Email: boz@uwm.edu
URL: http://www4.uwm.edu/soe/directory/profiles/boz.cfm
Phone: 414-229-5742

Inter-Organizational Collaboration in Instructional Technology Development and Implementation

Robin Wyatt
Instructional Developer
Governors State University

Introduction

The development of large-scale instructional media is a social process joining multiple individuals with varied skill-sets. Interactive multimedia development processes are influenced by a multitude of elements, including but not limited to, designers and practitioners, cultural environments, scale of project, and instructional design models. Each of these components influence and interconnect to create a learning object. Large-scale development of educational technology can also involve the collaboration of different organizations. Inter-organizational collaboration refers to the joint effort of two or more organizations working together to achieve a shared goal (Pfeffer & Novak, 1976). A majority of research on interactive multimedia in educational technology has been on models for creating instructional media, techniques for designing the instruction, and on the learning outcome of these technologies. Research pertaining specifically to the development aspect of the educational technology field typically lacks processes and the collaborative nature of teamwork.

This case study examines the collaborative aspects of instructional technology development and implementation on the PRIDE Digital Curriculum (PDC). The 24-disk, interactive multimedia training product delivered on CD-Rom was developed through an inter-organizational collaboration between Governors State University, Child Welfare League of America (CWLA), Illinois Department of Children and Family Services, and several additional state agencies. Participants of the mix-methods case study include 10 interviews with key members of the design and development team, focus groups from 20 agency leads on the implementation process in Ontario, Canada and 477 surveys from trainers, staff and foster parents. The multimedia development and implementation processes of the PDC are examined through an activity theoretical (Leontiev', 1978; Vygotsky, 1980) lens to uncover how organizations address cultural influences, contradictions, and communication in collaborative activities. This paper presents portions from a larger study.

Review of Related Literature

Current trends in educational technology recognize that design and development (D&D) research is scarce within the field's literature. Richey and Klein (2007) defined D&D research as "the systemic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development" (p. 1). Richey and Klein identified research that is especially "critical" on models and practices employed by designers and developers (p. 3). Designers' performance and actions can vary greatly based on their experience level, and additional variables and complexities take place when a team is required to develop instruction. Correia's (2008) study identified main areas of disagreement and conflicts in teams are language issues, communication styles, personality traits, different priorities and motivations (p. 25). Larson and Lockee (2009) noted practitioners differ in respect to the organizational culture in which they work. They define culture as "shared beliefs and values, behavioral norms, and communication patterns that are reflected in an organization's policies" and assert the organizational culture affects the design of instruction (p. 2). As processes and objects change, these variables affect the design team and require new competencies of the team members (Kim, Lee, Merrill, Spector, & van Merrienboer, 2008).

The advances in technology have made planning and producing more difficult and labor intensive (Spector, 2002). "As project complexity grows, so does the need to collaborate and to coordinate activities" (Spector, p. 31). The success of instructional design, development, and implementation of learning material is greatly influenced by the decisions made along the process. Seels and Richey (1994) defined an instructional systems design as "an organized procedure that includes the steps of analyzing, designing, developing, implementing, and evaluating instruction." (p. 31). This system is referred to as the ADDIE model. Gustafson and Branch (2002) stated, "There remains a need to indicate *how to practice* particular elements of the ID process in specific contexts" (p. 3). An increase in globalization and decentralization of organizations is changing how instructional designers communicate with the design and development teams, such as through virtual methods of communication (Richey, Morrison, & Foxon 2007). A case study conducted by Durham and Arrell (2007) identified that the cultural difference between institutions is significant when designing and developing collaborative material. Furthermore, the implementation phase can be influenced by multiple factors that can be "difficult, if not impossible, to predict fully ahead of time in the design and development phases" (Korte, 2006).

One study by Pacifici, Delaney, White, Cummings and Nelson (2005) was resourceful for its scope into foster parent training through an interactive multimedia training program. The article cites several studies on foster parenting, including Rhodes, Orme, Co, & Buehler (2003), which identified that new foster parents are 40% likely to drop out of the system during their first year. Other articles demonstrated the importance of training (Cuddeback & Orme, 2002; Hampson & Tavormina, 1980; Puddy & Jackson, 2003; Simon & Simon, 1982). Training has shown to improve parent attitudes and parent-child interaction, reduce children's behavior problems, increase stability of placement, improve children's social skills, and increase foster parent involvement in maintaining connections with the children's birth parents. Much of the training is developed by individual agencies (Zukoski, 1999). This can lead to varying degrees of quality and information. The delivery of this training can depend on the ability and the experience of the trainer (Grimm, 2003; Puddy & Jackson, 2003). In addition, there are problems with parents attending traditional classroom style training, such as lack of transportation, time, or childcare services. Pacifici et al. evaluated a 30-minute course distributed on DVD to 74 foster parents. Overall, the user satisfaction and perceived quality revealed positive results and supported efficacy of the DVD training. The tests indicated an increase in the parent knowledge and confidence on their understanding and ability to address the issues discussed in the training material.

Training Material: PRIDE Digital Curriculum

The training product used for this research is entitled PRIDE Digital Curriculum (PDC). The researcher of this study was also the Assistant Design Team Coordinator for the multimedia development project. This multi-million dollar production was funded primarily through a Learning Anytime Anywhere Partnership (LAAP) FIPSE grant. A total of 24 disks were developed for the multimedia format from a previous in-class curriculum developed by IL-DCFS, CWLA and 14 other agencies. The curriculum was based on the PRIDE Model of Practice. PRIDE is a professional development training model that stands for Parent Resources for Information, Development, and Education. The disks contain video scenarios, narration, audio sound bites, graphics, animation, text entry, and interaction, such as drag & drop activities. Each of the 24 disks contains relatively 3 hours worth of interactive training.

Research Methodology

Activity theory is suggested (Hyysalo, 2005; Wilson, 2002) for studying the complex, undefined, and situated elements of design, as this theoretical approach examines long-term processes and collaboration within design work. Kuutti (1995) defined activity theory as "a philosophical and cross-disciplinary framework for studying different forms of human practices as development processes, both individual and social levels interlinked at the same time" (p. 23). Activity theory was developed from Vygotsky's (1980) and Leontiev's (1978) social-cultural historical psychology but did not focus on a method for integrating

analysis. Engestrom (1993) developed a model of human activity analysis based on the theoretical framework of cultural historical activity theory. Engestrom's (1993) activity systems model of human activity is used to identify the variables. The activity systems model identifies six variables: (a) subject,(b) object, (c) mediated tool (artifact), (d) rules, (e) community, and (f) division of labor. The basic units of analysis for this case study are the activities involved in the development and implementation phases. Yamagata-Lynch (2003) noted that once a researcher identifies the activity, they "need to shift the focus on the understanding of the motive-goal-instrumental conditions" rather than the behaviors (p. 104). All qualitative data in this study used a coding technique.

Creswell and Plano Clark (2007) noted the mixed-method approach "focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies," which "provides a better understanding of research problems than either approach alone" (p. 5). The mixed-method approach utilized in this research includes a triangulation design comparing quantitative data to qualitative data. A great deal of data was collected for use in this analysis. These data are a compilation from 10 years since its original grant approval. It is not uncommon for a naturalistic study to include an abundance of data, as these data can both guide the investigator and identify areas in context. The purpose of a case study is to understand the context in developing the instructional materials and to reach an understanding of the motivations for the development process in a collaborative setting.

Participants

The participants in this study represent two separate data collections. The first data collection group included 477 participants from an IRB-approved pilot study questionnaire and 20 agency leads participants. The second data collection involves 10 interviews with key members of the development and implementation processes.

Instruments

Three online questionnaires were developed to investigate the implementation during a pilot study. The three questionnaires were distributed to (a) trainers, (b) staff members, and (c) foster /resource family members. An Advisory Group was developed to assist in the organization of the pilot study and 25 out of the 53 agencies throughout the Province of Ontario volunteered. All participants were informed on the onset of the questionnaire that their participation should be voluntarily offered as per the IRB guidelines. Participants were able to skip any online questions.

Findings and Conclusion

The data analysis revealed that the development process was not iterative or systemic as many development models propose but more a parallel process. The six main parallel processes in the collaborative activities were: project management, instructional synergism, design, development, evaluation, and dissemination/implementation. Iterative processes imply a repetition in the activities similar to a cyclic pattern while the systemic process implies a linear process. The study identified the various community members in the project did not necessarily wait for the systemic process to get to their part in the development and their assignments did not always come in cycles. For instance, once templates were designed for certain screen shots, the graphic artist would work ahead on additional modules where the script had not been finalized. The division of assignments facilitated the efficiency of the workflow as individuals took responsibility for their own role in the team and were given lead decision-making permissions based on their contributing knowledge.

The data from this study came from a total of 31 agencies. The interviews represented five agencies while the surveys and focus groups represented 26 agencies. Data from the surveys and focus groups focused on the implementation and revealed slight cultural differences based upon the size and geographic location of its agency. For instance, smaller agencies were less prepared for implementing instructional technology

but they were more positive or optimistic of this method of training. Cultural differences identified through the interviews revealed personality tensions and contradictions in perspectives. Cultural difference in the design and development phases impacted workflow, timelines, and worker moral.

Overall, the study revealed some strengths and weakness of instructional development and the implementation process. The joining of multiple agencies to create this project was extraordinary. Illinois DCFS asked CWLA for assistance in gathering a steering committee from across the nation to develop the original print version of the PRIDE model in 1991. Over 65 individuals with diverse backgrounds, experience and skills contributed. Six agencies, CWLA, and Governors State University continued this instructional synergism for the PDC project. The strength of the synergy is evident in the quality of the PDC. The weaknesses revealed in the study, however, identify that a consensus on the project management, instructional synergism, design and shared vision of a project must be established during the initiating of a partnership.

Significance and Contributions to Future Research

The relevance and importance of this multimedia training in the case study revealed a positive acceptance to this type of training. However, practitioners should be aware that trainers and users may view some elements of the training differently. A multi-audience perspective would be useful within the design phase. In addition, the research identifies the importance of gaining a shared vision right from the beginning of the collaboration. Understanding multidisciplinary collaborations is an essential element for policy development, program success, and improving outcomes. In a age where universities are dealing with budget cuts and methods of producing more with less staff, 'it's important to learn from the lessons that emerged from these FIPSE sponsored partnership projects" (King & Griggs, 2006, p. 48).

References

Correia, A.P. (2008). Team conflict in ICT-rich environments; Roles of technologies in conflict management. *British Journal of Educational Technology. 39*(1), 18-35.

Creswell, D. J. W., & Clark, D. V. L. P. (2006). *Designing and conducting mixed methods research* (1st ed.). Thousand Oaks, CA: Sage.

Cuddeback,, G. S., & Orme, J.G. (2002). Training and services for kinship and nonkinship foster families. *Child Welfare,* 81, 879-909.

Durham, H., & Arrell, K. (2007). Introducing new cultural and technological approaches into institutional practice: an experience from geography. *British Journal of Educational Technology, 33*(5). 795-804.

Engeström, Y. (1993), Developmental studies on work as a testbench of activity theory. In Chaiklin, S., Lave, L. (Eds),*Understanding practice: Perspectives on activity and context* Cambridge: Cambridge University Press.

Grimm, B. (2003, April-June). Child & family services reviews: Foster parent training: What the CFS Reviews do and don't tell us (Part 2). *Youth Law News: Journal of the National Center for Youth Law, 24(2).*

Gustafson, K. L., & Branch, R. M. (2002). *Survey of instructional development models* (4th ed.). Syracuse, NY: ERIC Clearinghouse on Information and Technology.

Hampson, R. B., & Tavormina,). B. (1980). Relative effectiveness of behavioral and reflective group training with foster mothers. *Journal of Consulting and Clinical Psychology, 48,* 294-295.

Hyysalo, S. (2005). Objects and motives in a product design process. *Mind, Culture, and Activity, 12***,** 19-36.

Kim, C, Lee, J, Merrill, M. D., Spector, J. M., & van Merrienboer, J. (2008). Foundations for the future. In J. M. Spector, M. D. Merrill, J. Van Merrienboer, & M. Driscoll. *Handbook of research on educational communications and technology,* (pp. 807-815). New York, NY: Lawrence Erlbaum.

King, K. P,. & Griggs, J. (2006). *Harnessing innovative technologies in higher education. distance learning*. Madison, WI: Atwood.

Kuutti, K. (1995). Work processes: Scenarios as a preliminary vocabulary. In J.M. Carroll (Ed.), *Scenario-based design: Envisioning work and technology in system development.* Chichester, England: John Wiley & Sons Ltd.

Larson, M. B, & Lockee, B. B. (2009). Preparing instructional designers for different career environments: A case study. *Educational Technology Research and Development, 57*(1). 1-24.

Leont'ev, A. N. (1978). *Activity, consciousness, and personality*. Englewood Cliffs: Prentice-Hall.

Pacifici, C., Delaney, R., White, L., Cummings, K., & Nelson, C. (2005). Foster parent college: Interactive multimedia training for foster parents. *Social Work Research*, 29, 243-251.

Puddy, R.W., & Jackson,Y. (2003).The development of parenting skills in foster parent training. *Children and Youth Services Review, 25*, 987-1013.

Rhodes, K.W., Orme, J. G., Cox, M. E., & Buehler, C. (2003). Foster family resources, psychosocial functioning, and retention. *Social Work Research ,27,* 135-150.

Richey, R. C., & Klein, J. (2007). *Design and development research*. Mahwah, NJ: Lawrence Erlbaum.

Richey, R., Morrison, G., & Foxon, M. (2007). Instructional design in business and industry. In R. A. Reiser & J. V. Dempsey (Ed.), *Trends and issues in instructional design and technology*. (2nd ed.) (pp. 173 – 184). Upper Saddle River, NJ: Pearson.

Pfeffer J., & Novak , P. (1976). Joint ventures and interorganizational interdependence. *Administrative Science Quarterly, 21*, 398–418.

Seels, B. B., & Richey, R. C. (1994). *Instructional technology: The definition and domains of the field.* Washington, DC: AECT.

Simon, R. D., & Simon, D. K. (1982). The effect of foster parent selection and training on service delivery. *Child Welfare,* 61, 515-524.

Spector, J. M. (2002). *Knowledge management tools for instructional education.* Columbus, OH: Merrill.

Vygotsky, L. S. (1980). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wilson, B.G., (2002). Trends and futures of education, implications for distance education. *Quarterly Review of Distance Education, 3*(10), 91 -103.

Yamagata-Lynch, L. C. (2003). Using activity theory as an analytic lens for examining technology professional development in schools. *Mind, Culture, and Activity*, *10*(2), 100-119.

Zukoski, M. (1999). Foster parent training. In J.A. Silver, B. J.Amster, &T. Haecker (Eds.), *Young children and foster care: A guide for professionals* (pp. 473-490). Baltimore, MD: Paul H. Brookes.

About the Presenter

Robin Wyatt has been involved in instructional development for 10 years and has taught television studio courses for the last eight years. She received her B.A. in Communications (2001) and a M.A. in Communications and Training (2003), with a concentration in multimedia, at Governors State University. She has worked on a large-scale multimedia training project with global distribution. Robin has also been involved in video production, Hyysalo, 2005 Web development, managing the university signage system and running the university cable station. Meanwhile, she continued her studies and will earn her EdD in Instructional Technology at Northern Illinois University in August 2011. Her current research interests involve activity systems and the instructional synergy within instructional technology team environments.

Address: Governors State University
Division of Digital Learning and Media Design
1 University Parkway
University Park, IL 60484
Phone: 708-235-7377
Email: rwyatt@govst.edu

Implementing a Transformation Zone: Conditions for Successful Online Program Conversion

Rita L. Poth
Academic Director
University of Cincinnati

Dani Peterson
Associate Director
University of Cincinnati

Introduction

The administrative level charge to convert the Substance Abuse Counseling program to an asynchronous online Bachelors Degree was determined after a within college program transfer at the University of Cincinnati College of Education, Criminal Justice and Human services. This decision called for not only the re-design and conversion of the program itself, but the creation of systems structure and support within the college to ensure a successful outcome. The work of Dean Fixsen and his colleagues at the University of South Florida (Fixsen, et. al., 2005) describes the critical requirement of planful implementation practices essential in order to put a new program or innovation in place, and to install systems structure and functions which are geared toward a continuous cycle for sustaining, improving and growing both systems infrastructure, as well as the innovation/program itself. A framework emerging from the implementation research which is a helpful conceptualization for attending to systems support which would allow for successful innovation or program change is the Transformation Zone (Fixsen, et .al., 2009).

Transformation Zones

By definition, a Transformation Zone is "a vertical slice of an education system. The slice is small enough to be manageable, but large enough to include all aspects of the system." (Fixsen, et. al., 2009). Introduction of the new improved online Substance Abuse Counseling Program could not be successful without the systems support to create, implement, and sustain it. Adapting the concepts of the Transformation Zone for purposes of the online program conversion required creation of the following key elements. (see Figure 1)

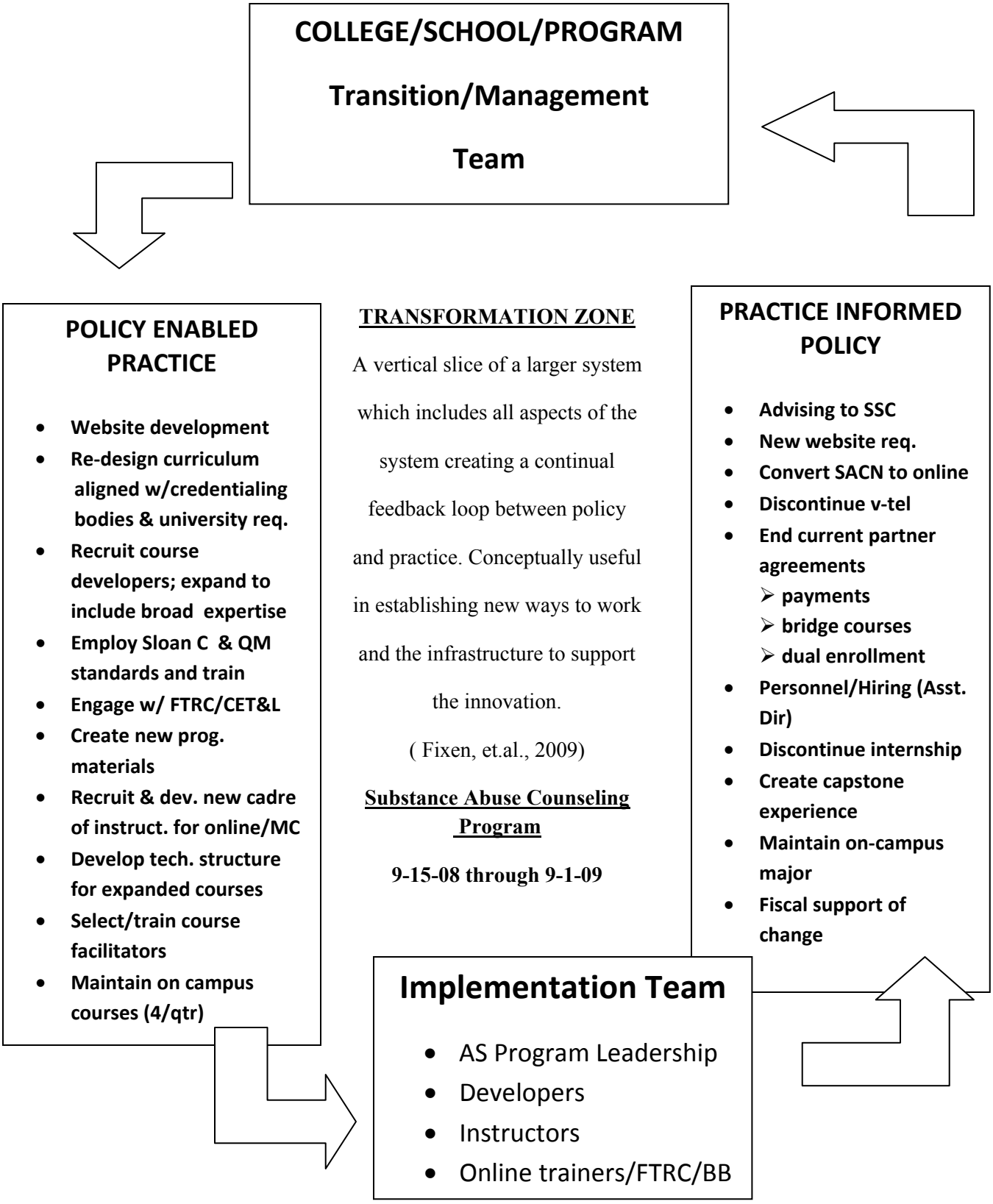
- **The College/School (Division)/ Program Team**
  The College/School/Program Team represented the Dean's office (Assistant Dean), the School or Division (School Director), and the Substance Abuse Counseling Program (SACN Director and Assistant Director). This Team agreed upon the value of the online program conversion, the potential for scalability and capacity development, standards for quality improvement and sustainability, formalized feedback loops , self-assessment of fidelity of policy and practice implementation, and use of and reporting of evaluation data. The team met weekly during this phase to identify and address policy and practice barriers and existing supports with perspective from the top down and bottom up represented.

- **Practice Informed Policy**
  Policy that is developed to consider and address information, issues, and concerns with input from the persons implementing the innovation/program on the ground level, empowers, facilitates, and motivates the ongoing implementation of the new program. In the example described in this paper, there were policy barriers and existing supports for the

College/School/Program Team to analyze. Policy/practice barriers included student advising structure, existing community college agreements for distance video delivery and student transfer, insufficient program staff, technology coordination across IT (information technology) and ID (instructional Design), fiscal support . Existing policy supports included commitment across the team for the online conversion process, continuing to work as a team, acquiring new learning (formal and informal), technology personnel, and support for online marketing approaches.

- **The Implementation Team**
  The Implementation Team consisted of the Substance Abuse Counseling Program Director and Assistant Director, new course developers, selected course instructors, and online trainers from the university- based Faculty Technology Resource Center (Blackboard and course design support and training).

- **Policy Enabled Practice**
  Policy enabled practice is exemplified by new structures, functions, and activities, omission/waiver or flexibility of application of not relevant or useful policies/practices , and a focus on tasks which move to implement the new program. Policy decision makers have been informed by those who implement practices in a reciprocal, ongoing loop of communication. Online conversion activities supported by policy/practice decisions made by the College/School/Program Team included: new program website, new student forum site, instructor support/resource site development, curriculum re-design aligned with credentialing bodies and university requirements, recruiting new course developers, evaluate and select new instructors, learn and employ online course/program standards from Quality Matters and Sloan Consortium, form partnership with Faculty Technology Resource Center, create new marketing and course materials, develop technology for courses with expanded numbers, select and train course facilitators (for >50 enrollees), maintain on campus course (4 per quarter), phase out former community college agreements, and develop faculty professional development for online course development and instruction.



Outcomes

A Transformation Zone model application was used to initiate a degree program conversion from a video distance and on-campus approach to a completely asynchronous online program while keeping a part of the on-campus course offerings. The transition of the Substance Abuse Counseling Program (SACN) to fully online was achieved through this system-wide feedback loop between policy (infrastructure) and practice (online conversion). Transition priorities were supported for program re-design and quality improvement, and new technologies and support systems for students and instructors. The outcomes reported represent an initial work phase from September 15, 2008 through November 1, 2009.

Data collected on the following measures yielded these results. The student enrollment numbers pre and post online conversion showed a 60% increase overall. The total revenue impact of the online conversion translated into over $800,000 in Fall 2009, up from $500,000 from Fall 2008. This increase represents a profit of over $300,000 in tuition revenue ($262/credit hour) in one academic year. In addition, outcomes will be shared concerning online expansion across school and college, and instructor learning and feedback.

Next Steps – Beginning Fall 2009 through present

- Quality Matters professional development; certified QM reviewers; Development of standardized QM master template for all school online courses
- Online instructor café (networking and resources for development and design)
- Faculty/adjunct instructor training process for online courses/programs
- School of Human Services online expansion across all programs
- Brown Bag meetings for information sharing, problem solving, new technology
- University level planning and advisory groups for campus wide consistency and quality in online education
- College level online/technology/instructional design committees
- Course development and review protocol for faculty and adjunct instructors
- Course evaluation and feedback loop for continuous improvement utilizing the QM rubric and standards
- Research and evaluation on processes and products

References

Fixsen, D. L., Blasé, K. A., Horner, R., & Sugai, G.(2009) Scaling-up evidence-based practices in education. *Scaling-up Brief #1*.Chapel Hill: The University of North Carolina, FPG, SISEP.

Fixsen, D. L., Naoom, S. F., Blasé, K. A., Friedman, R.M., & Wallace, F.(2005). *Implementation research: A synthesis of the literature.* Tampa: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).

About the Presenters

Rita L. Poth, Ph.D. became interim Academic Director of the Substance Abuse Bachelor's Degree Program at the University of Cincinnati, summer 2008. Prior to that appointment, Dr. Poth served as Director of an Ohio Regional Special Education Center during her thirteen-year tenure. Dr. Poth's background is in the field of Psychology/School Psychology with experience in practice and administration. As Academic Director of the Substance Abuse Program, she was charged with the role to transition the program from an on-campus/video teleconference format to a fully online delivered degree program with accessibility for both the four-year degree seeking, and degree completion student.

Address: University of Cincinnati
513 Dyer Hall
Cincinnati, OH 45242
E-mail: rita.poth@uc.edu
Phone: 513.556-3575
Fax: 513.556.3898

Dani Peterson became Associate Director of the Substance Abuse Bachelor's Degree Program (SACN) at the University of Cincinnati, winter 2009. Prior to that appointment, Ms. Peterson served as Academic Coordinator for Florida State University's Academic and Professional Program Services Online Division. Her expertise lies in the area of online program curriculum, course design and development and related instructional technology. As Associate Director of the Substance Abuse Program, the focus of the role was to execute the transition plan of the conversion of the Bachelor's Degree Program in SACN from an on-campus/video teleconference format to a fully online delivered degree program with accessibility for both the four-year degree seeking, and degree completion student. Currently, Ms. Peterson's role is to oversee development and design evaluation and continuous improvement across all new online courses, programs and certificates for the School of Human Services.

Address: University of Cincinnati
504 Dyer Hall
Cincinnati, OH 45242
E-mail: dani.peterson@uc.edu
Phone: 513-556-9199
Fax: 513-556-3898

Best Practices for e-Connectivity in Online Courses

Andree C. Swanson
University of Phoenix

Introduction

In a review of contemporary literature, research revealed that students believe they cannot connect with their instructors in online classrooms (Hughes, Ventura, & Dando, 2007; Stichter, Lewis, Richter, Johnson, & Bradley, 2006). Faculty, administrators, curriculum designers, and student advisors in institutions that offer online programs do not adequately address the social and psychological connectivity needs of students (DeShields, Kara, & Kaynak, 2005). This lack of attention to the social and affective needs has a negative effect on learner satisfaction and retention (Bonk, 2002; Melrose & Bergeron, 2006; Moody, 2004; Simpson, 2004; Slagter van Tryon & Bishop, 2006). Specific guidance on social interaction in the proprietary online classroom does not exist. Because of the absence of guidance, training on e-connectivity is lacking for online faculty and students' satisfaction is decreased leading to a higher attrition rate (Dow, 2008; Drouin, 2008; Herbert, 2006; Scollins-Mantha, 2008).

Definition of Terms

E-mmediacy or *e-connectivity* is the feelings or believing of social connectedness that students and faculty get through the technologically enhanced online learning environment (Slagter van Tyson, 2007; Slagter van Tyson & Bishop, 2006).

Framework

Serving as the framework for the study were many theorists. Ryan and Deci's (2000) demonstrated that students gather data and are supported through social environments. Bandura's (1977) expressed people learn best in a social environment, modeling behaviors. Stahl, Koschmann, and Suthers (2006) “social theory of computer supported collaborative learning (CSCL)” (p. 1) discussed the effectiveness of using peer-facilitated discussion boards. Bloom’s (1978) taxonomy provided a framework for the overall study.

Study Methodology

A modified Delphi, qualitative method, was used to gather data, which included three rounds of questionnaires administered through Surveymonkey.com. Selecting a panel of experts was difficult and had to fit specific categories. Faculty participants were limited to those with doctoral degrees who worked at proprietary distance learning schools for at least 36 months. Student participants had at least two years of online learning experience. The HLC/NCA region of “Arkansas, Arizona, Colorado, Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, Oklahoma, New Mexico, South Dakota, Wisconsin, West Virginia, and Wyoming” provided the geographical boundaries (HLC/NCA, 2009, para. 1). Faculty and students were then deemed experts by virtue of their experience in the online classroom.

The goal of the questionnaires was to develop recommendations to establish the best practices for social interaction in the proprietary online classroom. The survey focused on the teaching, learning, and computer literacy facilitator competencies; computer and institutional support provided; and facilitator affective skills needed to deliver courses that produce a high level of learner satisfaction. The perceptions of the online facilitators and students were analyzed and a list of best practices for social interaction in the proprietary online classroom was created.

The expert faculty members were asked the overarching question: *What do faculty panel members believe can be done to improve social connectivity in a distance-learning classroom?* Whereas, the expert distance-learning students were asked: *What do distance learning students believe can be done to improve social connectivity in a distance-learning classroom?* Asking both online educators and students these questions enabled a synthesis of responses to analyze and establish best practices. Of note was that previously, students had not been considered experts in online education; however, adding online students addressed this missing component (Slagter van Tyson & Bishop, 2006).

Slagter van Tyson and Bishop (2006), who were the key inspiration for this study, noted that an essential element missing from their study were the opinions of students and teaching assistants who have taken distance education courses. Dr. Swanson's dissertation incorporated faculty experts' and students' responses and asked the following four research questions:

1. What non-technology features can be included to best accommodate all learning styles,
2. How can an instructor effectively motivate online students,
3. What kinds of contact may occur in an optimal online educational environment or learning management system, and,
4. How can faculty reach the social and psychological needs of the students?

As a frame of reference for four categories, both the panel of educational experts and students were asked to identify content that involves the cognitive, affective, and psychomotor domains based on Bloom's Taxonomy (1978).

A pilot study was conducted, and then three rounds of survey questions seeking consensus each round. If consensus was not achieved, the question was modified to narrow in on the targeted area of concern. Overall, 81 separate questions were created to develop expert data for recommendations for content needed the social, psychological, and e-connectivity needs of proprietary institutions, distance learning students. The participants answered the quantitative questions by responding to the Likert scale.

Findings

The faculty and student expert panelists responded to nine overarching questions (see PowerPoint), broken into 81 questions, administered through three different rounds. The responses were robust and provided the basis for the list of best practices for social interaction in the proprietary online classroom. The results may potentially provide leaders and administrators with a model for increased connectivity in the distance-learning classroom and a list of criteria for hiring qualified distance learning faculty. These responses provided developed into specific guidance on social interaction in the form of a list of best practices based on Bloom's Taxonomy and into three different themes: 1) Cognitive, show relevance to students, 2) Affective, e-connectivity, instructor presence, positive communication, open to social networking, and students' social and psychological needs, and 3) Psychomotor, use of technologies to e-connect.

Cognitive Domain

In the cognitive domain, faculty should show relevance to students: (a) encourage students, (b) express in words that student success is important, (c) incorporate case studies, (d) make resources available for students to succeed, (e) provide scenarios that are meaningful and help students apply learned information, (f) remind students of their goals, and (g) show relevance of course materials to students' career goals. Faculty should not include collaborative group projects outside of the curriculum nor pass students without regard to standards.

Affective Domain

In the e-connectivity theme, faculty should be accommodating, caring, encouraging, flexible, and warm.

Faculty should connect emotionally with students. In the instructor presence theme, faculty should: 1) focus on a successful learning model that establishes a high standard of pedagogy, 2) maintains a constant and consistent presence, 3) maintain a high standard, and 4) remain flexible.

In the positive communication theme, to motivate students, faculty should be: (a) accommodating, yet firm and consistent, (b) approachable through frequent communication, (c) aware of communication problems that exist, and (d) honest in all interactions. Faculty should communicate: (a) clearly, effectively and convey a caring tone, (b) constructive feedback, (c) create a course calendar with assignment due dates at the beginning of each course, (d) promptly, (e) provide constructive feedback, and (f) use encouraging words. Faculty should provide: (a) constructive feedback, (b) thorough and positive feedback, and (c) negative (constructive) feedback. Avoid negative feedback in a public classroom forum. Faculty should communicate: (a) via e-mail, (b) honestly, (c) promptly, (d) clearly, effectively, and convey a caring tone, (e) due dates for assignments at the beginning of each course, (f) firmly, consistently, and accommodate students, and (g) with encouraging words. Acknowledge problems that exist in the online learning environment. Faculty should be accommodating and encouraging to students and remain flexible.

In the open to social networking theme, faculty should use social networks in and outside the online classroom, create social networks in the classroom and virtual events outside of the classroom. In the online classroom, faculty and students would, if available, participate in a classroom café and share off topic (i.e., photos, recipes). In the online classroom, faculty and students would not use Facebook, Twitter or Web 2.0. Faculty and students have not participated or used the following items to support an online classroom or to connect with another student in a classroom café, Twitter, and Web 2.0. To encourage students, faculty should use social networks (i.e., Facebook, MySpace).

In the students' social and psychological needs of students theme, faculty should be trained and knowledgeable of the different learning styles of students and the psychological make-up of the student. Faculty should not be responsible to meet the social and psychological needs of the online learner nor should they disregard the online students' social and psychological needs.

Psychomotor Domain

In the use of technologies to e-connect theme, to engage students and build community, faculty should integrate multimedia, use message boards, and use the asynchronous classroom. Faculty should integrate video and audio. To engage and build community, incorporate e-mail (most effective method), instant messaging, telephone / telephone conferences, web-based synchronous voice phone (i.e., Skype), webcams, discussion boards, asynchronous message boards, live chat sessions, blogs, synchronized meetings, asynchronous chat rooms outside the classroom, and social networks (i.e., Facebook, MySpace). The most effective methods for reaching online students are e-mail, phone calls, and asynchronous discussion boards. Of note are these methods were found to not be effective for reaching online students: phone calls, live, synchronized online chat is not the most effective method for reaching the online students, a web-based phone call, and a PowerPoint with visual and music. To encourage students: 1) incorporate instant messaging, 2) create online videos, and 3) use webcams.

The list of best practices is available as a handout. The data gathered indicated that recommendations could be made to online administrators and faculty to use the list of best practices as a seminal point for establishing guidelines for meeting the social e-connectivity needs of online learners. The findings from this Delphi study, and potential future studies, ensure that online learners will have increased opportunities to e-connect with faculty and students alike.

Next Steps

Based on the data and findings, a list of best practices for social e-connectivity was produced and recommendations have been noted. These recommendations can serve as a starting point for implementation in online classrooms and prepare faculty for the online students. This list of best practices may be expanded and incorporated into proprietary and non-profit online institutions at the graduate and undergraduate level. Based on these findings, future research may be conducted in the following areas:

1. Conduct a quantitative method study at specific school(s) to further develop their own list of best practices based on research.
2. Conduct a qualitative or quantitative study reviewing a school's already created list of best practices.
3. Conduct quantitative studies based on the themes that arose based on Bloom's taxonomy.
4. Conduct a study on the development of course materials (syllabus) to improve their relevance to online instruction.
5. Conduct a qualitative or quantitative study on the effectiveness of applying the list of best practices into online faculty training.
6. Conduct a quantitative study focusing on the communication theme that arose and assess this for different populations such as doctoral students, graduate students, and undergrad students.
7. Conduct a qualitative study focusing on the students' perceptions of e-connectivity.
8. Set up an experiment using a control group to evaluate the effectiveness of different social media in the online classroom.
9. Conduct a qualitative or quantitative study on the effectiveness on e-connectivity using social media such as Facebook or Twitter.
10. Conduct a case study on a school, such as University of Wisconsin -- Oshkosh, on their understanding and application of e-connectivity through social media.

References

Bandura, A. (1977). *Social learning theory*. New York,NY: General Learning Press.

Bloom, B. (1978). New views of the learner: Implications for instruction and curriculum. *Educational Leadership, 35*(7), 563-576. Retrieved from EBSCOHost database.

Bonk, C. (2002, March). Online training in an online world. [Electronic version]. *USDLA Journal, 16*(3).

DeShields, Jr., O. W., Kara, A., & Kaynak, E. (2005). Determinants of business student satisfaction and retention in higher education: Applying Herzberg's two-factor theory. *International Journal of Educational Management, 19*(2), 128-139. Retrieved from Emerald article database.

Dow, M. (2008). Implications of social presence for online learning: A case study of MLS students. *Journal of Education for Library and Information Science, 49*(4), 231-242. Retrieved from Research Library. (Document ID: 1647738511).

Drouin, M. (2008). The relationship between students' perceived sense of community and satisfaction, achievement, and retention in an online course. *Quarterly Review of Distance Education, 9*(3), 267-284. Retrieved from ProQuest Education Journals. (Document ID: 1669462571).

Herbert, M. (2006, Winter). Staying the course: A study in online student satisfaction and retention. *Online Journal of Distance Learning Administration, IX(IV).* Retrieved from http://www.westga.edu/~distance/ojdla/winter94/Herbert94.htm

Higher Learning Commission of the North Central Association of Colleges (HLC/NCA). (2009). *What is the Higher Learning Commission?* The Higher Learning Commission. Retrieved from http://www.ncahlc.org/

Hughes, M., Ventura, S., & Dando, M. (2007, February). Assessing social presence in online discussion groups: A replication study. *Innovations in Education and Teaching International, 44*(1), 17-29. Retrieved from ProQuest database.

Melrose, S., & Bergeron, K. (2006). Online graduate study of health care learners' perceptions of instructional immediacy. *The International Review of Research in Open and Distance Learning, 7*(1). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/255/477

Moody, J. (2004, Fall). Distance education: Why are the attrition rates so high? *The Quarterly Review of Distance Education, 5*(3), 205-210. Retrieved from ProQuest Education Journals database. (Document ID: 844311651).

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78. Retrieved from http://www.psych.rochester.edu/SDT/documents/2000_RyanDeci_SDT.pdf

Scollins-Mantha, B. (2008). Cultivating social presence in the online learning classroom: A literature review with recommendations for practice. *International Journal of Instructional Technology & Distance Learning, 5*(3). Retrieved from http://www.itdl.org/journal/Mar_08/article02.htm

Simpson, O. (2004, February). The affect on retention of interventions to support distance learning students. *Open Learning, 19*(1). Retrieved from ProQuest database.

Slagter van Tryon, P. J. (2007). E-mmediacy strategies for online learning: An instructor's guide and instrument for the design and evaluation of social connectedness in web-based courses. Ed.D. dissertation, Lehigh University, United States -- Pennsylvania. Retrieved from Dissertations & Theses: Full Text database. (Publication No. AAT 3314496).

Slagter van Tryon, P. J., & Bishop, M. J. (2006). Identifying "e-mmediacy" strategies for Web-based instruction: A Delphi study. *Quarterly Review of Distance Education, 7*(1), 49-63. Retrieved from ProQuest database.

Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: an historical perspective. Drexel University. 1-20. Retrieved from http://www.ischool.drexel.edu/faculty/gerry/cscl/CSCL_English.pdf

Stichter, J. P., Lewis, T. J., Richter, M., Johnson, N. W., & Bradley, L. (2006). Assessing antecedent variables: The effects of instructional variables on student outcomes through in-service and peer coaching professional development models. *Education & Treatment of Children, 29*(4), 665-692. Retrieved June 6, 2009, from ProQuest Psychology Journals database. (Document ID: 1161697531).

About the Presenter

Andree Swanson is adjunct faculty at Community College of Aurora, Ashford University, Grand Canyon University, College for Financial Planning, and Kaplan University. Dr. Swanson' s academic interests are in business and educational leadership and distance education. Dr. Swanson is an active member of the Colorado Distance Learning Association, MERLOT, and Sloan-C. The source of this work was Dr. Swanson's dissertation completed in November 2010 at the University of Phoenix. (See Swanson, A., Hutkin, R., Babb, D., & Howell, S., 2010, September). *Establishing the best practices for social interaction and e-connectivity in online higher education classes*.)

Address: 10259 Jill Avenue
Highlands Ranch, CO 80130
Phone: 303-506-6449
Email: andreeswan@aol.com

Library Services for the Distance Learner: A Library Needs Assessment at Oregon State University

Stefanie Buck
Ecampus/Instructional Design Librarian
Oregon State University

Introduction

Online or distance education programs offer a convenient and flexible alternative for students who want to pursue a higher education degree but cannot attend classes at a university campus. Distance education is a rapidly growing trend in the United States. The Sloan-C *Learning on Demand Report* (2010) noted a 17% growth rate for online learning compared to the 1.2% growth rate of the regular higher education enrollment (Allen & Seaman). As the online programs grow and expand, so does the need for access to campus services, including the library.

At Oregon State University, a mid-sized land grant institution, online programs (Ecampus) represent a growing university population with enrollment rising up to 40% every year for the last 6 years (Reed, 2009). Students taking courses online require services such as book and article delivery in addition to access to online databases, an online catalog, and research assistance. The library literature indicates that students and instructors do not always use library services to their full potential (Dinwiddie & Lillard, 2002; Stockman & Turtle, 2004). One of the principle issues identified in the literature is the often low level of awareness among distance education students of available library services (Cooper, Dempsey, Menon, & Millson-Martula, 1998; Kelley & Orr, 2003). Even those who are aware do not always make use of these services to their fullest. The use of library sources among distance learners remains low even as the need for library services and resources is high, particularly when students are becoming more skeptical of Web sources and want reliable information (Kelley & Orr). Access to these resources, therefore, is critical. Libraries and distance education programs can work together to raise awareness among students and instructors. Understanding what the awareness levels and the issues among distance learning in accessing library services are the first steps in closing the gap.

A needs assessment conducted in 2009 by the Ecampus Librarian at Oregon State University Libraries aimed to answer the following questions regarding Ecampus instructors and students and library resources:

1. Awareness of library resources and services
2. Use of library resources
3. Instruction and user education services and needs

Study Methodology

The method for gathering data for this study was through surveys, discussion groups, and interviews of library and Ecampus staff. A 25-question survey with both closed and open-ended questions was sent out to 1,500 students and 300 instructors in the Ecampus program. Eleven students and instructors participated in discussion groups using virtual conferencing software. Finally, 11 faculty and staff in the OSU Libraries and Ecampus were also interviewed.

The results of the survey were too small to yield statistically significant results. Sixty-four students and 62 instructors responded to the survey. Although small, the issues that the survey revealed were not unexpected when compared to the issues identified in the literature. In combination with the results of the discussion groups and interviews, the data provide some useful information for follow-up and issues that should be addressed by the library and Ecampus program and can provide a guide for other institutions.

Results

Awareness and Use

OSU Library provides an array of services to students and instructors at a distance including online databases and e-journals, electronic delivery of journal articles and mail delivery of books from the library, interlibrary loan services, and research and instruction in the use of library resources.

In this study, the students were more aware of some of these services than others were. Almost 90% of the students said they knew about the OSU Libraries home page, which is the main starting point for library research. Students were aware of the library catalog (71%) and the online databases, but less aware of some of the unique services, such as access to consortial libraries (59%) and Interlibrary Loan (19%). Interlibrary Loan acquires books and journal articles and sends these to distance students, so it is a critical service point for them. Students also did not know where to get research assistance. Many institutions have a designated distance education librarian who can assist students and instructors in the use of library resources. Thirty-five percent of the students were not aware of this option. Overall, 11% of the student respondents had not learned about the library at all, despite the required Ecampus orientation that contains a library unit. This puts them at a disadvantage compared to on-campus students.

The library needs assessment overall indicated a high level of use among the students; 71% use it weekly or monthly. However, given the small sample size, this cannot be considered conclusive. Previous surveys (2008, 2009) that had a larger response rate indicated that use is at about 48%. Those students who are aware of the services use the services regularly if not frequently but, again, this applies only to some services. Interlibrary Loan (8%) and Summit (9%) were the least used services, which is most likely a reflection of the general lack of awareness. Use of the services is not always easy. One barrier that the students frequently mentioned was the library Web site itself. They found it difficult to use and it was confusing to them how to get the articles once they had identified them. Instructors did not have this same issue with the Web page, but they did feel that the Web site is a potential barrier to the students and may discourage them from using library resources.

Instruction and User Education

How and where students learn about the library resources is crucial to their awareness and use. Instructors play a vital role in connection students to library resources and many of the students in this survey learned about the library from their instructors (31%). Adams and Cassner (2001) pointed out that “instructors are influential in affecting student perceptions of, and their use of, the library” (p. 6). Instructors too were aware of some services and resources but not others, specifically the consortial library services. Since most of the instructors were on-campus, they already had some familiarity with the library. However, when it comes to passing this information along, instructors were inclined to believe that they provide more information about the library than the students think they do. If they did provide information about the library, it was more likely to provide information about the library than in the actual use of library resources and some instructors provided no library information (27%). There were different reasons for this. Twenty-four percent of the instructors agreed that their students already know how to use library resources and therefore did not provide any additional information or instruction. Most instructors did provide, at a minimum, a link to the OSU Libraries Web site. The students, however, commented that the instructors had not provided them with a lot of information about the OSU Libraries or how to use it, and, although some may have suggested the OSU Libraries, the general expectation was to use whatever means necessary to get the resources for the paper or project.

Some instructors were making use of the number of the services offered to help the students access library materials, such as creating direct links to articles (55%) or adding library information to the course syllabus (42%), but not as many were asking for course pages (13%), which are guides for the students to locating effective library resources or asking a librarian to participate in a course Blackboard (0%). In

most cases, they were not aware of these services. Twenty-six percent of the instructors did not know they could ask a librarian to participate in a class.

Even those students who knew about the library services did not ask for individual research assistance. Most students (60%) indicated they had never contacted a librarian for research help. In some cases, the difference in time zones made contacting the library more difficult for some students, but it was also an awareness issue. Both students and instructors were interested in additional library instruction. They wanted tutorials and guides that explain to them not only what is available to them, but how to conduct research in the most efficient manner.

Students are heavy users of online resources and, for many, if it is not electronic, it does not exist. Many university libraries will send books and copies of journal articles to students at a distance. In this survey, the use of the service was low due in part to a lack of awareness but also because of time. If a journal article is not immediately available online, they ignored it rather than requesting it through interlibrary loan. They also indicated they are reluctant to borrow books because of the shipping time and, in part, the cost. Students expressed a need for more full-text online journals (94%) and would like more e-books (42%), which will allow them to preview the contents. They were also interested in the possibilities of streaming videos (44%). Instructors were also interested in ebooks as a more accessible alternative to hard copy.

On a more positive note, overall satisfaction with the library was high. It was higher for instructors than for students. Eighty-eight percent of the faculty agreed that the OSU Libraries are giving them the assistance they need to conduct their research or studies. Fifty-nine percent of the students agreed. If we can lead the students to the right resources and help them in using these sources easily and effectively, they will most likely use them again in the future.

Recommendations

Instructors often complain that students are not using quality sources in their research (Tomaiuolo, 2005). Libraries pride themselves on being the best source for credible and scholarly resources but only if the students know about them and can use them. What can distance education departments or programs and libraries do to help get students to the library resources? Library outreach to distance education students and instructors is crucial but distance-learning programs play a key role in getting the word out. A coordinated effort between the two areas can mean the difference between a student finding and using the best resources or just settling for what's out there.

Raise the Awareness

New services and initiatives need to be marketed aggressively to distance education students and instructors. A good marketing plan to help get the word out about the library and in particular the new services that students may not know about is essential. This needs to include both high tech and low-tech options such as brochures, e-newsletters, targeted emails, presentations and information on the website. The distance education program and the library need to leverage all of the different contact points the program has with students and instructors. Students and instructors suggested that there needs to be more communication between the library and themselves. At OSU, some college advisors have Blackboard sites just for their advisees or send out advising packets to students. These are two places where library information can be included. A distance education program can help make the library Web site more visible in the CMS, which is the students' main point of entry to the university and their coursework. Distance education programs often offer introductory courses or Webinars or orientation programs for incoming distance education students. Making the library a part of that orientation is critical to forming student research habits early on.

Target the Instructors
The impact of the instructor in raising the awareness of the students should not be underestimated. Because they play such a vital role in connecting students and the library, distance education programs and the library need to target the instructors, particularly those with research intensive courses (Dermody, 2005; Gandhi, 2003). Getting the word out to students is important but it is the instructor–student interactions that bring the most benefit. Instructors need to know about the sources available but also need to know about their own students' library research skills. Offering an orientation to instructors new to the distance education program before beginning of the school year can help to raise their awareness and thereby their students awareness. Regular contact through a variety of coordinated methods, such as email, newsletters, brochures, etc. will also help raise instructor awareness.

Provide More Instruction in Different Forms
A number of comments indicted that students would like to learn more about the library earlier in their course of study. They also wanted instruction "on demand" so they can learn at a time and place most convenient to them. Tutorial, guides, and handouts need to be in a place where students can easily find them and in a variety of formats. The students recommended embedding the tutorials in Blackboard or having the instructors' link to them from the CMS. Students often have Blackboard open already because they are doing homework so they will be more likely to see them there. Library-related information and tutorials can also be added to the distance education program page Web page. Access to these resources needs to be in a place distance students frequently visit. They also need to be easy to use.

Address Resource and Service Needs
The library will not be able to purchase all of the resources that distance education program students and instructors want. Instead, the services such as Interlibrary Loan and use of consortial agreements that can help students get additional materials need to be advertised better and instructors need to be made aware of the time factors involved with getting these materials. New resources need to be advertised widely. When the library has to cut sources, including distance education programs, in any serial cancellation or major library collection changes will help to keep people informed. Libraries are moving heavily to online sources and purchasing full-text online journals whenever possible, which is a great boon to distance learners. The library and distance education program can investigate ways the distance program can supplement the purchase of new online journals or to purchase online versions of older journals currently only in paper. It is also vital that the library and the distance learning program establish a procedure to work together more closely when new programs come up or as new courses go online to ensure that the library has what the instructor needs to that the library can get the item.

Gather More Information
Even something like the OSU survey reported on here has done something to raise the awareness, a phenomenon experienced by others conducting library surveys among distance users (Adams & Cassner, 2001). Some of the instructors commented that this survey was the first they had heard about the library and that they intended to learn more, now that they knew about it. "Thanks for taking the time to put out this survey," one instructor wrote, "this is in itself is a good way to spread information about Library services." Raising awareness requires constant effort. "Keep beating the drum in regard to the services that are available," wrote an instructor," we need to learn and be (continually?) reminded of what is there. That's the only way I am going to realize how I can use these services" and hopefully pass that information on.

References

Adams, K. E., & Cassner, M. (2001). Marketing library resources and services to distance faculty. *Journal of Library Administration, 31*, 5-22. DOI:10.1300/J111v31n03_03

Allen, I. E., & Seaman, J. (2010, January). *Learning on demand: Online education in the United States, 2009*. Babson Survey Research Group/The Sloan Consortium. http://www.sloan-c.org/publications/survey/pdf/learningondemand.pdf

Cooper, R., Dempsey, P.R., Menon, V., & Millson-Martula, C. (1998). Remote library users: Needs and expectations. *Library Trends, 47*, 42-64. Retrieved from http://www.press.jhu.edu/journals/library_trends/

Dermody, M. (2005). We cannot see them, but they are there: Marketing library services to distance learners. *Journal of Library & Information Services in Distance Learning, 2*, 41-50. DOI: 10.1300/J192v02n01_04

Dinwiddie, M., & Lillard, L. L. (2002). At the crossroads: Library and classroom. *Journal of Library Administration, 37*, 251-267. DOI:10.1300/J111v37n01_21

Gandhi, S. (2003). Academic libraries and distance education: Challenges and opportunities. *Reference & User Services Quarterly, 43*, 138-154. Retrieved from http://www.rusq.org

Kelley, K. B., & Orr, G. J. (2003). Trends in distant student use of electronic resources: A survey. *College & Research Libraries, 64*, 176-191. Retrieved from http://crl.acrl.org/

Reed, A. S. (2009, August 1). *Division outreach and engagement academic report for 2008-2009*. Oregon State University. Retrieved March 23, 2010 at http://extension.oregonstate.edu/extadmin/sites/default/files/2008-2009oeacademicreport.pdf

Stockham, M., & Turtle, E. (2004). Providing off-campus library services by team: An assessment. *Journal of Library Administration*, *41*, 443–457. DOI:10.1300/J111v41n03_09

Tomaiullo, N. G. (2005). Faculty views of open web resources use by college students. *Journal of Academic Librarianship, 31*, 559-566. doi:10.1016/j.acalib.2005.08.014

About the Presenter

Stefanie Buck is the Ecampus and Instructional Design librarian at Oregon State University. She has held this position since July 2009. Prior to joining the faculty at Oregon State, she was the Extended Education librarian at Western Washington University in Bellingham, WA. She has taught library research skills online and to distance education courses.

Address: 121 The Valley Library
Oregon State University
Corvallis, OR 97331
Phone: 541-737-7273
Email: stefanie.buck@oregonstate.edu

Information Sessions

Information Sessions

Assessment Track

Screencasting: Results of a Pilot Study and Practical Applications

Kathleen Mathieson, PhD, CIP
Assistant Professor, Doctor of Health Sciences Program
Arizona School of Health Sciences, A.T. Still University

Introduction

In face-to-face instruction, verbal and non-verbal cues are important in facilitating understanding, but online courses often rely primarily on text and lack paralinguistic cues such as body posture, voice intonation, and facial expression (Ice, Curtis, Phillips, & Wells, 2007; Liu, Bonk, Magjuka, Lee, & Su, 2005). Thus, an online learning environment frequently requires instructors to modify their teaching style, develop new skills and strategies, and adopt new instructor roles (Berge, 2000; Heuer & King, 2004; Liu et al., 2005). It has become increasingly important to examine methods that may foster community, improve communication, and ultimately enhance teaching and learning in an online environment.

Multiple theories have been developed to describe the factors, relationships, and interactions that comprise distance education. Among these, Moore's Theory of Transactional Distance is perhaps the most widely used (Moore, 1993). This theory conceptualizes the "psychological and communications space," or the transactional distance, as instrumental in shaping the distance education experience (p. 22). Moore described three variables that affect the distance education experience and the level of transactional distance: dialogue, structure, and autonomy. Dialogue refers to positive interactions between individuals in the learning environment that are aimed at improving student understanding. Structure refers to the degree of "rigidity or flexibility" of the educational program (p. 23) and autonomy refers to "the extent to which in the teaching/learning relationship it is the learner rather than the teacher who determines the goals, the learning experiences, and the evaluation decisions of the learning programme" (pp. 26-27).

While validity of the Theory of Transactional Distance has been questioned (Gorsky & Caspi, 2005), it has also been described as a "core theory in the field" (Giossos, Koutsouba, Lionarakis, & Skavantzos, 2009, p. 1). Gokool-Ramdoo asserted that Transactional Distance Theory can be considered a "global theory" and that "a transactional approach seems to be consciously or unconsciously adopted by theorists and practitioners alike" (2008, p. 1).

Shearer expanded on the Theory of Transactional Distance by developing a conceptual definition of dialogue and testing a classification scheme for types of dialogic intent in online, asynchronous learning environments. The three types of dialogic intent he identified were *dialogue towards understanding*, *dialogue towards conversation*, and *silence* (e.g., for the purpose of reflection) (2010, p. 4).

Feedback as a Form of "Dialogue Toward Understanding"

Recent research has examined the effect of various feedback tools on factors such as learning, teaching presence, and motivation in an online learning environment. Examples of these tools include computer-assisted feedback (Denton, Madden, Roberts, & Rowe, 2008), YouTube (Ng & Hussain, 2009), and asynchronous audio feedback (Ice et al., 2009). Ice and colleagues compared text-only to audio feedback in seven asynchronous, online university courses. Students were more satisfied with audio feedback, perceiving it to be more effective in communicating nuance, increasing involvement, enhancing learning community interactions, increasing retention of content, and creating a feeling that the instructor cared about them. Furthermore, students' application of course content was associated with audio feedback (Ice et al., 2009, p. 3).

This study builds on the work of Ice and colleagues by examining a specific type of "dialogue toward understanding" in an asynchronous, online learning environment. Specifically, this study compared the effect of audiovisual feedback via screencasting as a supplement to text feedback. Following the Theory of Transactional Distance, the study hypothesis was that students would be more satisfied with text-plus-audiovisual feedback as it related to interacting with the instructor, improving the sense of community, and perceived learning.

Methods

This pilot study was conducted across two courses: a Statistics course (OT 808) taught in winter 2009 and a Research Methodology course (OT 807) taught in spring 2010. Both courses were required as part of an online, post-professional occupational therapy program, and both were taught by the same instructor (the study investigator). Students who took both courses could only participate in the study once. The A.T. Still University-Arizona Institutional Review Board approved the study.

Among the 16 students enrolled across these two courses, 15 consented to participate. Students were randomized to receive text-only or text-plus-audiovisual feedback on their assignments for the first half of the course (weeks 1 through 6). At week 7, each group crossed over so that all students received both types of feedback for half of the course (Figure 1). Although the text-only and text-plus-audiovisual study periods were equal, the number of assignments students received in each condition ranged from three to five, due to the necessity of timing assignments according to course content.

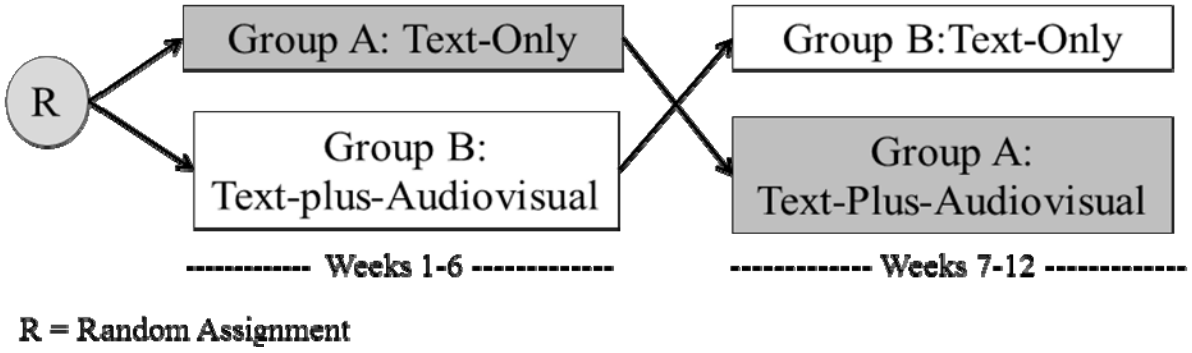


Figure 1. Study Design

When each course ended, students were asked to complete an anonymous electronic questionnaire, in which they described what they liked and disliked about each feedback method, which type they felt was more effective, which type they were most satisfied with, and which type they would prefer if given a choice. Questionnaire items were largely qualitative and were based on previous work by Ice and colleagues (2009). The questionnaire was reviewed for face and content validity by four faculty members with expertise in the areas of research, qualitative methodology, and educational theory. Qualitative responses on the questionnaire were downloaded and printed. Using an inductive qualitative coding process, the study investigator identified major themes as they related to the study hypotheses. Throughout the study, the investigator logged the time spent grading assignments so that average grading time could be compared between feedback types.

Types of Feedback

Text-only feedback consisted of using the "track changes" option in Microsoft Word to provide text-based corrections and feedback. Comments were also inserted throughout assignments, and summary

comments and a completed grading rubric were provided at the end of each assignment. This grading process represented the instructor's standard practice.

Text-plus-audiovisual feedback consisted of the text feedback described above, as well as an individual "screencast" for each student. Screencasts were recorded using the program Jing (http://www.techsmith.com/jing/) and involved a screen capture in which the instructor reviewed the student's assignment while recording simultaneous audio (i.e., verbal) and visual (e.g., highlighting, pointing with mouse, typing) feedback. These screencasts were stored on a website (http://screencast.com/), and were only accessible by a unique link. The unique link to each student's screencast was inserted at the end of their assignment, after the summary comments. Students viewed the screencasts via their Internet browser, and could watch them an unlimited number of times.

For both types of feedback, assignments were returned to students via the online course assignment drop box. Each week, all students' assignments were returned at the same time, in order to reduce any bias caused by a faster return time for one type of feedback or the other.

Table 1. Major Findings as Related to Research Questions

Research Questions	N Favoring Text-Plus-Audiovisual Feedback	Example Student Quotes
Which type of feedback was a more effective way of interacting with the instructor: text-only or text-plus-audiovisual?	11/13	"For me the more effective way of interacting with the instructor was the text-plus-audiovisual because it gave me a classroom-like feel listening to my instructor with both of my visual and hearing senses working at the same time" (Student 6).
Which type of feedback gave a greater sense of "community" in the course?	13/13	"Text plus audiovisual gave me a greater sense of belonging to a class, that the instructor actually "sees" you and acknowledges your presence. A voice, even though it is recorded, saying your name and talking to you about your work and what the instructor thinks about it gives me that sense of 'community,' that this is MY class and I that belong in it" (Student 11).
Which type of feedback was more effective for helping learn the material?	12/13	"Text-plus-audiovisual feedback kept my attention longer and was easier to follow along from the side margins to the highlighting in the paper. It was easier to comprehend and follow any suggestions and to hear a more in-depth discussion regarding the pros and cons of the paper and the course material" (Student 2).

Results and Practical Applications

Among the 15 students participating in the study, 13 completed the study questionnaire. While students found the text-only feedback to be satisfactory, most (11/13) favored the text-plus-audiovisual method and reported that, if given a choice in future online courses, they would choose this method. Students liked hearing the instructor's voice, and felt that the audiovisual component made the feedback more engaging, personal, comprehensive, and effective (Table 1). Several reported feeling more "connected" to the instructor. As one student noted, "Since this is an online program, it just felt very special to have you 'talking' to me" (Student 8).

Providing audiovisual feedback via screencasting took an average of 23.9 minutes (± 7.8) per assignment, compared to an average of 11.9 minutes (± 4.4) for text-only feedback. Therefore, utilizing audiovisual feedback for every assignment in larger courses is likely not feasible, but there are other ways to use screencasting for the purpose of providing "dialogue toward understanding" in an online environment that are more practical and time efficient. For example, rather than recording screencasts for each student individually, the instructor can record one screencast that summarizes feedback for the class as a whole (e.g., for a given assignment). In addition, screencasts can be a useful and efficient method for providing examples or demonstrations to an entire class, or for providing one-on-one guidance and feedback for individual students who are struggling. Finally, screencasts can easily be incorporated into online learning modules which are accessible by the entire class. These and other ways of engaging students and increasing community through screencasting are discussed by Mangieri (2009).

Limitations and Future Research

This study was limited by the small sample size and the fact that only the effect of feedback mode was examined; the effects of other factors related to feedback, such as content (e.g., praise, criticism, encouragement) and timeliness were not included. In addition, although the time periods for the text-only and text-plus-audiovisual feedback conditions were equal, the number of assignments in each condition was not (minimum=3, maximum=5). The study was strengthened, however, by the rigor of a cross-over design, the consistency resulting from all feedback being provided by one instructor, and the fact that all assignments were returned at the same time each week.

Future research should continue to examine the use of screencasting and other methods to provide "dialogue toward understanding" and their effect on bridging the "transactional distance" in online learning environments. Examples of questions for future study are: Does providing this type of feedback to a class (rather than to individual students) result in the same degree of student satisfaction; Do other media, such as video commentary, yield similar results; and What is the importance of facilitating different types of dialogue (e.g., student-to-student, instructor-to-student, student-to-instructor). Finally, more research is needed to determine whether these and other methods result in improved student learning.

References

Berge, Z. (2000). New roles for teachers and learners in online higher education. In G. Hart (Ed.). *Readings & resources in global online education* (pp. 3-9). Australia: Whirligig Press.

Denton, P., Madden, J., Roberts, M., & Rowe, P. (2008). Students' response to traditional and computer-assisted formative feedback: A comparative case study. *British Journal of Educational Technology, 39*(3), 486-500.

Giossos, Y., Koutsouba, M., Lionarakis, A., Y Skavantzos, K. (2009). Reconsidering Moore's Transactional Distance Theory. *European Journal of Open, Distance and E-Learning, 2*, 1-6.

Gokool-Ramdoo, S. (2008). Beyond the theoretical impasse: Extending the applications of Transactional Distance Theory. *International Review of Research in Open and Distance Learning, 9*(3), 1-17.

Gorsky, P. & Caspi, A. (2005). A critical analysis of transactional distance theory. *The Quarterly Review of Distance Education, 6*(1), 1-11.

Heuer, B. P., & King, K. P. (2004). Leading the band: The role of the instructor in online learning for educators. *The Journal of Interactive Online Learning, 3*(1), 1-11.

Ice, P., Curtis, R., Phillips, P., & Wells, J. (2007). Using asynchronous audio feedback to enhance teaching presence and students' sense of community. *Journal of Asynchronous Learning Networks, 11*(2), 3-25.

Liu, X., Bonk, C. J., Magjuka, R. J., Lee, S., & Su, B. (2005). Exploring four dimensions of online instructor roles: A program level case study. *Journal of Asynchronous Learning Networks, 9*(4), 29-48.

Mangieri, J. (2009, September 23). Using screencasting to engage and build community with online learners. *Faculty Focus.* Retrieved from http://www.facultyfocus.com/articles/online-education/using-screencasting-to-engage-and-build-community-with-online-learners/

Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), Theoretical principles of distance education (Vol. 1, pp. 22-38). New York, NY: Routledge.

Ng, H. Z., Hussain, R. M. R. (2009). Empowering learners as the owners of feedback while YouTube-ing. *Interactive Technology and Smart Education, 6*(4), 274-285.

Shearer, R .L. (2010, August). *Transactional distance and dialogue in online learning*. Paper presented at the 26th Annual Conference on Distance Teaching and Learning, Madison, WI. Retrieved from http://www.uwex.edu/disted/conference/Resource_library/proceedings/29897_10.pdf

About the Presenter

Dr. Mathieson is an assistant professor A.T. Still University (ATSU) in Mesa, Arizona. She has developed and taught courses in a variety of health sciences programs at ATSU, and is currently a full-time faculty member in ATSU's Doctor of Health Sciences Program, an online, post-professional program designed for master's or doctorate prepared health professionals. Dr. Mathieson develops and teaches online courses related to the Program's required Applied Research Project and mentors students through this process. Her interests include research ethics, research methodology, statistics, educational technology, and teaching and learning in the online environment.

Address: Arizona School of Health Sciences
A.T. Still University
5850 E. Still Circle
Mesa, AZ 85206
Phone: 480-219-6130
Email: kmathieson@atsu.edu

LASAs: A Competency-Based Approach to Assessing Student Learning

Jan Tucker, PhD. Associate Dean Undergraduate Business
Argosy University

Colleen Miron, PhD, Associate Dean Undergraduate Gen. Ed. and Liberal Arts
Argosy University

Mukul Bhalla, PhD. Associate Dean Undergraduate Psychology
Argosy University

Introduction

A common challenge for higher education institutions is designing meaningful and reliable assessment programs that effectively measure student learning as a function of program outcomes. In recent years, assessment for the purpose of accountability seems to have attracted more attention than assessment for the improvement of teaching and learning, this paper will focus on the latter context. Specifically the definition of assessment we are working with "refers to a wide range of activities that involve gathering and examining data for the purpose of improving teaching and learning" (Halpern, Horton, Peden, & Pittneger, 1993, p. 23). A comparison of student learning outcomes assessment within and across institutions can provide useful feedback to faculty in order to know which educational practices are effective for accomplishing student learning outcomes, and to ensure that graduates are not only obtaining the required knowledge and skills for the discipline, but are also trained for success in the workforce.

All institutions feel the pressures for accountability from national and state governments, as well as from regional accrediting agencies. Federal, state and local governments want to ensure public money is being used to support higher education in the form of student assistance programs and that financial aid is being spent responsibly. In recent years, the drive from accrediting bodies has been to identify objective, quantifiable student learning outcomes and documentation to demonstrate that the results of assessment data are used for continuous improvement (Council of Regional Accrediting Commissions, 2003; National Governors Association, 2007; U.S. Department of Education, 2006).

Similar pressure to ensure the college experience is applicable to the workforce also comes from other stakeholders such as potential employers. For example, a survey of employers by AAC&U (2007) indicated that college graduates do not possess some of the basic skills necessary for them to be successful in the real word. A large number of employers indicated students were not well prepared in global knowledge (46%), self-direction (42%), writing skills (37%) critical thinking skills (31%) and self-knowledge (26%). The Job Outlook 2008 survey (2007) by the National Association of Colleges and Employers (NACE), which lists the qualities and skills employers seek, also indicates that the skill most lacking in college graduates was communication, both oral and written.

Given the multiple stakeholder demands and the diverse institutional priorities for higher education institutions in the US, we are far from reaching a national consensus to define what knowledge and skills a degree in a particular discipline should impart, regardless of where it is earned. Nevertheless, there are common elements to the competencies all educational institutions should like to see their graduates demonstrate such as: Knowledge of culture, critical thinking, written and oral communication, quantitative and information literacy and teamwork and problem solving skills (AAC&U, 2002).

A challenge in assessing course goals, objectives and competencies is the myriad of assessment methods that can be used to measure student success. This paper describes one institution's efforts to implement a centralized, standardized, competency-based assessment system in three undergraduate programs

(business, general education and psychology). Using an *assessment first* method, university faculty, administrators, subject matter experts and instructional designers collaboratively designed two high-stakes, competency based assessments or Learning Assessment System Assignments (LASA) for each undergraduate course, which combined, directly measure all course objectives across the undergraduate curriculum. The development process of instituting the LASA program is discussed below.

Background

The institution of focus is a private university offering both graduate and undergraduate degrees across 19 ground campuses and an online division. Past efforts to collect consistent, direct measures of student learning data from all campuses proved unsuccessful and uninformative. Data was piecemeal or non-existent. There was no automated system to record or track direct student learning outcome data either on the individual campuses or nationally across campuses. Small sample sizes for the Business and Liberal Arts programs on many campuses were also problematic, making meaningful campus-level program analysis impossible.

Previously, the primary direct measure to assess student learning emphasized capstone papers or projects. For the BA Psychology and BS Business (BSBA) programs, student performance on a term paper in the respective capstone courses was assessed. All BA psychology students completed a 10-12 page literature review paper, with an accompanying PowerPoint presentation. All BSBA students completed a strategic business plan and strategy analysis. The Liberal Arts (BALA) program also has a capstone course, but the program is too new and has too few students enrolled to measure program outcomes using the capstone course. Each year, the Program Chair for each campus had to collect manually all student capstone papers, and assign a panel of three faculty to review each student paper using a Rubric for Assessing Student Performance on Program Learning Outcomes on which they would rank student performance on the program outcomes on a scale of 0-3 (*0 – inadequate, 1 – adequate, 2 – proficient, 3 – exemplary*). A score of 1, 2, or 3 was considered passing. Since data were pulled at only a single point in the program, formative data on student learning were not available; only performance across various graduating classes could be compared.

In light of the limited utility and time-and labor-intensive nature of the above process, several options were considered to more effectively assess student learning, including requiring a standardized test such as the ETS Proficiency Profile for the General Education program or the MFAT for the Psychology and Business programs, all commonly used across a variety of institutions. A field test of the MFT, however, resulted in significant challenges in securing proctors and monitoring completion for the large online division of students. In addition, the MFAT is administered only to seniors so it does not measure gains over the course of study (like the capstone papers), and it did not tap into all the content areas emphasized by our curricula. Similar issues were noted with the ETS profile. Thus, the process of finding an alternative began.

LASA Program: A Possible Alternative?

In early 2010, the university instituted a standardized learning assessment system for the Business, General Education/Liberal Arts, and Psychology undergraduate programs across all delivery formats. This learning assessment system included embedded assessments (called Learning Assessment System Assignments or LASAs) within each course to provide a measure of student learning. All courses in the three programs have 3-5 course objectives that map directly to Program Outcomes. LASAs are considered high-stakes assessments that directly measure the course objectives in each course. All current courses were reviewed and appropriate existing assignments were identified or new assignments were created to serve as LASAs. Each course in the undergraduate program has two LASAs, which combined, measure all course objectives. LASAs are not intended to assess students on every topic covered in the course, but are key to assessing the course objectives and hence, the program outcomes. LASAs account for 50% of

the student's final grade. Thus, an important part of the curriculum design and faculty training process in the LASA project was to ensure that course content and faculty guidance play an integral role in preparing students for the LASA assignments.

Rubric development and implementation plays a key role in the objective assessment process (Benjamin, 2007). Detailed rubrics for scoring the LASAs were created by experienced rubric developers in conjunction with the subject matter expert who provided the content for the course. It was imperative that both the assignments and the rubrics provide very clear direction and focus as to what students were expected to do. The rubrics contain some standardized language for components that transfer across all assignments such as the writing component and APA formatting, but are unique in terms of the content of each assignment. Each assignment component is mapped back to all relevant course objectives it assesses. Each course objective, in turn, is mapped back to all program outcomes it helps to achieve. All rubrics use the same four point scale, briefly summarized as:

- *Unsatisfactory*: Missed the concepts completely
- *Emerging*: Some elements of the concept were present, but did not meet outcome goals
- *Proficient*: Met the outcome
- *Exemplary*: Goes beyond minimum requirements of assignment.

Faculty enter two sets of scores for the LASAs: (a) the score on the rubric indicating a measure of the course objectives and program outcomes, and (b) the numerical/letter grade on the assignment in the online classroom grade book, which counts towards the course grade. Data resulting from the rubrics for the LASAs are entered automatically into an assessment system database, the Learning Outcomes Manager (LOM), in order to evaluate their effectiveness in measuring programmatic outcomes. Scores can be pooled automatically across multiple variables, and can be organized, searched, and analyzed by relevant program outcome(s).

Project Implementation

The LASA program began with a full review of all courses in the undergraduate programs selected. A curriculum team consisting of faculty, instructional designers, and the Associate Dean for the program reviewed and revised all existing courses to update content and to identify and/or create the two LASAs and accompanying rubrics for current courses. Course syllabi were then revised and adjusted as necessary. For all new courses, the process began with syllabus development, which is outlined below.

Syllabus Development Overview

The master syllabus acts a blueprint for the course development team. The intent is to create a rich competency based course where there is alignment between course objectives, assessments, and the learning resources and activities. The syllabus creation follows a 6 step process:

Step 1: Outline Course Objectives/Competencies
Step 2: Map Course Objectives back to Program Outcomes
Step 3: Write Course Description
Step 4: Identify Topics
Step 5: Create Learning Assessment System Assignment (LASA) and scoring rubric
Step 6: Identify Learning Resources

The starting point for building the course in the LASA model is course objectives; they are precise, directly measurable competency statements in a given area of study, couched in Bloom's (1956) taxonomy and mapped to program outcomes. Program outcomes are higher level competencies that students should acquire as they progress through the program. Program objectives exist for the undergraduate programs in business, psychology, and liberal arts, as well as for the general education curriculum common across the disciplines. Since the outcome/competency statements are very broad and general, they cannot be measured directly with any level of precision; for example, the BSBA Program

Outcome: Student can "communicate business concepts both written and orally, appropriate to the audience." While this is clearly a desired program outcome, this competency can be measured only by a specific course objective that is mapped back to program outcomes/competencies.

Once course objectives are created, mapped to program outcomes, and the course description and topics are identified, the curriculum team creates the LASAs for the course. The LASAs are intended to measure course competencies directly and program outcomes indirectly. Every five-week course has two LASAs, one in week 3, and one in week 5. LASAs must be robust and have breadth and depth; measure higher order competencies; and contribute to 50% of the final grade for the course. When designing LASAs, the curriculum team is encouraged to be creative. Assessments can take a variety of forms (paper, presentation, videos, survey creation, case study, exam, portfolio, as appropriate to the assignment and the discipline), and application is emphasized.

Once the LASA instructions and description are created, an instructional designer with expertise in rubric creation collaborates with the faculty content expert to design the rubric. Each component of the assignment is assessed individually and is mapped to the relevant course objectives it is designed to measure. Eighty percent of the total score is based on content; 20% on presentation/writing elements. The final step in the syllabus process involves identifying learning resources (articles, Websites, simulations, self-assessments, videos, etc.) to support the course objectives and topics in the course.

While LASAs in capstone courses reflect student competencies and overall measure of performance at the end of a program, LASAs in other courses are intended to be used for progressive feedback on student learning for individual students and faculty, as well as program administrators. Students can use them to identify areas of strength and challenges, and faculty and administrators can use them to make the necessary adaptations to instructional strategies or course and program content.

Assessing the Assessment

Throughout 2010 and early 2011, LASAs and rubrics were created for all undergraduate courses in the three programs studied. The next steps in the project will include more widespread faculty training on LASAs, the use of rubrics, and the LOM database system. By Fall 2011, it is anticipated that faculty will begin to score student performance on the LASA rubrics, and we will have initial programmatic data across most undergraduate courses in all three programs ready for analysis. Based on these data, the Associate Deans and program faculty will review program curriculum annually to assess gaps in student learning and to improve continuously programmatic outcomes. While this assessment system promises to offer robust, objective, quantifiable embedded assessments drawing on the knowledge, skills, and attitudes students should achieve in these three programs, we also anticipate challenges in implementing a standardized assessments across 19 campuses (ground based and online) . Future research will focus on the analysis of the implementation process.

References

Association of American Colleges and Universities. (2002). *Greater expectations: A new vision for learning as a nation goes to college*. Washington, DC: Association of American Colleges and Universities. Retrieved from the http://www.greaterexpectations.org/

Association of American Colleges and Universities. (2007). *College learning for the new global century: Executive summary with findings from employer survey*. Washington, DC: Association of American Colleges and Universities, The National Leadership Council for Liberal Education & America's Promise.

Association of American Colleges and Universities (AAC& U). (2002). *Greater expectations: A new vision for learning as a nation goes to college*. Washington, DC: Association of American Colleges and Universities. Retrieved from the http://www.greaterexpectations.org/

Association of American Colleges and Universities. (2007). *College learning for the new global century: Executive summary with findings from employer survey*. Washington, DC: Association of American Colleges and Universities, The National Leadership Council for Liberal Education & America's Promise.

Benjamin, S. (2007). *The quality rubric: A systematic approach for implementing quality principles and tools in classrooms and schools.* Milwaukee, WI: American Society for Quality Press.

Bloom, B. S. (1956). *Taxonomy of educational objectives, handbook I: The cognitive domain.* New York, NY: David McKay.

Council of Regional Accrediting Commissions. (2003). *Regional accreditation and student learning: Principles of good practice*. Retrieved from http://www.msche.org/documents/regnlsl.pdf

Halpern, J. S., Horton, C. P., Peden, B. F., & Pittenger, D. J. (1993). Targeting outcomes: Covering your assessment concerns and needs. In T. V. McGovern (Ed.). *Handbook for enhancing undergraduate education in psychology*. Washington, DC: American Psychological Association.

National Association of Colleges and Employers. (2007). *Job outlook 2008* survey.

National Governors Association. (2007). *Higher education accountability for student learning. NGA Center for Best Practices issue brief*. Washington, DC: Author. (ERIC Document Reproduction Service No. ED496328)

U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education*. Washington, DC: Author. (ERIC Document Reproduction Service No. ED493504)

About the Presenters

Jan Tucker, Ph.D., is the Associate Dean of Undergraduate Business in the College at Argosy University where her responsibilities include the development and maintenance of curriculum, assessment, and faculty student support for both blended and online delivery of the undergraduate business programs. Her research interests include change management, e-learning and technology based curriculum development.

Address: 205 N. Michigan Ave, 13th Floor
Chicago, IL 60601
Email: jtucker@argosy.edu
Phone: 312-848-5764

Colleen Miron, Ph.D., is the Associate Dean of Undergraduate Liberal Arts and General Education at Argosy University. She oversees curriculum development, assessment, and faculty and student support for both blended and online aspects of the Liberal Arts and General Education programs. Her research interests include students with disabilities, online program assessment, and faculty development.

Address: 205 N. Michigan Ave, 13th Floor
Chicago, IL 60601
Email: cmiron@argosy.edu
Phone: 312-519-5877

Mukul Bhalla, Ph.D., is Associate Dean of Psychology in the College of Undergraduate Studies at Argosy University. Areas of responsibility include the development, maintenance and revision of the undergraduate psychology curriculum for blended and online delivery, faculty development and outcomes based assessment at the course and program level. Her research interests include cross-cultural differences in body image, assessment of student learning across various delivery formats and standardized programmatic assessment issues.

Address: 205 N. Michigan Ave, 13th Floor
Chicago, IL 60601
Email: mbhalla@argosy.edu
Phone: 312-848-5947

Multisensory Online Assessment: Techniques, Research Results, and Student Feedback

Dr. Tena B. Crews, Professor
College of HRSM – IIT Program

Dr. Kelly Wilkinson, Director
Center for Instruction, Research and Teaching
Indiana State University

Introduction

Multisensory feedback through assessment to strengthen and reinforce the learning process may be a challenge for educators; however, students indicate it is their preference. Learning can be enhanced when the assessment process incorporates visual, auditory, and handwritten presentation. A multisensory approach "not only reinforces learning, it personalizes the assessment process, engages students and helps ensure the learning and assessment respond to multiple student learning styles" (Wilkinson, Crews, & Kinley, 2008, p. 75).

This research study provided business communication students with an opportunity to provide input as to their preferred assessment method on writing assignments. Huba and Freed (2000) defined assessment as:

> The process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning. (p. 8)

The University of Southern California's Center for Excellence in Teaching (2007) Web site noted:

> To assess derives from the Latin verb "assidere," *to sit by* (originally, as an assistant-judge in the context of taxes). Hence, in "assessment of learning" we "*sit with* the learner," and that implies that it is something that we *do with* and *for* our students rather than *to* them. (para. 1)

Parini (2008) stated that he tries to ". . .emulate. . . , sitting beside my students in my office, "correcting" their work" (p. 3).

The research process used in this research uses multisensory assessment to mimic sitting with student and providing feedback, but through an online format. The provided definitions of assessment connect will with this research as the researchers are investigating the benefits of types of assessment to improve students' writing skill, learning and success in a business communication course. The type of assessment utilized in this research study is more engaging and centered on the students' learning.

Purpose of the Study

The purpose of this study was to investigate students' perceptions of the most effective method of assessment to provide feedback on writing assignments. This study involved undergraduate students in business communication courses.

A researcher designed, online questionnaire, which provided an example of a writing assignment assessed four different ways, was used to gather the data. The same example writing assignment (written analysis

of a book) was used for all assessment types. Such a written analysis is similar to other business communications writings in that students must analyze information, provide concise documentation and include a reference.

Assessment types included:

1. Handwritten comments on the writing assignment (HW)

2. Use of track changes on the writing assignment (TC)

3. Use of audio and video techniques so students could hear and watch the professor grade the writing assignment as she explained the changes being made on the document via the use of a keyboard and desktop computer (i.e., highlight information, key information, edit text, etc.) (AV-Desktop)

4. Use of audio and video techniques so students could hear and watch the professor grade the writing assignment as she explained the handwritten edits being made on the document via a tablet PC (AV-Tablet)

Methodology

Students in undergraduate business communication courses in a large southeastern university served as participants for this study. The business communication course is a required course for all majors in the college. The business communication classes were all held in computer laboratories; therefore, students (n = 186) could complete the researcher developed online survey and submit data immediately. The online survey was approved through the university's Institutional Review Board (IRB) and was anonymous as the students completed it online and no identifying information collected.

Each of the four assessment types (HW, TC, AV-Desktop, AV-Tablet) were shown and explained to participants. After viewing each assessment type (HW, TC, AV-Desktop, AV-Tablet), participants completed the survey by first ranking the assessment types from 1 – most helpful to 4 – least helpful. Participants were also asked to identify if they strongly agreed, agreed, disagreed, or strongly disagreed with each of the following statements for each of the four types of assessments.

This type of assessment:

1. will improve my writing skills.
2. will help me understand why I am making mistakes in my writing.
3. will help me be successful in this course.
4. will help create a relationship with my instructor.
5. provides positive feedback.
6. would be effective in Podcast format.
7. would be effective for traditional in-class courses.
8. would be effective for online courses.

Findings

The majority of participants (55%) were male and 46% of the participants were female. The sample group included traditional students with 51.38% juniors, 52.74% seniors, 5.5% sophomores, and 0.55% freshmen. The participants ranked the audio and video with e-handwritten feedback through the use of a tablet PC as the most helpful and second most helpful assessment type. Additional findings will be discussed during the presentation.

References

Huba, M. E., & Freed, J. E. (2000). *Learner-centered assessment on college campuses: Shifting the focus from teaching to learning.* Boston, MA: Allyn and Bacon.

Parini, J. (2008). The unbearable importance of grading. *Chronicle of Higher Education, 54*(23), A38-A38. Retrieved from Academic Search Premier database.

University of Southern California. (2007). Assessment of teaching and learning. Center for Excellence in Teaching. Retrieved from http://www.usc.edu/programs/cet/resources/assessment/

Wilkinson, K., Crews, T. B., & Kinley, E. (2008). Enriching the learning experience for e-learners: Making assessment real. *Proceedings of the 2008 Higher Learning Commission Annual Conference*, *3,* 75-77, Chicago, IL

About the Presenters

Dr. Tena B. Crews is a Professor with the College of HRSM – IIT Program.

Address: Carolina Coliseum #118A
Columbia, SC 29208
Phone: 803-777-5559
Fax: 803-777-9564
Email: tcrews@mailbox.sc.edu

Dr. Kelly Wilkinson is Director of the Center for Instruction, Research and Teaching at Indiana State University.

Address: Indiana State University
Terre Haute, IN 47809
Phone: 812-237-2077
Fax: 802-237-8129
Email: kelly.wilkinson@indstate.edu

EFACT: A Method for Assessing Your Online Course

Gina G. Berridge, Ph.D.
Assistant Professor of Teacher Education
University of Southern Indiana

Samantha D. Penney
Programming Manager for Instructional Technology Services
University of Southern Indiana

Judith A. Wells
Instructor of Mathematics and Coordinator of Mathematics Instructors
University of Southern Indiana

Introduction

Online degrees and programs continue to increase in number and popularity. In 2009 the university with the highest enrollment was the University of Phoenix, Online Campus, with an enrollment of 380,232 students (Digest of Education Statistics, 2010). In the fall of 2009 an estimated 5.6 million students took an online course. This was an increase of one million students from the fall term of 2008 (Allen & Seaman, 2010). As the popularity and convenience of online learning increases, so does the need for excellence in the programs and courses offered. Student evaluations of the teaching strategies and materials used in online classes that facilitate student learning are essential for quality programs and can give instructors valuable information about their online course. Student evaluations are powerful resources that help faculty members adjust and alter their teaching methods and materials used in their course. This paper explored the process of piloting an evaluation of student self-assessment through anonymous feedback at mid-semester that detailed what helped or hindered their learning in an online class.

The University of Southern Indiana began a pilot program in the fall of 2009 for instructors of online classes to receive student input about their course midway through the semester. This type of formative assessment allows instructors to change or alter their method of instruction for increased student learning. It is similar to Clark & Redmond's (1982) Small Group Instructional Diagnosis (SGID) developed to generate student feedback in face-to-face classes about the course mid-way through the semester. As in SGIC, USI's program for online classes was designed for the instructor to make changes in instructional strategies and methods for increased student learning, not as a course evaluation. This type of formative assessment correlates with the definition from Bloom, et al. (1971) cited in Pryor & Crossouard (2008) that describes formative assessment as "the process of curriculum construction, teaching, and learning for the purpose of improving any of these three processes"(p. 117). Summative assessments, or those taken at the end of the course, give teachers feedback for their next class, but not for the students currently enrolled. Electronic Formative Assessment of Classroom Teaching for online classes (EFACT) was designed to briefly shift the power to students at mid-semester to reflect on their own learning and give that feedback to their instructor with the intention to facilitate the learning process. Formative assessment becomes a process where teachers as learners seek to understand the methods and strategies they use in an online course that helps and/or hinders student learning. Going directly to the student for anonymous feedback at mid-semester is a powerful tool that can give online instructors detailed information concerning student learning.

Method

Like the process used in other institutions of higher learning, the EFACT is performed by faculty for faculty. Individual instructors can request an EFACT through the Center for Academic Creativity. The Center takes this request and assigns a faculty member from a different college that has been trained as an EFACT consultant. The consultant contacts the faculty member and the faculty member adds the consultant to the class as a student giving them full access to students' emails. The faculty member then emails his/her students and lets them know they will be contacted by email from the consultant and encourages them to respond to the questions about the online class. The consultant then emails the students a letter outlining the procedure and assuring students that communication with the consultant is confidential. The class is asked to spend about 10 minutes answering the following questions and then email their responses to the consultant by a certain date, usually five days. The three questions are:

1. What helps your learning in this class?
2. What hinders your learning in this class?
3. What suggestions do you have for this class?

The consultant then compiles the students' responses and emails them to the students with instructions to read the list and make further comments if needed. The students are told that their instructor will get their feedback and that all feedback is anonymous. The consultant then meets with the faculty member who is given a copy of students' feedback. The consultant neither evaluates nor critiques the faculty member or student feedback, but does instruct the faculty member to discuss the results with their students and thank them for their feedback. The faculty member then decides what, if any, changes need to be made for increased student learning.

Findings

In seven online classes from three different colleges with over 100 responses from students, useful information was given to instructors on what helped student learning in their online classes. Communication was a key factor. The instructor responding in a timely manner to questions/concerns about the assignments, communicating detailed instructions about assignments and exams in the syllabus, and making him- or herself available through email, office chat, and discussion forum were all listed as important for increased learning. Referring to homework a student said, "At first I thought I wouldn't like the idea of submitting homework via a scanned image and email (assignment box), but I actually like doing that and being able to review the graded homework." Students also listed lectures, Power Points, links to the Internet and videos as being helpful tools that increased learning. One student commented, "I'm able to go at a pace that fits my lifestyle, for the most part." Another student said, "Most of us take the online classes due to work schedules—in my case three jobs and I am a single mother."

In response to the question, "What hinders your learning in this class?" students spoke of the nature of an online course. One student commented, "I feel that Internet classes generally hinder learning just because there is a lack of class discussion. Discussion board does not compare to class conversation." Another student stated, "Distance education is difficult in general…" In referring to technical problems, one student noted, "technology is fantastic but sometimes it gets in the way." Other hindrances to learning included using more than one textbook, not having lectures or test reviews, any changes in the syllabus, and having information spread out over the different sections of Blackboard. One class in the pilot had a group project of four to five students that was due mid-semester. Most of the students commented that the group project was frustrating, not enjoyable, and very difficult. Communication also hindered student learning as an overwhelming number of students said no personal contact or communication with the instructor and classmates and lack of feedback was a barrier to learning.

Suggestions that students had for online learning were increase time for homework, visual examples, offer face-to face time, audio-video instruction, organization of Blackboard information, and having printed material to refer to that just the online textbooks.

Conclusion

There are obvious challenges with online classes just for the very nature of how they are delivered. Most of the responses that helped and hindered student learning had to do with interaction with the instructor. Instructors of online classes can be aware that student learning is enhanced through the use of lots of communication. Email, video, office chat, and discussion board are strategies online instructors can use to communicate their subject matter and "talk" with students. Interaction is a necessary component to assist online students in their learning. A very detailed syllabus from the beginning of class helped students pace themselves and assignments and announcements posted in one location were also valuable for student learning. Students liked links to the internet, Power Points, and lectures and felt that these methods were helpful to learning the subject matter. EFACT is a power shift giving students the opportunity to reflect on their learning. Through these self-assessments instructors have valuable information to decide what (if anything) they can change midway through the semester to increase student learning.

References

Allen, I. E., & Seaman, J. (2010). Class differences: Online education in the United States. Retrieved from http://sloanconsortium.org/publications/survey/class_differences

Clark, D. J., & Redmond, M. V. (1982). Small group instructional diagnosis: Final report. Retrieved from http://www.eric.ed.gov:80/PDFS/ED217954.pdf.

Pryor, J., & Crossouard, B. (2008). A socio-cultural theorization of formative assessment. *Oxford Review of Education, 34*(1), *1-20.*

National Center for Education Statistics. (2010). Chapter 3: Postsecondary education. *Digest of education statistics: 2010*. Retrieved from http://nces.ed.gov/programs/digest/d10/ch_3.asp

About the Presenters

Dr. Gina Berridge is currently an assistant professor in Teacher Education at the University of Southern Indiana. She teaches undergraduate and graduate courses in literacy/reading. She had previously been in K-12 education as a teacher, principal, Assistant Superintendent and Superintendent. Dr. Berridge has a Ph.D. , Ed. S., and a M.Ed. in Educational Leadership, Administration and Foundations from Indiana State University, Terre Haute, IN. She has a B.S in Elementary Education from the University of Southern Indiana, Evansville, IN and a B. S in Business from Indiana State University-Evansville, IN.

Address: Teacher Education
University of Southern Indiana
8600 University Blvd.
Evansville, IN 47712
E-mail: ggberridge@usi.edu
Phone: 812-465-7043
Fax: 812-465-1029

Samantha D. Penney is the Programming Manager for Instructional Technology Services at the University of Southern Indiana. She has worked for over eight years in the distance education industry and has experience in management, teaching, training application, training development, instructional

design, and faculty development. She has an M.A.Ed from Austin Peay State University in the area of Instructional Technology and post graduate work at Virginia Tech. She also has a M.A. in Mass Communications from the University of South Dakota and a BA in Journalism from South Dakota State University.

Address: Instructional Technology Services
University of Southern Indiana
8600 University Blvd.
Evansville, IN 47712
E-mail: sdpenney@usi.edu
URL: http://www.linkedin.com/in/spenney
Phone: 812-465-1061
Fax: 812-465-7131

Judith Wells is an Instructor of Mathematics and Coordinator of Mathematics Instructors at the University of Southern Indiana. She has taught mathematics courses for over 30 years and for the past four years she has developed and taught mathematics courses online. She has an M.S. and B.S. in Mathematics Education from Indiana State University.

Address: University of Southern Indiana
8600 University Blvd.
Evansville, IN 47712
E-mail: jwells@usi.edu
Phone: 812-465-1631
Fax: 812-465-1052

Information Sessions

Design/Development Track

The Case for the Self-Paced Online Course

Steven Weiland
Michigan State University

Introduction

At a time when the conventions of distance education favor interaction among students in a variety of synchronous and asynchronous features, what could sound more out-of-step than the self-paced course designed for autonomous learning? But claims for the value of online "communities" can be overstated, and the preferences of adult learners overlooked. The self-paced course, in which students work on their own to complete a sequence of activities, like reading texts, viewing and listening to digital media, exploring websites, and completing writing assignments, may be as fruitful (or more) than online courses with many deadlines and required interaction among students. Social constructivism reigns in online course design but other approaches merit attention as our experience grows in digital learning.

This paper, in four parts, explores one such approach. The first names an essential element of distance education: the organization of space and time. The second explores self-direction, autonomy, and independence as ways of naming what a self-paced course requires, and the emerging "open course ware" movement is identified as a place in which we can observe its uses. The third part offers an account of self-paced courses in Michigan State University's online MA program and then specifies "conditions of learning" supporting them. A brief conclusion asserts the place of choice in students' management of time and the utility of seeking variety in online course design.

De-regulated Space, Regulated Time

Consider the phrase "distance education." Distance refers to the space-defining feature of online learning. But an unacknowledged anomaly in distance education can be seen in differing attitudes toward space and time in online programs and courses. Thus, the campus has been reduced to but one of many locations for learning, and distance from the instructor is not seen as an obstacle to taking a course or earning a degree. The newest communications technologies are increasingly useful in closing the spaces between widely separated students and their instructor with synchronous video and audio.

Inventive course design presents many appealing variations in the virtual space of teaching and learning, rivaling if not reproducing the classroom. I do not myself see the reproduction of the classroom, particularly in conversation among students, as a requirement of effective online learning. Indeed, for conventional online courses the chief design problem is finding a ratio for synchronous and asynchronous activities that favors student-to-student communications. Thus, group projects and postings to discussion forums are favored devices. Asynchronicity doesn't always mean autonomy. In fact, I expect that it rarely means as much. A self-paced course represents fully realized asynchronicity as essential to course design.

Online programs have de-regulated space in their courses but they generally regulate time in familiar ways. Thus, it is common (at least at my own institution) to see a semester divided into 14 or 15 weeks, in effect reproducing the standard pattern of the campus-based course. But, apart from the opening and end of the semester, there is no reason why an online course can't be organized temporally in a way that capitalizes on configurations of the course content that may demand something different than week-by-week student work. That is, students can be granted freedom in organizing the time of their efforts as long as they are not obligated to meet deadlines for communicating with other students.

Self-Direction, Independence, and Some Lessons from OpenCourseWare

The self-paced online course has a history in the correspondence movement in American higher education, particularly those features of it that might be recovered for application in the digital age. To be sure, correspondence study was never well integrated into traditional academic institutions even though it survived until the last decades of the 20th century when it was, inevitably, overtaken by the new technologies (Kett, 1994). Still, judging from the theoretical literature on adult learning, the correspondence movement is a forgotten episode in education. That's because, beginning in the 1970s, leading theorists saw opportunities to add to the goals of self-direction. It came to stand for: (a) autonomous learning largely organized and evaluated by the individual; (b) processes of individual transformation or a form of "critical thinking" that could inform social action; and c) collaboration and the construction of shared meanings among learners. In particular, the last—plainly beyond the correspondence course format—has been a location for theorizing self-directed learning as a form of constructivist social experience, part of the influential Community of Inquiry framework for understanding distance education (Garrison, 2003).

But there is a new history in the making of self-directed learning. Thus, recognition of increasing demand for postsecondary education, with the unending expansion of Internet resources, has prompted fresh attention to the "de-schooling" mentality of the 1970s popularized by Ivan Illich. There is a recent account of the prospects for a new age of self-direction in learning in Anya Kamenetz's *DIY U* (2010). She prefers, as I do, "independence" as the defining feature. But in studies of adult and now online learning, "autonomy," and "self-regulation" also compete with "self-direction" as ways to capture a complex configuration of traits, expectations, and habits (see Andrade & Bunker, 2009). However, it is named, the problem remains of formulating in a systematic way what we understand of cognition in the self-paced format, including the organization of time and tasks, interaction with online hypermedia resources, and an image of mature learning ability at a time of public attention to the professional skills required in the years ahead.

One-by-one student activity in non-credit formats can be seen in online programs like *Rosetta Stone* and *Café Mocha* (for the study of languages) and the OpenCourseWare (OCW) opportunities in many fields offered by MIT, Yale, and Carnegie Mellon (among other institutions; see Walsh, 2010). As part of the "Do It Yourself" style of postsecondary education, these formats capitalize on intrinsic learner motivation applied to well structured and demanding self-paced resources. Each course is useable only in the spirit of independent study. There are no provisions for communicating with other students or the instructor (though there are a few exceptions at *Open Yale Courses*). The results reflect what any student makes of the course content presented in a format designed to sustain interest and promote learning.

Yale's open courses are typically organized according to the weeks of the semester. What else could they be since the courses are essentially video versions of the classes taught by Yale faculty to undergraduates. But it is surely the unusual user who goes to the lectures on the same days of the week for the (virtual) 15 weeks of the Yale semester. We can assume, I think, that for most OY students viewing the classroom sessions is more like watching the episodes of a popular TV program re-packaged in DVD form. Time and interest permitting, episodes may quickly follow one another. Or days and even weeks may go by between viewings. There is a course narrative to observe, also available in the course syllabus, but one that needn't be strictly observed.

At Open Yale the student is a viewer and listener, though a transcript is available for each class session. But there is no mistaking that the student is attending a lecture at a distance. Indeed, in many of the courses the instructor (all are highly regarded Yale professors) rarely moves away from the lectern. At a time when the lecture is surely the most stigmatized of all forms of teaching, how can we account for Open Yale's more than 3 million learners? To be sure, the courses are free and there is no formal student commitment. MIT and Carnegie Mellon offer different formats, more print and less video and audio at

MIT, and at CMU fully animated courses offering automated feedback to students. But learners themselves can decide on the order of their activities and the extent of them in any part of a course.

The Self-Paced Course and Conditions of Learning

The essence of a self-paced course, much like a book, is rich content. In fact, the four self-paced courses I offer are simply extended hypermedia texts. The eight units in each course may as well be called chapters, each broken up into sections, again, similar to what a reader would find in a non-fiction book. It is the abundant hypermedia that makes the difference. Beyond my expository prose (about 80,000 words) and the traditional printed books and films that are part of the syllabus, the course includes hundreds of links—some made part of unit assignments, but most designated as "opportunities" for reading, viewing (video, websites, and exhibits of many kinds) and listening. Students make their way through the units at their own pace. When they complete one—with an essay—the next opens. Of course, that is unlike a book with its freedom to browse. But very few students have ever expressed the wish to do so. Perhaps the "cascading" (as our course management system names it) represents a form of discipline in the context of temporal freedom.

With their highly individualized asynchronicity, and students working at different units as the semester moves along, these courses can only support the most limited forms of student-to-student communications. There is a Discussion Forum but it is used only unevenly, and in some semesters not at all. But I do not accept the suggestion that because there are no group projects or community building "conversation" that the courses are lacking interaction. The design shifts it to the students' engagement with the hypermedia resources. And there is considerable interaction with the instructor in relation to the required essays. Responses to them are often as long as or longer than the essays themselves, prompting many students to remark on how unusual it is to be read so closely in an online course. There is something of the tutorial in the design, enhancing the self-paced format with considerable individual attention associated with the completion of each unit.

Survey results from over 500 students who have completed the courses attest to the contribution that the format made to their learning. And asked if they would have preferred a format that included required student-to-student communication, semester after semester over 90% say "No." These are surprising results given the assumptions made about what students want in online learning. Perhaps it is the faculty's commitment to social constructivist pedagogy—a sine qua non in colleges of education—that makes common forms of interaction ubiquitous and therefore the self-paced format unappealing.

Research and theory support my experience, suggesting that the case for the self-paced online course reflects the following conditions of learning:

- *The Mind at Work*: When "metacognitive monitoring" is employed in the self-regulation of learning—for example, in memory tasks—learners are more successful. But self-pacing itself is not the reason. As in other domains, individual differences matter. Thus "learning can be enhanced through successful implementation of self-guided study-time allocation" (Tullis & Benjamin, 2011, p. 117).
- *The Uses of "Alonetime"*: There is a role for educational solitude as an alternative to collaboration and the activities of a "learning community." According to the British psychoanalyst Anthony Storr (1988), "all human beings are directed by nature toward the impersonal as well as toward the personal." Isolated meditative awareness is only one version of solitude. Thus, forms of what has been called "alonetime" can be a resource for learning and other human activities (Buckholz, 1997).

- *Student Characteristics*: Online students display different habits of learning (or "cognitive styles") in the flexible format of the self-paced course. Thus, patterns of work in online

environments can be classified as "mastery oriented," "task focused," and "minimalist" in the effort necessary to be engaged by formal education. All types of students can be "relatively successful" to the degree that they complete a course. The self-paced course prompts most students (more than 80%) to effectively manage their learning time (del Valle & Duffy, 2009).

- *The Role of Interaction*: While virtually all accounts of online learning make student-to student interaction essential, often on behalf of the development of a "learning community," re-conceptualizing "equivalency" among the features of an online course can yield alternative models. Thus, "deep and meaningful learning" can be supported by "student-content" and "student-instructor" forms of interaction while "student-student" interactivity may be minimal or even non-existent (Anderson, 2003).

- *Student Preferences*: A test of "equivalency" demonstrated that the self-paced course can yield high levels of student preference for "student-content" and "student-instructor" modes of interaction. Students were more than willing to forgo interaction with other students in order to capitalize on the flexibility of the self-paced course and its distinctive affordances. "Interactions with other learners, both in the formal space as well as fostered by informal activities, were seen as tangential and while helpful are not necessary to achieve a desirable learning outcome" (Rhode, 2009, p. 14).

Partisans of interaction may say that the self-paced format lacks the defining features of "best practices" in online course design (e.g., Keengwe & Kidd, 2010). Precisely (!) is the appropriate response. The self-paced course doesn't preclude online interactivity but it presents challenges to enabling it for students working in different parts of a course at different times. And skeptics might ask about the self-discipline needed by students in a course without scheduled deadlines across the semester. In my experience students will occasionally comment on the difficulties they had in adapting to the scheduling freedom the courses offer. Student habits are strong—and well matched to the conventions of schooling at all levels. But, the self-paced format can be a resource for rethinking motivation.

Conclusion: "On the Lookout" in Online Teaching

If you have ever recorded an episode of a favorite TV program, you have practiced "time-shifting." That is, you have managed a feature of experience in accord with the wish to control time and attention. In a culture of speed (Gleick, 1999) perhaps any gesture of this kind is a resource for learning. But the central feature of the self-paced course is the autonomy it offers students. In her celebration of the "DIY" mentality Kamenetz sees the potential for the transformation of American postsecondary education. Recognizing it in the format of the self-paced online credit course represents a more modest goal. In fact, the format is deliberately designed to slow the trend toward capitalizing on every "affordance" presented by the new communications technologies.

Adult students want choice and control in managing their time, as is reflected in the rapid growth of distance education. I do not mean to suggest (as Kamenetz sometimes appears to do) that we must now organize education about such desires. But virtually all accounts of American higher education recognize that its vitality reflects the choices of individual scholars and teachers in organizing learning around different views of what works best. Surely there is a place for the self-paced course, with its content and instructor oriented forms of interaction. Indeed, the format can be seen as allied to recent protests against the excessive connectivity in the lives of most Americans (Powers, 2010; Turkle, 2011).

Despite the freedom implicit in distance and asynchronicity, student time in online courses is most often structured with many deadlines, including those associated with participation in a "learning community." The self-paced alternative deserves consideration, not as a placement for the favored format but as way of thinking about online teaching and learning that may disturb our assumptions. Dewey (1960) urged that in

our best work we resist "rest[ing] on [our]oars." He added: "[He] who permits himself to be propelled simply by the momentum of his attained right habits, loses alertness; he ceases to be on the lookout. With that loss, his goodness drops away from him" (p. 132).

References

Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. *International Review of Research in Open and Distance Learning*, *4*(2).

Andrade, M., & Bunker, E. (2009). A model for self-regulated distance language learning. *Distance Education*, *30*(1): 47-61.

Buckholz, E. (1997). *The call of solitude: Alonetime in a world of attachment*. New York, NY: Simon and Schuster.

del Valle, R., & Duffy, T. (2009). Online learning: Learner characteristics and their approaches to managing learning. *Instructional Science: An International Journal of the Learning Sciences, 37*(2), 29-149.

Dewey, J. (1960). *The theory of the moral life*. New York, NY: Holt, Rinehart and Winston.

Garrison, D. (2003). Self-directed learning and distance education. In M. Moore & W. Anderson (Eds.), *Handbook of distance education*, pp.161-169. Mahwah, NJ: Lawrence Erlbaum.

Gleick. J. (1999). *Faster: The acceleration of just about everything*. New York, NY: Pantheon.

Kamenetz, A. (2010). *DIY U: Edupunks, edupreneurs, and the coming transformation of higher education*. White River Junction, VT: Chelsea Green.

Keengwe, J., & Kidd, T. (2010). Toward best practices in online learning and teaching in higher education. *MERLOT Journal of Online Learning and Teaching*, *6*(2), 533-541.

Kett, J. (1994). *The pursuit of knowledge under difficulties: From self-improvement to adult education in America, 1750-1990*. Stanford, CA: Stanford University Press.

Powers, W. (2010). *Hamlet's BlackBerry: A practical philosophy for building a good life in the digital age*. NewYork, NY: Harper.

Rhode, J. (2009). Interaction equivalency in self-paced online learning environments: An exploration of learner preferences. *International Review of Research in Open and Distance Learning*, *10*(1).

Storr, A. (1988). *Solitude: A return to the self*. New York, NY: Free Press.

Tullis, J. and Benjamin, A. (2011). On the effectiveness of self-paced learning. *Journal of Memory and Language*, *64*(2), 109-118.

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other.* New York, NY: Basic Books.

Walsh, T.(2010). *Unlocking the gates: How and why leading universities are opening up access to their courses*. Princeton, NJ: Princeton University Press.

About the Presenter

Steven Weiland is Professor of Higher, Adult, and Lifelong Education at Michigan State University where he teaches in the College of Education's online MA programs.

Address: Michigan State University
410 Erickson Hall
East Lansing, MI 48824
Email: weiland@msu.edu
Phone: 517-355-2395

Quality Design Standards for Publisher Courses

Ron Legon, Executive Director
The Quality Matters Program
MarylandOnline

Rich Pirozzi, Director of Customer Development
Higher Education Division
John Wiley & Sons, Publishers

The Quality Matters Program collaborated with Wiley Publishers in a yearlong project to develop a rubric to evaluate online publisher courses. This session will describe the initiation and goals of the project, the process we have gone through to adapt the 2008-2010 Edition of the Quality Matters Rubric for the design of online and blended courses in higher education to the evaluation on online publisher materials, and summarize the major components of the resulting publisher rubric.

The project originated with a inquiry from a major publishing house, John Wiley & Sons, regarding the possibility using the Quality Matters higher education rubric to evaluate their WileyPLUS courses. In order to fully appreciate the issue presented by Wiley, we need to describe some basic features of WileyPLUS and the Quality Matters course design rubrics.

WileyPLUS is an online teaching and learning environment that integrates a digital textbook with instructor and student resources to fit multiple learning styles. This integrated suite of teaching and learning resources includes:

- a full online version of the textbook with a wide range of study resources,
- an instructor managed course calendar,
- homework management tools for the student,
- instant feedback and context-sensitive help for students in completing their assignments,
- customizable presentations including PowerPoint slides, visual aids, as well as your own materials for use online or in the classroom, and
- an online gradebook that automates such tasks as making assignments, scoring student work, keeping grades, and allows the instructor to identify students falling behind and intervene accordingly.

Thus, a WileyPLUS course may be used to supplement and enhance a face-to-face course, constitute the online component of a blended course, or form the foundation of a fully online course.

The Quality Matters Program is a non-profit educational organization focused on quality standards for distance learning. More than 500 U.S. colleges and universities subscribe to QM and use its tools. With regard to course design, QM

- develops and disseminates rubrics for the design of online courses,
- trains faculty and staff in the application of these standards,
- enables formal and informal course reviews based on these standards, and
- sponsors research on the impact of implementing the standards on students, faculty and institutions.

The established Quality Matters higher education and Grades 6-12 course design rubrics address design issues for fully online and blended courses that are typically developed by individual faculty or by design teams at individual institutions. Such courses typically include instructor input and reflect institutions policies and resources—elements that WileyPLUS courses lack until they are adapted to the needs of particular institutions. On the other hand, WileyPLUS courses include resources for the instructor that fall outside the scope of the typical developed courses that the QM is intended to evaluate.

The Wiley inquiry presented an exciting opportunity to QM. As we learned more about the WileyPLUS

product, we anticipated that it would require a substantial revision of the existing QM rubrics to focus on their unique design issues, as compared to typical online and blended college courses. We also saw the potential for applying this new approach to the products of other publishers that are providing enhanced versions of their digital textbooks. On this basis, we responded to Wiley with a proposal to collaborate on the development of a publisher edition of the QM Rubric.

It was envisioned that the publisher edition would assist publishers is designing their online resources according to QM standards consistent with those used by the more than 500 colleges and universities that have adopted the QM approach. It would also assist individual instructors and departments at those institutions and, perhaps, many others, in selecting publisher courses based on their consistency with QM standards.

Under the terms of the QM/Wiley agreement, the project began with teams of QM Master Reviewers and Wiley instructional design staff evaluating several WileyPLUS courses using the standard 2008-2010 edition of the QM Rubric. These findings guided a joint committee charged to develop the new publisher rubric. Based on the early reviews and in-depth discussions, the committee identified:

- standards that fit the WileyPLUS courses without any modification,
- standards that would require substantial modification of the annotations and guidelines,
- standards that would need to be refocused to fit the publisher course context,
- standards that could not be met by publisher courses and should be removed, and
- issues in publisher courses that were not addressed by the existing standards.

Over a period of three months, the committee met on a bi-weekly basis and produced a draft of the Quality Matters Publisher Rubric. While the new rubric was shaped to cover all the issues raised by the scope of WileyPLUS, it was intentionally not tailored to fit the precise capabilities of the WileyPLUS approach. Rather, the discussions focused on the potential capabilities and limitations of publisher designed courses, with an eye toward the broader application of the new rubric to the industry as a whole and acknowledgement of the potential for continuous improvement.

Some of the distinctive standards in the Publisher Rubric, as it evolved, are

- technical / tutorial support for the instructor as well as the student,
- tools allowing the instructor to customize the course,
- tools for students to customize their learning experience, and
- more thorough criteria regarding course content.

The resulting beta version of the Publisher Rubric was next applied to a series of WileyPLUS courses from late December 2010 until early March 2011 and adjustments were made to the rubric as a result of these reviews. The WileyPLUS courses that were reviewed in this period subsequently underwent modification to meet the Publisher Rubric standards, and Wiley is factoring in these standards in the design of future new and revised WileyPLUS courses.

In April 2011, QM tested the rubric with courses from other publishers to ascertain whether they would meet our goal of a widely applicable set of standards for publisher courses. By the time of the UWEX conference in August 2011, we will be able to share the impact of these additional tests on the final shape of the Publisher Rubric.

In addition to modifications to the standards themselves, the Publisher Rubric, as it exists at this writing, differs from the 2008-2010 edition of the higher education rubric in several respects. The hypothetical perfect score of a publisher course that meets standards is 100 points, in contrast to the 85-point score attainable in the higher education rubric. We believe that the 100-point score will be a more intuitive benchmark for users.

In the existing higher education and grades 6-12 rubrics, a course must satisfy all 3 point "essential" standards. However, since all but 5 standards are valued at 3 points each in the Publisher Rubric, this requirement has been dropped. Publisher courses must score 85 or more points out of 100 in order to meet standards, but no particular standards are treated as essential. In effect, the entire rubric is regarded as essential.

The Publisher Rubric, though it is still primarily concerned with design, places more emphasis on the evaluation of content. This is an acknowledgement that the primary value of publisher courses is a solid presentation of course content. A consequence of this shift in emphasis is that the majority of reviewers for a particular must have sufficient understanding of the subject matter of the course to make the necessary judgments about content, whereas we generally use only one subject matter expert in other course reviews.

Several other issues are still awaiting the outcome of our test reviews before being resolved. One of these is whether the Publisher Rubric should be sequenced to enable a review of the general structure and format of a publisher's approach as distinct from evaluation of individual courses. We expect that further testing with the products of multiple publishers will help us determine whether this separation is feasible and desirable.

In the procedures for applying the established QM rubrics, each standard is judged on an all or nothing basis—full points or none. This practice reflects QM's intention that the course review serve as part of a continuous improvement process, working with faculty and course developer(s). In this context, scores on individual standards should focus attention on needed improvements and not send mixed messages. However, while feedback to the publisher to encourage the enhancement of courses is still one of the central purposes of the Publisher Rubric, it is also intended to be used by potential *adopters* of publisher courses and indicate to them as clearly as possible the performance of a publisher course *as it stands*. Partial credit may make sense as a reflection of the current status of the product. During the testing phase, we are asking reviewers to use both the current scoring method and a flexible scoring method, awarding partial credit where appropriate, to determine if the results are sufficiently different to consider substituting flexible scoring for the Publisher Rubric.

When we present our results at the conference in August, we anticipate that these issues will have been resolved. But, in keeping with the principle of continuous improvement, user feedback, the results of early publisher course reviews, and targeted research projects will be used to evaluate and improve the first edition of the QM Publisher Rubric. Over time, QM hopes an enhance and refined Publisher Rubric will benefit forward-looking publishers like Wiley and assist faculty and their institutions in selecting quality commercial products that provide their students with the best possible distance learning experience.

About the Presenters

Dr. Ronald Legon is Executive Director of The Quality Matters Program and Provost Emeritus of the University of Baltimore (UB), where he served as Provost from 1992 to 2003. He also served as Director of the MBNA e-Learning Center at UB, where he led the establishment of the first AACSB accredited fully online MBA program in 1998, and Director of the Helen P. Denit Honors Program. Prior to joining UB, Dr. Legon served as a faculty member and in a variety of administrative roles at the University of Illinois at Chicago (UIC) over a 25-year period. He served successively as a department chair, associate dean, dean and associate vice chancellor for research and for academic affairs.

Address: The Quality Matters Program of MarylandOnline
1997 Annapolis Exchange Pkwy., Suite 300
Annapolis, MD 21401

Phone: 312-208-7557
Email: rlegon@qualitymatters.org

Rich Pirozzi has been in the educational publishing/software industry for his entire career, starting in 1992. He has focused in the area of digital publishing since 1999 as Director of Customer Development for the Digital Publishing Group at John Wiley & Sons. His role at Wiley is to help sales representatives and customers learn about and use Wiley's digital product offerings. His specific responsibilities include training, technical support, presentations to existing/prospective customers and exploring new business and partnership opportunities (such as Quality Matters). He also manages the WileyPLUS Account Managers, which are positions that are unique to Wiley.

Address: 111 River Street
Hoboken, NJ 07030
Phone: 201-748-6386
Email: rpirozzi@wiley.com

Learning Design for Student-Owned Learner-Engagement

Simon Paul Atkinson
Educational Developer
London School of Economics and Political Science, UK

Kevin Burden
Director of Postgraduate Professional Development
The University of Hull, UK

Introduction

There is a clear need for higher education to be responsive to its current learners' needs. It is also clear that faculty must be supported in this process to explore new models of academic practice and new approaches to learning. The SOLE model (Student-Owned Learning-Engagement) is a conceptual model of the contemporary learner's ownership of their learning outcomes and their engagement with them. The associated toolkit supports the model's implementation by individual distance education designers and teaching staff.

We must identify new models for conceptualising and communicating appropriate pedagogy, appropriate processes, appropriate learning design tools that makes maximum use of students' motivations, and engagement. Contemporary learners in the developed world behave in social terms, their mode and models of communication differ from their predecessors (Junco & Mastrodicasa, 2007), but these behaviours are socially contextualised and not necessarily applicable to formal education (Jones, Blackey, Fitzgibbon, & Chew, 2010). Effective teachers make use of all manner of contemporary, real-world, examples in their classrooms, and if these use contemporary technology to prepare students for a world where such technology is the norm then they should be congratulated, but we must systematically design learning to be appropriate.

It would be unwise to suggest that an entire generation is digitally wired, connected and digitally literate, indeed the evidence suggests the contrary (C. Jones, Ramanau, Cross, & Healing, 2010). Each course design, each member of faculty, needs the skills to profile, identify, empathise with each subsequent cohort. Each course must be responsive, appropriate, and supportive of cohorts emerging and involving modes of learning.

There is a healthy on-going debate about institutional roles, about the level of control that an institution can, should or must influence over technology or whether to release the freedom of open source, open repositories, and the collective creativity of Web 2.0 applications (Atkinson, 2009). These are important questions which institutions, and associations or federations of institutions, must consider if they are serious about enabling faculty to fulfil their evolving roles.

Frameworks for Development

Whilst it is unrealistic to expect all academics to be specialists in learning theory, it is not unrealistic to expect academic staff to be sufficiently versed in learning theory as to enable them to design appropriate learning opportunities. The emphasis is not on technology, as the danger exists that teacher focused practices are simply remodelled through technology without the necessary shift towards a learner centred epistemology. Boud and Prosser (2002) suggest a learner focused perspective and drawing on research in both higher education and adult education propose to situate learning design in the context of quality lifelong learning outcomes. Their emphasis on learning and teaching as being 'relational phenomena' stresses that learning is always situated in a unique context. It is important, therefore, that learning design encourages deep learning with specific subject matter but, more importantly, that learners are aware of the design, structure and intent of the learning process. David Boud identifies five elements of effective adult learning that neatly encapsulates these learning centred perspectives. These are:

- Learning built on a foundation of experience;
- The active construction of learner's own experience;
- Learning as an holistic process;
- Learning as being socially and culturally constructed;
- Learning as being influenced by the 'socio-emotional context' in which it occurs.

(Boud, 1993)

Research from both higher education and professional contexts suggests that the learner experience, and the resultant outcomes, is greatly influenced by learner's perspectives of their own experience. This suggests that transparency in learning design is a crucial element. Boud and Prosser suggested a student-centred framework that communicates learning as being 'holistic, relational and problematic'. The resulting framework is structured around four areas:

- Engagement of learners, taking into account prior knowledge and expectations;
- Acknowledgement of the learning context, but the context of the learner and the context of learning;
- Learner challenge, taking learners beyond the immediate experience of provided materials;
- The provision and practice, with a stress on demonstration feedback reflection and the development of confidence.

(Boud & Prosser, 2002)

The framework is designed to produce high quality learning activities but also provides some indication of how individual courses, or programmes of study, might be approached. The framework outlined by Boyd and Prosser aligned closely with that detailed by Hung and Chen (2001) on e-learning design in the context of situated learning which resulted in six key principles. These are:

- Learning is embedded in rich cultural and social contexts;
- Learning is reflective and metacognitive;
- Learning is an identity formation or act membership;
- Learning is a social act/construction mediating between social beings through language, science, the genres and tools;
- Learning is socially distributed between persons and tools;
- Learning is demand driven/dependent on engagement in practice.

(Hung & Chen, 2001)

These frameworks suggest that learning content and process should be transparent to the learner, and that learning is distributed between the individual and the tools at their disposal. The frameworks also stress the need for learner engagement regardless of whether or not the context includes technology. Indeed the level of technology adoption is largely irrelevant to the underlying principles of these frameworks. The primary importance is assigned to learning context and learner expectations, to the socially and culturally embedded nature of learning. To design learning with the stress on the subject content, devoid of the learner experience is ineffective and out of place. There is a tension between the design of learning that is overly contextualised, non-reusable, and subject specific and designs which follow basic principles but which may prove less than practical to implement. What is required is a model of learning that places the learner at the centre, that stresses the need for learning challenge and engagement, reflection and metacognition, but which is valid regardless of the technology used to enable the model.

A Student-Owned Learning-Engagement Model

One model that attempts to fulfil the need for learner centredness, here defined as student-owned, and a holistic approach with the stress of engagement, is the Student-Owned Learning-Engagement (SOLE) model. This model (see **Figure 1**) attempts to encapsulate and embody learning theory in a practical visual representation. It is a model that implicitly requires academic staff to design learning that takes account of both Boud and Prosser, and Hung and Chen's recommendations.
Developed in response to the increasing demand on faculty for support in designing within a blended institutional delivery environment, with the same learning outcomes expected of both face-to-face and

online distance delivery, the SOLE model attempts to capture in its nine elements of student activity, or engagement, the pre-requisites for effective learning design. The nine elements are illustrated in Figure 1:

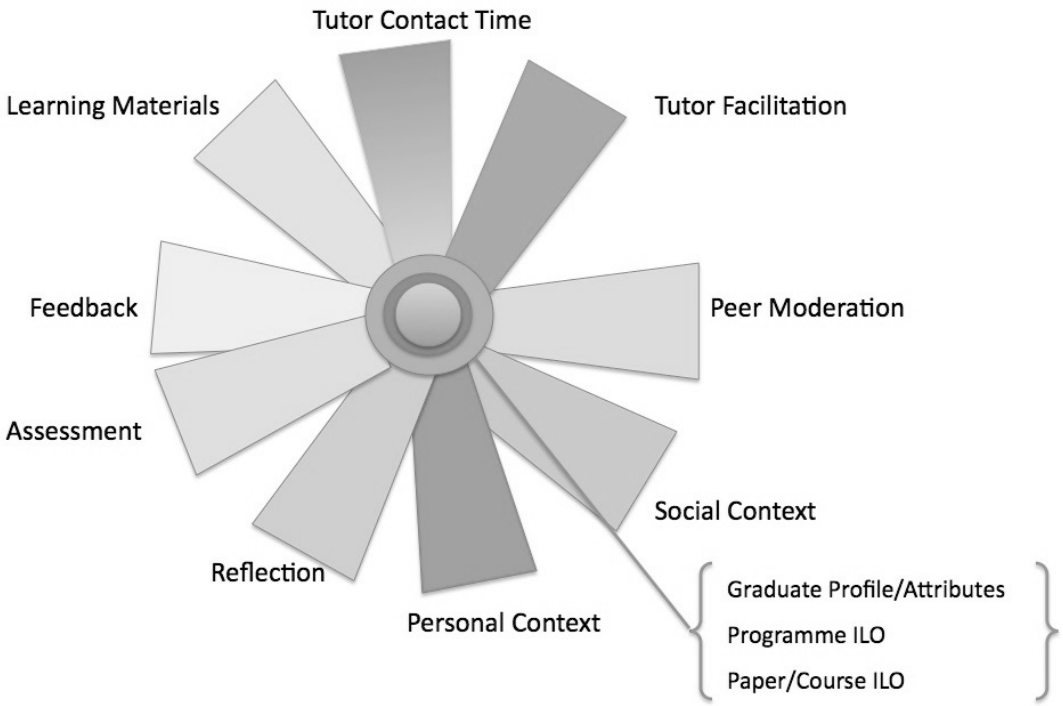


Figure 1. *SOLE Model*

The model serves as a staff development tool, to be worked through at course team meetings or in professional development contexts. It is a tool for professional debate, allowing individual academic staff to reflect on their personal practice, to reflect the specific needs of their disciplines, and to draw on the recommendations of colleagues, former students, and current students. The model requires the conversations that inform and populate it are necessarily current.

To enable staff to design learning that is transparent to students, one of the underlying principles of the SOLE model is that a representation, or visualisation, of the learning can be made available to students. This serves to engage the learner, acknowledge their context, and make transparent the learning process. This visualisation takes the simple form of a printout from the Microsoft Excel toolkit or as a PDF for upload into a virtual environment or email distribution. This visualisation acts as a form of advanced organiser, but is highly significant. By making available the learning design with all of the various elements of the SOLE model populated, the course designer is making it clear that the student takes possession of the *intended* learning process. The student has before them what is expected of them in all of the areas of learning previously considered to be distributed, often unevenly, between staff and student. The stress is on students owning the process. A toolkit using Microsoft Excel, the template made freely available via the web (www.solemodel.org), allows staff with no additional staff development needs beyond basic Excel use, to create an integrated and holistic view of the learning process which accounts the theory but is not constrained by it.

Educational theory should, perhaps, be of interest to all learning and teaching practitioners but a mere visual representation may still not be sufficient to make theory ‘live’ for many teachers. Whilst the opportunity exists for professional development around a presentation and discussion of the model itself, and these have been successfully undertaken in workshops, such a model needs to be as accessible as possible. Conole suggests, ‘the development of toolkits provides a way for non-specialists to engage with such theories in a manner which supports careful design and prompts productive reflection and engagement’ (Conole, Dyke, Oliver, & Seale, 2004, p. 18).

The need, therefore, is to support professional development and reflection with a means to 'actualise' the model in a practical and meaningful way. The SOLE model's stated aims (Atkinson, 2011) are to seek to:

- embody pedagogical guidance and learning theory within an accessible and transparent model shared by students and teachers;
- embody best practices regarding constructive alignment (Biggs & Tang, 2007) inside a learning design model easily accessible to, and shared by, staff and students;
- produce a practical model that 'captured' the lessons to be learnt from Laurillard's representations of conversational learning processes (Laurillard, 1993), whilst taking an inclusive approach to alternative conceptualisations of learning;
- enable the development of a practical toolkit that would make patterns of learning design shareable and transparent to students and colleagues.

Whilst the model incorporates pre-existing theory in its design, it does not enforce a specific pedagogical theory. Although neither advocating social-constructivism nor constructivism, the model does advocate the interconnectedness of the learner experience with the learner as central. This is not an advocacy of solipsism but rather of building on all the connections, present and past, that each individual values.

The model is accompanied by an Excel toolkit because:

> Toolkits are designed to facilitate the identification of implications or recommend suitable approaches based on the information and assumptions elicited from the user. They provide a structured guiding framework, whilst also enabling flexibility and local contextualisation. Therefore rather than the toolkit deciding on the best approach on behalf of the user, the practitioner uses these interferences to make informed, professional decisions about whether certain changes would be appropriate. (Conole et al., 2003, p. 22)

The toolkit provides much the same opportunities for professional development as the model but supports the individual teacher, and ultimately the student, "to work 'within' a learning design, diagnosing expected activity, adjusting the balance of engagement through the development process, describing (as an advanced organiser) what the learning might look like and providing opportunities for on-going evaluation" (Atkinson, 2011, p.11).

Conclusions

Higher Education Institutions are challenged to teach in increasingly diverse ways, to increasingly diverse populations. Universities find themselves competing with other tertiary providers, professional associations and any manner of private education provider. Senior university leaders must acknowledge that the very nature of knowledge creation, stewardship and propagation has changed. Staff, trained in one epistemological universe must be supported in adapting their skills to a new one. The institutional adoption of the SOLE model provides faculty with something to work with, or counter to, to improve or adopt. The SOLE model, customised to each institution, is one way of enabling the very best of educational technologies to meet the demands of new emerging generations of learners.

References

Atkinson, S. (2009). *Revolution and pedagogy: Why e-learning can still transform university teaching* (Proceedings). EQIBELT Workshop 2007-2008. Zagreb: SRCE / University of Zagreb.

Atkinson, S. (2011). Embodied and embedded theory in practice: The student-owned learning-engagement (SOLE) model. *The International Review of Research in Open and Distance Learning*, *12*(2), 1-18.

Biggs, J., & Tang, C. (2007). *Teaching for quality learning at university: What the student does* (3rd ed.). Buckingham. GB: Open University Press.
Boud, D. (Ed.). (1993). *Using experience for learning.* Buckingham. GB: Open University Press.
Boud, D., & Prosser, M. (2002). Appraising new technologies for learning: A framework for development. *Educational Media International*, *39*(3), 237.
Conole, G., Dyke, M., Oliver, M., & Seale, J. (2004). Mapping pedagogy and tools for effective learning design. *Computers & Education*, *43*(1-2), 17-33.
Hung, D. W. L., & Chen, D.-T. (2001). Situated cognition, Vygotskian thought and learning from the communities of practice perspective: Implications for the design of Web-based e-learning. *Educational Media International*, *38*(1), 3.
Jones, C., Ramanau, R., Cross, S., & Healing, G. (2010). Net generation or Digital Natives: Is there a distinct new generation entering university? *Computers & Education*, *54*(3), 722-732.
Jones, N., Blackey, H., Fitzgibbon, K., & Chew, E. (2010). Get out of MySpace! *Computers & Education*, *54*(3), 776-782.
Junco, R., & Mastrodicasa, J. (2007). *Connecting to the Net.Generation: What higher education professionals need to know about today's students* (1st ed.). Waldorf, MD: National Association of Student Personnel Administrators.
Laurillard, D. (1993). *Rethinking university teaching : A framework for the effective use of educational technology*. New York, NY: Routledge.

About the Presenters

Simon Paul Atkinson has served in continuing education roles with Exeter University (UK) and Victoria University (New Zealand), in faculty development for distance education roles with the Open University (UK) and Massey University (New Zealand) and in Learning Development leadership roles such as with the University of Hull. He writes, teaches and presents on learning design for emerging digitally enabled university contexts and is currently the module leader at the LSE for their 'Course Development and Design' accredited faculty programme.

Address; London School of Economics and Political Science
London WC2A 2AE
United Kingdom
Email: spa@sijen.com

Kevin Burden is a lecturer in educational technology in the Centre for Educational Studies where he is also responsible for the development of technology enhanced learning (TEL) across the faculty. He has worked at the University of Hull since 1995, starting in initial teacher training and moving into continuing professional development for educators, which includes post-graduate and doctoral work. Kevin has led several national technology related projects for various organizations including BECTA, National College for School Leadership, the Department for Education (DfE) and more recently, work in the European Commission. He works internationally with technology related projects and partners from various countries including the USA, Australia and China.

Address: The Centre for Educational Studies
The University of Hull
United Kingdom
Email: k.j.burden@hull.ac.uk

Making the Most of Your LMS: User-Centered Design Strategies

Lisa Torrescano
Senior Instructional Design Consultant
DePaul University

Dee Schmidgall
Interaction and Multimedia Designer
DePaul University

Background

SNL Online is the online degree program of the School for New Learning at DePaul University, Chicago. We offer Bachelor of Arts degrees in accelerated degree completion and competence-based programs, and MA or MS degrees in our graduate program. Our students are adult learners with a wide variance of technical ability and typically juggle work, family, and academic responsibilities. We offer about 100 distinct courses with 80+ sections available per quarter, and with a course cap of 26 . Courses are developed with and taught by both our resident and adjunct faculty; many of the latter live outside the Chicago region . Our program is growing to both create opportunity and satisfy demand. SNL Online includes a director of online learning, 3 instructional designers, 3 full-time program administrators, and 1-3 student and/or part-time workers to assist with production, administration and support.

By mandate our program is student-centered. We seek to create an online learning environment that supports student learning by being effective, efficient, and enjoyable. In the past we had relied on heuristics or best-practices from web design and instructional design to create our course templates. To achieve a consistent, easy-to-use, and scalable learning environment in Blackboard we formatted our course content pages with an external CSS. These content pages were not editable by faculty or studentswhich gave us the ability to ensure a consistent user experience, but also required significant resources to build, maintain, and support courses.

This design was largely successful. However, when faced with requests or complaints about usability from students or faculty we had to respond in the absence of real data. We simply did not know if a complaint was an indication of a universal problem or just an outlier. With our development and maintenance load, we did not have the resources to survey students and faculty, analyze the data, or make and implement recommendations. All we had to go on were anecdotes and course evaluations, which were neither reliable nor appropriate measures.

In early spring of 2010, DePaul University decided to change its learning management system (LMS) from Blackboard to Desire2Learn (D2L). The move presented both an opportunity and challenge to start fresh and create a better design template for SNL Online courses that addressed past deficiencies and leveraged D2L's customization abilities. To ensure success we decided to follow user-centered design principles.

User-Centered Design

Interaction Design, Beyond Human Computer Interaction (Sharp, Rogers, & Preece, 2007) described user-centered design (under the umbrella term of interaction design) as a way to "creat[e] user experiences that enhance and augment the way people work, communicate, and interact" (p. 9). UCD is a collaborative holistic approach to designing interactive products concerned with creating quality user experiences, meaning those that are easy to learn, effective to use, and enjoyable to use.

Though this process is widely embraced in the consumer market because it is effective, efficient, and cost-saving, it is seldom mentioned in the domain of higher education. Because we had limited resources of time, money, and peoplepower, we knew we could not make guesses—however well informed—about what would work. We decided to adopt user-centered design strategies to make the most of our LMS.

UCD Process

Sharp, et al. stated that user-centered design involves four basic activities:

1. Indentifying needs and establishing requirements for the user experience
2. Developing alternative designs that meet those requirements
3. Building interactive versions of the designs so that they can be communicated and assessed.
4. Evaluating what is being built throughout the process and the user experience it offers. (p. 17)

Requirements-gathering is a crucial stage of interaction or user-centered design. It's absolutely necessary to understand who your users are, what abilities they have, what they want to do and how they want to do it. Students and faculty are obvious users, but users include all stakeholders from the dean through your production team; anyone who interacts with or is impacted by your design. It is imperative to understand the constraints of the system you will work with, including the LMS and your IT department. It is also critical to identify and plan for communication, training, and administration needs at the beginning of the project.

Developing alternative designs to meet requirements is neither as difficult as you might fear nor as easy as you might hope. It is important to get a conceptual model of what the interaction should do, rather than what it should look like. For example, we decided our design should allow for a fully integrated learning experience with easy, contextual access to readings, multimedia, assignments, discussions, and other course tools. With that in mind, we could begin sketching out alternate page designs and wireframes.

The next step is to build interactive models of the designs so they can be tested and assessed. This can be as simple as a paper prototype, where each stage of an interaction is visualized on a separate sheet of paper. This allows for faster prototyping and iteration, and facilitates truthful user feedback during testing. However, in some cases functional models will need to be built to fully assess their usability.

Finally, it is important to evaluate the design and user experience throughout the development process and use that information to refine and iterate. A premise of UCD is that you *don't* get it right the first time. There is a wide variety of ways to evaluate a design including observation, questionnaires and surveys, user tests, heuristics, and cognitive walkthroughs. The goal is always the same; to learn how users really interact with your design and how you can improve it to provide for a better user experience.

User Test Design

The goals of the test were determined by input from the SNL online director, multimedia designer, and instructional designer. The results of the test were evaluated, interpreted, and integrated into the next iteration of the D2L SNL course content page layout and summary grid design.

The test was designed to exercise the course design and summary grid under controlled test conditions with representative users. The user experience test objectives were to:

- Determine the key course design elements to be included in the content page of the D2L SNL Online course
- Determine the most user friendly layout of the course content page

- Determine design inconsistencies and usability problems, which may include:
  - Navigation errors – failure to locate functions, failure to follow recommended screen flow.
  - Presentation errors – failure to locate and properly act upon desired information in screens, selection errors due to labeling ambiguities.
  - Execution errors – failure to interpret and understand what is expected.
- Determine the most effective and usable summary grid layout
- Determine the best design to integrate competence-specific assignment instructions
- Establish baseline user performance and user-satisfaction levels of the interface for future evaluations.

Participants

The participant group was composed of 6 students and 4 faculty members. The students had taken 2 or more SNL Online courses within the last two years. The faculty had taught at least 2 SNL Online courses. Students and faculty participants performed a number of tasks to interact with various versions of course design templates and grids.

Methodology

Over a 3-day period, 6 students and 4 faculty participated in the user experience test. Each test session was 1–1.5 hours. The participant was given an orientation prior to the test and was instructed to "think aloud" during each task scenario. Participants were also advised that they would be videoed and/or timed during each task.

Task Flow

The participants' responsibilities were to complete a set of representative task scenarios as efficiently and timely as possible, and to provide candid feedback regarding the usability and acceptability of the course design and grid layout. The participants were directed to provide honest opinions regarding their user experience and participated in post-session subjective debriefing.

The roles involved in the user experience test were as follows. An individual often played multiple roles.

Facilitator

- Provide training overview prior to usability testing
- Provide overview of study to participants
- Define usability and purpose of user testing to participants
- Assist in conduct of participant and observer debriefing sessions
- Respond to participant's requests for assistance

Test Observers

- Silent observer
- Identify problems, concerns, and procedural errors
- Serve as note takers.
- Record participant's actions and comments

To capture data free from bias or influence from prior learning, the task design was different for each student, and each student was presented the prototypes in a different order.

Test ethics were also discussed and agreed upon. All persons involved with the user experience test were required to adhere to the following ethical guidelines:

- The performance of any test participant must not be individually attributable. A participants name should not be used in reference outside the testing session.
- A description of the participant's performance should not be reported to his or her manager

Reporting Results

The user-experience test report consisted of video clip presentations of the key results, analysis of the usability metrics against the pre-approved goals, subjective evaluations, documentation of specific usability problems, and recommendations for resolution.

Life After the Results

After the test results and recommendations were presented, the project moved into a phase of negotiation with key stakeholders and iteration based on these discussions. This is where the "ideal course" suggested by the usability test met the real world of implementation. A design document was created based on our analysis of test results and used to create the first in a series of course templates.

We hired and trained a team of six student workers to handle the labor-intensive task of migrating 80+ courses into the new design template. A series of unexpected system shortcomings and changes to requirements by key stakeholders forced us to adjust the design numerous times; those adjustments had to be retrofitted in the courses that were already converted. After the 10th round of iteration, a final course design template was approved and all courses were aligned with it.

On December 15, 2011, we finished the last course conversion of the Winter 2011 online curriculum and opened up all the courses to the students and faculty in D2L. Though we were prepared for significant comments and questions from our users, both students and faculty, we were gratified that most found our new design easy to use. We credit this success to leveraging the best practices of user-centered design when designing within the constraints of a LMS.

About the Presenters

Lisa Torrescano is an Instructional Designer with DePaul University, School for New Learning, SNL Online. She has over 10 years experience working in educational, nonprofit, internet start-up and publishing organizations. Her focus has been in leadership positions in program development, instructional design and evaluating user experience for classroom-based and online education.

Address: 990 Fullerton Avenue, Suite 3000
Chicago, IL 60614
Phone: 847-912-4091
Email: eramosto@depaul.edu

Dee Schmidgall (MFA, School of the Art Institute of Chicago) is an Interaction Designer with DePaul University, School for New Learning, SNL Online. He designs and manages SNL Online's course and departmental web presence and multimedia. He also researches and advocates for emerging technologies and best practices in online learning.

Address: 1 E. Jackson, Suite 1500
Chicago, IL 60604
Phone: 312-362-8164
Email: dschmidg@depaul.edu

Building a Blended Class: Face-to-Face, Online, Anytime

Robert Keel
Teaching Professor in Sociology
Department of Anthropology, Sociology, and Languages
University of Missouri-St. Louis

Introduction

The co-present classroom is the "gold standard" for education. The communicative richness of this environment and, as discussed by Boden and Molotch (1994), a basic human "compulsion to proximity" make face-to-face interaction ideal for learning. Recognizing that the restrictions of time and space limit the accessibility of a traditional classroom, the model of "blended learning" presented here is meant to document and assess an ongoing attempt to open up the classroom both spatially and temporally. This model builds upon research by Irons, Jung, and Keel (2002) that documents how "accessibility" can be a key factor in predicting student satisfaction with a course, and a study by Irons, Keel, and Bielema (2002) that documents the positive effect of a blend of learning modalities on student satisfaction. The blended class model developed here includes multiple modes of teaching and learning (face-to-face, online, synchronous, asynchronous, individual, group), allowing students to learn on their own time and in their own way, yet still providing an overall structure for consistency and community.

Rationale

Students entering university classrooms today are individuals who have grown up in a world that has always had an Internet and World Wide Web. They are mobile *device* users: interactive, online, and "multi-channel" as documented by Lenart, Madden, Smith, and Macgill (2007) in a Pew Internet and American Life Report. Another Pew Report, by Lenhart, Purcell, Smith, & Zickuhr (2010) documented that 72% of online 18-29 year olds use social networking Websites, 81% of adults between the ages of 18 and 29 are wireless Internet users, and 2/3 of 18-29 year olds (66%) own a laptop or netbook. A Department of Education (2009) study suggested that students in online classes do as well or even better than students in traditional classrooms, independent of whether the course is blended, hybrid, or totally online—across content areas and learner styles. With students already adapted to such diverse communication styles, it makes sense to design courses that incorporate the benefits of anytime/anywhere learning.

The Blended Learning Model

The blended learning model discussed here attempts to incorporate a variety of resources in ways that make attending class, engaging learning resources, and participating in collaborative work possible regardless of the time and geographical limitations of the individual student. Multiple modes of teaching and learning (face-to-face, online, synchronous, asynchronous, individual, group) allow students to learn on their own time and in their own way, yet still provide a structure for consistency and community. The class is designed to allow students to participate face-to-face (as in a traditional class) or remotely via a "virtual classroom environment" (Wimba Classroom: http://www.wimba.com/products/wimba_classroom). Class sessions use online, hypertext lecture notes and other learning aids that are available to all students in and outside of the classroom. Student-to-student interaction is facilitated by online discussion board and small group projects (for example, see: http://www.umsl.edu/~keelr/010/GroupActivities/ga.html). All students in online groups have access to a variety of means of collaborating—Wimba Classrooms, Wikis, email, social networking sites, etc. Students interact with course content both traditionally (textbook), via online lecture notes (see: http://www.umsl.edu/~keelr/180/180lec.html) and a wide variety of other course content (tutorials,

readings, quizzes, and tests) organized via a course management system (Blackboard©). Table 1 displays the variety of modalities and some of the available resources for this blended class model.

Table 1. *Blended Learning Modalities*

	Engagement					
	Teacher/Student		Student/Student		Student/Content	
	Co-present	Remote	Co-present	Remote	Co-present	Remote
Synchronous	Face-to-Face Lecture/Discussion	Wimba Classroom	Small Groups, Wikis	Wimba Classroom, Wikis	Online Lecture Notes, Interactive Activities, CMS	Online Lecture Notes, Interactive Activities, CMS
Asynchronous	NA	Wimba Archives, Recorded Videos	NA	Discussion Boards, Wikis	NA	Online Lecture Notes, Interactive Activities

Acceptance and Student Satisfaction

The current presentation does not attempt to document learning outcomes. Documentation of student satisfaction and acceptance of technology in the classroom (especially Wimba Classroom, Wikis, and Blackboard©) is based on data collected over the past ten years (see: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html), and conclusions concerning student perceptions of Wimba and Wiki use are based on surveys spanning the past 10 semesters with responses from over 1600 students (see: http://www.umsl.edu/%7Ekeelr/fttc_2010/building_a_blended_class_fttc_2010.htm).

Findings

Table 2. Selected *Mean Scores*

	MGW	Wimba	Wiki
Question	Mean WS06-SP10 **7-point** Lickert Scale *N:* 7163	Mean SS06-FS09 5-point Lickert Scale *N:* 1635	Mean SS06-FS09 5-point Lickert Scale *N:* 1635
13. MGW/Wimba/Wiki helps me do better (learn more).	2.68	2.46	2.76
14. Satisfied with courses because of MGW/Wimba/Wiki.	2.60	2.26	2.83
18. Use MGW/Wimba/Wiki in all my courses.	2.02	2.36	3.26
19. Take another course at UMSL because it uses MGW/Wimba/Wiki.	3.18	2.58	3.25
20. Complete my degree at UMSL because of MGW/Wimba/Wiki.	3.25	2.67	2.67

Note: Learning and Satisfaction with MyGateway (Blackboard©) WS06-SP10 and Wimba and Wikis SS06-FS09 (Keel, 2010a, p. 11 and 2010b)

Although the results of these surveys are not definitive—except in the case of MyGateway use, the overall support for the positive impact made by the introduction of these technologies indicates ongoing student acceptance and satisfaction. Wiki use appears as less appreciated, yet an intervening factor—wikis are used for group work in high enrollment classes—may explain the higher mean scores. The higher levels of dissatisfaction seen here may be to student frustration, not because of the wiki use, but due to uncooperative group members. Nonetheless, students express an interest in having these technologies used more and in more courses—whether online or traditional face-to-face.

Conclusions

The development of blended class models to extend access and interaction beyond the confines of the traditional classroom fosters increasing openness in education (access to information and learning spaces), accommodates change and adapting to diverse users' needs, and promotes interactivity and transparence. Brown and Duguid (2000) provide a clear image of such open and transparent educational opportunities:

> Essentially, a student's university career in such a system would no longer be through a particular place, time, or preselected body of academics, but through a network principally of their own making, yet shaped by a degree granting body and its faculty. A student could stay home or travel, mix on-line and off-line education, work in classes or with mentors, and continue their learning long after taking a degree. (p.239)

References

Brown, J. S., & Duguid, P. (2000). *The social life of information.* Harvard Business School Press: Boston, MA. Retrieved from http://www.istl.org/01-winter/review3.html and http://firstmonday.org/issues/issue5_4/

Irons, L. R., Jung, D. J., & Keel, R. O. (2002). Interactivity in distance learning: The digital divide and student satisfaction. *Educational Technology & Society* 5(3), 175-188. http://www.uwex.edu/disted/conference/Resource_library/proceedings/29897_10.pdf

Irons, L. R., Keel, R. O., & Bielema, C. L. (2002, December) Blended learning and learner satisfaction: Keys to user acceptance? *USDLA Journal*, *16(*12). Retrieved from http://www.usdla.org/html/journal/DEC02_Issue/article04.html

Keel, R. (2010a). Building a blended class: Face-to-face, online, anytime. Retrieved from http://www.umsl.edu/%7Ekeelr/fttc_2010/building_a_blended_class_fttc_2010.htm

Keel, R. (2010b). MyGateway student survey report: Fall 2009-Spring 2010. University of Missouri-St. Louis, Information Technology Services. Retrieved from http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html

Learning and Satisfaction with MyGateway (Blackboard©) WS06-SP10 and Wimba and Wikis SS06-FS09

Lenart, A., Madden, M., Smith, A., & Macgill, A. (2007). Teens and social media. *Pew Internet and American Life Project*. Retrieved from http://www.pewinternet.org/Reports/2007/Teens-and-Social-Media/4-Communications-and-social-media/03-Multichannel-teens-are-a-breed-apart.aspx?r=1

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social media and young adults. *Pew Internet and American Life Project.* Retrieved from http://pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx?r=1

Molotch, H. L., & Boden, D. (1994) The compulsion of proximity. In D. Boden & R. Friedland (Eds.), *Now here: Space, time and modernity*, (pp. 157-176). Berkeley, CA: University of California Press.

U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service. (2009). Evaluation of evidence-based practices in online learning. Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

About the Presenter

Robert Keel, Teaching Professor in Anthropology, Sociology, and Languages at UM-St. Louis, has been teaching sociology for 34 years, and has been integrating Web- and Internet-based instruction into his classes since 1993. From 2000-2005, he served as the faculty coordinator of the MyGateway (Blackboard) system at UM-St. Louis. In 2010, Prof. Keel was named an eMentor for the University of Missouri System. He has made numerous presentations to professional, academic, and community groups on a variety of topics relating to online and distance education, as well as the social implications of the Internet.

Address: Department of Anthropology, Sociology, and Languages
University of Missouri-St. Louis
One University Blvd.
St. Louis, MO 63121
Phone: 314-516-6052
Email: rok@umsl.edu

Real Life, Real Time
Engage Students Through Experiential Learning

David James Clarke IV
Toolwire, Inc. – USA

Introduction

If one were to ask, “How has the world of a child changed in the last 150 years?" the answer would be, “It's hard to imagine any way in which it hasn't changed.” t the same time, teaching practices today versus 100 years ago look more similar than dissimilar. This is a problem; the current approach to teaching has a number of significant shortcomings:

- Too Much Content: Like trying to fit a big foot into a small shoe
- Delivered Too Soon: Like water off a duck’s back; information doesn’t stick
- NOT Just-in-Time: Learning lacks immediate relevance

For the first time in history, institutions of higher learning now have access to cost-effective resources that are rapidly disrupting engrained ways of thinking about teaching by re-imagining what it means for students to learn in real life, authentic contexts.

The capacity to deliver **REAL LIFE** and **REAL TIME** experiences presents an unprecedented chance for forward thinking higher education institutions to ***ENGAGE*** more students by presenting material in contexts that are more relevant to life, to ***RETAIN*** more students by increasing student satisfaction, and to better prepare students for gainful employment through “virtual internships”.

Real Life: Maslow’s “Hierarchy of Learning”

Given the diversity and range of experiences shared by today’s higher education students, standardized, one size-fits-all educational approaches have significant limitations. Institutions looking to improve program effectiveness should consider adopting a more student-centric curricular architecture that is more relevant to student life.

Abraham Maslow’s “Hierarchy of Needs” theory is a pyramidal framework that illustrates how individuals prioritize their needs. Applied in a learning context, this framework can be a helpful tool for schools looking to better ***ENGAGE*** and ***RETAIN*** their students.

In order to achieve increased student satisfaction and **retention**, a critical measure of success for learning programs today, institutions must be better prepared to support students experiencing unexpected life events. Organizations that successfully adapt their learning architecture to this more student-centric orientation will be better prepared to produce consistently intrinsically motivated, self-actualized learners who have a clear vision for how to achieve their learning goals.

Today’s institutions must shift away from teaching “knowledge” and focus on providing real life practice in the form of experiential learning environments that teach core skills. The critical role of experiential learning in the overall learning process is underscored by a scientifically developed framework called the Cognitive Learning Cycle. According to the Cognitive Learning Cycle, the learning process contains four important steps:

- Learn: Knowledge – via lecture, reading, etc. – committed to *Short Term Memory*
- Discuss: Collaboration leads to a deeper understanding

- Experience: Experience commits this understanding to *Long Term Memory* via *Cognitive Encoding.* This is the power of Experiential Learning.
- Feedback: Instructional feedback enables *Cognitive Reboot*, thus clearing Short Term Memory and preparing the brain for another round of learning.

As one can see, **experiential learning** is the critical bridge between short-term learning and long-term retention and understanding.

Real Time: Just-in-Time vs. Just-in-Case Learning

The need is greater than ever for higher education to prepare students for gainful employment and to educate part-time students already in the workforce. This shift has created a huge demand for more efficient real time instruction that prepares individuals with specific skills **Just-in-time**. The opposite of "just-in-time" learning is "just-in-case" learning. Whereas a "just-in-case" program might teach students the best practices for running an effective political campaign, a "just-in-time" program would prepare students who are in the process of running a campaign, the information for running a campaign at the time they need it. In the past, this would have been challenging and hard to scale. Thanks to new immersive learning technologies, this is a reality today, and it has enormous potential applications in a wide range of fields.

Building on the example above, an effective "just-in-time" experiential learning environment would also contain the following characteristics:

- Context-sensitive: Knowledge transfer occurs in an authentic environment (in a virtual "Capital Hill" environment instead of on a chalk board)
- Mission-critical: Information focuses primarily on the most critical issues (how to actually handle tough ethical situations instead of abstract ethics conversations)
- Immersive: Immersion promotes increased urgency for learning (such as practicing a foreign language in an actual community)
- Skills transfer: Knowledge transfer has practical applications that translate into real world skills relevant to gainful employment (in a virtual environment the campaign manager might actually have to prepare budgets or write press releases)

Experiential learning provides students with a "virtual apprenticeship". From an instructional perspective, live practice closes the kinesthetic learning loop, thus enhancing cognitive encoding and improving skills retention.

Rubber Meets the Road

A spectrum of immersive online learning environments solutions exist that can be tailored to meet the specific needs of institutions across any field such as business, healthcare, legal, IT etc., and across any subject area such as Humanities, Composition, financial literacy etc.

Several institutions are leading the worldwide innovation wave of Immersive Experiential Learning solutions. Today, you can find a wide range of products and solutions for higher education organizations. Some of the best Immersive Learning Environments are unique in their simplicity of design, yet extremely powerful in their ability to engage students. Three learning solutions of note include:

1. Interactive Learning Environments
   - "Day-in-the-Life" scenarios with an Illustrated UI
   - Static Avatars with Text Dialogue

- Lab Guide + Equipment + Task Assessment

Situational Hard Skills: (MIS, CASE, Network Mgmt)

2. Smart Learning Environments
   - "Day-in-the-Life" scenarios with an Illustrated UI
   - Static Avatars with Text Dialogue
   - Built-in "Natural" Assessments via conversations/presentations

   Broad Soft Skills: (Business, Healthcare, Sciences)

3. Learnscapes
   - "Day-in-the-Life" immersive environment with Photo-realistic UI
   - Video Actors with Audio Dialogue
   - Built-in "Natural" Assessments via conversations/presentations
   - "Learning Cycles"

   Broad Soft Skills: (General Ed, Business, Legal)

Each of these Experiential Learning Environments creates an immersive real life experience for students where they interact with characters to gain information, form ideas, and synthesize knowledge acquired into a demonstrable product by way of the assessment elements. The "natural assessment" elements are contextual in nature and allow instructors to assess a student's level of knowledge while providing an experience that is in keeping with the storyline. Students may be assessed through the creation of an email response to questions posed by a "virtual" co-worker or friend or they might be assessed through their responses to questions that are asked in the context of a lunchtime conversation.

With natural assessments, we can keep students "in the moment" while at the same time creating assessment elements that are true to the way adults are subtly evaluated in the day-to-day interactions in the workplace and with friends and colleagues.

In addition, several Experiential Learning Environments include W**eb-based student desktops**, a fully functional *Windows*^{TM} desktop built specifically for each student. The desktop is available anytime, from anywhere via an Internet-connected Web browser. This "electronic locker" includes all of the software applications, lab tools, and central storage required for a given course or an entire degree program. Students will be able to carry their projects, programs, Websites, and technology reports with them throughout their degree. In addition, students build experiential skills portfolios (or Galleries) to take with them after graduation.

Summary

Today's higher learning institutions have a tremendous opportunity to extend their campuses in an innovative way proven to increase course completion and student retention. The way to do this is to combine REAL LIFE scenarios, REAL TIME live discussions, and self-directed study into one rich and accessible educational experience—delivered right to each student's desktop. This nirvana blended learning experience is built on the foundation of the following instructional design principles:

- Learning is most engaging when multi-sensory, multi-modal support is provided
- Learning is most effective when cognitive overload is minimized and avoided
- Learning how to learn is just as important as learning through instructor facilitation and modeling.
- Learning is better sustained and reinforced through continued self-assessment and instructor feedback

By pursuing this approach, institutions will improve their ability to produce motivated, self-actualized learners who are ready to join the workforce and to make productive contributions to society.

About the Presenter

As Toolwire's Founder, **David James Clarke IV** brings over 25 years of industry passion and entrepreneurial spirit to his e-Learning architecture, publishing, and speaking projects. An education pioneer, Clarke developed the company's customer-centric philosophy and learning methodology, which originated the concept of live, hands-on learning for students in an anywhere, anytime format. Clarke is an industry expert in the education and e-Learning industries, and is a best-selling author of over 34 technology and learning books. Prior to Toolwire, he served as a technology architect and professor at the University of California, Berkeley where he pioneered one of the very first Multi-Sensory learning systems for technology. Prior to the University of California, Clarke founded the Computer Telephony Institute, and served as Director of systems integration at the Walt Disney Company. Clarke has a bachelor of sciences degree in genetics from the University of California, Berkeley, and a Master of Business Administration, M.I.S. from California Polytechnic.

Address: 6150 Stoneridge Mall Road, Suite 190
Pleasanton, CA 94588
Phone: 925.997.7579
Email: dclarke@toolwire.com

Transitioning to Hybrid Instruction: A Tool, Techniques, a Teachable Moment

Tonya Amankwatia

Introduction

While many recent pedagogical theories and education reforms support promoting interactive student-centered learning that fosters 21st-century learning skills, many educators have not changed their instructional practices to match new theory; educators typically teach the same way they were taught (Chung, 2004; Schlechtly, 1990). Along with changing theory, groups like The Partnership for 21st-Century skills (2004)—whose members represent several prominent corporate, non-profit, and governmental entities such as Apple Computers, Cisco Systems, Verizon, the Corporation for Public Broadcasting, Junior Achievement, and the National Education Association— recognized that students would be required to collaborate with others and employ a variety of tools to gather, analyze, synthesize, and represent vast amounts of information in 21st-century workplaces and communities. One way higher education might embrace the shift to foster these types learning skills is through hybrid or blended instruction.

Framework for Change

For various reasons, hybrid instruction is becoming more prevalent in higher education, yet some remain unclear about what hybrid instruction even means or what constitutes quality learning (Ellis, Steed & Applebee, 2006). Transitioning entire programs or courses to the hybrid model constitutes a large scale technology change implementation. Indeed, large scale change initiatives can be especially challenging for faculty without the proper supports. In 1990, after an extensive literature review and studies of exemplary technology-using schools, Ely concluded that there are eight conditions necessary to facilitate successful technology implementations: (a) dissatisfaction with the status quo, (b) existence of knowledge and skills, (c) availability of resources, (d) availability of time, (e) rewards and incentives, (f) participation, (g) commitment, and (h) leadership. In short, change requires clarity about purposes and processes. Fullan (2001) claimed that often faculty may want to improve but are not clear about what constitutes the important features of an innovation or what should be done differently. This paper provides an overview for how the Distance Education and Instructional Technology Department of DeSales University in southeastern Pennsylvania clarified and supported an entire program's transition to hybrid instruction. Large enrollments, space limitations, and nontraditional adult learners' needs for more flexible learning opportunities were the key issues addressed by hybrid instruction. Based on faculty questions about hybrid instruction, a tool (the Interaction Matrix) and some techniques were developed in order to meet them at their "teachable moment."

Explaining the Interaction Matrix

Amankwatia (DeSales University, 2010) developed the Interaction Matrix as a way to explain why transitioning face-to-face courses to the hybrid model is not merely digitizing face-to-face content and placing it on the Web. The starting point in the transition to hybrid is to help instructors understand and experience the affordances of Web, the benefits of multi-media/multi-modal instruction, and the types of interactions available, given the tools and learning management system capabilities. After that foundation, the Interaction Matrix is introduced as a tool to guide the transition. The matrix is built upon three types of interactions: student-to-content, student-to-student, and student-to-expert. The idea is that each of these components is useful to building 21st century learning skills and helps close the gap between thinking and doing by acknowledging the importance of a learner's individual experience, cultural symbols, and self-expression for creating new symbolic structures (Bickman, 2003).

Assignment interaction goals derive from 21st century learning skills. They help explain the purpose of interaction. Some interaction goal examples are collaboration, self-direction, social responsibility, creative problem solving, critical evaluation, and accountability. Hybrid instruction can be designed to meet these various goals through the three types of interactions in both online and face-to-face environments. With student-to-content interactions, instructors design assignments that afford students the opportunity to explore and reflect upon course concepts, instructional goals and text material. Student-to-student interactions involve creating assignments requiring students' synchronous or asynchronous communications. Instructors may encourage students to work in dyads or larger groups to discuss, evaluate, create, publish, present, and challenge and support assumptions. Student-to-expert interactions provide students with direct individual or group opportunities to learn from the instructor or other professionals in the field.

Working With the Interaction Matrix

The process for helping faculty re-design their courses with the matrix follows. With syllabus in hand and an understanding of the three interactions and active learning, instructors are ready to fill in the cells of the Interaction Matrix (See Table 1.).

Table 1. Example Interaction Matrix Prior to Changes

Assignment	Student-Student	Student-Content	Student-Expert	Targeted Learner Outcome(s)	Assignment Interaction Goal(s)
Beowulf Critical Essay		X	X	Distinguish dynamic and static literary characters	*Not considered*
Mid-Term		X			
Final Exam		X			

Examining the syllabus, instructors identify all existing assignments (instructional activities) listed to fill in the first column. Once those are listed, instructors determine interaction component type and place an "x" in an appropriate cell on the matrix. Next come the targeted learner outcomes from syllabus. Often instructors have not considered the interaction goal in terms of 21st century learning skills.

Now the opportunity comes for instructors to extend or re-design assignments. After analyzing the placement of x's on matrix, instructor are able to see any gaps and then look for opportunity to add other interaction components. These opportunities must include a consideration of the assignment interaction goal(s) options and should align with syllabus learner outcomes and course objectives. In the example below (Table 2), an existing assignment is modified by extending the interaction to a student-to-student component and aligning it to new interaction goals. The modification includes an online moderated debate on Beowulf using Elluminate ® preceding the writing of a critical essay in dyads instead of in silos.

Given all of this, organizing hybrid instructional activities within a larger lesson plan is essential. Consistency is also important. For example, the anticipatory set/objectives portion of a lesson plan can be easily transformed into an interactive, Web-based activity. Learners can always start a new learning module with this portion of the lesson plan online.

Table 2. Example of Extended Assignment With Technology-Mediated Interactions

Assignment	Student-Student	Student-Content	Student-Expert	Targeted Learner Outcome(s)	Assignment Interaction Goal(s)
Critical Essay on Beowulf: Static or Dynamic	**X**	X	X	Distinguish dynamic and static literary characters	knowledge application; critical evaluation ; collaboration
Mid-Term		X			
Final Exam		X			

Implementing Hybrid Instruction

External factors often drive the need for large scale change. In this case, two key rollout dates coalesced: the migration date of all program courses to hybrid instruction and expiration date of the learning management system contract. Teachable moments abound in these situations. Instructors should play a direct role in the moving of their courses from one system which can create a great opportunity to talk about changing instructional models and paradigms and incorporating new Web tools. To ease the transition, administrators should endeavor to meet Ely's eight conditions. For example, DeSales University hired new professional staff that assisted with the transition. Faculty received training and a stipend for re-designing each course. A planned "reflection" period was inserted between the pilot and the full rollout of the new learning management system in order to refine and adjust.

In the case of DeSales University, faculty continue to adjust on their own terms. A humanities professor remarked, "Once your course is set up and you have figured out how to manage it, distance teaching is fun and can actually open up interesting new teaching, learning and networking opportunities for you." An education instructor still struggled, "What do I put on the Web? I need that face-to-face interaction." The Distance Education and Instructional Technology department continues providing instructional design help and a supportive community structure for faculty to discuss the changing paradigms mediated by technology.

References

Bickman, M. (2003). *Minding American education: Reclaiming the tradition of active learning*. New York: Teachers College Press.

Chung, I. (2004). A comparative assessment of constructivist and traditionalist approaches to establishing mathematical connections in learning multiplication. *Education, 125,* 271-278.

DeSales University Distance Education and Instructional Technology Department. (2010). Designing effective interactions: Transform your F2F assignments for hybrid and online courses [PowerPoint slides].

Ellis, R. A., Steed, A. F., & Applebee, A. C. (2006). Teacher conceptions of blended learning, blended teaching and associations with approaches to design. *Australasian Journal of Educational Technology*, *22*(3), 312-335.

Ely, D. P. (1990). Conditions that facilitate the implementation of education technology innovations. *Journal of Research on Computing in Education, 23*(2), 298-303.

Fullan, M. (2001). *The new meaning of educational change* (3rd ed.). New York, NY: Teachers College Press.

Partnership for 21st Century Learning Skills (2004). *Framework overview*. Retrieved from Partnership for 21st Century Learning Web Site: http://www.21stcenturyskills.org/

Schlechtly, P. C. (1990). *Schools for the 21st century: Leadership imperatives for educational reform.* San Francisco, CA: Jossey-Bass.

About the Presenter

Dr. Tonya Amankwatia has been the director of Distance Education and Instructional Technology at DeSales University since June 2008. She earned her Ph.D. in Learning Sciences and Technology from Lehigh University where she was recognized by the College of Education in 2007 for her outstanding contributions to the field of education. She has 11 years college teaching experience, including both the undergraduate and graduate level. She is on the board of directors for the Division of Distance Learning or AECT and was a past board member for the Teacher Education Division.

Address: Trexler Library
2755 Station Avenue
Center Valley, PA 18034
Phone: 610-282-1100 x1689
Email: tonya@desales.edu

Using Social Media to Foster Learning Connections

Sharon Stoerger
Instructional Design Consultant
University of Wisconsin – Milwaukee

Dylan Barth
Instructional Design Consultant
University of Wisconsin - Milwaukee

Background

Today's students come to campus with a variety of technology devices and Internet-based accounts. These young people are prolific users of technology, and social media, in particular, are popular with this group. In their personal lives, many students are using social media to create, communicate, and connect with others from around the world. Yet, students do not readily adopt all technologies. Educators have recognized that students typically favor certain digital tools over others. For instance, students are rapidly adopting mobile devices such as laptops and Internet-capable handheld devices and are quickly becoming power users. These young people typically navigate toward social media sites instead of email, for example, to communicate with each other. Conversely, students' use of social media in an academic setting is often minimal, at best (Smith, Carulso, & Kim, 2010).

According to Jay Cross (2010), learning involves social interaction and active participation. A recent report on students' perception of effective teaching also highlights the importance of these characteristics (Delany, Johnson, Johnson, and Treslan, 2010). In this report, students ranked communication and engagement as keys to effective teaching. However, individuals teaching in hybrid or online learning spaces in particular have found it difficult to communicate with students due to the mediated environment. While students' use of social media in their academic lives may be minimal, educators are exploring the ways in which these digital tools could be used to support teaching and learning.

Social Media in Education

Michael Wesch (2008) suggested that students suffer from a "crisis of significance," in that they do not consider what they learn to be relevant outside the classroom. At the same time, the popular press touts the active use of social media by young people—a claim that is supported by a recent Pew report (Lenhart et al., 2010). More specifically, the latest ECAR study (Smith, Caruso, & Kim, 2010) reported that the number of students using social networking sites continues to rise. In fact, 97% of the student participants responded that they use social media such as Facebook (p. 55). In the classroom, research conducted by Roblyer, McDaniel, Webb, Herman, and Witty (2010) discovered that students are more open to using social media to support the classroom experience instead of email.

Another pedagogical challenge that can be met by social media tools is increasing engagement and interactivity in f2f class meetings and lectures. Saville, Zinn, and Elliott (2006) reported that students learn better using other methods of teaching besides lecture. This finding is aligned with the work of Butler (1992) who found that students typically identify the lecture as the least effective method of teaching. However, institutions are still using lecture-based, passive learning models for foundational, content-rich, lower-level courses. Further, students operate in silos and need more mechanisms to build learning community and peer networks, which have been proven to lead to increase learning and satisfaction. As a recent National Survey of Student Engagement (2010) reported, students who engage in educational activities with their peers are more likely to exhibit other positive educational behaviors and have a positive view of the campus learning environment. Social media tools can be used to make these

environments more interactive and engaging while in class. Also, this increase in interactivity can increase the opportunity to the building of peer networks and learning community,

Typically, theories such as behaviorism, cognitivism, and constructivism have framed discussions involving the use of technology in educational settings. Some educational scholars, however, have noted that the technology is changing the ways in which information is disseminated and knowledge is acquired. Moreover, the theories that were relevant in the past may be lacking and limited in these digitally enhanced spaces. It is also noted that the acquisition of knowledge is no longer a linear process. For these reasons, they stress the need for new educational theories. Connectivism (e.g., Siemens, 2004) is one construct that emphasizes assessing the importance of information and linking it to the right people. This of making connections to outside individuals, opinions, and activities served to guide this study.

This Study

Research Methodology

This study examined the use of social media in two different courses: (a) an English composition course for undergraduates; and (b) an instructional technologies course for graduate students. The composition course was conducted in a blended format, and the instructional technologies course was fully online. The number of students enrolled in these courses was 24 and 23, respectively. Both courses were offered through a 4-year institution located in the Midwest. The age of the students ranged from 18 to the mid-50s. Data were collected from the interactions students had using social media, as well as from online survey responses. A qualitative analysis was also conducted on the reflective writing assignments submitted by the students.

English Composition and Facebook

The first part of this study examined the use of social media to foster educational connections and to enhance learning in two different courses, one blended and one fully online. Prior to the start of this work, we explored the concept of connectivism and used it as a frame for our educational activities. Next, we investigated the use of Facebook as both a tool for disseminating course announcements and as a medium for online class discussions in a blended research writing course. Students enrolled in this course took part in four online discussions and made connections with their peers within Facebook and the learning management system, Desire2Learn (D2L). Students were divided into two groups of twelve and alternated between posting to Facebook and posting to the D2L discussion boards. Identical prompts and rubrics were used for both formats, and discussion assignments focused primarily on critical analysis of published texts and student-produced samples. All students chose to contribute to the public Facebook discussions but were offered an alternative assignment option.

Furthermore, during one face-to-face class meeting, students participated in a synchronous online discussion using the Facebook discussion tool. The class was divided into three groups of eight and responded to three specific prompts. After responding to the questions for approximately 15 minutes, the class verbally discussed specific answers to the prompt. Finally, a survey will be distributed at the end of the semester to assess the students' experiences and preferences using these two discussion tools.

Social Media and Personal Learning Networks

The second part of this study examined the use of social media as a way to expand the educational network beyond the classroom. At the beginning of the semester, these students were instructed to select a social media tool (Twitter, Facebook, Quora, YouTube, blogs, etc.) to learn more about the ways in which technology is used in educational settings. These students were initially provided with a short list of names and topics to follow as a starting point. However, they were encouraged to identify and explore their own areas of interest. Ultimately, the students were to expand their social media network throughout the semester to include at least 20 individuals and/or topics.

In the final week of the course, the students wrote a reflection paper describing their connections to individuals outside the classroom. Additionally, these students evaluated the knowledge they acquired through these connections, as well as the information they contributed to the discussions that took place in these spaces. Students in this course were asked to complete a survey about the personal learning network they created, as well.

Findings

Students in the English Composition course have not indicated a preference for their discussion activities. However, the instructor noticed some limitations of the Facebook discussion tool compared to that of Desire2Learn. For example, Facebook's discussion application does not allow for threaded discussions, which means that students and the instructor struggled to efficiently respond to other posts. Other practical limitations of the Facebook discussion tool include the lack of printing capability and the inability to integrate assessment of student participation with the learning management system. Despite these limitations, the instructor remains hopeful that the familiarity and general ease-of-use lead to a more satisfactory and engaging learning experience for students.

Some students who participated in the social media and personal learning network activity indicated that they initially thought this assignment was simply busy work. However, their opinions changed after they began to learn from the network they created. Another interesting observation was that the majority of students chose to follow blogs. This was the case even when these students were using social media such as Facebook and Twitter for their personal communication. While the students who selected blogs were enthusiastic about the information they acquired from their network over the course of the semester, the Twitter and Facebook followers were more likely to express frustration with these resources. Some of these comments reflected the lack of quality information shared, the number of posted messages (too many and too few), and the promotional nature of the posts. However, large numbers of the students found the assignment valuable and identified several individuals in their networks that would continue to be a source of information.

Overall, the social media activities conducted in both courses enabled students to become competent through their connections and leverage power of the Internet to leverage the efforts of those who contribute to the discussion. The data collection and analysis for this study are ongoing. Ultimately, more research is needed to understand in greater detail the ways in which students make learning connections via social media.

References

Butler, J. A. (1992). Use of teaching methods within the lecture format. *Medical Teacher*, *14*, 11-25.

Cross, J. (2010). *Informal learning: Rediscovering the natural pathways that inspire innovation and performance*. Hoboken, NJ: John Wiley and Sons.

Delaney, J. G., Johnson, A. N., Johnson, T. D., & Treslan, D. L. (2010). *Students' perceptions of effective teaching in higher education*. St. John's, NL: Distance Education and Learning Technologies.

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social media and young adults. *Pew Internet & American Life Project*. Retrieved from http://pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx

National Survey of Student Engagement (NSSE). (2010). Major differences: Examining student engagement by field of study. Retrieved from http://nsse.iub.edu/NSSE_2010_Results/pdf/NSSE_2010_AnnualResults.pdf#page=10

Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. (2010). Findings on Facebook in Higher Education: A comparison of college faculty and student uses and perceptions of social networking sites. *Internet and Higher Education, 13*(2), 134-140

Saville B. K., Zinn T. E., & Elliott M. P. (2005). Interteaching vs. traditional methods of instruction: A preliminary analysis. *Teaching of Psychology, 32*, 161–163.

Siemens, G. (2004). Connectivism: A learning theory for the digital age. *Elearnspace everything elearning*. Retrieved from http://www.elearnspace.org/Articles/connectivism.htm

Smith, S., Caruso, J. B., & Kim, J. 2010. ECAR study of undergraduate students and information technology ,2010. *EDUCAUSE*. Retrieved from http://www.educause.edu/Resources/ECARStudyofUndergraduateStuden/217333

Wesch, M. (2008, Spring). Anti-teaching: Confronting the crisis of significance. *Education Canada, 48*(2), 4-7. Retrieved from http://www.cea-ace.ca/media/en/AntiTeaching_Spring08.pdf

About the Presenter

Sharon Stoerger is an instructional design consultant in the Learning Technology Center at the University of Wisconsin-Milwaukee (UWM). She teaches online and face-to-face courses related to instructional technologies and professional writing at UWM and Mount Mary College. Sharon has presented her work on educational uses of technology at a number of different conferences including the Association for Library and Information Science Education (ALISE), EDUCAUSE, and the Plymouth eLearning Conference (UK). Sharon has also written articles and book chapters that have appeared in publications such as IRRODL, and The Handbook of Research on Practices and Outcomes in Virtual Worlds and Environments.

Address: Learning Technology Center, Golda Meir E-175
2311 East Hartford Avenue
Milwaukee, WI 53201
Email: stoerger@uwm.edu
URL: http://www.uwm.edu/Dept/LTC/
Phone: 414-229-4319
Fax: 414-229-6758

Dylan Barth is a Learning Technology Consultant at the University of Wisconsin-Milwaukee, where he also teaches blended composition courses in the Department of English. At UWM, Dylan assists with Desire2Learn support and site administration and coordinates the Faculty Development Program for Online and Blended Teaching. He will be co-presenting on using ePortfolios as a tool for reflective writing at the upcoming Sloane-C Blended conference in March. His areas of interest include online/blended course design, Web 2.0 tools, and rich media. Dylan is currently finishing his dissertation on the intersections of primitivism and masculinity in American apocalyptic and post-apocalyptic literature.

Address: Learning Technology Center, Golda Meir E-175
2311 East Hartford Avenue
Milwaukee, WI 53201
Email: djbarth@uwm.edu
URL: http://www.uwm.edu/Dept/LTC/
Phone: 414-229-4319
Fax: 414-229-6758

Information Sessions

DE Solutions Track

MCNY DL Case-Study: Paradigm-Shift in Business Program's Approach to Serving Predominantly Black Minority Students

Jaya Kannan
Associate Professor and Director, Learning Centre
Metropolitan College of New York

Tilokie Depoo
Professor & Director Business Programs
Metropolitan College of New York

Background: Historically Black Colleges:

According to the 2010 Sloan Consortium report, although one-third of the country's 4500 universities offer online degree programs, only about 10 percent of the nation's Historically Black colleges (HBC) do. Even among black colleges, compared with two-thirds of the public institutions that are offering distance programs, only 10% of the private colleges do so (2007 report released by the Digital Learning Lab of Howard University). This gap between private and public black colleges is said to be attributable to institutional mission. (Kolowich, 2007).

In this context, given the national drive to expand distance learning programs and on-line courses to minority serving institutions, we are keen to explore the challenges facing Metropolitan College of New York (MCNY), a mission-driven private college providing a unique experientially-based education model to a minority student population that is predominantly black.

Aim and Scope:

In analyzing MCNY's DL implementation in 2010, we investigate the relevance of the institutional commitment as a primary factor. This case-study presents the challenges of implementing fully online courses targeting underprepared minority students (predominantly black) enrolled in a business degree. Tackling issues of administrative skepticism, structural weakness, student expectations and technology support, we provide evidence that contrary to institutional belief, underprepared minority students can achieve a high degree of comfort level and satisfaction and perform academically well in online courses.

Student Profile At MCNY and the Business Program

The profile of students in the business undergraduate and graduate programs mirrors those of the college at large. At the undergraduate level, MCNY students are typically adult, minority, predominately female students who are also working. Ninety-six percent of full-time, first-time undergraduates receive financial aid. The minority ethnicities at the undergraduate level are broken down into 72% Black, 21% Hispanic, 3.4% White and 3.6% Non Resident Alien (international) students. While our male undergraduate students average 32.8 years of age, our females average at 32.5 years.

Program Planning for the Purpose-Centered Education Context

Until 2010, the DL efforts in the college have focused on hybrid-courses with minor exceptions and no courses had been offered completely on-line at a programmatic level. This was for fear of being held back by a) the limited infrastructural support, b) faculty's perceptions that these students were not technologically and/or academically skilled to handle fully online courses and c) the anecdotal evidence from the classroom that student attitudes toward learning in a fully online environment was far from favorable.

However, the findings from the college-wide 2009 technology survey report proved to be an eye-opener. Approximately 47% of students surveyed indicated a strong desire to take an online course. Unlike earlier perceptions, the qualitative data from this student survey was also overwhelmingly in support of course delivery in the on-line environment.

In addition to the encouraging shifts in the institutional strategic planning initiatives and programmatic imperatives warranting online course, the voice of the students contributed as a strong motivational element. This provided the right impetus for the Business program's leadership to boldly envision a curriculum that was to be delivered approximately 28% on-line. As an added incentive, the faculty of the Business Programs immediately endorsed the desire by the college to introduce online courses. They saw online courses as an opportunity to expand the Constructive Action philosophy beyond the walls of the campus and to increase instructional and professional feedback to students while encouraging greater student interactions.

To place the significance of strengthening MCNY's purpose-centered education model using online teaching and learning in context, here is a brief description of the curriculum: In an effort to resolve the pedagogical dichotomy between applied knowledge and the classical acquisition of theoretical knowledge, this proposed degree program is carefully designed to integrate theory and practice into a cohesive and comprehensive whole. Every semester, a student engages in a self-designed "Constructive Action" –a real world managerial activity driven by a beneficial goal or purpose. Students learn to look at their Purpose from different perspectives (systems, self& others, values and skills) called Dimensions which, when taken together, provide students with a holistic way of looking at organizational situations and designing solutions to problems and challenges. Essentially, the Constructive Action is "empirical evidence" that students learned specific theoretical concepts, are able to engage in a practical application of theory to problem solving and can demonstrate a critical analysis of why the theories in practice supported a certain hypothesis.

The Constructive Action in an online environment provides an added advantage to students as well as business partners. In an online course setting, CA allows for meaningful commitment and comments from instructors and cooperation between mentors and students. It offers greater flexibility to working students who have family commitments and are juggling several courses and greater accessibility to mentors and potential for strengthening student learning via the asynchronous mode. Other compelling reasons to offer online courses were to:

- implement the college's strategic plan of developing a comprehensive distance learning strategy that combined academic, administrative, technological and marketing aspects of purpose-centered-education
- use this as a vehicle to more efficiently meet the institution's vision of promoting social justice
- develop students' technology skills more implicitly by anchoring it within the unique curricular design that marries theory and practice.
- consolidate courses to increase the average class size and potentially increase program enrollment while not requiring additional physical space.

Challenges and Goals at the Institutional Level

For an institution that was foraying into pure on-line courses at a program level for the first time, there were quite a few challenges facing the Business Faculty at MCNY. These challenges helped in formulating these goals: (1) create a strategy to secure buy-in from administrators and non-business faculty on the merit of offering fully online courses, (2) build the overall process to build and offer courses online, and (3) develop the mechanism for assessment and continuous improvement in these very early stages.

In order to have successful online course offerings, the Business Faculty identified four levels of essential support. These included academic support focusing on standards and assessment managed by the faculty, technical support focusing on training of LMS for students and faculty, student academic support, and institutional support from key administrative offices such as student services.

Brief Summary of Business School Program Implementation

In the light of the challenges facing the faculty, the Business Program's approach to the development and launching of fully on-line courses can be characterized as a collaborative effort between faculty, technology staff and administrators at the college. A committee of full-time and adjunct faculty as well as staff from the college volunteered to serve on the implementation committee. The committee was charged with the following: (a) identify the courses that would be best suited for online course offering; (b) identify standards as baseline guidelines for course development; (c) identify faculty with existing on-line teaching experience to teach first offering of courses; (d) identify assessment measures to be used for continuous improvement; (e) monitor student success and progress within the online environment, and (f) assist in the further development of on-line courses to ensure that students can continue with taking on-line courses throughout the curriculum . The committee convened in summer 2009 and is still a standing and active committee within the Business Programs.

All of the faculty members teaching online in the initial semester of course offering had experience developing and/or teaching courses on-line. Despite their prior experience, training was provided on the LMS, pedagogy and assessment for all who taught in the first semester of offering.

Initially, in fall 2009, a total of 13 undergraduate (out of 45) and 4 (out of 62) graduate courses were selected for development offering in the following semester. Initially, it was planned that 2 courses should be offered per semester for both the undergraduate and graduate programs. This represented a total of 29 % all undergraduate courses and 4% of total graduate courses. Thereafter, 3 additional undergraduate and 3 additional graduate courses were developed for the next two semesters, Spring and Summer, totaling 19 courses in the undergraduate and 9 graduate courses for the calendar year 2010. Cumulatively, over the three terms (Spring, Summer and Fall 2010) 13 undergraduate and 7 graduate courses were delivered fully online. Courses that did not meet enrolment minimums had to be cancelled for the online platform.

On average, there were 217 non-unique registrations in the courses. When combining all the three terms in 2010, enrollment in the online courses grew at an average of 56% with the bulk of the growth coming from the initial semester of offering to the following, summer semester. The number of students enrolled in online courses also grew by an average of 63% to 205 undergraduate and graduate students. Students who enrolled and then dropped courses average 23%. Notably, there were no withdrawals from the initial semester of offering to the second semester, summer 2010.

Method and Emerging Results

In collaboration with MCNY's Office of Institutional Research and Assessment, the Faculty of the Business school designed a Feedback Survey administered to every student in every online course in all of the 3 terms in 2010. The goal of this ongoing study was to evaluate on a continuing basis, students' receptiveness of this new mode of delivery and to identify areas for improvement. This assessment was in addition to the college's ongoing Semester Course Evaluation Program. The assessment comprised of an eight question survey made available to all students enrolled in online courses. The survey was administered by the college's third-party vendor, Survey Systems. Two of the questions also allowed students to provide written comments about their experience in the online course.

Initial results show that on average, students who were enrolled in fully online courses passed at higher rate when compared to all business students enrolled in all courses for the same period. Specifically, undergraduate students enrolled in online courses had passing rate of 96% as compared to 79% for onsite students. Graduate students had a one percent better passing rate at 93% than students enrolled in onsite courses.

Results presented in this analysis are only for the Spring 2010 and Summer 2010 semester as the data for the Fall 2011 semester is being analyzed at the time of this writing. The response rate for the Spring and Summer semesters are 17% and 20% respectively.

These results capture data related to three main areas:

1. Student satisfaction: Did the course meet their expectations of a DL course
2. Comparison of student experience between online learning and face-to-face learning
3. Retention rate: did completion of DL course in term 1 lead to registration for term 2?

The student response was overwhelmingly positive in all the above-mentioned areas. When it came to student satisfaction, the evidence from the self-reports showed that, online courses met and/or exceeded students' expectations by 85% for both semesters. This included self-reports of 35% favoring "somewhat above expectations" and 23% favoring "well above expectations".

An analysis of students' response to the question "how did this DL course compare with courses taken in the traditional settings" revealed that 46% of the students thought their experience of distance learning was better than traditional settings.

Given the novice stature of a program offering online courses as part of the business curriculum for the first time, students' registration in the online courses increased by 195% in the subsequent second semester of offering. Additionally, more than 50% of the written comments support the idea of increased offering of online courses.

While analyzing persistent rates in distance education programs, Rovai (2003) distinguishes between Tinto's notion of input and integration variables. While students' characteristics and prior experience that determine the "input" are not normally altered by institutions, the "integration" variable determined by action taken by the college (in terms of policies and practices) after the student's entry into the college has a greater impact on the student's experience and perception. MCNY's efforts toward integration, starting from orientation to academic support via office hours and the strength of the student cohort model may have played a significant role in achieving this high persistent rate.

Conclusions

Many of these student subjects took the DL courses for the first time and indicated that they would continue to do so if courses were available. Their positive response contradicts the college's perception of our students' attitude to online learning and corroborates with the U.S Doe (fall 2010) report that students' experience of "online learning is marginally better than regular class."

Given the history of the college's hesitancy to forge ahead with pure online courses, the characteristics of the student population, and its alignment with national trends, findings about the high level of student satisfaction at the initial stages of the business school's program implementation comes as a surprise. Drennan, Kennedy, and Pisarski (2005) suggested that student satisfaction is influenced by positive perceptions toward technology and an autonomous learning mode. That the students thought their

experience of online learning almost matched the strengths of the classroom goads us into wanting to explore this connection between perception, learning methods and performance further.
This very encouraging evidence in a short period of two terms is the result of a paradigm-shift approach in the Business School's strategic planning. Instead of being held-back by the dominant belief system that online learning may not be the most suitable platform for minority students facing the challenges of limited accessibility, lack of academic preparedness etc, it took these variables as wonderful opportunities for re-defining the Business curriculum. It met the problem head-on by developing a robust system built on quality course delivery and well-rounded support (technology, academic and administrative). This radical approach has persuaded more than 90% of the students to benefit from the advantages of online learning and change their attitudes to asynchronous online learning and complete the course.
As a next step, we are keen to identify the complex variables that contributed to this high satisfaction rate and study its correlation with evidence of student learning.

References

Drennan, J., Kennedy, J., & Pisarski. A. (2005). Factors affecting student attitudes toward flexible online learning in management education. *The Journal of Educational Research, 98*(6), 331-338.

Kolowich, S.(2007). Modest gains for black colleges online. *Inside Higher Ed.* Retrieved from http://www.insidehighered.com/news/2007/03/01/hbcu

Rovai, A. P. (2003). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education 6,* 1–16

Sloan-C. (2010). Class differences: Online education in the United States, 2010.Retrieved from http://sloanconsortium.org/publications/survey/class_differences

About the Presenters

Dr. Tilokie Depoo is Professor and Director of Business Programs at Metropolitan College of New York. His teaching experience includes both on-line and on-site courses and has pioneered numerous innovative career focused programs for students. He has managed fully on-line degree programs and has served as instructional designer for several graduate level on-line courses. He has over twenty five years of corporate business experience with a diversified professional background in both international and domestic businesses. In the last few years, his focus has been to develop curriculum that aligns with real world practices to better prepare students for successful careers. He has Ph.D. in Global Leadership and Strategic Management from Lynn University.

Address: 431 Canal Street
New York, NY 10013
Email: tdepoo@mcny.edu

Dr. Jaya Kannan is an Associate Professor and the Director of the Learning Enhancement Centre at Metropolitan College of New York. Her expertise in the field of online learning combines the interconnected areas of teaching, course development, administrative planning and research. Her international academic experience has included teaching and research in India, Singapore and USA. Current research agenda involves studying learner autonomy and assessment of the learning process in the online environment. She has a PhD in Computer Assisted Language Learning from Anna University, India.

Address: 431 Canal Street
New York, NY 10013
Email: jkannan@mcny.edu

Creating a Support Community for New Faculty Teaching Online

Tim Walker
Manager, Classroom Technology Support
Loyola University Chicago

Bruce Montes
Director, Academic Technology Services
Loyola University Chicago

Introduction

According to the 2010 Sloan Survey of Online Learning, the number of students enrolled in online courses rose by almost 21% over the past year. This represented the largest increase ever, accounting for an additional one million new online learners. It was also reported that about 30% of all higher education students now take at least one online course (Allen & Seaman, 2010). To manage this growth, many colleges and universities are encouraging traditional classroom instructors to teach online. These institutions need to provide resources, training, and activities to support faculty transitioning into this new role.

Research indicates that faculty new to online teaching significantly benefit from strong collegial support and access to a variety of instructional resources (Kyei-Blankson, 2009). Peer interactions are a key component to this process. However, creating this support environment is often challenging and complex. Faculty may be geographically dispersed, have conflicting schedules, or hesitant to engage in cross-disciplinary collaboration. The development of an online faculty support community can help overcome these obstacles. This paper and corresponding presentation briefly review a model for developing, assessing, and sustaining such a program.

What Is a Faculty Support Community?

A faculty support community consists primarily of instructors and select professional staff who actively participate in the sharing of information and exchange of ideas to enhance the teaching-learning process. It is cross-disciplinary and closely resembles a faculty learning community (FLC) where peer interaction is a vital factor to success. The most notable differences to an FLC are it is not limited by numbers, technical staff may contribute regularly, and the typical one-year time commitment doesn't apply. A vibrant faculty support community may continue to prosper with a fluctuation in individual participation and membership.

The community is primarily cohort-based (rather than topic-based), where participants address the teaching, learning, and developmental needs of an important cohort that has been affected by isolation, fragmentation, or stress (Cox, 2009). It has two primary goals: to build a sense of community and to explore a variety of teaching techniques and approaches. All or part of the community may collaborate during regularly scheduled meetings. However, most interaction usually occurs in an asynchronous format (discussions, emails, polls, blogs, etc.). A variety of instructional resources may also be available for individual review. Each faculty support community determines on its own the resources, training, and activities necessary for success.

It is possible for a faculty support community to be on-ground, online, or blended. For the purposes of this study, following three phases of this process are highlighted as if the community were to be exclusively online.

Development

The development of a faculty support community requires committed instructors and support staff. Faculty "buy-in" is critical to the success of a support community. According to the Sloan National Commission on Online Learning, "More than six years of data from the national Sloan Survey of Online Learning have shown that faculty acceptance of online education has consistently been seen as a critical barrier to its wide-spread adoption" (2009). Additionally, the Commission suggested that faculty generally agree teaching online takes more effort on the part of the faculty member than it does to teach a traditional face-to-face course. Some studies suggested that many teachers do not necessarily feel competent or equipped to integrate technology into their courses, which can have negative consequences to the success of online programs. Colleges and universities may lack a systematic approach to faculty development (Schon, 1973; Senge 1990) and sound coordination of a faculty support community will be important to its success.

A support community specifically designed to prepare faculty for teaching online can come in multiple forms. Through comparative analysis, Yilmazel-Sahin and Oxford suggested that some models of faculty development for technology integration are more effective than others (Yilmazel-Sahin & Oxford, 2010). In their study, Yilmazel-Shain and Oxford categorized approaches to faculty development into three areas: workshops, mentoring, and school-university collaboration. Their study suggested that the most effective form of approaches to faculty development are the school-university collaboration models because they actively involve the teachers, they increase comfort levels with integrating technology into courses, they provide opportunities to develop skills at one's own pace, they offer individualized, ongoing follow-up assistance, and they may offer flexible scheduling (Yilmazel-Shain & Oxford, 2010). The faculty-support community model most closely fits the school-university collaboration model of faculty development.

Assessment

"Evaluation and assessment are critical to the success of FLCs, and authentic assessment has the potential to contribute greatly to the quality of FLC experiences in terms of both process and outcomes" (Hubball, Clarke, & Beach, 2004). They suggested that assessment would address what learning is important to faculty. The authors also propose consideration of three principles to bring to life authentic assessment.

First, Hubball et al. (2004) suggested that "authentic assessment requires faculty members to be actively engaged in the process." Faculty members need to provide input into the process of setting objectives and the directions of the community.

Second, Hubball et al. (2004) proposed, "authentic assessment should take place in a variety of carefully planned ways before, during, on completion of, and following the FLC experience." Some of the ways they suggest assessment is both through student-learning outcomes and self-learning, as well as the use of multiple instruments such as focus groups, questionnaires, and Web documentation.

Third, Hubball et al. (2004) proposed that "authentic assessment of FLCs is both an individual and social contextual process." They propose that self- and collaborative goal setting, and evaluation will most likely "engage diverse learning styles."

Assessment of a faculty support community very closely models that of an FLC and the systematic approach to assessment of the support community should be able to draw on the same principles.

Sustainment

Puzziferro and Shelton (2009) revisited the Seven Principles for Good Practice published by Chickering and Gamson in 1991. They indicated the principles provide us with a timeless foundation for implementing quality faculty support. All seven principles merit some consideration for sustaining a viable faculty support community. However, the principles of [1] Good Practice Encourages Contact, and [3] Good Practice Encourages Active Learning may offer the best insight into creating a highly sustainable online support community.

The first principle stresses the significance of frequent contact and open communication to keep a community engaged. Faculty who feel connected are more likely to develop confidence in online teaching and motivated to continue to improve their skills (Puzziferro & Shelton, 2009). Therefore, a consistent presence in an online support community can lead to sustainment. A strategy would be to assemble a team faculty peers and have them share responsibility for being present and posting on a regular basis.

The third principle focuses on active learning and the importance of faculty discussing what they are learning, documenting what they are learning, and relating activities to real teaching experiences. This promotes an environment suited to lifelong learning and provides solutions to practical issues and problems (Puzziferro & Shelton, 2009). As a result, an online support community that better prepares faculty for teaching will inevitability find sustainment. A strategy would be to have a group of faculty peers design hands-on, authentic activities that relate directly to real-life situations.

To summarize, faculty will continue to make use of an online support community if it ultimately provides value to them. They are looking to share ideas, engage in meaningful ways, and learn new information (Stark, 2011). An online support community that continues to make this a reality will garner long-term viability.

References

Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States, 2010*. Babson Park, MA: The Babson Research Group.

Chickering, A. W., & Gamson, Z. F. (1991, Fall). Applying the Seven Principles for Good Practice in Undergraduate Education. *New Directions for Teaching and Learning, 47*. San Francisco, CA: Jossey-Bass.

Cox, M. D. (2009). *What is a faculty and professional learning community?* Retrieved from http://www.units.muohio.edu/flc/whatis.php

Hubball, H., Clarke, A., & Beach, A. (2004). Assessing faculty learning communities. *New Directions for Teaching and Learning, 97*, 87-100.

Kyei-Blankson, L. (2009). Learning to teach and teaching online: Faculty-faculty interactions in online environments. *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 947-952). Chesapeake, VA: AACE.

Puzziferro, M., & Shelton. (2010). Supporting online faculty: Revisiting the Seven Principles (a few years later). *Online Journal of Distance Learning Administration, 12*(3). Retrieved from http://www.westga.edu/~distance/ojdla/fall123/puzziferro123.html

Schon, D. A. (1973), *Beyond the stable state*. Harmondsworth, UK: Penguin.

Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Doubleday Currency.

Sloan National Commission on Online Learning (2009). *NASULGC-Sloan National Commission on Online Learning benchmarking study: Preliminary findings*. Retrieved from http://sloanconsortium.org/sites/default/files/NASULGC.pdf

Stark, J. *Building and sustaining an online community*. Retrieved from http://www.bemispromotions.com/building-and-sustaining-an-online-community/

Yilmazel-Sahin, Y., & Oxford, R. (2010). A comparative analysis of teacher-education faculty development models for technology integration. *Journal of Technology and Teacher Education 18*(4), 693-720.

About the Presenters

Tim Walker is the Manager of Classroom Technology Support at Loyola University Chicago. He has over twelve years of experience working with faculty on integrating technology into the teaching-learning process. He oversees the support function for approximately 300 electronic learning spaces located on three campuses. Prior to joining Loyola, Tim spent fourteen years at National-Louis University in multiple positions. His academic credentials include a bachelor's degree in Business Administration from Marquette University, and a master's degree in Human Services Administration from National-Louis University. He is also a currently enrolled in the Distance Education Certificate Program at the University of Wisconsin-Madison.

Address: Loyola University Chicago
1032 W. Sheridan Road
Granada Center, Room 240
Chicago, IL 60660
Phone: 773-508-2960
Email: twalker1@luc.edu
URL: www.luc.edu/cts

Bruce Montes is the Director of Academic Technology Services at Loyola University Chicago. In this role, he oversees the academic support operations for the division which entails assisting students, faculty, and staff with mastering the use of learning technologies. Bruce also teaches instructional technology courses for Loyola's School of Education on a part-time basis. He has served in multiple capacities at Loyola for over 35 years and has extensive experience in the use of technology in higher education. His academic credentials include a bachelor's degree in Communication and a master's degree in Instructional Technology, both from Loyola University Chicago.

Address: 1032 W. Sheridan Road
Granada Center, Room 240
Chicago, IL 60660
Phone: 773-508-7601
Email: bmontes@luc.edu
URL: www.luc.edu/its/ats.shtml

Online Communities for Collaborative Work & Collaborative Learning: Lessons Learned

Deb Wisniewski
Consultant
Sharing Common Ground

Theresa Kulow
Assistant Director
Employment Resources, Inc.

Introduction

Since the fall of 2009, we have been involved in developing and managing three online communities. Each of these communities grew out of a desire to provide a place for people with a shared passion to connect and collaborate in an open environment. All three initially began as online formal learning environments that supported face-to-face trainings, but have evolved to be free-standing communities that expand informal learning opportunities and nuture new ways for participants to share ideas, knowledge, and experiences. Table 1 describes these three communities.

Table 1. *Three Online Communities*

Online Community	Focus of Community	Membership	Community Management Structure	Sponsorship
ABCD in Action (Asset-Based Community Development); created August 2009	How to put ABCD into practice in both personal and professional lives	259 members from across the United States, plus several other countries; Primarily people who use ABCD in their professional work, e.g., community organizers, ministers, youth workers.	"Stewardship Team": three people. Two of these people were the originators of the site and a third member was recruited.	Site fees paid by the ABCD Center. The Stewards volunteer their time.
SDS Network; created February 2010	Supporting self-determination and the use of self-directed supports by people with disabilities	145 members primarily from Wisconsin, plus several other states and countries; includes individuals with disabilities, family members, allies and service providers	Management Team: Two part-time managers	Site fees and managers' time paid through a grant, as part of a virtual training and technical assistance center.
Employment Network; created February 2010	To expand community-based employment	260 members primarily from Wisconsin, plus several other states	Management Team: Two part-time managers	Site fees and managers' time paid through a grant, as part of a virtual

	options for people with disabilities.	and countries; includes individuals with disabilities, family members, allies and service providers	Network Hosts: Four volunteer hosts	training and technical assistance center.

Ning Plans

Ning advertizes itself as "the World's Largest Platform for Creating Social Websites." When we first began using Ning, it was a free platform. During the summer of 2010, the company developed three different plans and began charging a fee for them: Ning Mini ($19.95/year), Ning Plus ($199.95/year), and Ning Pro ($499.95). They currently have teamed up with Partner Sponsors to make Ning Mini available free to eligible North American K-12 and Higher-Ed Ning Networks, and Ning Plus available free for health-related networks. We currently use the Ning Plus for all three of our communities.

Depending upon the plan chosen, there are many tools and features available. Our communities currently use these: discussion forum; blog; video embedding; events; groups; Facebook and Twitter integration; sign-on through other social media (Facebook, Twitter, Yahoo, and Google). They offer free test networks through the Ning Plus and Ning Pro plans. These allow you the opportunity to experiment with a copy of your site, without worrying about causing problems with your actually network. More information on the plans can be found at: http://www.ning.com/compareplans

Lessons Learned

Over the last couple years, we have learned a great deal about what works and what doesn't when developing and managing online communities. We have been fortunate to have found fellow travelers on this adventure and have learned a lot from them as well. The following represents a snapshot of the lessons we've learned through our experiences and the experiences of others.

The Foundation for Online Communities

People and purpose comes before technology. Too often people develop online communities based on the desire to use a particular technology. One of the most important lessons we've learned is that people and purpose need to be considered before thinking about technology. Who are the people you hope to connect? Why do you want them to connect? There are many other questions that should be considered before considering technology, but these two are essential. Being clear about these two questions will aid in community development, as well as give potential members a clear idea of what the group is all about.

It's all about relationships. Online communities are about more than just content. People join online communities for many reasons, but they stay and become active members because they develop a sense of belonging. Online communities need to consider how to foster connections and shared experiences between members in order to increase their participation and commitment to the community as a whole. Good content *interests* people; relationships *engage* them.

Membership

Bigger isn't necessarily better. The success of a community isn't determined by the number of members who join. It's determined by the commitment of the members, demonstrated by their level of activity. Don't worry about size; focus instead on activity and what you can do to stimulate it.

Leaders, members & lurkers: They are all important. There are multiple roles within online communities and multiple people to fill those roles. The responsibility of managing an online community includes nurturing and supporting the leaders and potential leaders, welcoming and encouraging the members, and remembering and coaxing the lurkers (those who are just watching/reading but not actively participating).

Development and Management

Development takes time and effort. "Build it and they will come" really doesn't happen. Actually, they may come, but they won't stay and participate. Getting communities off the ground involves a commitment of time and energy to get the juices flowing. The community manager needs to begin by welcoming each new member to the LC and helping them feel connected. This means starting with where they're at, both in person and online. Some will be ready to jump right in; some will need more support and guidance. When the communities are based online, it takes even longer to forge those connections and to build those relationships.

Working to engage members never ends. Everyone is busy. That seems to be the mantra today. Even the most committed members will drift away unless you give them something new to consider, to discuss, to engage with. The trick is to encourage engagement without nagging.

Community managers are essential. You wouldn't schedule a party but then not show up to host it, would you? Online communities need the same consideration. Community managers are needed to welcome new members, make introductions, answer questions, facilitate discussions, engage members, respond to problems, nurture potential leaders, provide training, and more. Without someone in this very active role, a community can lose steam and then disappear.

It's not a one-person show. As vital as a community manager is, this person should never be confused with being the sole leader of a community. Communities flourish when members feel that there is shared leadership and opportunities to grow into leadership positions. Recognizing the contributions of potential leaders and providing encouragement for them to take on larger roles within the community will result in a stronger network for all.

Consider and promote the "Trust Factor." An important part of a successful online community is trust. Without it, your community won't be as strong as it could be—it brings people together; it encourages people to share information and the more they share, the more others will share. Strong bonds result in a strong community. Community managers have an ethical responsibility to lead by example in promoting and maintaining that trust. Members of online communities often follow the example of influencers—so it's important for community managers to encourage an atmosphere of community trust.

We will make mistakes. Community building is messy work. Sometimes we make mistakes. The trick is to learn from the mistakes and grow from them.

KISS: Keep it super simple. This follows from the "people and purpose before technology" principle. Don't use all bells and whistles just because they're available. Use the simplest means to engage members. If it takes too much work to participate, many folks will just give up.

Activities and Content

Help people to feel connected to each other and to the community. Individualize welcome messages for new members. Comment on their profiles. Recognize special achievements. Give them links to

discussions, groups and other members that relate to what they've written about in their profiles. These are just a few examples of activities that help people feel connected.

Content needs to be member-driven, not sponsor-driven. It's not impossible to keep a community alive without a sponsor, but it is much more difficult. Sponsors pay for site fees and community managers, contribute content, and provide access to technical expertise and resources. In exchange, they are able to learn about community needs, preferences and priorities, promote events, and market products. The tricky part is that the sponsor's goals are not necessarily the goals of the community. A community needs to focus on the community – the members and their interests and passions. If the sponsor itself becomes the focus, then the community will struggle to continue.

Focus on activities that call members to take action. Each time you communicate with a single member or with the whole community, always include something they can do… update their profile, add to a discussion, post a photo, watch a video. Focus on questions, not just on content. Content requires them to read/watch; questions require thinking/answering.

It needs to be fun. Even in the most serious of online communities, fun is a necessary ingredient. Members are more likely to stay connected and active if they know that they will have the opportunity to smile. Encourage off-topic discussions among members. Sharing personal ideas and interests actually serves to promote community engagement. Sharing recipes, talking about the Packers, and discussing cats vs. dogs helps to encourage personal connections between members.

Communities should be an integrated piece of your overall plan. Online communities should not be kept separate from all of the other things you are doing in learning, teaching, or sharing of information but a part of and embedded within everything you do. Every action you take in one area should lead to an action within the community. That goes the opposite way as well.

Make connections to other communities. No one community can cover all of the important topics or meet the needs of all members. People will value a community more if it acknowledges and connects to other communities and resources.

Online Community Resources

The following list is a sampling of the resources that we have found to be the most helpful and practical. There are many others on the Internet and more appear every day. We thank each of these for the many resources, tips and ideas they have provided us in this exciting work.

Happe, R., & Storer, J. (n.d.). Community roundtable: A peer network for community, social media and social business practitioners from The Community Roundtable Website: http://community-roundtable.com/

This is another resource for learning about community development and management, particularly in the corporate world. Although this organization charges an annual membership for full access to their resources and trainings, there are many materials available to non-members as well.

Millington, R. (n.d.). The online community: How to grow thriving online communities. Retrieved from Feverbee Limited Website: http://www.feverbee.com/

Millington is primarily focused on corporate communities, but much of his advice and tips are applicable in other types of communities as well.

Ning creators network. (2010). Retrieved from Ning, Inc. Website: http://creators.ning.com/

This Ning network is open to all Ning Creators. It is a very active community with a wealth of information. Almost all questions get responses, mostly from other creators, although Ning staff are also very helpful. Information can range from very simple to extremely complex.

Reed, M. (2011). *Community spark*. Retrieved from CommunitySpark.com Website: http://www.communityspark.com/
Reed offers great tips on community development and management.

Wenger, E., White, N., & Smith, J. D. (2009). *Digital habitats: Stewarding technology for communities*. Portland, OR: CPsquare.
This book is the most practical and useful book we use. It provides a great balance of thinking about technology and community, while promoting collaborative work and collaborative learning.

White, N. (n.d.). Full circle associates: Connections for a changing world, online and offline. Retrieved from Full Circle Associates Website: http://www.fullcirc.com/
Nancy White provides many practical resources for using with online communities. She also shares her experiences, trainings, etc. through a blog on the site.

About the Presenters

Deb Wisniewski, MSSW, is an independent consultant and the owner of Sharing Common Ground. Her career has always focused on promoting the self-determination of people with disabilities. She is currently a Fellow with the national Asset-Based Community Development (ABCD) Center, and the Community Network Coordinator with In Control Wisconsin. While pursuing a Professional Development Certificate in Distance Education from UW-Madison, she began combining ABCD and technology to build and support online communities. Deb currently works with several teams to develop and manage three online communities and has provided technical assistance and unsolicited advice to others developing their own online communities.

Address: Sharing Common Ground
21 Corry St.
Madison WI 53704
Email: scgwis@gmail.com
Phone: 608-345-4761

Theresa Kulow is the Assistant Director at Employment Resources, Inc. (ERI) in Madison, Wisconsin. Theresa brings extensive experience in marketing, design, and promotion; information management; website administration and design; and online learning development and training. She currently oversees the e-learning design team for the Paths to Employment Resource Center (PERC), a virtual training and technical center focused on bringing together employment and disability resources. With a degree in English and Education, Theresa has a real passion for learning and enjoys sharing her experiences and expertise in this area.

Address: Employment Resources, Inc.
4126 Lien Road, Suite 104
Madison WI 53704
Email: kulow@eri-wi.org
Phone: 608-246-3444 Ext. 224

Managing Workforce Training: Get the Most With the Minimum

Eric Roe, Ph.D.
Director, Employ Florida Banner Center for Advanced Manufacturing
Primary Investigator, US Department of Labor Funded ETA TBL Project
Polk State College

Glenn P. Goonis, J.D.
Manager, Advanced Manufacturing Technology Based Learning Initiative,
US Department of Labor Funded ETA TBL Project
Hillsborough Community College

Introduction

The U.S. Federal Government has been providing a number of funding opportunities for workforce training during this recession, such as the Community-Based Jobs Training Grants and the new Technology-Based Learning grants. Writing a winning proposal for federal funding opportunities such as these is difficult—many proposals are turned down—but reaching grant goals within budgetary constraints imposed through limited grant funding can be a bigger challenge. At the Workforce Florida-funded Employ Florida Banner Center for Advanced Manufacturing, writing award-winning grants and managing them to success has become a way of doing business, helped in great part by ensuring that its grants fund pathways to success, from training high school students to certifying adult learners to educating degree-seeking college students. The Banner Center, currently located at Polk State College in Lakeland, FL, develops programs which build off of each other, leading to attraction and retention of wealth-creating businesses in Polk County and throughout the state. The Banner Center, formerly housed at Tampa's Hillsborough Community College, has partnered with HCC to form the Advanced Manufacturing Technology-Based Learning Initiative. The initiative is implementing a US Department of Labor Technology-Based Learning (TBL) grant to create blended learning programs that prepare learners for the high-skill, high-wage world of advanced manufacturing.

Best Practices for Grant Project Success

Grant project success can achieved when approached from two levels: first, you must successfully propose on the grant, and second, you must do what was promised in the grant proposal. When it comes to grant proposal writing, there are several items potential grantees should keep in mind. The first is locating appropriate grant opportunities. There are many government and private sector grant-providing entities, such as the US Department of Labor, the National Science Foundation, the Bill and Melinda Gates foundation, and others. To stay current with potential opportunities, signing up for new updates from <http://www.grants.gov> and other funding bodies is worth the time and extra mail. Once subscribed, be sure to read the notifications, or to have someone appointed to read them. Reading the requests for proposals carefully is important, as is being sure to follow the requirements for submitting a proposal. This work can be tedious, and is often time-consuming, but well worth the effort. Another important lesson to keep in mind is to be sure to pay attention to the details of the grant request; different grantors will have different requires for successfully written grants, from font size to plans for sustainability after the grant period has expired. Read the request for proposals carefully, and be sure to follow all rules to the letter. For more details on successful grant proposal writing, check with the grantors. Oftentimes they will have training sessions that grant proposal writers can attend, which provide insight to what the grantor is looking for in a successful proposal. Additionally, these sessions provide an opportunity for specific questions which can be addressed by the grant officer.

Once a potential grantee has won the grant, the real challenges begin: Overcoming the constraints of the project to reach a successful project conclusion. Perhaps the most critical constraint with grant projects is limited funding; the successful grantee will have to work with a budget that is considerably smaller than encountered in the private sector. When dealing with eLearning and blended learning, the TBL team at HCC and the Banner Center found that leveraging resources from partners was the key to successfully reaching project goals.

The TBL team worked with private sector partners, including Lab-Volt™, to leverage not only existing eLearning assets related to their grant topic, but also their proprietary Learning Management System. Over the course of its 50+ years, Lab-Volt – who focuses in the manufacturing sector – has gained prominence as a developer of computer-based learning systems, simulation training software, and modular multimedia educational programs with supporting classroom management systems, as well as web-based training programs. Lab-Volt's eLearning assets are fairly complex, and give manufacturing students the ability to obtain virtual hands-on in the virtual classroom. Lab-Volt had a large selection of pre-existing eLearning assets that related to manufacturing, although they did not offer any preparation materials that were developed specifically for the CPT exams; the TBL team culled through their materials and selected those that were related to the testing objectives, and added them to the curriculum, where appropriate. Additionally, Lab-Volt provided their Learning Management System (LMS) for use by TBL learners. The project team was led Hillsborough Community College, who manages the grant through a full-time project manager. The project manager was selected for the role has experience in eLearning, classroom training, and the manufacturing sector. His goal has been to leverage the Banner Center's classroom curriculum and the appropriate eLearning modules to ensure a successful course.

The goal of the TBL grant is to prepare learners for employment and advancement opportunity in advanced manufacturing. The certification that the learners work towards, the MSSC CPT, is nationally recognized, and was created with the input of industry.

Companies like Lab-Volt work with employers and schools whose learners are encouraged to receive certifications like this, so being able to partner with the TBL project and –through that partnership – add a new certification to its menu of training choices for its client base made economic sense for Lab-Volt. Additionally, like most other grants, the TBL grant has a limited duration during which the goals are to be met. The grant has a three-year duration, and the first six months of the grant were spent on administrative functions, such as hiring the appropriate staff, which leaves two and one-half years for the ADDIE steps (analysis, design, development, implementation, and evaluation). As this program is 80 hours in length, the design and development phases had to be rushed to ensure enough time left in the grant to implement the program to the promised 650 learners. For these reasons, leveraging existing materials benefited the time, cost, and quality legs of the project triangle. Without the existing high-quality eLearning objects from Lab-Volt, along with their LMS, reaching the goals of the grant would have been difficult if not impossible.

Another constraint faced in projects like this, which frequently deal with higher education institutions and their non-credit side, is finding a LMS and webinar software package that is accessible by learners who are not necessarily registered as college students. For example, in many Florida colleges Blackboard or similar learning management systems are available to for-credit instructors, but not for non-credit learners. Therefore, the TBL team needed find a learning management system that could host the eLearning objects that Lab-Volt provided. As mentioned above, Lab-Volt provided the team with their Mind-Sight LMS, which can be installed by learners both in the classroom at home, giving 24-7 access to over 180 eLearning objects used by the TBL team. In addition to hosting the Lab-Volt materials, the LMS can also host other SCORM-compliant eLearning assets, documents, and PDF files. The TBL team purchased additional eLearning materials from other providers, and created some of their own; all of these can be hosted on the LMS.

Further, for-credit learners are often able to use webinar software for their classes, using applications such as Blackboard and its web conference functionality. However, this option is not necessarily available to non-credit learners. For the TBL project, the team had to find a low-cost, high-functioning web conference tool to ensure distance learning could be delivered successfully. The team researched and used various tools and finally settled on Microsoft™ Live Meeting™. The Live Meeting software allows for real-time audio delivered over VOIP, in addition to video, chat, presentation sharing, and other basic functionality. The tool is stable, and the cost is considerably less than many rivals.

The Importance of Nationally Recognized Certifications

When determining how to meet the goals of the grants for which the Banner Center has applied, personnel keep in mind the importance of nationally-recognized certifications. Certifications, such as the Manufacturing Skill Standards Council's Certified Production Technician (CPT), have traditionally been recognized as being worthwhile for grant requests because trainees are able to obtain a certification recognized throughout the nation, thus providing more easily recognized benefits than a local certification may present. The U.S. Department of Labor's Education and Training Administration has awarded the Banner Center (though its former home, HCC in Tampa, Florida) a Technology-Based Learning grant for nearly $500,000 to prepare learners for the CPT exams using a blended learning approach. The certification is not only transportable to employers throughout the United States, but—in the state of Florida—can articulate up to 15 credit hours towards learners' Associate of Science degree in Engineering Technology.

For the TBL grant, the Banner Center was able to work with a third party, Lab-Volt ™, to leverage their eLearning assets they developed that relate to advanced manufacturing and the CPT exams. To entice them to provide the eLearning objects and LMS at a low cost, the grantees provided the overall certification preparation course to Lab-Volt™, for addition to their catalog of available programs. Now Lab-Volt's sales staff is able to present its customers with an option to prepare its learners for CPT exams, thanks to the Banner Center and the TBL grant. This will benefit Lab-Volt's customer relations, in addition to providing more learners the opportunity to earn their CPT certification. In addition to the Lab-Volt materials, the Banner Center purchased eLearning assets from a National Science Foundation-funded consortia of colleges at a rate far below market value. Together with Lab-Volt's LMS and eLearning assets, learners in the TBL program are presented with up to 280 different eLearning assets to help them prepare for CPT exams.

To make the TBL program available to a geographically-dispersed audience, the Banner Center has purchased a host account with Microsoft™ Live Meeting. The Live Meeting software enables learners to see the instructor though a live video feed, and additionally hear the instructor via Voice Over Internet Protocol (VoIP). When coupled with the LMS and related eLearning assets, learners can access the course from anywhere. Each cohort of learners, thus far, have come from different regions of Florida (Orlando, Sarasota, New Port Richey, Lake Wales, Lakeland, and others) and even different states (California in one instance). The TBL team chose Live Meeting after testing various other options. Live Meeting was chosen because of its robust ability to stream video and audio via VoIP, thus negating the need for learners to dial into a conference line. Additionally, Live Meeting was priced substantially better than its rivals, and offered much the same functionality (chat, Q&A, polling, screen sharing, etc.).

The Importance of Articulation Agreements

Recently, many states have begun to create articulation agreements for nationally-recognized certifications. The CPT certification in Florida can articulate up to 15 credit hours towards holders' Associate of Science degree in Engineering Technology. The articulation agreement was initially created

by the current head of the Banner Center, Eric Roe PhD. Dr. Roe's efforts to obtain the first such articulation agreement in Florida cleared a pathway for the 101 more to be approved since. <http://www.fldoe.org/workforce/dwdframe/artic_indcert2aas.asp>. The Banner Center works in partnership with corporate colleges and for-credit institutions to implement the TBL training. The training can be offered as a stand-alone product for corporate colleges who are working with employers to ensure that their employees have the advanced manufacturing skills required to perform successfully on the plant floor, and also through for-credit institutions for students who wish to articulate 15 credit hours in an 80-seat hour course. Many Engineering Technology students from various Florida community colleges obtain their core credits in the degree via the articulation agreement. This enables the Banner Center to work with educational institutions who might not otherwise be interested in presenting their students with the option to obtain a certification.

Sustainability

Grant funding is often meant to be seed money, to create the basis for a sustainable project or entity. With the TBL grant, sustainability was a key factor in the government's decision-making process. The proposal writers and managers took this into account when developing the grant, and developed a product—preparation courses for a nationally-recognized certification—that could be attractive in the market of non-credit education. Many manufacturing employers already specifically request CPT holders for new openings, and some manufacturers even make holding the certification a suggested prerequisite for gaining promotional opportunities. Additionally, there are other private sector providers of test preparation who charge unsubsidized tuition rates for their programs. For these reasons, the TBL team believes that their product fills an important gap not only in the offerings of the schools involved in the partnership, but also for the private sector partner. When determining what to propose when grant opportunities arise, be sure to take into account sustainability. Ask, "Is there demand for this product or service in the market?" If the answer is yes, consider what fees may be realistically charged, and determine if that amount would lead to sustainability. Once the grant is awarded, be sure to keep sustainability in mind while setting up marketing and business plans, and be ready to switch to a for-profit mode immediately after the conclusion of the grant, if possible.

Conclusion

Obtaining funding from grant sources can be challenging, for potential grantees have to not only write a successful grant proposal, but also complete the terms of the grant on what is frequently a limited budget. To be successful here, it is helpful to partner with other entities—both public and private—to meet the time, cost, and quality constraints of the project. The TBL grant used existing classroom curriculum from the Employ Banner Center for Advanced Manufacturing, in addition to existing eLearning assets from Lab-Volt, to create a blended approach to preparing learners for exams leading to a nationally-recognized manufacturing certification. Additionally, the project was able to use Lab-Volt's LMS to host the eLearning. To ensure sustainability, it is a best practice to include realistic plans for generating revenue from a proposed grant-funded product or service after the expiration of the grant. The TBL project includes plans to sell training curricula at market value after the expiration of the grant.

About the Presenters

Eric A. Roe, Ph.D., is a chemical engineer. He is the founder and Director of the Employ Florida Banner Center for Advanced Manufacturing, aimed at developing talent development strategies linking workforce training, secondary and post-secondary education, industry certifications, and apprenticeships for manufacturing. He is the program director of the Engineering Technology AS degree at Polk State. He serves as the principal investigator and director of two US Department of Labor grant-funded initiatives: a

$2.91M Community Based Jobs Training Initiative and a TBL grant. Dr. Roe earned his Ph.D. in Chemical Engineering from the University of South Florida in Tampa.

Address: Polk State College
PSC Corporate College
999 Ave. H, NE - Station 100
Winter Haven, FL 33881
Email: eroe@polk.edu
URL: www.banner-mfg.org
Phone: 863-669-2838
Fax: 863-669-2330

Glenn P. Goonis, J.D., is an entrepreneur, seasoned corporate learning consultant, and training manager who has led large-scale training initiatives at companies such as Ford Motor Co., Consumers Energy, and MetLife. Currently, Glenn is managing a granted-funded office at Hillsborough Community College in Tampa, FL, where he is using blended learning approaches to train learners in the skills necessary for working in advanced manufacturing. Glenn earned his Bachelor's of Science in journalism from Eastern Michigan Univ. in Ypsilanti, MI., and a Juris Doctor from Wayne State Univ. law school in Detroit.

Address: Hillsborough Community College
Brandon Campus
10414 E. Columbus
Tampa, FL 33619
Email: ggoonis@hccfl.edu
URL: www.hccfl.edu
Phone: 813-253-7838
e-Fax: 636-212-9826

Building an Online Professional Learning Community

Robin Greenler
Outreach Coordinator
Center for the Integration of Research, Teaching, and Learning (CIRTL)

Kitch Barnicle
Network Coordinator
Center for the Integration of Research, Teaching, and Learning (CIRTL)

Introduction

Best practices for the development of online professional communities change as rapidly as, and in parallel with, the technologies they rely on. Starting with email in the early 90's to the current collaborative and user-centered Web 2.0 tools, online professional communities are constantly evolving with respect to what they do and how it is done

In 2009, Falk and Drayton published an overview of multiple long-running projects that have succeeded in establishing online communities for math and science professionals (Falk & Drayton, 2009). While these programs made significant contributions to the their respective professional communities, one of the principle values of the book is in its reflective view of the evolution of these programs, of the iterative changes in design, technology, human infrastructural support and learning goals in response to new technology, user expectations, and assessment of user interaction.

The Center for the Integration of Research, Teaching, and Learning (CIRTL) is a National Science Foundation project focused on preparing future faculty in the fields of science, technology, engineering and mathematics (STEM) to become both excellent researchers and superb teachers. Since 2006, the CIRTL Network has supported the establishment of local learning communities at six academic institutions and brought together each of those local communities to form a national learning community. While the development of this cross-Network learning community is young and still in process, a reflective view of its development can be instructive in considering the factors that impact the success or failure of such national professional networks. This paper describes the development to date, of the CIRTL cross-Network learning community.

Center for the Integration of Research, Teaching, and Learning (CIRTL) Network

The CIRTL Network began as a National Science Foundation Center for Learning and Teaching in higher education in 2003 and expanded to include six research universities in 2006. The mission of the CIRTL Network is to enhance excellence in undergraduate education through the development of a national faculty committed to implementing and advancing effective teaching practices for diverse learners as part of successful and varied professional careers. Today, the CIRTL Network includes Howard University, Michigan State University, Texas A&M University, University of Colorado at Boulder, University of Wisconsin-Madison, and Vanderbilt University.

Each CIRTL Network member institution operates an interdisciplinary learning community founded on the CIRTL core ideas of Teaching-as-Research, Learning Community and Learning-through-Diversity <www.cirtl.net/pillars>. The teaching-as-research idea integrates research, teaching, and learning by guiding STEM educators to engage in their teaching as they engage in their research—know prior work, hypothesize, implement, collect data, analyze, and improve. Development of graduates-through-faculty is fostered in an interdisciplinary learning community that engages and connects all participants in

improving their teaching. The diversity of such learning communities promotes the understanding that learning of all is enhanced through diversity.

CIRTL's National Learning Community

The primary purpose of the CIRTL's cross-Network learning community is to leverage the benefits to future faculty of learning with and from faculty and peers at a diverse set of research universities. CIRTL's contributions to diversity in STEM are founded on the principle that excellence and diversity are necessarily intertwined. Faculty and students bring an array of experiences, backgrounds, and skills to the teaching and learning process. Effective teaching capitalizes on these rich resources to the benefit of all, which we call "Learning-through-Diversity" The cross-Network learning community provides a mechanism for community members to learn from the diversity across six academic institutions that vary in several dimensions—private/public; large/moderate size; majority-/minority-serving; and geographic location.

Synchronous Opportunities for Engagement

CIRTL's cross-Network learning community has developed an array of synchronous opportunities for STEM graduate students and post-docs to share, learn, and collaborate. Our first cross-Network initiative connecting students from various institutions was the establishment of online, synchronous graduate courses in teaching and learning. Through these courses we developed a technological approach that would allow us to interact online while utilizing a pedagogically sound methodology that was student-centered, employed active learning techniques, and relied on utilizing the diversity of the student experience to create a rich teaching and learning environment. Several factors were considered when selecting a technology for synchronous interactions. Desirable features included cross-platform compatibility, accessibility for users of assistive technology, support for video, Voice over IP, text chat and application sharing. In addition, given the interactive nature of the CIRTL courses, support for virtual breakout rooms was weighted heavily during the selection process. Finally, choosing a tool that would have a fixed, or at least predictable cost for the year, was an important consideration. After considering these factors, an Elluminate vClass virtual meeting room was chosen as the platform for synchronous events, including courses. The Elluminate virtual meeting room provides the desired features in a space that is available 24/7.

Capitalizing on our successes with the online courses, we established other synchronous, cross-Network events, including the CIRTLCasts, the CIRTL Virtual Coffee Hours, and the Capstone Seminars. These new initiatives have contributed significantly to cross-Network participation.

Courses <http://www.cirtl.net/course_overview> . The primary goal of the CIRTL distance-learning curriculum is to provide a rich array of learning opportunities that take advantage of the diversity of the CIRTL Network. A minimum of two, semester-long graduate courses are offered every semester by faculty and academic staff across the Network. Seven unique courses have been developed and offered one to five times each, with a total of 185 graduate students and post-docs enrolled. Since 2006, the following CIRTL Network courses have been offered: The College Classroom; Teaching & Learning Science; Diversity in the College Classroom; Effective Use of Technology in Teaching and Learning; How Teams Work and How to Work Better in Teams; Preparation for Teaching; and Research Mentor Training.

Coffee Hours <www.cirtlcafe.net/coffeehour>. Started in Spring 2010, the CIRTL Virtual Coffee Hours are a venue for informal online chats on a wide range of topics. In academic year 2010-2011, a Coffee Hour series was developed with a regular monthly time slot, an overall theme of navigating the academic job market, and a target audience of STEM graduate students and post-docs. One powerful aspect of this series was the opportunity to involve recent CIRTL alumni as mentors to the

graduate students in the conversation about academic careers and the job search. In addition to the expected benefit to the grad students, it has provided an opportunity to reengage recent alumni/new faculty with CIRTL.

CIRTL Capstone Seminars <http://www.cirtl.net/capstone_TAR>. Every local CIRTL learning community has a capstone, internship-like program. This is a prime opportunity for the relatively small number of students doing the advanced CIRTL internship (referred to as a Teaching-as-Research project) at each institution to join together into a larger community for special programming. We have set up presentations by faculty with expertise from the Network, and in academic year 2011-2012 plan to add cross-Network working groups of students with similar projects and a Network-wide virtual poster session of all final projects. In terms of growth of the online Network, the numbers of students here are small (approximately 22 last year); however, these are the most committed and engaged students in the Network. By better serving them, we are engaging those most likely to take leadership in the online community as it grows.

CIRTLCasts <http://www.cirtl.net/cirtlcasts>. CIRTLCasts are more formal online presentations that provide opportunities to make localized expertise within the Network available broadly to all Network institutions, supplement ongoing conversations in the Network, and provide contemporary perspectives to energize and support an active learning community. In the future we envision an increased strategic use of the CIRTLCasts to target a specific audience, topic, or need of the community, such as bringing in a speaker to address an issue that is being discussed in an ongoing online discussion thread.

Asynchronous Opportunities for Engagement

Enhancing asynchronous interactions across the community is critical to the growth of the cross-Network learning community. Asynchronous interactions such as discussion boards, blog posting, and uploading resources, support flexible interaction in terms of time, place, topic, degree of engagement, , and methods of interacting. However it also requires more individual initiative, as the user must decide to visit the site and engage, and decide to do so over a sustained period of time. Crossing the barrier to sustained, independent, user-driven participation is a critical and highly challenging step in the growth of an online community. We are attempting to cross this barrier through the development of Online Communities of Practice.

Opportunities for asynchronous interactions are available through the CIRTL Website <http://www.cirtl.net>. Over the last few years, the Website has evolved to go beyond providing static information and resources to providing an online presence that would support interactivity. Initially the CIRTL "Portal" was developed to allow users to interact with one another through groups, forums and blogs. In the second phase of the redesign process, these functions were consolidated into the CIRTL Café <http://www.cirtl.net/cafe>, a space on the Website for STEM graduate students, post-docs and faculty interested in teaching and learning to interact with their counterparts across the country. The CIRTL Café supports text chat, blogs, RSS feeds, connectivity with the virtual meeting room and CIRTL's social networking presence on sites like Twitter and YouTube. Still, with the CIRTL Café, we have not made the transition to sustained, independent, user-driven participation in an online community. We are in the process of developing Online Communities of Practice that will encourage active, asynchronous interactions within the learning community by providing a functional reason for individuals with a common goal to seek out and interact with each other and by building in integrated, ongoing support into the site's structure.

Online Communities of Practice

The Online Communities of Practice (OCoP) will be organized around themed areas of intellectual content that are central to CIRTL's goals and are supported by CIRTL Network courses. By connecting

the themed areas with CIRTL Network courses (Diversity in the College Classroom, Effective Use of Technology in Teaching and Learning, and TAR capstone courses), the Web space becomes a place for classroom discussion to extend beyond the traditional boundaries of a single semester and a single cohort of students. The courses can help to provide a regular influx of new people, new energy, and contemporary resources, while the Web space provides a long-term presence that brings together past and current course cohorts and teaching and learning community members interested in issues of diversity, technology, and teaching-as-research.

In the OCoP STEM graduate students, post-docs, current faculty and staff will have opportunities to (a) share ideas, practices, knowledge, and resources in core areas of STEM teaching and learning, (b) collaborate and build professional connection, (c) support extension and continuation of classroom learning for CIRTL courses, and (d) to engage in ongoing professional development with others involved in STEM teaching and learning. We hope to do this through threaded discussion boards, chat capability, blog postings from Network experts, collaborative authoring tools, such as wikis, a co-constructed resource library that includes links to resources and a bibliography, and a bulletin board feature for announcements about upcoming events in the STEM teaching and learning community.

Critical to sustaining an active online learning community will be the presence of a committed group of core members who can anchor each content-focused community, provide leadership, and add significant intellectual content. The core group will consist of at least one CIRTL Network faculty with expertise in the content area who will contribute intellectually to the discussions though regular comments, posting of resources and occasional responses to discussions. This Network expert would take on this role for a minimum one-year term. In addition to the Network experts, a staff person would provide ongoing management and support to each community. This support would include monitoring and facilitating discussions, communication with the Network faculty, and soliciting occasional input from additional Network faculty when opportunities arise. Additionally CIRTL staff would manage, oversee, and continuously assess the community functioning.

Cross-Network programming will connect with and support each OCoP. This programming will include Network courses, sponsored CIRTLCast speakers brought in to address key areas of discussion, capstone seminar presentations, and Coffee Hour topics pulled from questions or issues raised in discussion threads. In this way, we are designing synchronous and asynchronous opportunities that support one another and can be responsive to the emergent needs of the community.

In keeping with one of CIRTL foundational pillars, the teaching-as-research approach to iterative design, assessment and modification, the OCoP will be evaluated to determine the efficacy of the site in meeting the needs of the community. Evaluation will be based on three factors: sociability and usability, based on Preece (2000), and member satisfaction. Sociability, the social interactions between community members, would include assessment of the amount and quality of interaction, and the duration of membership. Usability will be assessed through user interactions with the site including measures such as the time required to complete tasks such as finding information or posting a comment. Member satisfaction will be assessed based on surveyed feedback, user tenure, and cross-program migration from the OCoP to other cross-Network programming.

Conclusion

In Fall 2011, the CIRTL Network will expand to 25 member institutions. An appropriate balance among synchronous and asynchronous cross-Network activities will need to be established in order to maintain the fidelity to the core ideas of CIRTL while meeting the demands of future faculty. Our efforts have thus far been successful in engaging new participants and providing additional opportunities for previous participants to keep connected with the CIRTL Network. However, additional opportunities to more fully

engage the community exist and will continue to evolve. Increasing the vitality, utility and value of the cross-Network community will require a sustained effort from CIRTL leaders, affiliated faculty and participating future-faculty to ensure that our online programming is accessible, current, stable, and dynamic.

References

Falk, J. K., & Drayton, B, (2009) *Creating and sustaining online professional learning communities*. New York, NY: Teachers College Press.

Preece, J. (2000). Online communities: Designing usability, supporting sociability. Chichester, England: John Wiley & Sons.

Stiles, T., Siegel, E., Courter, S. (2007) An interactive course on instructional methods for future faculty. 23rd Annual Conference on Distance Teaching & Learning. Madison, WI.

About the Presenters

Robin Greenler has worked for more than two decades in the field of science education reform. Through a succession of national programs, she has explored how to build and support creative communities of teachers and learners by bringing authentic science process and content into the classroom. She takes a leadership role in the Center for the Integration of Research, Teaching, and Learning (CIRTL) Network by supporting and mentoring members of the Network, and helps guide the development of the national learning community.

Address: CIRTL
1025 W. Johnson Street, Suite 552
Madison, WI
Email: rgreenler@wisc.edu
URL: www.cirtl.net
Phone: 608-263-0630

Kitch Barnicle has been the Project Manager for the NSF-funded Center for the Integration of Research, Teaching, and Learning (CIRTL) for 8 years. She also serves as Network Coordinator for the Center which is focused on developing a national faculty in science, technology, engineering, and mathematics (STEM). She collaborated on the development of CIRTL's Effective Teaching with Technology course and has played a lead role in developing strategies to offer on-line courses across the CIRTL Network.

Address: CIRTL
1025 W. Johnson Street, Suite 552
Madison, WI
Email: kabarnicle@wisc.edu
URL: http://www.cirtl.net
Phone: 608-262-9174

Acknowledgements

This material is based on work supported by the National Science Foundation under Grant No. DUE-0717768. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the NSF.

Project DELTA: Improving Student Learning Through Interactive Course Design

Peter J. Shapiro
Director, Creative Learning Services
Florida State College at Jacksonville

Patti Levine-Brown
Professor of Communications; Director, Project DELTA
Florida State College at Jacksonville

Jill M. Hagenberger
Senior Instructional Designer
Florida State College at Jacksonville

Introduction

More than 20 years ago, research emphasized that significant changes in instructional delivery included use of computers to improve learning, teaching, and instructional management (O'Banion, 1989). For the last 6 years, Florida State College at Jacksonville has championed a teaching and learning strategy, known by postsecondary institutions as SIRIUS Academics. This strategy takes a unique approach to offer creative, interactive instruction—typically delivered in either online or hybrid modes—as well as inexpensive alternatives to traditional, high-cost course materials. The SIRIUS Academics project began when Florida Community College at Jacksonville decided to address student persistence, the high cost of course materials, and student motivation and preparedness. Changing these factors, along with the teaching/learning dynamic, was key to the project's success. Basic skills and high-enrollment general education courses were targeted and developed.

In 2009 the college received a FIPSE (Fund for the Improvement of Postsecondary Education) grant for $728, 112, to be administered over a three-year period by Florida State College at Jacksonville, in partnership with George Mason and Iowa State Universities. The initiative, named Project DELTA (Disseminating Effective Learning Through Automation), focuses on innovative strategies to educate working adults and displaced workers. Project DELTA addresses a need for change at the postsecondary level in the approach to retention and success of nontraditional students. Other project partners include Pearson Education, Inc. and The Follett Higher Education Group. Pearson Education provides digital images for SIRIUS Academics course materials along with MathXL and other MyLab software where appropriate. The Follett Higher Education group serves a distributor of SIRIUS Academics materials and provides CafeScribe as a digital ebook platform. Project DELTA enabled Florida State College at Jacksonville to create a nationwide research pool for the continuous improvement of SIRIUS Academics courses and to further explore how these courses—and the faculty that teach them—impact student success and retention. Iowa State University serves as the project evaluator, and with the cooperation of the Project DELTA college consortium members, SIRIUS Academics, and the growing list of participating institutions, all will benefit from the results of research conducted during the grant period.

The Nontraditional Learner

Historically, these "nontraditional" learners have been defined as persons over age 25 (Whisnant, Sullivan, & Slayton, 1992). However, Knowles (1992) defined adulthood as "the point at which individuals perceive themselves to be essentially self-directing" (p. 46)—a point that does not necessarily correlate with age. These nontraditional learners require an alternative framework for learning. Knowles (1992) suggested that nontraditional learners must know why they need to learn something before

deciding to learn it (Merriam & Brockett, 1997). This need suggests that the responsibility for learning be transferred from facilitator to learner.

Learning Theory and Course Design

SIRIUS Academics courses do not use commercial textbooks; all course materials' designs extend from the learning outcomes of the course curriculum. SIRIUS Academics reflects a paradigm shift in teaching and learning, and the application of technology. Capitalizing on a rich research base of pedagogical approaches to instructional design, SIRIUS Academics course design is grounded in multiple theoretical principles and models, including motivation; mastery learning; thematic, anchored instruction; constructivism; and cooperative learning. These research-based principles holistically weave through the course design, resulting in a robust instructional scaffold for student success.

Keller (1979) proposed that student motivation is a multiplicative representation of value and expectancy. According to Keller (1983), for learners to be motivated and persistent, certain conditions must exist. Keller developed the ARCS (attention, relevance, confidence, and satisfaction) model, which describes the conditions necessary for sustaining learner motivation. One of the most influential research-supported instructional strategies central to SIRIUS Academics is Bloom's (1971) mastery learning model. Developing questions, activities, and quizzes *for* learning, rather than *of* learning, is central for students of different abilities to achieve higher levels of learning. Mastery learning allows students unlimited opportunities to self-assess learning progress in mastering learning objectives. This formative evaluation strategy is most effective when questions and activities are compartmentalized in the lessons and chapters. Mastery learning research indicates a positive effect on learner motivation, confidence, satisfaction, and persistence.

Thematic instruction is a strategy of organizing instruction around themes or anchors, which provide a way for learners to link prior experiences to new experiences. SIRIUS Academics uses themes or stories to capture learners' attention and to address relevance, by clarifying abstractions with concrete examples in both the faculty-authored text and supplementary online learning objects. Learning is a social process, the continuous interaction among cognition, behavior, and the environment (Schunk, 2000). This principle correlates with constructivism, an underlying philosophy of SIRIUS Academics courses. Learning environments need to be realistic, relevant, and meaningful.

Research indicates that "learner participation in structured online discussion, collaborative online activities, online assessment, and interactive course material are ways of promoting constructivism" (Mason, as cited in Gulati, 2008, p. 184). Utilizing this approach in discussion forums helps students build their knowledge bases, interact with their colleagues, and connect their worlds to the course content. All of the previously mentioned theoretical approaches create a scaffold that enables students to learn through their mistakes and apply what they have learned. According to Gibbons and Wentworth (2001), instructors generally underutilize nontraditional students' experiences as a learning resource, considering these experiences preexisting knowledge that merely provide a foundation for new knowledge.

Faculty Professional Development

While course design is critical for student success, faculty professional development is also important. Faculty play a critical role in scaffolding student instruction in both online and hybrid modes. One requirement of working with Project DELTA and SIRIUS Academics courses is that faculty complete a prescribed professional development curriculum, delivered online. The first course, Learning Through Interactivity, is required of all faculty. Only those who design courses for SIRIUS Academics must complete an entire online professor certificate program. Learning Through Interactivity introduces

faculty to the research-based approaches in SIRIUS Academics courses, increasing the odds that these methods will not be discounted when faculty teach their own SIRIUS Academics courses.

Just as students experience instruction scaffolding, faculty participation in online learning places them in a similar situation. It is critical that faculty be submitted to the same stressors as their students before teaching an online or hybrid course. One of the most important training elements is the focus on positive motivation and effective modeling. Students need to be motivated to succeed, and positive reinforcement encourages students to engage with their instructor, their colleagues, and the material.

Faculty Role in the Course Production Process

SIRIUS Academics course production transpires over four semesters, with a team composed of faculty, instructional designers, multimedia specialists, quality assurance professionals, and external subject matter expert consultants. As previously described, the team's pedagogical approach is grounded in learning and motivation theories, instructional design principles, and current technology. The outcome of the four-semester process is a second edition course, which can be released to the consortium of colleges.

Each faculty team consists of three faculty members. Any faculty member with a master's degree who is certified to teach the course being developed may be chosen to contribute as a faculty coauthor and team member. While the course is developed, the faculty team participates in the professional development process. This ensures that, as faculty design courses, they understand the theoretical approach and the time frame in which the course needs to be completed. Halfway through the process, the course is designed and completed as a first edition, and beta tested at Florida State College of Jacksonville, both online and, when possible, in the classroom. The course is also sent to an external evaluator, a consulting faculty member typically from outside Florida, who is certified to teach the course, with preference given to those faculty who have taught the course online. SIRIUS Academics has designed 23 courses that will be in their second edition or later by fall 2011. By fall 2013, 40 high-enrollment general education courses will be available in their second edition or later. When a consortium college adopts the course, a third party converts the course for use in that college's learning management system.

Project DELTA: Consortium Commitment and Evaluation

The commitment to students exceeds the design and physical delivery of SIRIUS Academics courses. George Mason University, acting as an academic partner on the grant, provides online resources and career counseling to workers who are displaced or changing careers; these individuals must be enrolled in a SIRIUS Academics course. Iowa State University, serving as grant evaluator, has started gathering data from enrolled students and faculty. Even though this evaluative research is in progress, initial reactions to the courses and the design approach have been positive; the first reports are due in summer 2011.

The heart of the project is the consortium of colleges, which serves the purpose of improving the learning process through technology-enhanced applications of learning and motivation research. The consortium offers opportunities for college and university faculty to participate in professional development training at no cost and to share in the development and use of SIRIUS Academics courses. Project DELTA membership provides reduced materials costs to students enrolled in the SIRIUS Academics courses, much lower than traditional textbook costs, plus any tutorial software costs in reading, mathematics, and English classes that are customized to use them.

To be a member of the consortium as part of Project DELTA, each institution commits to five faculty members each teaching at least five sections of a SIRIUS Academics course(s) within each calendar year of the grant. The faculty members must successfully complete the Learning Through Interactivity online course prior to teaching. In exchange for meeting this commitment and supplying data to Iowa State for

the grant evaluation, faculty are awarded a small annual honorarium. Currently, the consortium has 24 member colleges, but not all schools have implemented the courses. Due to signing an institutional commitment, selecting courses for adoption, identifying faculty to participate, and completing professional development requirements, the implementation process takes time. By the end of 2011, the consortium anticipates having 30 members, with over 20 colleges offering the courses.

Conclusion

Research from NCAT (Twigg, 2005) suggested that course redesign can increase student success, while reducing instructional costs in college-credit and basic skills courses. High dropout and failure rates in general education and basic skills courses have resulted in many colleges making a concerted effort to redesign curriculum and delivery methods in these courses. Florida State College at Jacksonville has approached student preparation, success, and persistence through building specialized online and hybrid courses that incorporate several learning theories proven to be effective in the scaffolding of learning. These design approaches, combined with trained faculty who understand the integration of technology and their role as facilitators and motivators, can lead to increased student success and retention at Florida State College at Jacksonville and the Project DELTA consortium colleges. In the process, faculty, staff, and students involved in this project will be part of a cycle of continuous improvement, as data from this research will assist SIRIUS Academics with further improving the courses being delivered and the professional development that is changing college teaching and learning.

References

Bloom, B. S. (1971). Mastery learning. In J. H. Block (Ed.), *Mastery learning: Theory and practice* (pp. 47–63). New York, NY: Holt, Rinehart and Winston.

Gibbons, H. S., & Wentworth G. P. (2001). Andrological and pedagogical training differences for online instructors. *Online Journal of Distance Learning Administration, 4*(3). Retrieved from http://www.westga.edu/~distance/ojdla/fall43/gibbons_wentworth43.html

Gulati, S. (2008). Compulsory participation in online discussions: Is this constructivism or normalisation of learning? *Innovations in Education and Teaching International, 45*(2), 183–192. doi: 10.1080/14703290801950427

Keller, J. M. (1979). Motivation and instructional design: A theoretical perspective. *Journal of Instructional Development, 2*(4), 26–34.

Keller, J. M. (1983). Motivational design of instruction. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: An overview of their current status* (pp. 386 – 434). Hillsdale, NJ: Lawrence Erlbaum.

Knowles, M. (1992). Applying principles of adult learning in conference presentations. *Adult Learning*, *4*(1), 11-14.

Merriam, S. B., & Brockett, R. G. (1997). *The profession and practice of adult education*. San Francisco, CA: Jossey-Bass.

O'Banion, T. (1989). The renaissance of innovation. In T. O'Banion (Ed.), *Innovation in the community college* (pp. 1–22). New York, NY: ACE/MacMillian.

Schunk, D. H. (2000). *Learning theories: An educational perspective* (3rd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

Twigg, C. A. (2005, June). Course redesign improves learning and reduces cost. *Policy alert*. The National Center for Public Policy and Higher Education. Retrieved from http://www.highereducation.org/reports/pa_core/index.shtml

Whisnant, W. T., Sullivan, J. C., & Slayton, S. L. (1992). The "old" new resource for education: Student age. *Community Service Catalyst*, *22*(3), 7–11.

About the Presenters

Peter J. Shapiro is Director of Creative Learning Services for Florida State College at Jacksonville. He earned his PhD in Education, with a specialization in Instructional Design for Online Learning, from Capella University and an MS in Communication from the University of Louisiana at Lafayette. Peter is a Quality Matters Master Reviewer, and he has authored journal articles and delivered presentations at conferences regarding faculty development for online teaching, distance learning administration, and the SIRIUS Academics project. He has over 25 years of higher education experience, including 13 years in the management, design, and delivery of online courses.

Address: Florida State College at Jacksonville
501 West State Street
Jacksonville FL 32202
Email: pshapiro@fscj.edu
URL: http://www.siriusacademics.org
Phone: 904-633-5479
Fax: 904-632-3364

Patti Levine-Brown is a Professor of Communications at Florida State College at Jacksonville. She received her bachelor's and master's degrees from the University of North Florida and her EdS in Developmental Education from Appalachian State University (ASU) in Boone, NC. Additionally, Patti has completed beginning and advanced programs in developmental education through the Kellogg Institute at Appalachian State University, and she is currently completing her doctorate in the Community College Leadership Program at the University of Texas at Austin. Patti has published three books with Prentice Hall and is a contributing author on two other publications.

Address: Florida State College at Jacksonville
3939 Roosevelt Boulevard
Jacksonville FL 32205
Email: plevine@fscj.edu
Phone: 904-381-3484

Jill M. Hagenberger is a Senior Instructional Designer at Florida State College at Jacksonville. She earned her MEd and PhD in Instructional Systems at The Pennsylvania State University, University Park, PA. Jill has 26 years combined experience in higher education and the private sector. Her expertise includes theoretical foundations of learning, systems theory, and human performance technology.

Address: Florida State College at Jacksonville
501 West State Street
Jacksonville FL 32202
Email: jhagenbe@fscj.edu
Phone: 904-357-8915
Fax: 904-632-3364

Helping Confused Students and Saving Your Sanity

Kathyrn Ley, PhD
Associate Professor
University of Houston–Clear Lake

Introduction

Online teaching drives some instructors crazy answering a seemingly never-ending stream of online student communications. Instructors lament the time that online teaching demands and some claim it is their primary web course challenge (Vaughan, 2007), a challenge persisting for more than a decade (c.f., Mupinga & Maughan, 2008; Visser, 2000). The time demand inhibits faculty willingness to teach online courses (Wolcott & Betts, 1999; Wolcott & Shattuck, 2007). Online teaching times contribution to the instructional cost equation (Milam, 2000). Many faculty perceive online teaching requires more time than does traditional classroom instruction and, especially for new online instructors, responding to student email consumes online instructor course time although they have learned to manage and to reduce email communications (Zuckweiler, Schniederjans, & Ball, 2004). Managing email can relieve some online faculty pressure and indicates the large role print communications play in most online courses.

Managing email is only part of the online communications challenge presented by human physiological constraints. Instructional time commitment is almost always greater for online than for classroom instruction because humans can speak faster, 180 words per minute (WPM; Colbert, 1988), than they can type, about 50 WPM, and they can listen more rapidly, a maximum 350-450 WPM, than they can read, 185-300 WPM (Fulmer, 1976). Hence, reading and writing takes two or three times longer than listening and speaking; a three-hour class in which participants speak and listen to almost all content could take six to nine hours. Self-regulation and cognitive load theory and research explain why every redundant or unnecessary written communication potentially hinders rather than helps learning. Instructional motivation theory (Keller, 2010) describes how to support learner motivation. Therefore, features and tools that avoid extraneous cognitive load, support self-regulation, and address learner motivation leverage theory to improve the learning environment. An instructor who implements such features and tools facilitates learning, removes online learning barriers, and decreases wasted time responding to redundant or unnecessary communications. Most importantly, online communications consistent with these theories are also consistent with a positive learning environment.

Given the ease and potential benefits of such features and tools, they should be in every online faculty member's toolkit for helping online students. Communications features and tools can be especially important for students who have difficulty accessing, locating, reading, and comprehending online course materials. Online student difficulties may be exacerbated by their anxiety about an online course and an instructor whom they do not meet in the same physical space. The instructor and students benefit from a common set of efficient, effective online communications tools and features designed to facilitate their self-regulation and promote their learning motivation. Theory and research form a firm foundation for the online tools and features that are well-suited to address online learners' motivational and learning needs.

Self-Regulation, Motivation, Extraneous Cognitive Load: The Instructional Implications

Many college students seem to be less independent and less willing or able to think critically than even a decade ago. Struggling students may be characterized as poorly self-regulating because they lack the defining activities of self-regulation (SR). Self-regulated learners self-generate thoughts, feelings, and actions for attaining educational goals (Zimmerman, 1983), plan and manage time; attend to and concentrate on instruction; organize, rehearse and code information; establish productive work environment and use social resources effectively; have self-efficacy, outcome expectations, task interest, and a learning goal orientation (Zimmerman, 2004). Poorly self-regulating learners are less likely to

engage in SR activities such as organizing and transforming materials, monitoring their progress, and evaluating their performance, all skills associated with lower achieving students (Ley & Young, 1998). An online instructor's toolkit can bundle features and tools that embed readily-adaptable, easily-maintained content-independent self-regulation instructional support (Ley & Young, 2001).

Adding SR support to facilitate online learning can also address another learning barrier within an instructor's control, extraneous cognitive load (Leahy, Chandler & Sweller, 2003). Courses can be designed specifically to reduce extraneous cognitive load, that is cognitive processes devoted to non-schema building (Clark, Nguyen, & Sweller, 2006). Extraneous cognitive load manifests in several ways, all of which are a function of instructional design (Merrienboer & Sweller, 2005). The implications for communications translate into tools and features designed to reduce extraneous cognitive load. The same tools a features support SR because they organize course materials, such as communications, and simultaneously reduce the number of redundant or unnecessary communications. Communications may also affect learner motivation either positively or negatively.

Instructional motivation guidelines enable instructors to address student motivational needs. Instructors can foment instructional motivation by reinforcing their attention, relevance, confidence, and satisfaction with a course (Keller & Suzuki, 2004). Their feedback and other communications can follow motivational principles (Keller, 2010) designed to encourage learner confidence, cue learner attention to monitoring their progress, and evaluate their skills and skill deficiencies without unnecessarily undermining their confidence or will to engage in instructional activities. Accordingly, principles for embedding instructional SR cues for organizing instruction and activities to facilitate learner cognitive and metacognitive processes; for using instructional goals and feedback to present student monitoring opportunities; and for providing learners with continuous evaluation information and occasions to self-evaluate (Ley & Young, 2001). Many of the features, tools and policies that reduce extraneous cognitive load also reinforce SR activities for the instructor and the student.

Online Faculty Communications Tools and Features

Students, when asked, consistently value instructor communications and especially personal feedback communications more than other course attributes or features. This explains why student email can overwhelm some online faculty but also offers an incredible opportunity to actively support online learner SR and reduce cognitive load with minimal effort to implement and maintain. If applied comprehensively, the guidelines will result in a course that incorporates the tools and features identified in Table 1. Similarly following the instructional communication guidelines in Table 2 will promote instructional motivation. Incorporating adaptable features and tools and following the communication guidelines can transform tiresome, argumentative, confused student communications into the instructor's motivational moment.

Table .1 Online Communications Guidelines to Support Self-Regulation and Reduce Cognitive Load

Include course communications procedures in the syllabus.
Use dedicated discussion boards for course communications: instructor-only messages to class; student-student; students to instructor with instructor responses.
Offer students synchronous options to a discussion board for asking questions about future assignments, such as telephone, chat, office hours, twitter, etc.
Limit student email to their personal, unique circumstances
Dedicate a class discussion board for students' course and assignment questions.
Dedicate a class discussion board for students helping students.
Gently train students to follow published communications procedures; avoid punishing noncompliance initially and never, ever reward it.
Provide students with class late policy.
Provide students (and yourself) a one-page assignment table.
Remind students what is due soon and when.
Routinely post class messages about timelines and tasks for preparing an assignment.
Announce when to expect student evaluation for an assignment.
Announce when and where to find completed assignment evaluation.
Require students submit proof they completed the free online VAIL academic honesty tutorial with perfect score.
Return assignment feedback that clearly identifies which criteria assignment did not meet.
Whenever possible embed feedback in an assignment.
Provide assignment evaluation criteria/rubrics.

Table 2. Instructional Communication Guidelines for Motivating Online Students

Introduce yourself as a human being to the class
Reassure students you are here to help all students succeed.
Thank students who help others or find your errors, especially if they do so in writing.
Discuss assignment compared to criteria; avoid "You did . . ." phrases
Precede any bad news about an assignment with what was right about the assignment.
Follow very bad news about an assignment with an offer to help students review their plan for how they prepare assignments.
Respond to students who offer poor excuses for poor work by thanking students for the explanation. After thanking students for the explanation, remind them that in the interest of equity, you cannot waive the criteria all other assignments were required to meet based upon an explanation.
Always apply policies/criteria equitably and, if warranted, magnanimously

References

Clark R. C., Nguyen, F., & Sweller, J. (2006). *Efficiency in learning: Evidence-based guidelines to manage cognitive load*. San Francisco, CA: Pfeiffer, Wiley.

Colbert, K. R. (1988, November). *A quantitative analysis of CEDA speaking rates.* Paper presented at the Annual Meeting of the Speech Communication Association, New Orleans, LA.

Fulmer, R. (1976). *Rate of reading and auding*. Harvard University. (ERIC Document Reproduction Service No. ED124920).

Keller, J. M. (2010). *Motivational design for learning and performance*. New York, NY: Springer. doi 10.1007/978/1-4419-1250-3

Keller, J. M., & Suzuki, K. (2004). Learner motivation and E-learning design: A multinationally validated process. *Journal of Educational Media*, *29*(3), 229 - 239.

Leahy, W., Chandler, P., & Sweller, J. (2003). When auditory presentations should and should not be a component of multimedia instruction. *Applied Cognitive Psychology*, *17*, 401-418.

Ley, K., & Young, D. B. (2001). Instructional principles for self-regulation. *Educational Technology Research and Development*, *49*, 93-105.

Ley, K., & Young, D. B. (1998). Self regulation behaviors in underprepared (developmental) and regular admission college students. *Contemporary Educational Psychology*, *23*, 42-64.

Milam, John. (2000, June). *Cost analysis of online courses*. Paper presented at the Annual Forum of the Association for Institutional Research, Cincinnati, Ohio.

Mupinga, D. M., & Maughan, G. R. (2008). Web-based instruction and community college faculty workload. *College Teaching*, *56*(1), 17-21.

Vaughan, N. (2007). Perspectives on blended learning in higher education. *International Journal on E-Learning*, *6*(1), 81-94.

Visser, J. A. (2000). Faculty work in developing and teaching web-based distance courses: A case study of time and effort. *American Journal of Distance Education*, *14*(3), 21-32.

Wolcott, L. L., & Betts, K. S. (1999). What's in it for me? Incentives for faculty participation in distance education. *Journal of Distance Education*, *14*(2), 34.

Wolcott, L. L., & Shattuck, K. (2007). Faculty participation: Motivations, incentives, and rewards. In M. G. Moore (Ed.) (*2007*) The *Handbook of distance education* (pp. 377-399) (2nd ed.) Mahwah, NJ: Lawrence Erlbaum,.

Zuckweiler, K. M., Schniederjans, M. J., & Ball, D. A. (2004). Methodologies to determine class sizes for fair faculty work load in web courses. *International Journal of Distance Education Technologies*, *2*(2), 46-59

Zimmerman, B. J. (2004). Sociocultural influence and students' development of academic self-regulation; a social-cognitive perspective. In D. M. McInerney, & S. Van Eten, (Eds.), *Big theories revisited* (pp. 139 – 164). Greenwich, CT: Information Age Publishing.

About the Presenter

Kathryn Ley holds a PhD in instructional design and has published over 30 articles including research on online learning and self-regulation. She has presented at over 57 at national/international professional conferences during twenty years of graduate teaching including a decade of online distance education courses. As a faculty member in a graduate instructional technology program, she teaches courses in instructional design, project management, performance technology, instructional motivation, and learning theory.

Address: 18036 Bal Harbour Dr.,
Houston TX 77058-4308
Email: ley@uhcl.edu
Phones: Work office 281-283-3585; Home office 281-335-5201

Online Lab-Science Offerings: AMS Weather, Ocean, and Climate Studies

James A. Brey
Director, Education Program
American Meteorological Society

Joseph M. Moran
Associate Director, Education Program
American Meteorological Society

Introduction

The American Meteorological Society (AMS) has been a pioneer in the development of online educational materials since 1996. With changing technology, the AMS has worked with faculty to enhance their online course offerings as well as introduce new educational resources to the e-classroom, including labs and case studies.

Developed by the AMS with support from the National Science Foundation (NSF), National Oceanographic and Atmospheric Administration (NOAA), and National Aeronautics and Space Administration (NASA), *AMS Weather Studies*, *AMS Ocean Studies*, and *AMS Climate Studies* are introductory, undergraduate level, lab science courses available for implementation nationwide. These are high-caliber, scientifically authentic courses that investigate current topics in Earth science through the use of real-world environmental data.

More than 600 colleges and universities have incorporated *AMS Weather Studies, AMS Ocean Studies*, and *AMS Climate Studies* into their curriculum, with an increasing number offering the courses completely online or in a hybrid learning environment. Currently, out of the schools that report such data, almost half of all *AMS Weather Studies* offerings are either completely online or in a hybrid learning environment. More than 30% are doing the same with *AMS Ocean Studies* and almost 40% with *AMS Climate Studies*.

Course Structure

Overview

AMS Weather Studies, AMS Ocean Studies, and *AMS Climate Studies* each consist of a fully-integrated set of printed and online learning materials. The courses include a comprehensive 15-chapter textbook, investigations manual with 30 laboratory-style activities, access to the secure course and faculty Websites, and a faculty resource CD. Instructors can use these materials in any combination that best suits their needs.

Textbooks

The textbooks, *Weather Studies: Introduction to Meteorology* 4th edition, *Ocean Studies: Introduction to Oceanography* 3rd edition (new for fall 2011 [Figure 1]), and *Climate Studies: Introduction to Climate Science* 1st edition, are authored and/or edited by Joseph M. Moran. Each full-color text investigates the geosciences from an Earth system perspective.

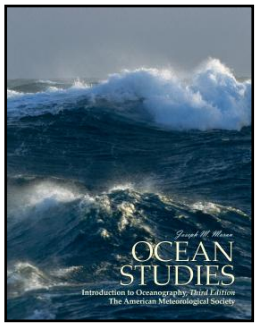
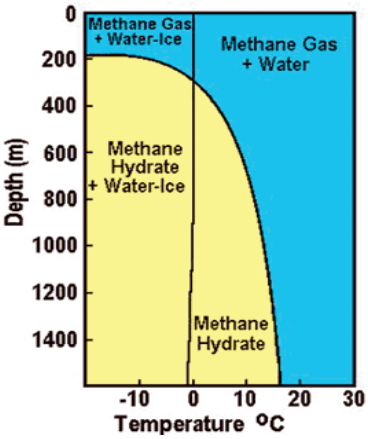


Figure 1. *New* AMS Ocean Studies *Textbook*

Every chapter opens with a "Case-in-Point," an authentic, relevant, and real-life event that applies a main concept covered in the chapter, previewing the chapter and engaging the reader's interest. The "Case-in-Point" is followed by a sample "Driving Question," a broad-based query that links chapter concepts and provides a central focus for that week's study. The "Driving Question" leads students into the chapter narrative, which is concluded with "Basic Understandings" along with "Review and Critical Thinking Questions." The textbook is typically used in conjunction with the Investigations Manual and course Website, but can also be used alone.

Investigations Manual

Updated annually, the investigation manual contains 30 laboratory activities two per textbook chapter (Figure 2), and innovatively connects with an optional third online component, *Current Weather Studies, Current Ocean Studies,* and *Current Climate Studies*, via the course Website.



The following is an excerpt from the *AMS Climate Studies* Investigations Manual relating to the Deepwater Horizon Oil Spill.

Investigation 9B: Methane Hydrates
Diagram shows why methane hydrate formed when methane and water mixed inside the dome.

Plot a point at a depth of 1500 m and temperature of 5.5 ºC, representing the conditions at the seafloor well site. It falls within the yellow portion of the diagram indicating stable conditions for the existence of methane hydrate.

Figure 2. Methane Hydrate Phase Diagram denoting depth (i.e., pressure) and temperature at which methane hydrate can exist. Methane hydrate is a solid. [National Energy Technology Laboratory, DOE]

Course Website

The secure course Website is an all-inclusive Webpage that provides links to numerous external sources as well as other information to further engage and educate students. It is where students and faculty gain access to the *Current Weather Studies, Current Ocean Studies,* and *Current Climate Studies* investigations. These online lab activities introduce a variety of current-event topics and expose students to real-world data including but not limited to: products from the National Weather Service (NWS), reports from the Intergovernmental Panel on Climate Change (IPCC), the Tropical Atmosphere Ocean (TAO) or TAO/TRITON array, as well as other real-time data from lead scientific organizations, such as the Korea Meteorological Administration (Figures 3 and 4).

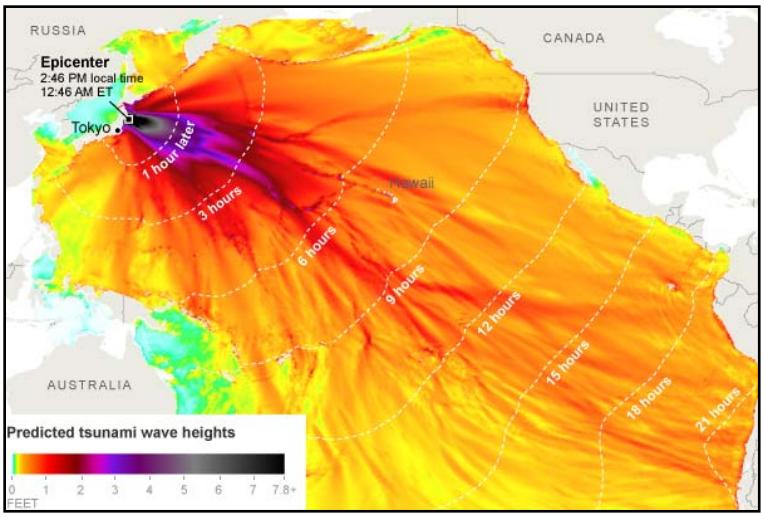
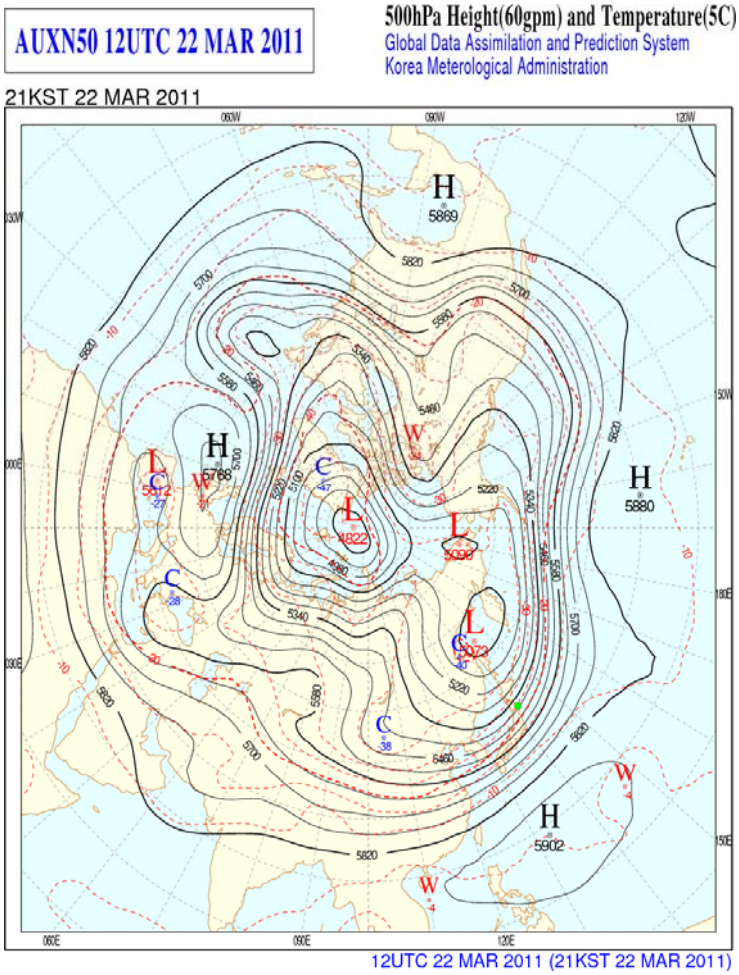


Figure 3. Excerpt from *Current Ocean Studies* 8: Global Warming: Rising Sea Levels and Coastal Impacts. Model generated pattern of the leading wave of the Tohoku Tsunami. [NOAA Center for Tsunami Research, PMEL]



The following is an excerpt from the *Current Weather Studies* 8B: Upper-Air Weather Maps, tracking radiation fallout from the Japan Nuclear Power Plant Disaster.

15. Highlight the unlabeled 5400-m contour from Japan eastward as the wind blows to the North American West Coast. The general 500-mb contour pattern across the northern Pacific Ocean suggests the wind speeds are relatively **[(*slow*)(*fast*)]** as inferred by the spacing of the contour lines. Therefore, the winds also generally flow parallel to these contour lines.

16. Assuming the radioactive materials from the Sendai power plants that were released into the atmosphere follow the wind flow as evidenced by the 500-mb contours, the area of North America where they might be detected would likely be **[(*northern and central Mexico*)(*the Northwest U.S. and western Canada*)(*the Southeastern U.S. and Caribbean*)]**.

Figure 4. Hemispheric 500-mb constant-pressure map for 12Z 22 MAR 2011 from the Korea Meteorological Administration. This is a view of the middle tropospheric contour and temperature conditions over the Northern Hemisphere.

Other course Website resources include the Daily Weather Summary (for *AMS Weather Studies*), updated daily (during the fall and spring semesters) with a comprehensive analysis of the synoptic weather in the United States for the previous 24 hours, as well as historical weather events. The Weekly Weather, Ocean, and Climate News are freshly prepared every Monday with important news from these sciences. Algebra- and calculus-level math applications (*AMS Weather Studies* only), along with access to COMET modules, chapter self-test questions, and geoscience career information are other resources found on the course Website.

Faculty Resource Material

Course instructors receive a Faculty CD that contains a faculty manual including learning objectives and suggestions for course implementation, as well as investigations manual answer forms compatible with any course management system, test bank questions and answers, textbook images, and PowerPoint® presentations for each chapter.

The investigations manual answer forms, found on the faculty CD, are files compatible with Respondus®, test-generating software for which many institutions are licensed (answer forms are also provided in Respondus® format). The faculty member has the option of delivering questions through their course

management system to allow automatic scoring and immediate results for their students. This feature allows for full integration to a college's e-learning environment.

The secure faculty Website delivers answers to chapter Review and Critical Thinking, investigations manual, as well as Respondus®-formatted answer forms for *Current Weather/Ocean/Climate Studies* questions for immediate insertion into a course management system quizzing function.

Course Implementation
AMS Weather Studies, *AMS Ocean Studies*, and *AMS Climate Studies* may be implemented as a new institutional course offering, a revision of an existing course, the expansion of an existing course to include a lab component, or may be used to create an online course, particularly as an online lab science. These courses are unique in that they can be offered in completely online, blended, and face-to-face lecture or lecture/laboratory learning environments by experienced science faculty or those new to teaching the subject matter. Mentoring by AMS-trained course instructors is available to all new instructors.

Course License Procedure
A license is required for institutions using both the textbook and the Investigations Manual. The license includes the textbook, Investigations Manual, and course and faculty Websites, or the Investigations Manual and/or course Website alone. A textbook-only option is available; however, does not include any of the faculty resources or access to the course and faculty Websites.

The Course License covers the fall, spring, and summer semesters beginning August 15th and ending the following August 14th. The license fee is $149 per institution, regardless of the number of sections or the number of students and regardless of when an institution begins their license within the academic year. Students enrolled in the course receive local institutional credit and purchase course materials either through their college bookstore or through the AMS Online Bookstore.

Summary

AMS Weather Studies, *AMS Ocean Studies*, and *AMS Climate Studies* aim to interest all students in the geosciences and are designed to increase scientific literacy through the use of real-world data. The AMS strongly encourages implementation of the course at undergraduate institutions in the U.S., Canada, and worldwide. For more information, please visit http://www.ametsoc.org/amsedu.

About the Presenters

Dr. James Brey is the Director of the American Meteorological Society Education Program. Prior to this, he was a Professor of Geography and Geology at the University of Wisconsin Fox Valley and was a leader in the development and offering of *AMS Weather Studies* and *AMS Ocean Studies*. Dr. Brey successfully delivered the *AMS Weather Studies* course online, on-campus, and blended lecture/laboratory settings for 8 years at the University of Wisconsin Colleges Online Program, where it is still offered. Dr. Brey is considered an expert in progressive educational delivery methods and the latest in pedagogical and technical innovation.

Address: 1120 G Street NW
Suite 800
Washington, DC 20005
Email: brey@ametsoc.org
URL: http://www.ametsoc.org/amsedu
Phone: 202-737-1043

Dr. Joseph Moran is an Associate Director of the American Meteorological Society Education Program and Professor Emeritus of Earth Science at the University of Wisconsin Green Bay. He is the principal author of the *AMS Weather Studies*, *AMS Ocean Studies*, and *AMS Climate Studies* textbooks. Dr. Moran is also the author of several other leading meteorology, Earth, and environmental science texts at the introductory college level.

Address: UW-Green Bay
Laboratory Sciences Bldg.
2420 Nicolet Drive
Green Bay, WI 54311
Email: moran@ametsoc.org
URL: http://www.ametsoc.org/amsedu
Phone: 920-465-2432

Information Sessions

Essentials of Online Teaching Track

Using Peer Review and Analytics to Incrementally Improve Online Courses

Len Bogle, Emily Boles, Scott Day, Dan Matthews, and Karen Swan
University of Illinois, Springfield

Introduction

Design-based research blends empirical research with the theory-based design of learning environments. It centers on the systematic investigation of innovations designed to improve educational practice through an iterative process of design, development, implementation and analysis in real-world settings (Wang & Hannafin, 2005). The research reported in this paper did not start out as a design experiment. It was originally conceived as a study exploring the effects of revising an online course based on the Quality Matters framework. When results refuted our original assumptions, it became an ongoing design-based study. In the sections, we review those assumptions, our initial findings, and the design experiment that evolved from them, concluding with our preliminary findings and directions for future research.

Overview

The original purpose of this study was to investigate relationships between course design, learning processes, and course outcomes. Its focus was on the review and revision of one fully online, graduate course in educational research methods based on the Quality Matters (QM) framework. Learning processes were measured using the Community of Inquiry (CoI) survey; outcome measures included scores on major course assessments as well as final course grades (all converted to percent of possible scores). CoI and outcome measures were compared before and after a QM review and redesign. Our hypothesis was that learning processes (as measured by the CoI survey) would be improved by the course revisions and that improved learning processes would lead to higher outcomes scores.

We were wrong. Our initial findings showed an actual reduction in CoI scores but an increase in performance scores. This led us to believe that the QM and CoI frameworks are really orthogonal; they view learning from differing perspectives and so measure different things. And because scores on the CoI survey went down after the QM redesign, we began exploring whether an initial QM redesign followed by iterative changes to the course based on CoI responses (CoI redesign) could result in both higher CoI scores and higher scores on outcome measures.

Methodology

This ongoing study used a design-based methodology to explore the effects of QM and CoI course revisions on student learning outcomes. Two research questions were investigated:

- Can course redesign based on meeting Quality Matters standards (QM revisions) result in improved student learning outcomes?
- Can changes in course design and implementation targeted to enhance particular Community of Inquiry scores (CoI revisions) (1) actually result in increased scores, and (2) lead to improved student learning outcomes?

Subjects were graduate students enrolled in Educational Research Methods (EDL 541B) in the fall 2009 (n=12), spring 2010 (n=14), summer 2010 (n=9), and fall 2010 (n=15) semesters. Outcome measures included scores on a written research proposal and the final exam, as well as overall course grades. All scores were converted to percent of total possible. In addition, CoI (learning processes) data were collected from a subset of students who volunteered to complete the survey each semester.

QM Revisions

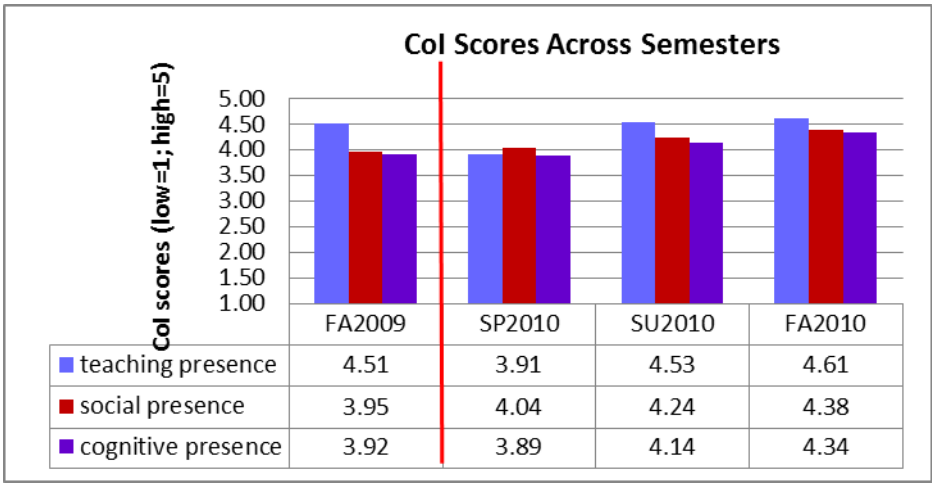
Quality Matters (QM) is a faculty-oriented, peer review process designed to assure quality in online and blended courses. It is objectivist in perspective and derived from the instructional design literature (Quality Matters, 2005). The QM peer review centers on a rubric which looks for 40 design elements organized into eight categories: course overview, learner objectives, assessment and measurement, resources and materials, learner engagement, course technology, learner support, and accessibility. Each design element is assigned a score of 1, 2 or 3. There are 17 elements assigned a 3, all of which must be met for a course to pass the review. In addition, a course must attain a minimum score of 72 of 85 total points

In the fall of 2009, three QM reviewers, including a QM expert, an instructional designer, and a faculty member in educational leadership reviewed the course. The course received a score of 58 and failed to meet 5 of the essential (3 point) standards, all of which had to do with learning objectives. These deficits were addressed in the Spring 2010 version of the course, which was reviewed again and received a score of 84 out of 85.

CoI Revisions

The Community of Inquiry (CoI) framework is a collaborative constructivist model of learning processes in online and blended courses. It views the educational experience as revolving around the interaction of three "presences" – social, teaching, and cognitive presence— which, it argues, support learning. The CoI survey (Swan et al., 2008) is designed to capture student perceptions of the presences. It consists of 34, 5-point, Likert-scale items – 13 teaching, 9 social, and 12 cognitive presence items. Students enrolled in Educational Research Methods in Fall 2009, Spring 2010, Summer 2010, and Fall 2010 were asked to complete the CoI survey and a substantial subset of them agreed to do so.

As previously noted, scores on the CoI instrument actually decreased from the fall of 2009 to the spring of 2010 (see Figure 1 below—the red line separates scores from before and after the QM revisions). Scores for two of the three presences decreased but the biggest decline was in perceived teaching presence. The CoI survey uses items with which participants are asked to agree or disagree on a 1-5 Likert scale. Items with scores of less than 3.75 (just below "agree") were flagged. These included three teaching presence items, two social presence items, and one cognitive presence, all of which were related to learning from discussions and collaborative assignments. Revisions for the Summer 2010 version of the course thus centered on changing the grading of the discussion from extra credit to 16% of the course grade (to show students it was valued) and asking student groups to agree upon participation expectations before they began group work (to avoid time on task issues).



	FA2009	SP2010	SU2010	FA2010
teaching presence	4.51	3.91	4.53	4.61
social presence	3.95	4.04	4.24	4.38
cognitive presence	3.92	3.89	4.14	4.34

Figure 1. Scores on the CoI Survey Across Semesters

As shown in Figure 1 above, scores on the CoI survey improved considerably for the summer semester, rising to levels higher than those from the fall of 2009. However, when considering item scores, one teaching presence, one social presence, and two cognitive presence item fell below 4 points ("agree"). These items all involved discussion forums, so another adjustment was made to them—questions were changed to incorporate students' knowledge and experiences for the Fall 2010 version of EDL 541B. In that semester, CoI scores again increased, with no items scores falling below a 4.

Results

Outcome measures included scores on a written research proposal and the final exam, as well as overall course grades. The former measures represent two of the four major course goals – the ability to write a research proposal and a general understanding of quantitative and qualitative methodology. (Measures of the other two course goals – the skills needed to critically read educational research and the ability to apply quantitative and qualitative tools to data-based decision making – were not included in the analyses due to a ceiling effect.) All scores were transformed to percent of total possible. Figure 2 below shows average scores on these measures across semesters (the red line separates scores from before and after the QM revisions).

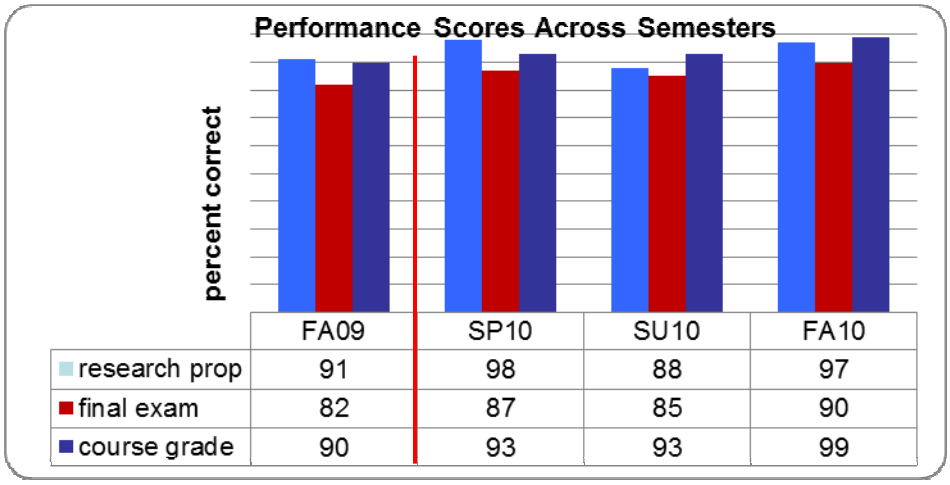


Figure 2. Comparison of Learning Outcomes across Semesters

The data show increases in all scores after the QM revision, then, after slight decreases in the summer semester, further gains in the fall semester. The combination of both the QM and CoI revisions across all four semesters brought average scores on the research proposal from a 91 to a 97, and on the final exam from an 82 to a 90, while overall course grades went from a 90 to a 99 (Figure 2).

Table 1. *Analysis of Variance Comparing Learning Outcomes Across Semesters*

ANOVA Table

			Mean Square	F	Sig.
Research Proposal Percent * Semester	Between Groups	(Combined)	242.956	1.800	.161
	Within Groups		134.952		
	Total				
Final Exam Percent * Semester	Between Groups	(Combined)	503.526	2.805	.050
	Within Groups		179.503		
	Total				
course grade * Semester	Between Groups	(Combined)	191.473	6.214	.001
	Within Groups		30.814		
	Total				

Analysis of variance found these differences were significant for the final exam scores at the p=.05 level and for overall course grades at the p=.001 level (Table 1). Post hoc analyses show these are significant when comparing Fall 2009 and Fall 2010 scores. Differences in scores on the research proposal were not significant.

Cohen's (1992) analysis of eta squared results (Table 2) was used to calculate effect sizes for all result. Effect sizes of the cumulative QM/CoI revisions were small for the research proposal (.11) and the final exam (.16), but moderate in terms of the overall course grades (.29). Although there may be a ceiling effect operating with respect to outcome measures, if similar effects hold for other core courses, these results may be magnified by the greater numbers.

Table 2. *Effect Sizes for Pre/Post Revisions Learning Outcomes*

Measures of Association

	Eta	Eta Squared
Research Proposal Percent * Semester	.327	.107
Final Exam Percent * Semester	.397	.158
course grade * Semester	.541	.293

The findings suggest that revising EDL 541 around stated objectives (QM) and presence deficits identified by CoI scores resulted in better student performance, especially in terms of overall course grades. The results thus indicate that ongoing course redesign guided by the Quality Matters (QM) and Community of Inquiry (CoI) frameworks can result in improved learning. Future research will explore whether such approach can work in other courses.

Educational Significance

The linking of online course design and implementation to learning outcomes is long overdue in online education. This ongoing study is not only a first step in that direction but it employs what are probably the two most commonly used theoretical frameworks in online education in the process. Findings suggest that, taken together, QM and CoI revisions can be linked to improved outcomes, but unfortunately not to each other. However, they do suggest a trajectory—QM review and revision of courses and incremental "tweaking" of course implementation relative to deficiencies revealed by the CoI survey—for incremental improvement of online courses. We are beginning to explore the efficacy of such an approach at the program level. If it indeed can lead to improved student performance across a variety of courses, then it will be of widespread practical use. In addition, demonstrating a link between the QM framework and student outcomes, and the CoI framework and student outcomes has great theoretical merit, especially as regards the latter and the cognitive presence construct in particular. Finally, the efficacy of our efforts demonstrates the usefulness of design-based approaches to research on online learning.

References

Quality Matters. (2005). Research literature and standards sets support for Quality Matters review standards. Retrieved from http://www.qualitymatters.org/Documents/Matrix%20of%20Research%20Standards%20FY0506.pdf.

Swan, K. P., Richardson, J. C., Ice, P., Garrison, D. R., Cleveland-Innes, M. & Arbaugh, J. B. (2008). Validating a measurement tool of presence in online communities of inquiry. *e-mentor, 2*(24) at http://www.e-mentor.edu.pl/artykul_v2.php?numer=24&id=543

Wang, F., & Hannafin, M. J. (2005). Design-based research and technology enhanced learning environments. *Educational Technology Research and Development, 53*(4), 5-23.

About the Presenters

Scott L. Day is Associate Professor and Chair of the Department of Educational Leadership at the University of Illinois at Springfield (UIS). He earned his Ed.D. in Educational Organization and Leadership from the University of Illinois at Urbana-Champaign in 2000. His teaching responsibilities include teaching on campus and online curriculum design courses for the Principalship and Superintendent programs. Dr. Day was a founding faculty member in the Master of Teacher Leadership (MTL) degree online in 2000. The MTL degree was recognized by Sloan-C as the Outstanding Online Program in 2010. Dr. Day also received the Pearson Award for Outstanding Teaching in 2010 from UIS.

Address: One University Plaza, MS BRK 377
Springfield, IL 62703
Phone: 217-206-7520
Email: sday1@uis.edu

Dr. Leonard Bogle joined the Educational Leadership department at the University of Illinois Springfield in 2005 as the first instructor hired specifically to teach online within the department. Dr. Bogle currently teaches courses in the areas of Supervision of Instruction, Introduction to Research, Collective Bargaining, Teacher Leadership, Instructional Design, Masters Project, Organizational Dynamics, and the Capstone Project. He has 34 years of experience as an educator in the public schools of Illinois with the last 28 years served as an administrator.

Address: One University Plaza, MS BRK 377
Springfield, IL 62703
Phone: 217-206-7824
Email: lbogl1@uis.edu

Developing Cognitive, Social, and Teaching Presence Online

Tina Stavredes, PhD
Chair, Psychology, School of Undergraduate Studies
Capella University

Introduction

In the online environment, where there is no face-to-face interaction, it takes greater effort to develop presence between learners and with the instructor. For learners who are moving from the face-to-face environment to the online environment, there is a void because of the lack of physical presence. This can lead to feelings of isolation, which can have a negative impact on motivation and persistence. In addition, the lack of presence can have an impact on the development of higher order thinking skills which requires collaboration. According to Garrison, Anderson, and Archer (2001), learning occurs within a community of inquiry through the interaction of social, cognitive, and teaching presence. Social presence establishes learners as individuals who are available to engage in learning. Cognitive presence is the ability of learners to construct knowledge through peer-to-peer interactions. Teaching presence is how the instructor facilitates the online learning environment to support social and cognitive presence to help learners meet the outcomes of course activities.

Social Presence

The structure of the online environment to support social presence can help reduce isolation and help establish learners as being present and available for interactions. Kerhrwald (2008) defined social presence as "an individual's ability to demonstrate his or her state of being in a virtual environment and so signal his or her availability for interpersonal transactions"(p. 94). Without the awareness of learners' presence, it is nearly impossible to develop relationships. To develop social presence, the design of the online environment must include opportunities to engage in social dialogue to provide an opportunity to develop presence and get to know one another. This can be done using discussions that allow learners an opportunity to introduce themselves to one another or a cyber cafe or lounge area that provides learners an opportunity to engage in casual dialogue not associated with the course content. As learners begin to engage socially with the instructor and peers, they can build trust with one another and begin to develop a sense of community which can prepare them for engaging in a community of inquiry as they participate in course activities.

Communication Channels

According to Short, Williams, and Christie (1976) when communication channels are increased, social presence increases among peers and the instructor; whereas, when communication channels are reduced, social presence decreases among peers and the instructor. A variety of communication tools can be used in the online environment to increase presence including email, private journals, discussion forums, instant chat, web conferencing and microblogs. Reaching out to learners individually via email or a private journal can acknowledge the instructor's awareness of their presence in the course and open lines of communication for the learner to begin a dialogue to share feelings and ask questions. Discussion forums provide an opportunity for learners to engage in dialogue casually or on a specific topic. Instant chat can help signify a learner's presence when they are online in the course environment and invite dialogue with other learners or the instructor when they are actively engaging online in course activities. Web conferencing can provide opportunities for the instructor to engage with learners as a group to deliver lectures or answer questions or individually to help learners overcome navigation or technical problems that require visual interactions. Microblogs such as Twitter, provide a means for instructors to communicate just-in-time with learners about upcoming due dates or other short messages that are time sensitive. It can also provide a venue for learners to engage in just-in-time communications to the

instructor or other members of the course. Opportunities to minimize the isolation of the online environment and allow learners to develop greater presence can diminish isolation in an online course, which can lead to greater persistence and achievement of course goals.

Cognitive Presence

The structure of the online environment to support cognitive presence is also critical. Cognitive presence is developed as learners engage in discourse and share their knowledge, experience, and ideas to construct knowledge. According to Garrison, Anderson, and Archer (2001), cognitive presence is "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (p.5). This requires the online experience to be designed for "active learning" which places the responsibility of learning and acquiring knowledge on the learner. It requires learners to think critically and reflect on what they know as they actively engage in learning activities to make meaning from the content and construct knowledge. This moves the learner away from being extrinsically motivated and focused on grades to becoming more intrinsically motivated with a focus on learning. It is transformative because it focuses on meaning-making that is relevant to the learner's life personally and professionally which has a positive impact on persistence.

Structure of Discussions

The structure of course activities can support active learning. Discussions should focus on topics that require learners to think critically. The more structured the discussion activities, the greater opportunities learners will have to build critical thinking skills and develop an engaging community of inquiry. Criteria for discussions should focus on the elements of critical thinking as well as the expectations for engaging in discussions in a timely manner and interacting with peers. Course activities should support active learning by providing opportunities for learners to develop an understanding of how to use an active knowledge base by "calling into question the assumptions underlying their customary, habitual ways of thinking and acting and then being ready to think and act differently on the basis of this critical questioning" (Brookfield, 1987, p. 1).

Elements of Thought

Elder and Paul's (2001) "elements of thought" can support critical thinking by helping learners understand how to actively participate in online discussions. During discussion it is important for learners to contribute their point of view to the discussion rather than simply copy information from the resources they review. Learners need to be able to demonstrate that they understand the purpose of the discussion and understand the question they are trying to answer or other questions that may relate to being able to discuss the issue. They should be able to use the concepts being considered and understand the line of reasoning of others, including the assumptions that are being made. In addition, learners should be able to seek information to answer the discussion question and use information to support their position. They must also be able to discuss their interpretations of the issue from their viewpoint and come to reasonable conclusions. Finally, the learner should understand the implications of following their line of reasoning and how it impacts the overall issue being discussed.

By providing guidelines for learners to engage in discussions, you can help them build their critical thinking skills and engage in more meaning discourse to construct knowledge as a community of inquiry. Consider creating discussion grading guidelines that incorporate Elder and Paul's (2010) "elements of thought" to communicate expectations for engaging in discussions. This can provide learners an opportunity to gain awareness of the elements of thought they use as they engage in discussion and can improve their ability to think critically as they engage in a community of inquiry.

Transactional Distance

According to Michael Moore (1980), the physical separation in the online environment known as transactional distance, can have an impact on understanding and perceptions, which can affect motivation. Teaching variables associated with transactional distance include dialogue and structure. Dialogue is the interaction between the instructor and learner. Structure relates to the design of the course including the content, navigation, multimedia, and communication tools used to support the online environment.

Flexible Course Environment

It is important that the structure of the course have a high degree of flexibility to minimize transactional distance (Moore, 1980). Some learners may require more structure to support their dependent learning styles while others may be more self-directed and prefer independent learning experiences (Stavredes, 2011). The critical component of the structure is being able to offer flexibility to meet the individual needs of learners. Dependent learners will require more support to accomplish learning activities. Checklists can help them accomplish weekly tasks in the course and support their planning processes. Templates and worksheets can help dependent learner understand how to accomplish specific tasks and monitor their learning. Reflective exercises can help them evaluate their learning. Additionally, support resources can help them fill gaps in knowledge and skills. The independent learner prefers to work alone. They may find some activities to be boring and repetitive, so providing a degree of flexibility to meet their needs is important. This can include allowing them to choose topics of interest to them personally and developing projects that allow them to have a certain degree of autonomy.

Teaching Presence

Teaching presence is critical to learner success. According to Moore (1980), increased dialogue between the instructor and learner along with a flexible learning environment leads to low transactional distance. End of course evaluations from learners focus on the interactions learners have with their instructor and complaints generally include comments regarding the lack of instructor presence. Teaching in the online environment requires a move away from the primary teaching role of lecturer to a new role as facilitator of learning to support social and cognitive presence that allows learners to engage in a community of inquiry and actively engage in knowledge construction. The instructor role should include interactions to encourage participation and knowledge construction. The instructor should also monitor learner progress and provide formative feedback and evaluate learner performance through summative feedback. Interactions should also encourage learners to be more self-directed.

Interactions to Encourage Participation

To encourage participation, the instructor should reach out to learners personally to open up communication channels and establish trust. The acknowledgement of the learner personally also may contribute to learner accountability. The instructor should also encourage knowledge construction by keeping discussions interesting, motivating, and focused on the topic. The instructor can use prompts to encourage discussions and ask learners to elaborate on discussion posts when they don't meet the requirements of the discussion. When a learner has a narrow focus or opinion, the instructor can take on another perspective and challenge the learner's perspective or ask the learner to take on another perspective to help him look at the issue from a different viewpoint. Instructors can encourage learners to discuss the assumptions of their line of reasoning or the implications of following their line of reasoning. The instructor can also use weaving techniques throughout a discussion to develop an understanding of the diversity of opinions and different lines of reasoning of learners on the issue as well as help re-focus the discussion if it moves off topic. If the instructor participates as an equal in the discussion and contributes their opinions, it can influence the thoughts of learners, so at the end of a discussion, the instructor can provide a summary of the discussion and include his or her personal opinion and experience to provide additional insight on the issue.

Interactions to Monitor Performance and Provide Feedback

It is important that the online instructor monitor learner progress towards goals. Formative feedback allows learners an opportunity to improve performance alone the way. In addition, it is important to point out writing issues to help learners overcome them early in the course before major writing assignments are due. The instructor should also monitor individual learner activity and proactively reach out to inactive learners to re-engage them in the course. It is also important to monitor the course environment for behavior issues and quickly step in to ensure that improper behavior is curtailed and learners see that the instructor is in control of the course environment. Learners want frequent feedback that is timely, specific, and actionable, so it is important to provide feedback throughout the course. Using scoring guides and grading rubrics can provide important information to learners about the expectations of a graded activity and can help the instructor provide consistent feedback to learners that is specific and actionable.

Interactions to Encourage Self-Directedness

It is important to continuously encourage learners to become more self-directed. The online environment is better suited for self-directed learners, so learners should be encouraged to become more self-directed by providing more support early in the course and then gradually remove the support to allow the learner to take on greater responsibility. In addition, strategies should support the development of metacognitive skills to help the learner plan, monitor, and evaluate their learning in the online environment and help them become more self-directed in their learning.

Conclusion

Developing presence in the online environment is critical to learner success. The online course structure should reduce feelings of isolation to improve motivation, which can help learners persist and achieve their educational goals. Presence has an impact on the development of higher order thinking skills which requires collaboration. Garrison, Anderson, and Archer's (2001) community of inquiry model can provide a framework to improve presence in the online environment and provide greater opportunities for learners to interact with their peers and instructor to construct knowledge. Overall, the more deliberate the planning of an online course to increase presence, dialogue, and flexibility, the greater opportunity learners will have to be a part of a transformative online learning experience that encourages critical thinking and the social construction of knowledge through a community of inquiry.

References

Brookfield, S. D. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco, CA: Jossey-Bass.

Elder, L., & Paul. R (2010). *The thinker's guide to analytic thinking.* Dillon Beach: Foundation for Critical Thinking Press.

Garrison, D. R., Anderson, T., & Archer. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of DistanceEducation*, *15*(1).

Kerhrwald, B. (2008). Understanding social presence in text-based online learning environments. *Distance Education*, *29*(1), 89–106.

Moore, M. (1980). Independent study. In R. Boyd, J. W. Apps, & Associates (Eds.), *Redefining the discipline of adult education* (pp. 16–31). San Francisco, CA: Jossey-Bass.

Short, J. A., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. New York, NY: John Wiley & Sons.

Stavredes, T. (2011). *Effective online teaching: Foundations and strategies for student success.* San Francisco, CA: Jossey-Bass.

About the Presenter

Tina Stavredes is chair of the psychology program in the School of Undergraduate Studies at Capella University. In her role she manages over 40 remote faculty. In 2010, she received the Harold Abel Distinguished Faculty Award. Previously, she was Director of Curriculum Development for Capella University. Dr. Stavredes holds a PhD in Educational Psychology with an instructional technology emphasis from the University of Minnesota. She has numerous publications and presentations to her credit. She has recently completed a book with Jossey-Bass titled *Effective Online Teaching: Foundations and Strategies for Student Success* that will be published August 2011.

Address: 225 South 6th Street, 9th Floor
Minneapolis, MN 55402
Email: tina.stavredes@capella.edu
Phone: 612-977-5341

Ensuring the Instructor's Voice is Present in Online, Asynchronous Classrooms

Cynthia Witz, MSM
Instructional Designer
Northwestern University School of Continuing Studies

Caitlin A. Frano, MAED
Assistant Director
Northwestern University School of Continuing Studies

Introduction

The Sloan Consortium reported in late 2010 that the number of chief academic officers who consider online education to be a critical component to their institutions' long-term strategies took an upward turn from 59% in 2009 to 63% in 2010 (Allen & Seaman, 2010). The same research indicates that students are interested in online education opportunities; more than 5.6 million students took at least one online course during the fall 2009 term—an increase of nearly 1 million students from the number reported the previous year. This equates to a 21% growth rate for online students as compared to a less than 2% growth rate of the overall higher education student population. Additionally, there is no evidence to indicate that the continued growth trend in online enrollments is at its end (Allen & Seaman, 2010).

Growth of Online Learning at Northwestern University School of Continuing Studies

As the Sloan Consortium research supports, we at Northwestern University School of Continuing Studies (NUSCS) have seen significant growth in student enrollment in our online courses. Understanding the commitment to our students, the faculty, and the institution in building and sustaining a quality distance education program, we've determined that a rigorous instructional design process for the resulting myriad newly developed courses is necessary. We believe that by undergoing such a rigorous instructional design process, we will sustain the consistency of curricula.

For many institutions for which distance education is still a new mode of delivery, there exists a challenge in expressing the value proposition for both new methods for instructional design and development as well as distance education. Even more difficult is the expression for the value of asynchronous components in distance education.

Value Proposition for Distance Learning

Distance education extends the reach of the learning institution by allowing course delivery to transcend time and space constraints. We believe to effectively broaden the institution's geographical reach, the delivery mode of distance education should include increased asynchronous components that can be accessed from any time zone, while minimizing negative impact to the learning process.

Instructional Design

NUSCS utilizes the standard analysis, design, development, implementation, and evaluation (ADDIE) instructional design process emphasizing a constructivist approach to adult learning. Once program outcomes, course goals, and weekly session learning objectives are determined via collaboration between the instructional designer and subject matter expert (SME), the specific course content, learning content, and formative and summative assessments are outlined in the curriculum map. Each element of the course content is mapped to a learning objective to ensure the student's mastery of the stated learning objectives is both supported and adequately assessed. Any items not directly supporting a stated learning objective

are not included in the course design, but may be added as additional resources. Typical course elements in online courses at NUSCS include Web- and print-based readings, discussion board prompts, handouts, interactive multimedia, detailed assignment directions, assessments, instructor-written announcements, and live Web conferencing. Faculty are discouraged, however, from utilizing live Web conferencing sessions for the purpose of direct instruction (i.e., lecture) because lecture tends to create a passive learning environment for students (Shakarian, 1995). Additionally, synchronous Web conferencing sessions negatively affect the institution's ability to broaden its geographical reach by time shifting. NUSCS instead utilizes Web conferencing sparingly for the purpose of allowing students another format in which to actively engage with their fellow students and faculty, which aligns with a constructivist approach to adult learning (Sun & Williams, 2004). In addition, NUSCS undergoes a rigorous instructional design process that results in the transformation of existing lecture content to more engaging and easily consumable asynchronous formats.

Faculty and Administrative Concerns

Most of the assigned SMEs go on to teach the course once it is implemented. Because of this, the perspective of the SME is often focused more on the impending facilitation of the course than on the instructional design process. This perspective generates the following key questions by SMEs:

- How will my voice be heard and unique personality come across in the asynchronous course elements?
- How will I convey the necessary information to my students without lecture? What happens to my lecture?
- What is my role in facilitating the course? What value will I bring to the course?
- How will I get to know my students? How will my students get to know me and my expectations?

These are all valid faculty and administrative concerns that are addressed via the design and development of online courses at NUSCS. Before faculty teach online for the first time, they are encouraged to participate in faculty training during which these concerns are again addressed and course facilitation techniques are shared and practiced. One such technique is the building of an educational community of learners.

Building an Educational Community of Inquiry to Leverage the Voice of the Instructor

The Teaching and Learning Centre states that an educational community of inquiry comprises of a group of individuals who "collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding" (Teaching and Learning Centre, 2007). A community of inquiry engages in a process of creating a meaningful learning experience through the development of the following three independent elements (Teaching and Learning Centre, 2007):

- Social presence: "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop interpersonal relationships by way of projecting their individual personalities" (Swan, Garrison, & Richardson, 2009).
- Cognitive presence: "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse" (Garrison, Anderson, and Archer, 2000).
- Teaching presence: "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001).

Building Social Presence into Course Design

The first communication seen by students in an online course at NUSCS is the faculty's welcome announcement to the class, which is an expressive piece than cannot be overlooked as a social component of the course.

Once the welcome announcement has been sent, the instructor and students can immediately begin engaging socially via a social discussion board (we at NUSCS call this the "Café")—a forum where students and faculty alike are encouraged to "project their personalities," thereby presenting themselves as real people, by relating course topics to real-world (professional or personal) examples.

Additionally, NUSCS faculty host an initial Web conferencing session, or "synch" session, during which faculty-to-student, student-to-student, and student-to-faculty interaction occurs. NUSCS also encourages, through careful instructional design, student utilization of tools such as learning groups in the learning management system course site and a student collaboration version of Adobe Connect.

Through personalization of welcome messages, participation in course content-related social discussion, and hosting of collaborative Web conferencing sessions, an instructor can boost social presence and effectively ensure his or her voice permeates the classroom.

Building Cognitive Presence Into Course Design

At NUSCS, we believe that cognitive presence begins with activating students' prior knowledge. Prior knowledge determines what we learn from experience, and neglect of prior knowledge can result in the audience learning something opposed to the educator's intentions, no matter how well those intentions are executed (Roschelle, 1995). Students activate prior knowledge throughout the course in the form of responses to thought-provoking, reflective, and open-ended discussion board prompts that are most often designed by the instructor and encourage student discussion and exploration through sustained reflection and discourse. The discussion board prompts effectively trigger in students' minds past experiences and events to which they connect and then can apply new ideas and concepts.

Through the designing of discussion board prompts that result in the activation of students' prior knowledge, an instructor can build cognitive presence and effectively ensure his or her voice permeates the classroom.

Building Teaching Presence Into Course Design

We at NUSCS believe that teaching begins during the design process and continues throughout the facilitation of the course. Discussion boards allow the faculty the opportunity to consciously facilitate conversations with students by challenging the students to think critically and encouraging student-to-student discussion, which is key to an effective, constructivist learning community (Sun & Williams, 2004). Through this active and ongoing facilitation of the discussion boards, an asynchronous course element, the faculty has effectively built his or her teaching presence into the course, and his or her voice is heard. The faculty's voice is also "heard" (or more appropriately *seen*) in feedback and grading of formative and summative assessments, which are real-world in nature, performance-based, and linked directly to measurable course goals and learning objectives.

Yet another opportunity to use the instructional design process to leverage the voice of the instructor and build his or her teaching presence comes in the form of writing assignments directions. In the asynchronous distance learning environment wherein the potential exists for faculty and students to be

separated by dramatic geographical distances and time zone differences, it is critical to provide unequivocally clear and well-composed assignment directions. The instructor can supplement the assignment directions with detailed examples, crystal clear expectations, personalized rubrics, and/or even tips such as recommended resources for student use in completing the assignments.

The instructional design process also leverages the voice of the instructor through the transformation of the instructor's illustrative examples or stories he or she traditionally shares with students via lecture into professionally produced, engaging, interactive, and sustainable multimedia formats. These multimedia are easily consumable and allow students opportunities to practice concepts and skills they've learned in class and obtain instant feedback and remediation, if necessary.

Through proper facilitation of discussion boards, clear assignment directions and personalized assignment feedback, and the creation of easily consumable multimedia formats that provide opportunity for student-guided practice and instant feedback, an instructor can boost teaching presence and effectively ensure his or her voice permeates the classroom.

Conclusion

To conclude, there are several methods by which an instructor can maintain his or her distinct voice in an online classroom environment devoid of lecture. This is achieved thorough effective instructional design; the transforming of lecture content into more engaging, professional, reusable, and easily consumable asynchronous formats; and building an educational community of inquiry through the establishment of a social, cognitive, and teaching presence.

References

Allen, I. E., & Seaman, J. (2010, November). *Class differences: Online education in the United States, 2010*. Retrieved from Sloan Consortium Web site: http://sloanconsortium.org/sites/default/files/class_differences.pdf

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conference environment. *Journal of Asynchronous Learning Networks (JALN)*, *5*(2), 1−17.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, *2*(2−3), 87−105.

Roschelle, J. (1995). *Learning in interactive environments: Prior knowledge and new experience*. Retrieved from The Association of Science-Technology Centers (ASTC) Web site: http://www.exhibitfiles.net/resource/education/priorknw.htm

Rourke, L., Anderson, T. Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous, text-based computer conferencing. *Journal of Distance Education*, *14*(3), 51−70.

Shakarian, D. C. (1995, May 1). Beyond lecture: Active learning strategies that work. *Journal of Physical Education, Recreation & Dance (JOPERD), 66*(5), 21.

Sun, L., & Williams, S. (2004). *An instructional design model for constructivist learning*. Paper presented at Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2004, 2476–2486, Chesapeake, VA. Retrieved from http://www.ais.rdg.ac.uk/papers/con50-An%20Intructional%20design.pdf

Swan, K., Garrison, D. R., & Richardson, J. (2009). A constructivist approach to online learning: The community of inquiry framework. In C. R. Payne (Ed.), *Information technology and constructivism in higher education: Progressive learning frameworks* (pp. 43-57). Hershey, PA: IGI Global.

Teaching and Learning Centre. (2007). *The model of a community of inquiry.* Retrieved from the Community of Inquiry Web site: http://communitiesofinquiry.com/

About the Presenters

Cynthia Witz is an instructional designer at Northwestern University School of Continuing Studies. She has been actively involved in the fields of professional training and development for more than a decade and has held multiple positions in higher education in both student and academic affairs. In her current role, Cynthia is responsible for working with subject matter experts and NU faculty as well as development vendors to apply adult learning theory and principles of instructional design to produce engaging, online undergraduate and graduate courses for NU. Cynthia holds a Bachelor of Arts degree in journalism and public affairs from the Ohio State University and a Master of Science degree in management and project management from Colorado Technical University. Cynthia is a published author; her articles have appeared in numerous publications including the Society of Professional Journalists' *Quill* magazine, the *Ohio State Alumni Magazine*, and *The Columbus Dispatch* newspaper. Cynthia is an active member of the global Project Management Institute (PMI) as well as the PMI Chicagoland chapter.

Address: Northwestern University School of Continuing Studies
Wieboldt Hall, 703
339 East Chicago Avenue
Chicago, IL 60611-3008
Email: c-witz@northwestern.edu
Phone: 312-503-5124
Fax: 312-503-3302

Caitlin A. Frano holds a Master's degree in education focusing on curriculum and instruction with a specialization in adult learning. In addition, she has over 15 years of instructional design, training, and teaching experience both in the corporate and the higher education arenas. She has been an online faculty for several years and has hosted a multitude of distance learning courses and workshops for various associations and organizations including, but not limited to, the American Medical Writers Association (AMWA), the American Society of Training and Development (ASTD), and Allstate insurance company. Caitlin is also a published author in several peer-reviewed journals as well as an editor of many peer-reviewed journal articles. Currently, Caitlin is the Assistant Director of Distance Education at Northwestern University School of Continuing Studies where she focuses on instructional design and development and faculty training and development.

Address: Northwestern University School of Continuing Studies
Wieboldt Hall, 703
339 East Chicago Avenue
Chicago, IL 60611-3008
Email: c-frano@northwestern.edu
Phone: 312-503-2839
Fax: 312-503-3302

Cultural Issues in Distance Teaching and Learning

Michael A. Mariasingam
Independent Consultant
Quality Learning Global Consultancy
USA

Ari-Matti Auvinen
HCI ProductionsOy
Finland

Introduction

The issues that cultural variations of learners would cause in distance teaching and learning, and some ways to minimize the impact of cultural variations are presented in this paper.

Definition of Culture

Stephan Dahl (1998) in the context of his paper on Communications and Culture Transformation defined culture as "shared values, believes and basic assumptions, as well as any behaviour arising from those, of a given group." Merriam-Webster dictionary defines culture as: "the customary beliefs, social forms, and material traits of a racial, religious, or social group." The common features of culture that stand out in both definitions are: shared values, beliefs and the behavior of a group. Such features can also be easily termed as tradition because tradition as defined by Merriam-Webster dictionary is "a long-established action or pattern of behavior in a community or group of people, often one that has been handed down from generation to generation." So, what makes culture different from tradition? The answer lies in other more appropriate Merriam-Webster definitions of culture: "enlightenment and excellence of taste acquired by intellectual and aesthetic training" and "that depends upon the capacity for learning and transmitting knowledge to succeeding generations." Thus, it could be said that culture is enlightened, excellent, refined, sophisticated form of tradition.

Cultural Diversity

Cultural variations exist among countries. When we talk of cultural variations we normally refer to or mean national cultures. But cultural variations can be classified at different levels and types. In the broadest sense cultural orientation among the various cultures can be defined into two major types: the Western Anglo-Saxon cultures and the Asian and other non-Western cultures (Hall, 2003). Within these two broad cultural orientations there are individual national cultures. Cultural variations could also exist within each national culture. Depending on the nature of the group considered within national cultures cultural diversity could also be expressed in terms of: differences in professional cultures; differences in organizational cultures; and differences between generations (Auvinen, 2010).

Cultural Formation

Cultural orientation could develop in two ways: through a naturally evolving process and through a process of cultural transformation through culture acquisition. As Hall (2003)d, "Culture is dynamic because it changes as circumstances change, and it has evolved in a way that is logical to the people inside that culture to help them solve their regularly occurring problems." People living in a given group, say a nation, are influenced by the group values, beliefs, and behavior and grow in the culture of the group through an evolving process. Such evolving cultures like the national cultures could be considered

naturally existing cultures. There are two broad cultural orientations in this category—the Western Anglo-Saxon cultures and the Asian and other non-Western cultures.

Cross Cultural Transformation

Naturally acquired cultural orientations could also change influenced by external forces. A good example is globalization and its impact on national cultures. The National Academy of Engineering in its editorial Globalization and Engineering said, "The globalization we are experiencing today is unprecedented in its magnitude and reach. … and globalization is transforming not only the location and organization of production and services, but also social and economic patterns" (Bugliarello, 2005). Dahl (1998) observed, "… With the globalisation comes an unprecedented influence on the national cultures. … It reaches not only a certain class, it reaches far into the society, every society." External forces such as globalization can influence naturally existing cultures and cause cultural transformation resulting in cultures that tend to be more global in nature. Dahl (1998) observed, "At the end of the twentieth century the post-modern geographic order, and the neoliberal economic order have given rise, in the Western European states in particular, to a new form of identity: The global identity."

Characteristic Features of Cultural Orientations

Of the two broad cultural types, the Western Anglo-Saxon cultures tend to be universalist in orientation. For universalist-oriented societies, the rules and obligations to the larger society dictate, without exception, the moral base for behavior (Hall, 2003). These cultures tend to be low-context cultures meaning context does not play a significant role in behavior and other group dynamics. The low context cultures also tend to be individualistic cultures, which "choose the individual and pay the price of impaired teamwork and the tendency to push for personal objectives even when they damage the team as a whole" (Hall, 2003). Also, "because people from these (low-context) cultures rely on words to convey meaning, they also tend to be very direct" (Sommerville, 2004).

The non-Western cultures tend to be particularist in orientation with the context (particular circumstances) being the determinant than the rules. According to Hall (2003) "The bonds and obligations of relationships are stronger than any abstract rule, and the response to situations may change according to the circumstances and the people involved." These high-context cultures "… rely on personal relationships, status, and previous communication to encode and decode messages. Much is understood in these cultures implicitly" (Sommerville, 2004). The high context cultures also tend to be "Collective cultures, such as that of the Japanese, choose the group and often pay the price in a submerging of individual initiative and creativity" (Hall, 2003).

Transformed Cultures

As mentioned above globalization tends to give people a global identity. Downey et al. (2006) said, "One key feature of a globalizing world is that it is increasingly difficult and, indeed, problematic to characterize people as members of different cultures." The transformation of cultures due to globalization has resulted in that "people increasingly have identities that locate or root them in more than one country" (Downey et al., 2006). One unintended but favorable consequence of such transformation is that it helps cross-cultural understanding, which has become essential in the globalized world.

Impact and the Implications of Cultural Variations

Cultural variations could cause problems when people from different cultures interact in business, social, and other situations. Without an awareness of other cultures, people from one culture can misunderstand the behavior, attitude, and actions of people from other cultures. For instance, people from low-context

cultures who use mainly language as the main source of communication may easily misunderstand people from high-context cultures who rely on the context - the non-verbal factors such as personal relationships, status, and previous communication etc.—to interpret messages (Sommerville, 2004). Such misunderstanding could easily occur even among the people of the same broad cultural groups such as the Anglo-Saxon culture. The types of problems that could occur and the type of intercultural efforts needed will depend on the area and the type of interactions. In this paper, the focus is on the cultural issues that arise in education, particularly in distance education and the necessary responses to them.

Cultural Issues in Distance Education

Cultural variations have a great impact on distance education because cultural differences affect greatly how people think, learn, respond, and perform. The distance-education learning materials are predominantly developed in the Anglo-Saxon world. Wong (2007) said. Wilson, Qayyum and Boshier (1998) found from an Internet search that 68 to 87% of 'e-learning courses' available were American courses that contain American cultural assumptions giving the impression that " 'American' is the norm and the rest of the world as periphery" (1998, p. 119). The content development for distance learning, therefore, is influenced by the learning abilities, learning styles, and learning preferences of the learners of the Anglo-Saxon world. When these distance learning contents are used in the Asian and other non-Western cultures without adaption it has been noted that the student persistence rates in distance learning has been very low, as low as 20 per cent. The main reason for the low student persistence has been identified as the unsuitability of the learning materials to the learners, who are culturally different from the learners for whom the learning materials were developed. In addition to this cultural impact on learning materials diversity in staff cultures affects the delivery of the learning materials. Cultural diversity also affects the way learner support systems are designed and help learners. If the teaching and learning are to be effective cultural differences should be given due consideration in all aspects of teaching and learning. The areas to look into to ensure that the distance programs will be suitable for global learners include: Content Development; Cultural Contextualization of Content; Teaching and Learning; Faculty Professional Development; Student Support Systems; and Assessment.

Content Development

Irrespective of whether it is on-campus education or distance education the overall educational approach should be to give learners a global identity; "multicultural citizenship" (Banks, 2003) by giving them multicultural understanding and ability to function in a multicultural environment. Banks (2003) said: "To develop reflective cultural, national and global identifications, students must acquire the knowledge, attitudes and skills needed to function within and across diverse racial, ethnic, cultural, language and religious groups." The curriculum should be designed with this educational objective.

Cultural Contextualization of Content

To make content culturally relevant to the learners, Wong (2007) said, "Mason (1994) outlined three broad alternative attitudes and practices: Try to tackle the problem by 1) making adaptations to the original course; 2) jointly redeveloping the course for cross-cultural delivery with the original overseas provider; or 3) creating a different version of the original course by translation into the local language."

Auvinen (2010) suggested cultural adaptation and re-contextualization of content: "it is important to de-context the core content ['purify' it from its original context] and to re-context it to their own learning environment ['add' the local cultural flavor]. Thus this process is including two important stages: the de-contextualization and the re-contextualization."

Teaching and Learning

The effectiveness of the learning process is very dependent on the learning abilities, learning styles, and learning preferences of learners which are very much influenced by culture. The teaching process is influenced by culture. As Patrick & Linder-VanBerschot (2010) said, "… when we teach, we are passing along not only *what* we know, but how we come to know it as well as the basis for accepting it as useful knowledge, and the values these represent" and they say "Creating opportunities for discussion about learning preferences should be a first step in determining the direction an instructional event should take."

Faculty Professional Development

As mentioned earlier diversity in professional cultures affects the delivery of the learning materials. Calder (2000) observes, "Robinson (1999), for example, has pointed out the need for distance educators 'to understand more fully the cultural contexts of learners and to build better bridges into and out of cultures of learning'(p. 45)." According to Patrick & Linder-VanBerschot (2010) "… instructional providers, including instructors and instructional designers, especially those working in online environments and struggling to maintain sufficient presence and student engagement, should develop skills to deliver culturally sensitive and culturally adaptive instruction" (Gunawardena & LaPointe, 2007). Faculty development programs with the objectives of providing faculty the skills needed to culturally adapt the content developed in non-native culture and to "deliver culturally sensitive and culturally adaptive instruction" (Patrick & Linder-VanBerschot, 2010).

Student Support Systems

Learner support services, in general, are of two broad types: the first is academic support that supports learners in cognitive development – development of learning skills, learning strategies, knowledge acquisition, and knowledge management etc., (Simpson, 2000, cited in Sim, H. K. C ., Atan, H., & Idrus, R. M., 2005); the second is non-academic support that deals with all other needs of the learners in their learning process such as orientation programs counseling services, technology advice etc. A point to keep in mind in choosing student support services is that the support needs of learners in both kinds of support vary globally. The learning styles and preferences of learners in the high-context cultures, it is found, are quite different from those of the learners in the low-context cultures. Learners in the non-Western cultures in general are found to be less self-directed and more dependent on instructors than their peers in the Anglo-Saxon cultures. The teaching and learning process in the high-context culture is teacher-centered against the learner-centered process in the low-context culture. Hence the nature and extent of academic support services required will vary. The nature and extent of non-academic support such as counseling services also depend on the cultural traits of learners. To provide high quality learner support service an understanding of the cultural variations of learners will be required and should be taken into account in designing the learner support services.

Assessment

The nature and frequency of assessments may have to be different in different cultures. The assessment methods used must be culture sensitive. High-context teaching and learning environment may require "individual and examination based assessment and frequent, regular, highly content specific assessment" (Morse 2003). Low-context cultures may require different assessment methods more suitable for self-directed learners.

Conclusions

"Cultural diversity remains apparent among learners, perhaps owing to deeply rooted cultural values and modes of thinking that are difficult to separate from learning processes (Nisbett, 2003). … The growing need for educational access leads students rightly to demand culturally adaptive learning experiences that allow full development of the individual (Visser, 2007). … For instruction to do the most good for students, instructional providers must be cognizant of the cultures of their learners and how those cultures manifest themselves in learning preferences (Nisbett, 2003)" (Patrick & Linder-VanBerschot, 2010). Therefore, for teaching and learning in distance learning to be effective the cultural differences should be given due consideration in all aspects of teaching and learning and appropriate adaptations and approaches must be employed.

References

Auvinen, A. (2010). *Cultural adaptation of learning content.* EDEN Paper. January 28, 2010.

Banks, J. A. (2003). *Educating global citizens in a diverse world. New horizons for learning*. Retrieved from http://www.newhorizons.org/strategies/multicultural/banks2.htm

Bugliarello, G. (2005, Fall). Globalization and engineering (editorial). National Academy of Engineering. 35(3). Retrieved on from http://www.nae.edu/NAE/bridgecom.nsf/weblinks/MKEZ-6G6QZY?OpenDocument

Calder, J. (2000, June). Beauty lies in the eye of the beholder. *International Review of Research in Open and Distance Learning*.

Dahl, S. (1998). *Communications and culture transformation. Cultural diversity, globalization and cultural convergence*. Retrieved from http://dahl.at/

Downey, G. L., Lucena, J. C., et al. (2006, April). The globally competent engineer: Working effectively with people who define problems differently. *Journal of Engineering Education*.

Hall, K. (2003). Worldwide vision in the workplace. *Global Integration.* Retrieved from http://www.leader-values.com/Content/detail.asp?ContentDetailID=350

Merriam-Webster Dictionary. Retrieved from http://www.merriam-webster.com/

Morse, K. (2003, February). Does one size fit all? Exploring asynchronous learning inn a multicultural environment *Journal of Asynchronous Learning Networks,* 17(1. Retrieved from http://www.sloan-c.org/publications/jaln/v7n1/v7n1_morse.asp

Patrick P., & Linder-VanBerschot, J. A. (2010). Cultural dimensions of learning: Addressing the challenges of multicultural instruction. *International Review of Research in Open and Distance Learning, 11*(2).

Sim, H. K. C., Atan, H., & Idrus, R. M. (2005). The learners' support system in distance education: A study of the satisfaction of quality. *International Journal of Instructional Technology and Distance Learning, 2*(9). Retrieved from http://www.itdl.org/Journal/Sep_05/article02.htm

Sommerville, J. (2004). *Keying in to cultural codes: How to do business overseas*. Retrieved from http://www.leader-values.com/Content/detail.asp?ContentDetailID=152 web: www.peakcp.com

Wong, A. L. (2007). Cross-cultural delivery of e-Learning programmes: Perspectives from Hong Kong. *The International Review of Research in Open and Distance Learning*, *8*(3). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/426/937.

About the Presenters

Michael A. Mariasingam, PhD is an independent consultant in quality assurance with Quality Learning Global Consultancy <www.qualitylearningglobal.com>. Dr. Mariasingam has developed a comprehensive set of quality standards in terms of rigorous measurable benchmarks for assessment and assurance of the quality of online programs. He has published a book and papers on quality in online programs and on

systematic guidelines and procedures for developing and delivering high quality online programs. Currently he is writing two books on Quality Assurance in Online Learning. Dr. Mariasingam has organized and facilitated several interactive hands-on workshops on designing, developing and delivering high quality online programs and on quality assessment and assurance of online programs.

Email: michaelmariasingam@yahoo.com
Phone: 1-216-965-7035
URL: www.qualitylearningglobal.com

Ari-Matti Auvinen (Senior Partner, HCI Productions Oy) is a widely known expert in distance education and eLearning. His M.A. degree is from the University of Helsinki and his M.B.A. degree is from the Helsinki University of Technology. He has a long experience as a consultant and trainer, including assignments in Finland, Europe and USA for higher education institutions and companies, and also European Commission, World Bank and UN organizations. He works also as the Chair of the Network of Academics and Professionals of EDEN (European Distance and E-Learning Network) and as the Board member of the Finnish eLearning Centre. In the past, he has served as a member of the Board of Directors of EFQUEL (European Foundation for Quality in eLearning) and as the Chair of the Finnish Association for Distance Education.

Address: HCI ProductionsOy
Kutomotie 16 A
FI –00380 HELSINKI
FINLAND
E-mail: ama.auvinen@hci.fi
Phone: +358–40–512 5725

Information Sessions

Faculty Support & Development Track

Introducing Faculty Peer Reviews Into Online Teaching

Ann H. Taylor, Interim Director
John A. Dutton e-Education Institute
The Pennsylvania State University

Introduction

The peer review of teaching—like the peer review of research—is a widely accepted mechanism for promoting and assuring quality academic work, and is required the purpose of promotion and tenure at Penn State. The peer review process in resident instruction typically involves a faculty reviewer observing a peer's classroom. The reviewer then summarizes her observations in a document that is to be included in the reviewee's dossier.

To address the need for online course peer review in the College of Earth and Mineral Sciences at Penn State University, the Dutton e-Education Institute designed, implemented, and assessed a peer review process for online teaching. The *Peer Review Guide for Online Teaching at Penn State* that we have developed is based on the "Seven Principles for Good Practice in Undergraduate Education," a summary of 50 years of higher education research that addressed good teaching and learning practices. Their findings, and faculty and institutional evaluation instruments based on the findings, have been widely used to guide and improve college teaching. Arthur Chickering and Zelda Gamson published the "Seven Principles for Good Practice in Undergraduate Education" in 1987, a summary of 50 years of higher education research that addressed good teaching and learning practices. Their findings, and faculty and institutional evaluation instruments based on the findings, have been widely used to guide and improve college teaching.

The Seven Principles

Good practice:

1. Encourages contact between students and faculty;
2. Develops reciprocity and cooperation among students;
3. Encourages active learning;
4. Gives prompt feedback;
5. Emphasizes time on task;
6. Communicates high expectations; and
7. Respects diverse talents and ways of learning.

Chickering, A., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin (39)*7.

While instruments such as end-of-course surveys provide a measure of student satisfaction with a course, the Seven Principles provide a useful framework to evaluate the effectiveness of online teaching. In the *Peer Review Guide for Online Teaching at Penn State*, each principle was adapted and described in detail, including examples of evidence of how a principle may be met in an online course. Resources for additional information are also included.

While, ideally, good practice would suggest that all seven principles would be supported in some way in an online course, variations in course format, size, and faculty teaching experience can make reaching that ideal difficult. Like the end-of-course student evaluations of instructors, where achieving a perfect rating is rare, it is assumed that a peer reviewer will discover room for improvement when examining a course

through the lens of the Seven Principles. The *Peer Review Guide for Online Teaching at Penn State* provides space for the peer reviewer to note teaching and learning strengths, as well as areas for improvement.

The *Peer Review Guide for Online Teaching at Penn State* is actually composed of two parts:

1. An *Instructor Input Form* that is to be completed for the reviewer by the reviewee in advance of the peer review in order to provide the reviewer with contextual information about the course, and
2. The actual *Peer Review Guide for Online Teaching at Penn State*, which is to be completed by the reviewer during the peer review.

Both documents are made available in two formats: a PDF version of the original *Guide* that can be completed electronically, saved, and shared, as well as a Microsoft Word version that can be customized for specific peer review needs. These documents are publicly accessible at https://www.e-education.psu.edu/facdev/peerreview

A Recommended Peer Review Process

Peer reviews of teaching are required for promotion and tenure at Penn State. Peer reviews are also needed for part-time faculty members who teach online and at a distance. University Policy HR23 states, "Each academic unit (e.g., department, college, and University Libraries) of the University should take responsibility for developing detailed review procedures, supplemental to and consonant with general University procedures, as guidelines for promotion and tenure." In other words, the process by which peer reviews are conducted varies across the University. To help facilitate the peer review of online courses, however, we provided a recommended peer review process.

Recommended Peer Review Process

1. First, the department/division head or school director or, where appropriate, campus chancellor and campus director of academic affair, identifies a faculty peer ("peer reviewer") to conduct the peer review of teaching.

2. The course instructor completes the "Instructor Input Form" and shares that document with the peer reviewer to convey contextual information about the course.

3. After reviewing the completed "Instructor Input Form," the peer reviewer uses the "Peer Review Guide for Online Courses" to work through the online course, observing how well the instructor addresses each of the Seven Principles. The reviewer notes the instructor's strengths and areas for improvement for each Principle in the space provided.

   NOTE: Reviewers should feel free to ask questions of the instructor any time clarification or information is needed during the review process.

4. The peer reviewer summarizes the feedback in the form of a letter to that instructor that can be included in the instructor's dossier. The letter, as well as a copy of the completed Peer Review Guide, is then shared with the instructor, the Program Manager (if the course is part of an online program), and the department/division head or school director or, where appropriate, campus chancellor and campus director of academic affairs.

For **provisional faculty** (not yet tenured), it is recommended that peer reviews occur at least once per year and in a variety of courses. Faculty being **reviewed for promotion**; it is better to have a series of peer reviews over time rather than several in the fall immediately preceding the review.

Use of the *Peer Review Guide for Online Teaching at Penn State*

The College's peer review resources are freely available for non-commercial use under a Creative Commons Attribution-Non-Commercial-Share-Alike 3.0 License. A research study exploring the use of these resources is planned for the near future, so more can be learned about how the materials have been adapted by other academic units at Penn State, as well as by other institutions. In addition, the author is working with other learning designers at Penn State to develop similar peer review tools for use with hybrid courses (i.e., face-to-face courses where at least 40% of the course takes place online).

About the Presenter

Ann Taylor is the Interim Director of the Dutton e-Education Institute, College of Earth and Mineral Sciences, at Penn State University. With responsibility for guiding the College's strategic vision and planning for online learning, Taylor works with faculty, administrators, stakeholders, and Institute staff to plan and implement online degree and certificate programs tailored to the needs of adult professionals worldwide. Taylor serves on University committees focused on strategic planning, policies, and procedures related to the University's distance learning initiatives and has been a member of the University Faculty Senate since 2007, where she chairs the Outreach Committee.

Address: 2217 Earth & Engineering Sciences Building
University Park, PA 16802
Email: atb3@psu.edu
URL: https://www.e-education.psu.edu/taylor
Phone: 814-863-9070
Fax: 814-863-1564

Designing Content Specific Communities of Practice for eLearning Faculty

M. Aaron Bond and Peter Macedo
Institute for Distance and Distributed Learning
Virginia Tech

Overview

In order to best represent the university's interests The Institute for Distance and Distributed Learning adopted Virginia Tech's University Distance and Distributed eLearning Strategic Plan as its own departmental strategic plan, a plan it helped to create. Over the past 5 years IDDL has leveraged professional development to contribute to the achievement of more than one third of the over 40 identified objectives.

Initially the professional development took the form of workshops focused on training faculty in the use of software and other technologies for the creation of online course materials. Offered topics expanded to teach on topics related to pedagogy, best practices and research. New opportunities such as certificate programs, departmental workshops, one on one assistance and brownbag lunches have drawn faculty, staff, and graduate students interested in furthering their knowledge and skills in the field of distance learning. Our newest professional development initiative is to expand the online faculty-centered teaching and learning community at Virginia Tech by developing content specific communities of practice. It is through the implementation of these learning community opportunities and other targeted professional development activities that IDDL has made great achievements not only for the department but also for the university as a whole.

Introduction

Faculty development and organizational development are often viewed as separate institutions. While faculty development is meant to provide individual growth, organizational development focuses on the long-term health of the larger organization (Baron, 2006.) If faculty development is to be effective, it must exist in a reciprocal relationship with organizational development (Baron, 2006). When faculty development initiatives are strategically planned, organizational goals are more easily met. (Kecskes et. al, 2006).

Though over one-third of public university faculty have taught an online class many readily acknowledge that teaching an online course can take more effort than delivering content through traditional face to face venues (Association of Public and Land-grant Universities-Sloan National Commission on Online Learning, 2009). Faculty who lack adequate training in online course development and appropriate pedagogy can negatively impact student learning (Association of Public and Land-grant Universities-Sloan National Commission on Online Learning, 2009). Encouraging a reciprocal relationship between organizational development and faculty development can help create the support opportunities that would assist faculty in delivering courses online. Using Mu and Gnyawali's (2003) framework for developing quality learning communities, IDDL formed a faculty learning community of practice specifically designed for online teaching faculty.

Program Description

Using strategic goals of IDDL and those of the larger university, IDDL developed targeted professional development workshops meant to enhance instructional strategies for instructors engaged in distance learning. During the process of building professional development opportunities, IDDL worked with administrators and faculty from across campus to identify specific needs. Using needs-based planning

strategies, professional development opportunities have become more meaningful and relevant for participants. Through this process a community of eLearning faculty developed. This community has helped to improve distance learning instructional practices across many departments on campus and is driving the creation of new strategic goals for future consideration.

Research has shown that faculty-centered learning communities facilitate connections for isolated faculty members, while providing real opportunities for professional growth (Cox, 2004). Rarely, do communities of practice form spontaneously and flourish without much work. More often such communities require extensive planning, organizational support, and a dedicated group of community members (Paloff, 1999).

As reported last year at the Distance conference, the Institute for Distance and Distributed Learning at Virginia Tech has successfully implemented a strong faculty professional development program with a thriving eLearning Faculty Community of Practice. The community of practice has since expanded to include smaller discipline specific communities that meet regularly face to face and virtually. Within each discipline-centered community, faculty work collaboratively to solve distance learning problems and issues that are specific to their own department or subject.

In this session, we will offer examples of targeted workshops and give research-based strategies for improving faculty professional development, including how to build an active community of practice. Additionally, we will examine the process for creating smaller discipline specific communities that operate within the larger community of practice as a separate entity. This session illustrates the faculty development practices offered by the Institute for Distance and Distributed Learning at Virginia Tech and focuses on the process for developing, expanding, and evaluating a thriving eLearning faculty community. Faculty involved in the eLearning Community of Practice at Virginia Tech will also be on hand to give insight into how targeted professional development has helped them reach their institutional goals. We will discuss how the eLearning Faculty Community at Virginia Tech has expanded to include smaller discipline specific communities of practice. The session will provide tips and strategies for incorporating an effective community of practice in any professional development program. Fresh narratives and perspectives from participating faculty members will be provided.

Summary

Faculty development is an important part of institutional planning. Finding innovative ways to include content specific professional development opportunities for online teaching faculty to connect, share resources, and create a support system can drastically improve faculty perceptions of the distance learning teaching experiences. Faculty satisfaction will lead to better student performance, learning, and student perception of the online class. The Institute for Distance and Distributed Learning at Virginia Tech has implemented a process for building a community of practice for its online teaching faculty and has expanded the community to provide opportunities for faculty to work with other faculty within their discipline to improve online instruction. This process is ongoing and IDDL will continue to foster the budding community by providing ongoing support and coordination of each content specific community of practice.

References

Association of Public and Land-grant Universities-Sloan National Commission on Online Learning (2009). Online learning as a strategic asset. Retrieved from http://www.sloanc.org/APLU_Reports

Baron, L. The advantages of a reciprocal relationship between faculty development and organizational development in higher education. In Chadwick-Blossey & Robertson (Eds) *To improve the*

academy: Vol 24. Resources for faculty, instructional, and organizational development (pp.147-165). Bolton, MA: Anker.

Cox, M. D. (2004). Introduction to faculty learning communities. *New directions for teaching and learning*, *2004*(97), 5-23. doi:10.1002/tl.129

Kecskes, K. J., Gelmon, S. B., and Spring, A. Creating engaged departments: A Program for organizational and faculty development. In Chadwick-Blossey &Robertson (Eds) *To improve the academy: Vol 24. Resources for faculty, instructional, and organizational development* (pp.147-165). Bolton, MA: Anker.

Mu, S., & Gnyawali, D. R. (2003). Developing synergistic knowledge in student groups. *The Journal of Higher Education, 74*(6), 689–711.

Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: effective strategies for the online classroom*. San Francisco, CA: Jossey-Bass.

About the Presenters

Aaron Bond currently serves as the Coordinator of eLearning Faculty Development and Support Services for the Institute for Distance and Distributed and Learning (IDDL) at Virginia Tech where he designs, develops, and delivers professional development activities for distance and distributed learning faculty while coordinating support efforts for faculty engaged in distance education. Aaron has worked in the field of instructional technology, distance education, and professional development since 1999. He has served as a corporate trainer, face-to-face classroom and online instructor, and as an assistant principal. Some organizations that Aaron has worked with include the Virginia Department of Education, Roanoke City Schools, PLATO.

Address: Institute for Distance and Distributed Learning Virginia Tech
3120 Torgersen Hall
Blacksburg, VA 24061
Email: mabond@vt.edu
URL: http://www.iddl.vt.edu
Phone: 540 231-1832
Fax: 540 231-2079

Peter Macedo has been with IDDL since Spring 2003 and has been working in distance education programs since 1995. He has worked with informal educators, K-12 and university programs with a focus in online instruction. Some of the organizations he has worked with include: The US Army, NASA, Baltimore County public schools, The Council of State Science Supervisors, The National Association of Science Teachers, The Institute for Connecting Science Research to the Classroom, the Networking for Leadership, Inquiry and Systemic Thinking group, the Center for Instructional Technology, and a large number of departments throughout Virginia Tech.

Address: Institute for Distance and Distributed Learning Virginia Tech
3120 Torgersen Hall
Blacksburg, VA 24061
Email: pmacedo@vt.edu
URL: http://www.iddl.vt.edu
Phone: 540-231-5004
Fax: 540-231-2079

Creating a Successful Faculty Professional Development Program Devoted to Critical Thinking

Dr. Paula Jones
Dr. Maryann Kolloff
Dr. Fred Kolloff

Establishing a new faculty professional development program takes time and careful planning. Standards for organizing and implementing a successful faculty professional development program need to be considered. The recommendations to establish professional development opportunities for faculty are separated logically into the steps of preparation, delivery of the workshop or sessions, and post-workshop checkpoints or follow-up. The critical roles played by campus administrators, key faculty, and post-workshop mentors are highlighted as vital partners enhancing the actual professional development session.

Some important standards to consider when developing a new professional development program within an university setting include:

1. Administration needs to foster an academic climate that supports and encourages faculty professional development,
2. The originators need to ensure that the professional development (PD) program is connected to the university's goals or strategic plan,
3. Administration and/or the originators need to develop a worthwhile reward structure for faculty members, and
4. Faculty members should be able to individualize the information or training to meet their needs.

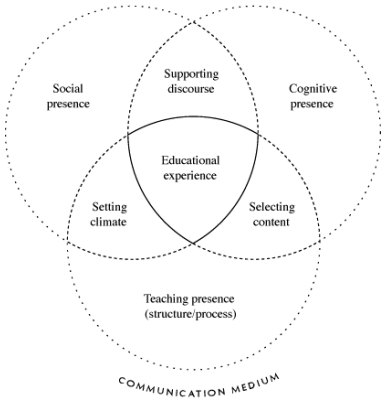
Of course, the overall goal of most faculty professional development programs is to improve teaching and learning. Generally, when a faculty group is formed, such as in a professional development program, the combined energy created has great potential to not only motivate faculty, but also improve the final product or outcomes of the program. Because of the continued communications and the sense of "community" that comes from an ongoing PD program, accountability and support can help the individual faculty members to be more productive in completing the program successfully. That is what was found in the development of one faculty professional development program, referred to as "The Distance Learning Academy." This 9-month program focused on supporting faculty in establishing methods for developing student critical thinking skills in online courses.

Can We Teach “Thinking Skills” Through Online Courses?

For some faculty, offering professional development sessions that are focused on methods of teaching critical thinking skills can possibly reduce the gap between aspirations to teach critical thinking and effective critical thinking pedagogy. Online teaching and learning certainly has the properties and tools needed to support higher-order learning and create the cognitive presence congruent with deep and meaningful learning outcomes (Garrison, 2003). The asynchronous and virtual nature of online learning calls on learners to be self-directed and to take responsibility for their learning. By offering instruction online, students will be able to participate in a more self-monitored learning environment that offers flexibility to the student as well as increased access to information. Therefore, it is important for instructors to utilize the online course tools that are generally available through various course management systems such as: online discussion board, chats, groups, blogs, wikis, etc., to encourage students to be involved in their own learning process through the establishment “presence”. To help to

demonstrate this, Garrison, Anderson and Archer (2000) have developed a conceptual model of online learning that is referred to as the "community of inquiry" model,

Figure 1. *Community of Inquiry*



This model postulates that deep and meaningful learning results when there are sufficient levels of three component "presences." The first is a sufficient degree of cognitive presence, such that serious learning can take place in an environment that supports the development and growth of critical thinking skills. Cognitive presence is grounded in and defined by study of a particular content; thus, it works within the epistemological, cultural, and social expression of the content in an approach that supports the development of critical thinking skills. The second, social presence, relates to the establishment of a supportive environment such that students feel the necessary degree of comfort and safety to express their ideas in a collaborative context. The absence of social presence leads to an inability to express disagreements, share viewpoints, explore differences, and accept support and confirmation from peers and teacher. Finally, in formal education, as opposed to informal learning opportunities, teaching presence is critical for a variety of reasons.

Cognitive presence, social presence and teaching presence are all important preconditions in helping the learner to feel comfortable in the learning environment. Garrison stated that establishing cognitive presence online represents a significant shift in the design and delivery of an educational experience (2003). As such, the guidelines for designing instruction that develops effective learning online require a significant shift in the educator's thinking. Educators must move away from information dissemination to one of collaboratively constructing meaning and understanding. The practical challenge then is to design the learning activities that provide the right balance and integration of reflection and collaboration.

Developing critical thinking in an online course is different from developing these same skills in a face-to-face course simply because of the online tools that are utilized to communicate and share instructions and feedback with students. When designing the online course, educators need to be familiar with the online instructional and communication tools that are available and utilize the tools in order to implement the *best practices* of developing critical thinking skills for students online. Here is a brief list of tools that are generally available in online course and there possible uses:

In order to develop students' critical thinking skills in an online environment, Garrison reports that there are two very important effective practices that must be developed in an asynchronous online course: (a) Provide students the opportunity to reflect; and (b) provide students the opportunity to collaborate with others, (2003). Through reflection, instructors must use written communication effectively, and provide learners the opportunity to revise and refine their comments and ideas. Reflection has to do with the state of learning and a learner's own knowledge, experiences, and thought processes (Dewey, 1933). To Dewey, learning was inducing reflection through questions and actively monitoring this inquiry for the purpose of achieving understanding (1933). Critical thinking is generally agreed to include the evaluation of the worth, accuracy, or authenticity of various propositions, leading to a supportable decision or direction for action (Jones, 1996).

Table 1. Course Management Tools

Course Management Tools	**Uses for Building Critical Thinking Skills Online**
Announcements page	Demonstrate active instructor participation, share expectations with students, provide navigational instructions, communicate current information and resources for students; Can serve as a motivator to students by keeping information current
Learning Units and/or Modules	Provide a well-organized and resourceful learning environment that covers content well; include learning goals/objectives in the units and/or modules; provide rubrics when possible; Instructors can provide examples and a "reflective" model of the process the students will experience and help to explain abstract concepts as they come up in the course
Online Assessments	Provide students immediate feedback in knowledge/comprehension/application levels of intelligence; Students can self-monitor and moderate behaviors as needed to learn
Discussion Board – Asynchronous Communication	Used for engaging students in "thought process"; Use of questioning techniques that encourage critical thinking can be implemented; Allows time for students to "look up" references and information and respond within a given time frame; Allows for open communication for students to ask questions, respond to other views; Encourages active participation of student and instructor alike; Could serve as a motivator for learning
Live Chat Session – Synchronous Communication	Can be used to engage students in "thought process" of a topic, a specific question, or assignment; Encourages (or requires) live, active participation of both student and instructor, real-time feedback can be provided from instructor to student(s) through the control of who is permitted to join the chat session
Groups Page (discussion board and file exchange)	Provides means of building peer relationships, online interactions, and opportunities to collaborate with other students online to complete assignments and/or projects; Provides the instructor a means for sharing feedback with group members where only the active group members can see the information
Blogs (journals – for reflective assignments)	Engage students in processing thought through opportunities to reflect on their learning throughout the course; Provides the instructor a means for sharing feedback to individual students (adding comments)
Wikis (team web sites)	Provides a means of building peer relationships, online interactions, and opportunities to collaborate with other online to complete a team or small group web-based project
Assignments and Safe Assignments	Used for submitting students' work; Students can self-regulate their own learning and modify their learning strategies as needed to demonstrate learning; Instructors can provide feedback on specific assignments to students
Grade Book	Allow students the opportunity to develop metacognition skills by offering ways to self-regulate and self-monitor efforts and behavior in learning; Students are kept informed on their progress in the course

This type of reflection is normally referred to as *metacognition.* Metacognition is an important concept in cognitive theory. “Metacognitive skills include taking conscious control of learning, planning and selecting strategies, monitoring the progress of learning, correcting errors, analyzing the effectiveness of learning strategies, and changing learning behaviors and strategies when necessary," (Ridley, D.S., Schutz, P.A., Glanz, R.S. & Weinstein, C.E., 1992). Metacognition consists of two basic processes occurring simultaneously:

1. Students monitor their progress as they learn, and
2. Students make changes and adapt their learning strategies if they perceive they are not meeting their learning goals.

Metacognition is about self-reflection, self-responsibility and initiative. Metacognition refers to knowledge of one's own thinking processes and products or anything related to them. It is "thinking about one's own thinking. At the same time, students must be responsible for goal setting and for managing their own time.

Perhaps the most effective practice in establishing an online cognitive presence congruent with higher-order learning is for the teacher to model reflective inquiry (Garrison, 2003). This is best done with the teacher objectively providing commentary and insight into their thinking process (i.e., thinking out-loud). The purpose is to increase metacognitive awareness— as stated above, a precondition for critical thinking and self-direction. Modeling reflective inquiry provides learners with concrete examples of how to approach subject matter for purposes of constructing personal meaning. Students learn how to manage and monitor their own learning. They gain the ability and confidence to be self-directed learners. In this regard, the teacher must participate in, but not dominate, discussions.

Modeling reflective inquiry and increasing metacognitive awareness can be greatly assisted by explicitly sharing a model of the thinking and learning process such as practical inquiry. Insight into the phases of inquiry and learning can help the learner appreciate whether they are in a problem definition stage, searching for relevant information, connecting ideas for meaning, or confirming understanding. Metacognitive awareness provided by such models can be an important tool in acting confidently and effectively through the selection and employment of appropriate strategies. This combined with teachers sharing their thinking process can be of considerable help to learners to develop metacognitive strategies and abilities and become reflective, self-directed learners.

The first challenge is to establish a community of inquiry in the online environment where learners feel connected and are cognitively engaged; and where there is a community that supports and encourages ideas to be critically analyzed and meaning negotiated. The discourse, however, must be purposeful and focused. The instructor must be able to interject new ideas, diagnose misconceptions, and move the discussion toward resolution that may or may not be predictable. The role of the instructor (as the facilitator) “goes beyond a neutral weaving of participants’ contributions” (Garrison & Anderson, 2003). Clarifying, explaining and summarizing are legitimate functions of a facilitator. As long as this direct intervention is constructive, open communication is not threatened. Garrison states, “lecturing online or simply providing access to information is a complete misuse of asynchronous learning networks,” (2003).

One important technique to use in an online environment is to allow students to moderate their discussion in small groups. This will actively engage most learners in a committed and free manner. The key is for students to report back their progress or conclusions. In this way, they receive appropriate feedback from all participants and confirmation of their understanding. By providing this increased responsibility and control, learners are encouraged to become more self-directed. The same technique can also be used for group projects, which is an excellent way to have learners collaboratively apply their new knowledge.

Finally, the use of online discussions can be very productive tools when used to develop critical thinking skills of online students. When instructors select a critical thinking strategy to use during online class or small group discussions, it is important for the instructor to frame the entry of the discussion so that students are able to focus their postings to the discussion topic and encourage students to offer deeper dialogue that contributes to the discussion. Collison, Elbaum, Haavind and Tinker confirmed that instructors should inform students of the standards and expectations of discussions before the online discussions begin. Also, identify and highlight productive lines of discussions when they occur. Also, instructors should provide examples of previous discussions as good models of online discussions whenever appropriate. Instructors should use re-direction strategies to keep the focus of the discussion on the topic at hand (2000).

In summary of the literature reviewed, educators can promote critical thinking skills by developing online course materials and activities that reinforce metacognitive skills. Educators who want to develop student critical thinking skills will need to develop a learning environment (online) that encourages students to ask questions, engage in reflective thinking and self-directed learning. At the same time, it is very important for the educator to model the reflective skills needed. Finally, the online discussions are important tools used to develop critical thinking skills for online students.

From the literature above, we found that faculty members needed professional development opportunities that provided training in critical thinking models, such as the Paul and Elder model and at the same time, offer instructional design and instructional media support as the faculty member worked to develop online instructional products for their students to use that would help to support the development of critical thinking skills. Faculty needed the opportunity to see models and be able to use the models to implement them into their own course content.

Distance Learning Academy

There are several tools and models available that could be helpful to faculty members in establishing effective methods in their courses for teaching students to develop critical thinking skills. Faculty members could benefit from professional development opportunities that support their efforts to explore the models and put at least one component of a model into practice and summarize the results.

Beginning in June 2009, an innovative faculty professional development program called The Distance Learning Academy was created at one university. The goal of this program was to support faculty members in applying at least one component of the Paul & Elder model in teaching students to think critically in relation to the specific course content. Eighteen faculty members applied to this program and participated in work sessions that introduced them to the components of the Paul & Elder model. From the summer sessions, the faculty members learned how to apply at least one component of the model in their specific courses and at the same time each faculty member wrote scripts for a specific instructional product that was focused on developing students' critical thinking skills. The ultimate goal of the professional development program was to produce an interactive instructional product for an online course that included all of the following elements:

1. measurable learning objectives
2. instructional content
3. models or examples of critical thinking assignments
4. practice or self-check assignments, (opportunities to reflect), and
5. a final assessment.

Through participation in this program, faculty members were given the support of an instructional designer and a media producer to produce the final instructional product. In February 2010, the faculty

participants displayed their newly created online instructional products at a showcase for administrators, faculty members and staff to review. Fourteen faculty members completed the program and each of them earned a $300 stipend. The program has been very successful and is being repeated in the summer of 2010.

Methods & Models Used to Develop Critical Thinking Skills

Critical thinking can also be referred to as purposeful thinking. To think critically requires an active process, one that requires a purpose. Critical thinking is a process where the person applies some pre-identified standard(s) and then uses some criteria in evaluating options that are presented.

Dr. Richard Paul and Dr. Linda Elder promote concise models of the process of critical thinking. Their main point is that critical thinking is a skill that must be taught. Included in their model are three primary components needed to think. They are (a) intellectual standards-how we evaluate our thinking, (b) 8 elements of reasoning—include the parts of our thinking, and (c) intellectual traits—the ultimate goal of critical thinking is to develop these traits. Richard Paul and Linda Elder also stated that there are two essential dimensions of thinking that students need to master in order to learn how to upgrade their thinking.

1. Students need to be able to identify the "parts" of their thinking, and
2. Students need to be able to assess their use of these parts of thinking.

Understanding the thinking process is important to learning. When learning is moved to an online environment, the challenge evolves to how to teach critical thinking skills through a virtual presence and communications. Faculty members could benefit from learning about one such professional development program that provided opportunities that were focused on establishing effective methods for developing and modeling critical thinking skills through online tools.

In this session, the presenters will share how this faculty professional development program was organized. In addition, the presenters will summarize how the Paul & Elder model was used to support the faculty members' efforts to develop instructional content for these specific products, summarize the faculty support provided within this program, and provide examples of the specific software programs used to develop the instructional products including iSpring Pro, Austhink Rationale Software, Soft Chalk, and Camtasia. Attendees will be able to review at least 3 of the interactive online instructional products that were produced to teach students how to develop their critical thinking skills using the Paul and Elder model specifically.

References

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives.* New York, NY: Longman.

Bloom B. S. (Ed.). (1956) *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domain.* New York, NY: McKay.

Collission, G., Elbaum, B., Haavind, S., & Tinker, R. (2000*). Facilitating online learning: Effective strategies for moderating* (pp. 126-161). Madison, WI:Atwood.

Dewey, J. (1933). *How we think* (rev. ed.). Boston, MA: D. C. Heath.

Dewey, J. **(**1933). *Experience and education*. New York, NY: Macmillan.

Garrison, D. R. (2003). Cognitive presence for effective asynchronous online learning: The role of reflective inquiry, self-direction and metacognition. Retrieved from http://www.communitiesofinquiry.com/documents/SLOAN%20CP%20Chapter%202003.doc.

Garrison, D. R, & Anderson, T. (2003). *E-Learning in the 21st Century*. London, England: Routledge Falmer.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical thinking in text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2). 87-105.

Jones, D. (1996). Critical thinking in an online world. Retrieved from http://www.library.ucsb.edu/untangle/jones.html#dewey.

Paul, R., & Elder, L. (2009). Critical thinking. Retrieved from www.critical thinking.org.

Ridley, D. S., Schutz, P.A., Glanz, R. S. & Weinstein, C. E. (1992). Self-regulated learning: The interactive influence of metacognitive awareness and goal-setting. *Journal of Experimental Education, 60*(4), 293-306.

Sloan Consortium (2005). *Growing by degrees: Online education in the United States*, 2005.

Virginia Tech. (2006), Teaching models. Retrieved from http://www.edtech.vt.edu/edtech/id/models/index.html

About the Presenters

Dr. Paula Jones serves as an Instructional Designer within the Instructional Development Center at Eastern Kentucky University. She also serves as an adjunct faculty member in the College of Education where she teaches educational research courses. Dr. Jones also serves as a Quality Matters Course Reviewer and Trainer.

Address: 521 Lancaster Avenue, LIB 112
Richmond, KY 40475
Phone: 859-622-1073
Email: paula.jones@eku.edu

MaryAnn Kolloff, EdD, is an Assistant Professor in the Curriculum and Instruction Department at Eastern Kentucky University. Dr. Kolloff is active in presenting workshops focusing on distance education for university faculty and in service teachers at national and state conferences. She teaches technology courses as well as adolescent and young adult literature courses in online learning environments.

Address: 521 Lancaster Avenue, LIB 112
Richmond, KY 40475
Phone: 859-622-1658
Email: maryann.kolloff@eku.edu

Online Course Quality: A 10-point System of Faculty Support and Development

Karen Bellnier
Instructional Designer
Johnson & Wales University

Janet Houser
Instructional Designer
Johnson & Wales University

Introduction

Johnson & Wales University is a four-year, private non-profit university based in Providence, Rhode Island. It is a career-focused university with undergraduate and graduate degree programs in business, hospitality, culinary arts, technology, and education. JWU consists of four campuses: Providence; Charlotte, North Carolina; North Miami, Florida; and Denver, Colorado, and has a combined enrollment of over 17,000 students. Until the most recent strategic plan that spanned 2007 to 2011 (Johnson & Wales University), technology efforts were limited and generally focused on administrative systems (e.g., student information system, marketing Website).

Implementing technology-mediated instruction was an emphasis of the most recent strategic plan, and to that end, the Office of Online Learning was established in January of 2008. Its initial focus was on the development and delivery of fully online courses. The first cohort of faculty was trained to develop and deliver full online courses in June 2008 and the first six online sections offered the following winter term. As of Spring 2011, the university has over 100 faculty trained in online learning and has offered as many as 38 concurrent online sections. In Fall 2010, the first students enrolled in our first fully online degree program: the junior and senior years of a Food Service Management bachelor's degree for applicants with an associate's degree in culinary arts or baking and pastry arts.

Challenge

From the outset, the Office of Online Learning was charged by the Provost's office with ensuring that the courses were well designed to meet the needs of online students and our faculty. We selected a model course approach where each complete, turnkey course was created by a faculty member or two after completing a training course. Despite being developed in collaboration with an instructional designer, the initial courses were inconsistent in their execution. At the same time, our office was growing from 3 to 6 staff including the addition of another instructional designer.

To ensure consistency, we wanted to provide support throughout the online course life cycle. We felt the need to define the expectations for a JWU online course to use internally to establish a shared understanding. It would also guide faculty developing and teaching online and communicate to administration about what was being asked of their faculty.

Approach

In the summer of 2010, Karen Bellnier and Amy Ricci, Director of Online Learning, developed the Online Course Quality Standards Rubric drawing on some of the best practices in the field (Ragan, MarylandOnline CSU Chico, Blackboard) and targeted areas of need identified in the courses at JWU. Out of this process, 27 standards were identified within five categories organized around areas of student engagement (Mabrito) [Course Organization & Administration, Syllabus, Student-to-Content Interaction, Student-to-Instructor Interaction, and Student-to-Student Interaction]. The standards are focused on the

execution of an online course, on strong pedagogic principles, and intentionally not on course content or rigor. Each standard identifies specific required elements, suggests additional elements that would incorporate best practices, and describes what would not meet the standard (Table 1).

Table 1. *Standards Framework Excerpt*

Description of standard	**Basic Elements**	**Elements of Distinction**	**Insufficient**
Students are able to assess their learning on their own.	- Regular opportunities are provided for students and instructors to gauge learning. - Students can participate in self-check activities (i.e., ungraded quizzes, games, peer review, etc).	- Assignment(s) regularly allow for revision and resubmission. - Assignment(s) provide for peer review.	- No self-check activities or opportunities for revision of submitted work.

With the support of the Provost and Deans, this rubric has been incorporated into every step of the faculty development and support model (Figure 1). There are 10 points along the online course life cycle that we would like to highlight where connections between the framework and the work of the faculty are emphasized.

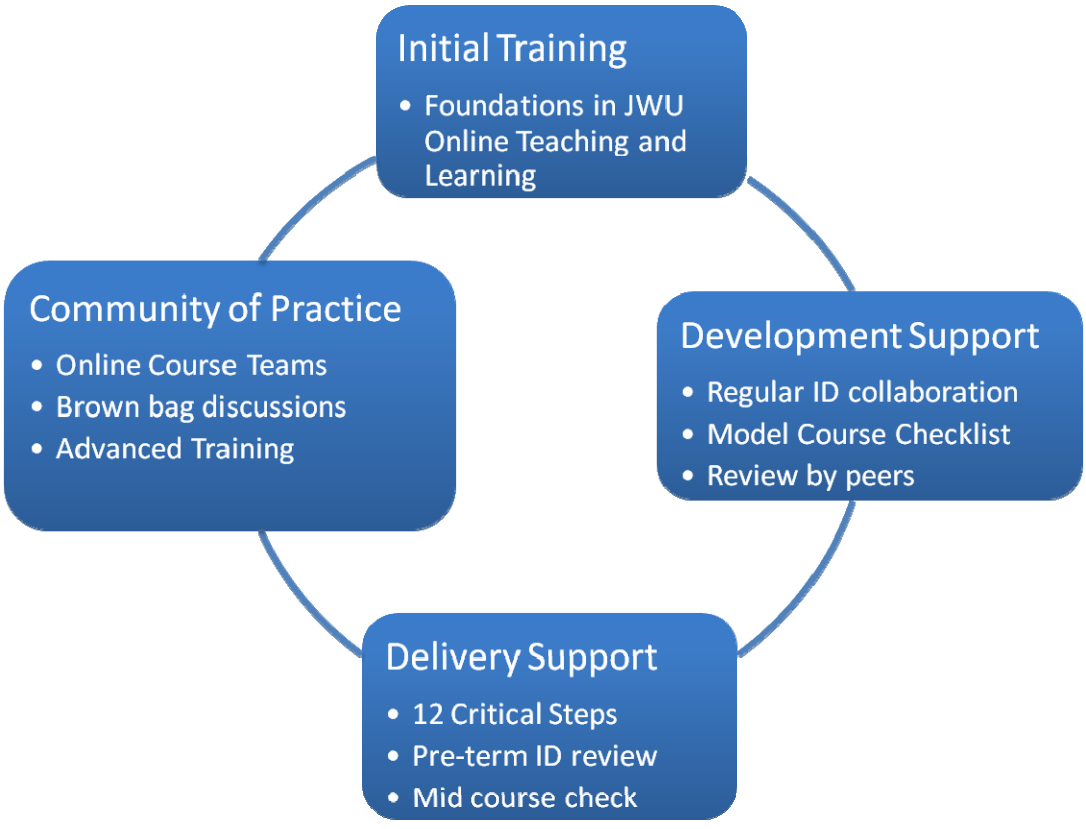


Figure 1. 10 Points of Engagement With Online Course Quality Standards.

Before teaching or developing an online course, faculty must successfully complete a 7-week online course [1] in the **foundations** of the technology and techniques of online instruction facilitated by an Instructional Designer. The principles of the rubric are presented during this course, along with theoretical underpinnings and opportunities to apply them in a design process.

Some faculty then spend 11 weeks working closely with an instructional designer to develop a model course [2]. This weekly **course development** process provides ongoing support and training in use of technology and reinforcement of the rubric's standards as the course is developed. The model course is evaluated by the instructional designer and a team of peers against a checklist based on the relevant standards [3]. The model is revised as needed based on the review.

Faculty teaching an online course are given their sections (based on the model or a previously taught section) about 5 weeks prior to term start. In addition, they are given a 12-item **course delivery** checklist to focus their efforts, an opportunity for a refresher in ulearn, and assigned an instructional designer as a contact person for the term [4]. That contact will review the course the week prior to term start and provide any feedback to ensure the success of the course [5]. This is primarily a technical check, but also includes maintaining the online course template, including elements based on the standards. The contact stays in communication with the instructor throughout the term [6]. Midway through the term, the Online Course contact reviews the course against the rubric-based course delivery checklist that focuses on a student engagement perspective and provides the faculty with positive reinforcement and guidance [7].

The developer and the peers may then also be invited to participate on the **Online Course Team** (OCT). This team consists of an administrator, 2-4 faculty familiar with the course, and an instructional designer. Each OCT is responsible for maintaining and improving a specific model course or group of related courses [8]. The team is encouraged to reach out to faculty who have taught the class online and solicit feedback and suggestions.

After completing a complete cycle of the learning—design—teaching process, faculty are provided with opportunities to expand their knowledge of ulearn as it applies to online pedagogy through professional development. The Office of Online Learning facilitates a **community of practice** through advanced topic training and 'brown bag' lunches [9]. In these advanced trainings and meetings faculty are encouraged to reflect upon their teaching experience and continually improve course design and delivery. Over the course of the past year, faculty best practices and examples have emerged during these meetings that have been shared among all online instructors [10].

Results

Course Design and Delivery

Over the past four terms (fall, winter, spring, summer), we have been using the course contact approach accompanied with the course preparation resources. Faculty have responded positively to someone "having their back," especially when they are teaching online for the first time. This has strengthened relationships between faculty and our office. Because of this relationship forged with our instructional designers, faculty are more willing to re-examine their teaching practices and accept input on course design. As a result, the courses have been more consistent, less confusing, and more effective, leading to students having a better overall online experience with less confusion.

We have seen that experienced and novice faculty alike continue to update their course design and revise learning activities to accommodate the unique circumstances of online learners and better reflect the principles of online pedagogy. As an example, there are signs of a shift from a preponderance of high stakes, multiple-choice, timed tests towards multi-segmented project-based assessments.

Next steps. As faculty are energized by courses they can have confidence in, we want to be in position to support their explorations into creative uses of the online environment. In addition, we want to highlight their successes and provide opportunities for faculty to learn from each other. The online course teams and community of practice described below provide faculty with opportunities to connect with each other, delve into advanced online topics, and move beyond one online course to a peer network of online practitioners. Additionally, the university is making the online learning platform a part of every face-to-face course in the fall of 2011. These experienced online instructors will be able to share their expertise with their peers as they start to integrate technology and distance education practices into classroom-based teaching.

Online Course Teams

This past academic year, JWU has convened seven Online Course Teams; six to review existing model courses and one to support the development of a four course concentration. The teams have engaged in the review and revision process, often meeting more frequently than originally planned and embracing challenging issues. Typical areas of focus for the OCT's have included revisiting assessment strategies, expanding the use of discussion forums, targeted use of media, and managing changes due to textbook shifts.

Next steps. These teams will continue to meet next year and we will be adding several more. We are excited to see faculty and departments demonstrate a strong interest in this process. In addition, some teams are exploring the idea of creating repositories of course ideas and suggestions in addition to the model courses, which would provide resources for both experienced and novice online faculty.

Community of Practice

As result of the process described here and a growing number of ongoing professional development opportunities provided by the Office of Online Learning, a community of online course instructors has emerged. Based upon shared experiences and resources, these faculty members represent a collegial network that spans a variety of disciplines across our four campuses.

We are developing a virtual place for this community of practice to access diverse resources (Garrison, Lave & Wegner). This space includes examples from existing JWU courses that exemplify the standards and in-depth guides that integrate the standards, plus examples, key articles, user guides, and specific strategies addressing pedagogical needs (e.g., asynchronous discussions, designing effective assessments, incorporating groups). It also serves as a library for relevant articles and a repository of training recordings and materials.

Next steps. As the use of the online platform grows for faculty teaching classroom-based courses, they will be encouraged to join and be welcomed into this community. We also envision an annual institute where faculty can present lessons learned and creative ideas as well as bringing in regional and national leaders to continue to expand the faculty awareness of the distance teaching and learning field and its strongest practices.

References

Blackboard. (2010). Blackboard exemplary course program rubric.

California State University, Chico.Rubric for online instruction, Creative Commons Attribution 3.0 United States License. Retrieved from http://www.csuchico.edu/celt/roi/

Garrison, D. R.(2008). E–Learning in the 21st century: A framework for research and practice (2nd ed.). London, UK. Routledge/Falmer.

Johnson & Wales Univeristy. (2006).Focus 2011 Retrieved from http://www.jwu.edu/focus2011/#fbid=bt0DbZ4g1P_

Lave, Jean; Wenger, Etienne (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, MA. Cambridge University Press.

Mabrito, M. (2004). Guidelines for establishing interactivity in online courses. *Innovate 1*(2). Retrieved from http://www.innovateonline.info/index.php?view=article&id=12

MarylandOnline, Inc. (2009). Quality matters rubric standards 2008-2010.

Ragan, L. (n.d.) 10 principles of effective online teaching: Best practices in distance education. *Faculty Focus.* Madison, WI. Magna Publications.

About the Presenters

Karen Bellnier is an instructional designer at Johnson & Wales University. Karen trains faculty for online course development and delivery and works closely with faculty developing online courses. She served as a reviewer for Blackboard's Exemplary Course Program in 2010 and 2011. Karen has been designing and delivery instruction for 15 years. Previously, she was a content developer for Amaze Design in Boston and the peer reviewer manager at the American Association of Museums. Karen holds a M.A. in Educational Technology Leadership from The George Washington University and a M.A. in Developmental Psychology from University of California, Santa Cruz.

Address: 8 Abbott Park Place
Providence, RI, 02903
E-mail: kbellnier@jwu.edu
URL: https://tech4academics.jwu.edu/AT/index.html
Phone: 401-598-2777
Fax: 401-598-2779

Janet Houser has 15 years of experience in academia. She has worked with faculty and student support in higher education and has designing and teaching experience in classroom-based and online courses. She is an Instructional Designer at Johnson & Wales University and has worked for Lesley University and the College of Southern Maryland. Her presentations have included "Leveraging Your LMS Investment" and "Integrating Wikis and Blogs in Academic Classrooms." Janet holds a Graduate Certificate in Instructional Technology from San Diego State University and a Certificate in Blended Course Delivery, SLOAN Consortium in addition to an M.A.in History, University of Washington.

Address: 8 Abbott Park Place
Providence, RI, 02903
E-mail: jhouser@jwu.edu
URL: https://tech4academics.jwu.edu/AT/index.html
Phone: 401/598-2367
Fax: 401/598-2779

Information Sessions

Learner Supports & Retention Track

Conducting an Online Student Support Services Inventory to Maximize Success

Johanna Dvorak
Director, Educational Support Services
University of Wisconsin-Milwaukee

Laura Pedrick
Special Assistant to the Provost
University of Wisconsin-Milwaukee

Needs Assessment

As universities expand their online offerings, it is essential that online students have access to high-quality support services. At the University of Wisconsin-Milwaukee (UWM) our goal is to achieve parity in support services for online students and on-campus students and to offer online students the support they need to be successful in their degree programs. Toward that end, in 2010 we conducted an Online Student Support Services Inventory. The Inventory helped the university benchmark how we are currently serving online students, documented best practices at other institutions, and identified gaps in services that are helping guide resource investment decisions.

UWM has increased its commitment to online education, by providing a growing array of online and blended courses and programs at the graduate and undergraduate level. We currently serve 2,000 students solely at a distance and more than 8,000 students per semester take at least one online class.

As online education has increased, the campus has made adjustments to provide our online students with student support services equivalent to those offered to students who are enrolled in on-campus courses. In order to meet this need, the authors conducted an on-campus inventory to determine the current level of service and access for online students. While UWM's online graduate programs attract students nationally and internationally, a majority of undergraduates taking online classes lives in the Milwaukee metropolitan area. For these working adult students, having evening access to on-campus services is highly desirable, and so our inventory examined whether student services units offered extended hours.

This presentation reports the results of a review of UWM's student support services to determine how we are currently serving students beyond our face-to-face (F2F) interactions to meet their needs. While we conducted this process to enhance services to online student who cannot get to campus, we also realized that by increasing access, we could benefit students taking blended and solely on-campus courses. Just as Universal Design benefits all students, online support services can do the same.

Process

The authors conducted a review of the key student support services needed by both online and on-campus students. These units cut across divisions including primarily student affairs, but also academic affairs units. They are, in alphabetical order, Academic Opportunity Center, Bookstore, Bursar, Career Development Center, Early Warning, Exam Proctoring, Financial Aid, First Year Center, Honors, ID Card, Job Placement, Learning Communities, Library, Mentoring, Multicultural Student Support, Office of Adult and Returning Students, Placement Testing, Recruitment & Outreach, Registrar, SAC, Scholarships, Supplemental Instruction, Tutoring, and Undergraduate Research.

Dvorak conducted on-campus informational interviews with directors of these units to determine the level and type of service being offered to online students. Critical areas were identified from the interviews for

further implementation of online services. A chart was developed that delineated by department web services, online synchronous communication, and the availability and times of extended evening hours.

Simultaneously, the authors researched best practices from other campuses and programs to determine what level of service our campus should attain for online students.

Interview Summary

The interviews revealed that there were varying degrees of interest, commitment, access, and services for online students. For some, the act of interviewing sparked interest in to look at services and begin to make changes in their services. Analysis of results showed that there were three categories of services: (a) Some services and programs focused primarily or solely on serving on-campus students; (b) Some had made some effort to serve online students; and (c) Some had made significant efforts to reach students at a distance.

On-Campus Focus

In the first group, directors of on-campus programs such as Honors, Academic Opportunity Center, and the Office of Undergraduate Research (OUR), and the Office for International Education saw themselves primarily as serving on-campus students. The Honors program is adding a residence hall living learning community, to bring top students together in smaller classes. Undergraduate researchers get to know a faculty member and work with him or her on research topics in their field of interest. However, some ideas began to be generated to offer online students opportunities, such as conducting research online. All offices were interested in developing new ways to reach their students online.

In keeping with our urban mission, the Academic Opportunity Center admits students who do not meet all admission criteria to the university, but who are screened and admitted for their capability for college success. Advisors saw these students to be at a disadvantage because they did not usually have computers or the preparation for online learning. Their advisors would not recommend that their students begin their college experience with an online course. They were concerned about the potential for failure of their students in online courses. Many of these students begin coursework at the developmental level in math, English composition, and college study strategies.

Some Online Focus

Others are further along the path and are looking to build on their level of support to enhance services further. The second group had developed unit Websites with information about services, online FAQ's, and they were in contact with their students via phone, email, and in some cases, Skype. These units did not have consistent evening hours when someone from their office would be available virtually for online students. However, directors in this group had begun to realize that practices were not always meeting students' needs and were focusing attention on this area.

For example, the First Year Center is now using mentors to contact incoming students via email before the school year starts. They are interested in using social media and Web conferencing as ways to reach out to incoming students, including those who will be strictly online. Having virtual clubs and including online students virtually in on-campus lectures or events could connect online student to campus.

Throughout this group of "early majority" adopters, including Financial Aid, the Student Accessibility Center, and the Bursar's Office, there was interest in using synchronous tools such as Skype and Elluminate to allow staff to communicate with students while viewing documents and expand online student access to services. Units were also developing more self-service features on their Websites, building on a successful implementation of IntelliResponse in Financial Aid.

Significant Online Focus

The third group has developed its services to meet the needs of online students as well as on-campus students. This group is represented by the Golda Meir Library, the Career Development Center, the University Bookstore, and Panther Academic Support Services and the Writing Center. These units have developed podcasts for student use, online courses for students who need support in their areas, and Web conferencing tools. The UWM Bookstore is also meeting the needs of online students.

The Golda Meir Library has many Distance Education (DE) services. DE registered students are eligible to have materials delivered to them at no charge. Faculty and academic staff may place course materials on E-Reserve, which is available 24/7 for unlimited simultaneous off-campus student users. Students may use chat, text, IM, email, and a toll-free number to contact librarians. They may also arrange for virtual research consultations.

The Career Development Center has a virtual career center Website which can easily be accessed by online students as well as on-campus students. Some of the features include: podcasts/Webcasts on career topics, online workshops, FAQs, downloadable print resources, and PantherJobs, an online job search database.

The University Bookstore puts all books for sale by course on its Website, making its service accessible 24/7. Currently, new texts, used texts, rentals, and e-texts, as well as supplementary materials are available online. Currently 1/9th of book sales occur via the Web. Of that portion, 70% is in textbook sales. The Bookstore markets to students off-campus through the Website, mail, TV commercials, Facebook, and Twitter.

Panther Academic Support Services (PASS) has conducted online review sessions for first- and second-year large lecture courses through its Tutoring and Supplemental Instruction programs. Most popular are exam reviews using Elluminate Web conferencing technology. Podcasts of key concepts are being captured from the sessions and placed in the content section of the PASS site of course information platform, D2L, for students to review.

UWM's Writing Center offers online tutoring, reviewing student papers online, and the Center has recently introduced live chat and audio options for synchronous meetings with students.

Sharing Strategies for Online Student Support

Participants were reflective about their efforts to serve online students, and were willing to develop additional strategies to serve them better. For some, this was the beginning of online student support. However, the interview experience generated interest and ideas that could be implemented this year and beyond. Others are further along the path and are willing to share their expertise with other student service departments.

So far, these areas for student support have been identified from initial interviews:

- Human resources need to be addressed: extending hours, adding staff, providing online training, etc.
- The campus Website needs to be developed to its fullest potential, including Web page accessibility, to improve information and access for online (and all) students.
- Other technologies should be utilized to reach online students synchronously and asynchronously: podcasting, Web conferencing, etc.
- Interviewing, advising or tutoring through Skype or another Web conferencing system such as Elluminate could be more widely implemented.

Beginning in 2010-2011, UWM engaged in a technology-focused strategic planning process to move UWM into the Digital Future. Working groups focused on bringing research, teaching and learning, and student services into the 24/7 digital era met throughout the year. These discussions have generated interest, new ideas, and enthusiasm for online learning. The results of the inventory of online services are informing Digital Future planning, and from this initial benchmark of online services, we are making plans to build a cohesive array of support services for online students that will also benefit our on-campus student population.

About the Presenters

Johanna Dvorak directs a comprehensive educational support program at the University of Wisconsin-Milwaukee (UWM). Panther Academic Support Services (PASS) includes peer tutoring, Supplemental Instruction, and online academic support services. She is a past president of the National College Learning Center Association (NCLCA). A qualitative researcher, her research interests include learning assistance management, tutoring programs and resources, and online support services. Johanna earned her PhD in Educational Leadership and Information Studies from UWM, her M.Ed. at University of Texas at Austin in Curriculum & Instruction and Library Science, and her B.A. in English at Drake University.

Address: jdvorak@uwm.edu

Laura Pedrick is the Special Assistant to the Provost at the University of Wisconsin- Milwaukee, where she oversees the University's online and blended programs. She serves as co-chair of the University's Online Program Council, directs the seed funding program for new online programs, and is project manager a Bill & Melinda Gates Foundation Next Generation Learning Challenge grant on the innovative U-Pace instructional model. Laura is a co-author of *Policy Practice for Social Workers: New Strategies for a New Era* and *Social Work Skills Demonstrated,* which features a textbook, workbook and interactive web-based case studies, both published by Pearson/Allyn & Bacon. Her background is in mass communication, and she holds a master's degree in journalism from the University of Minnesota.

Address: lpedrick@uwm.edu

Implementing Integrated Multicultural Instructional Design in Blended Courses

Jeanne L. Higbee, Professor
University of Minnesota, Twin Cities

Irene M. Duranczyk, Associate Professor
University of Minnesota, Twin Cities

Linda Buturian, Senior Teaching Specialist
University of Minnesota, Twin Cities

Introduction

Postsecondary students in the U.S. are increasingly diverse. National Center for Education Statistics (NCES; KewalRamani, Gilbertson, Fox, & Provasnik, 2007) data indicate that in the U.S. the proportion of postsecondary students of all races other than White, non-Hispanic, who enrolled in degree-granting institutions grew from 17% in 1976 to 32% in 2004. Postsecondary enrollment projections for 2015 suggest even greater racial and ethnic diversity (National Association of College and University Business Officers, 2005). Meanwhile, in 2003-2004, 11.3% of college students in the U.S. reported having a disability (Horn, Neville, & Griffin, 2006). The proportions of other populations (e.g., students who are English language learners, students who are low income) previously underserved by postsecondary institutions in the U.S. are also growing (KewalRamani et al., 2007). Thus, to be effective, distance education instructors must consider the varied learning and life experiences, ways of knowing, and preferred learning styles of these students when designing their courses.

In some ways distance education provides greater opportunities for promoting the achievement of students from diverse backgrounds, and many students from populations historically underrepresented in postsecondary institutions are likely to pursue distance learning because of its flexibility. Although faculty teaching online may not have visual cues to assist in determining whether students are engaged, there are other ways to ensure that all students feel included. It is critical that educators implement strategies that put the advantages of online learning to good use in reaching students who in previous eras might not have had access to higher education.

Integrated Multicultural Instructional Design

The purpose of this session is to introduce participants to integrated multicultural instructional design (IMID)—a new, holistic pedagogical model created specifically to consider students' diverse social identities (Higbee, Schultz, & Goff, 2010). IMID focuses on authentic integration of multicultural content and diverse teaching, learning support, and assessment strategies in postsecondary curricula, courses, and student development programs and services. The three-dimensional representation of IMID is in the form of a pyramid. At its foundation is a collaborative community of educators and students who demonstrate their commitment to diversity and multiculturalism by working to ensure that all students feel welcome and supported. The four sides of the IMID pyramid represent:

- How we learn / how we teach
- What we learn / what we teach
- How we access support services / how we support learning
- How we demonstrate learning / how we assess learning

At its apex the four sides of the IMID pyramid come together to achieve self-actualization for all members of the educational community. Figure 1 provides a graphic representation of the IMID pyramid.

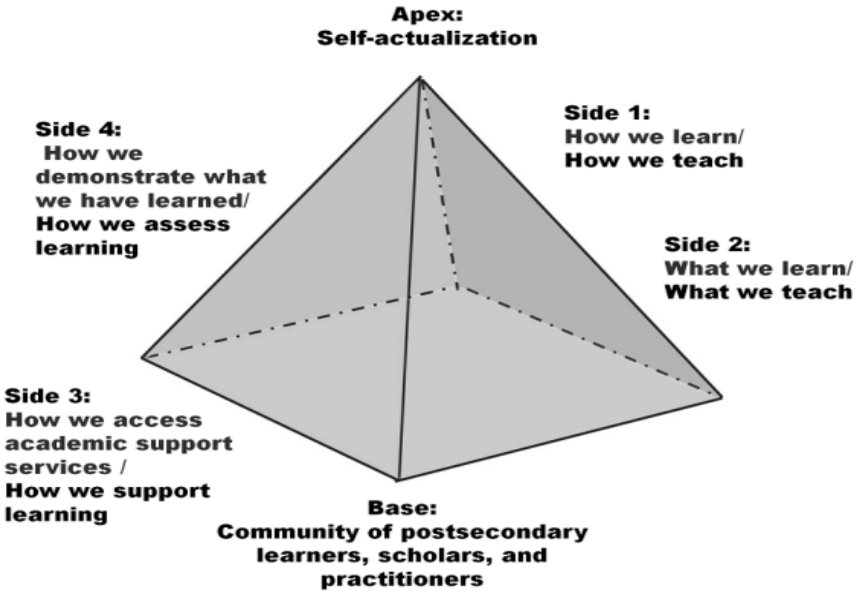


Figure 1. *The Integrated Multicultural Instructional Design (IMID) Pyramid*

The first step in implementing IMID is recognizing that we cannot predict the social identities of the students who may enroll in our courses. Thus, as we engage in curriculum and course development, we should keep in mind the vast range of possibilities. For example, considerations may include avoiding assignment due dates that conflict with religious holidays for major world religions (and not just Judeo-Christian perspectives), ensuring that students with vision impairments will be able to access all course materials, providing adequate time for students who are English language learners to respond in discussions or on exams, and evaluating all examples and applications to determine whether they will be understandable to students with varying cultural backgrounds and individual interests. The following paragraphs provide guiding principles for each aspect of the IMID model.

IMID guidelines for pedagogy—for how we teach—include the following:

1. Promote understanding of how knowledge and personal experiences are shaped by the contexts (e.g., cultural, social, political, economic, historical) in which we live and work.
2. Work collaboratively to construct knowledge.
3. Understand that learning is a complex process that involves many layers of reflection.
4. Identify what skills must be developed in order to achieve mastery without excluding students on the basis of nonessential skills.
5. Integrate skill development with the acquisition of content knowledge.
6. Establish and communicate clear expectations in terms of (a) learning objectives, (b) engagement in the teaching and learning process, and (c) evaluation measures for teaching and learning.
7. Use teaching methods that consider diverse learning styles, abilities, ways of knowing, and previous experience and background knowledge.

IMID guidelines for content—what we teach—include:

1. Determine what content mastery is essential for each course and for the program or curriculum as a whole.
2. Establish course objectives that reflect essential course components and do not exclude students on the basis of gaps in prior knowledge.
3. Meet or exceed professional standards for excellence in content mastery within an environment of inclusion.
4. Integrate multicultural perspectives within course content.
5. Relate course content to historical trends, current events, and future directions.
6. Consider global perspectives.

Guidelines for academic support include:

1. Maintain the delicate balance between challenge and support.
2. Support growth in skill development as well as content knowledge acquisition.
3. Address both cognitive and affective aspects of learning.
4. Respond to students' needs related to day-to-day living, such as housing, employment, and financial planning.

Guiding principles for assessment—the fourth side of the pyramid—include:

1. Develop multiple ways for students to demonstrate knowledge.
2. Encourage students to use creative and critical thinking and problem-solving skills in the process of demonstrating knowledge.
3. Establish a clear link between course or program objectives and the content knowledge and skill acquisition being assessed.
4. Ensure the absence of bias in the assessment of student learning.
5. Use both formative and summative assessment measures.

Examples of IMID Implementation in Blended Courses

In Duranczyk's blended introductory mathematical thinking course using statistics as the particular mathematics content, the four aspects of IMID can be infused. There are options for engagement and collaboration on campus or through cloud technology including the Moodle (Modular Object-Oriented Dynamic Learning Environment) platform for students to work independently or in small groups, synchronously or asynchronously, on topics of social and cultural relevance building on students' lived-experiences and cultural identities. Through the use of cloud technology students can create documents and survey a sample of a population of interest on a social issue of concern. Students can collaborate on tests, and create new knowledge or complete simple assignments that can be shared with their colleagues. The cloud technology enables students to work together on a project, a test, or a simple assignment even though they are not in the same space of the classroom. The blended class allows time in the class to develop trust and guidelines for communication while the off-campus activities allow students to balance the class with other aspects of their lives while making progress in their understanding of statistics in their world. The connections between statistics and the students' world are emphasized and used to develop an understanding of the basic concepts and activities of a statistical thinker. Using a scaffolding assignment process, a layered project-based assessment will enable students to demonstrate their statistical knowledge and growth in a setting and modality that capitalizes on their strengths and interests while providing continuous or targeted support and guidance throughout the semester. The following course goals are met within the IMID model:

- To recognize statistics as a fundamental liberal education skill giving attention to big ideas and general strategies for dealing with data, variation and chance, emphasizing data and concepts

- To be good "statistical citizens"—understand statistics well enough to be able to recognize, comprehend, explain, critically evaluate, and make decisions from a variety of data information sources (media, U.S. Government, private and public researcher or research groups, etc.)
- To recognize, use, and apply the principles and mathematical representations of statistics to contemporary topics and in the study of other academic disciplines
- To strengthen intuition through verification with the principles of statistics
- To connect classroom learning experiences with cultural, social, and real-world applications
- To be prepared to successfully study and work in-groups and independently
- To be able to demonstrate knowledge of statistics through the construction of meaningful applications and explorations
- To enrich ones voice in academia and society at large

For Higbee, online discussions are central to engagement in blended courses during weeks when class is not meeting face-to-face. The goal of online discussions is to involve students in the co-construction of knowledge, but instructors do not necessarily get the desired result. Pitfalls of online discussions can include entries that look more like text messages than academic discourse, messages that are misunderstood and may unintentionally alienate other students, threads that veer from the focus of the course, and the dissemination of misinformation. Considerations in creating opportunities for online discussion include synchronous or asynchronous, how and by whom threads are determined, deadlines for posts, how many students to include in each discussion group, how groups are formed, whether the membership in discussion groups remains constant over the academic term, and the extent to which the faculty member does or does not participate in the discussions. For a graduate course on multicultural pedagogy, Higbee used the Forums function in Moodle to create a separate Forum for each set of assigned readings. The week that the reading was assigned each student was required to post at least two questions or prompts by a deadline to initiate discussion. They could create new themes or build on those posted by others. The following week they were required to provide at least two more substantive responses to the previous prompts, while also posting new questions or prompts for the next Forum on the next set of readings. Each forum was surprisingly rich. After the first three weeks students evaluated the process and noted how much they appreciated the asynchronous nature of the discussion because it allowed time to reflect, go back to the reading for a deeper understanding, and develop a meaningful response. The students commented that they preferred this approach over face-to-face discussion in a traditional classroom. An international student and a student with a learning disability both observed that they often feel left out of classroom discussions that seem to "pass them by" when they take the time they need to process the question and formulate a response.

In Buturian's freshman seminar digital story assignments provide a rich example that relates to both how we teach and how we assess learning. These assignments can foster a deep integration of ideas and action related to diversity and social justice issues, when carefully designed. An understanding of multicultural theory and practice can impact thoughtful use of technology, scaffolding of smaller assignments, and development of learning objectives and assessment rubrics. Digital storytelling curricula adapted for online, hybrid, and in-class courses can yield rich academic discourse around diversity matters. Viewing excerpts from digital stories students created for an integrated seminar on water, and also digital projects students produced with iPads for an undergraduate literature course, helps us picture just uses of technology in the classroom. The iPad2 will create unparalleled access to storytelling tools, and well-developed curricular design could empower students to use technology in ways that transform their understanding of social justice issues and diverse cultures. To view students'

digital stories and read more about Buturian's course design, visit the water seminar website at http://www.cehd.umn.edu/PSTL/Water/.

References

Higbee, J. L., Schultz, J. L., & Goff, E. (2010). The pedagogy of inclusion: Integrated multicultural instructional design. *Journal of College Reading and Learning, 41*(1), 49-66.

Horn, L., Neville, S., & Griffin, J. (2006). *Profile of undergraduates in U.S. postsecondary education institutions: 2003-04 with a special analysis of community college students.* Washington, DC: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences.

KewalRamani, A., Gilbertson, L., Fox, M. A., & Provasnik, S. (2007). *Status and trends in the education of racial and ethnic minorities.* Washington, DC: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences.

National Association of College and University Business Officers. (2005). *Minority postsecondary enrollment increases significantly in 25 years.* Washington, DC: Author.

About the Presenters

Jeanne L. Higbee is a Professor and Director of Graduate Studies in the Department of Postsecondary Teaching and Learning (PsTL) at the University of Minnesota, Twin Cities. She is a 2007 American College Personnel Association (ACPA) Diamond Honoree and recipient of the ACPA Voice of Inclusion Medallion in 2005 and Disability Ally Award in 2008. In spring 2011 Jeanne was honored with the Horace T. Morse-University of Minnesota Alumni Association Award for Outstanding Contributions to Undergraduate Education. Her publications include 4 books, 16 monographs, and more than 100 articles.

Address: 254 Burton Hall
178 Pillsbury Drive SE
Minneapolis, MN 55455
E-mail: higbe002@umn.edu
URL: http://www.cehd.umn.edu/PSTL/directory/higbee.asp
Phone: 612 625-8015
Fax: 612 625-0709

Irene M. Duranczyk is an Associate Professor in PsTL in the College of Education and Human Development at the University of Minnesota. She has been active in pre-college and postsecondary programs preparing nontraditional students for college-level mathematics since 1985. Irene is the recipient of the 2007 National Association for Developmental Education's (NADE) Outstanding Research Conducted by a Developmental Education Practitioner Award. Irene is a Transform Trekker, transforming existing classes into hybrid classes, at the University of Minnesota.

Address: 233 Burton Hall
178 Pillsbury Drive SE
Minneapolis, MN 55455
Email: Duran026@umn.edu
URL: http://www.cehd.umn.edu/pstl/directory/duranczyk.asp

Phone: 612-626-4421
Fax: 612-625-0709

Linda Buturian is about to begin her tenth year of teaching humanities at the University of Minnesota. Her research areas include integrated approaches to teaching about sustainability issues, and the use of images and digital media to foster access and multicultural awareness. She was recently awarded funding to travel to Thailand with a colleague to created digital stories about the impact of conflicting uses of the Mekong River on the culture and daily lives of the villagers. Buturian has numerous publications including her essay collection, *World Gone Beautiful: Life Along the Rum River* (Cathedral Hill Press, 2008).

Address: 250D Burton Hall
178 Pillsbury Drive SE
Minneapolis, MN 55455
E-mail: butur001@umn.edu
URL: http://www.cehd.umn.edu/PSTL/directory/buturian.asp
http://www.cehd.umn.edu/PSTL/Water/
Phone: 612-626-7130
Fax: 612-625-0709

Comprehensive Assessment of Student Retention in Online Programs

Wallace Boston, Ed.D.
President & CEO
American Public University System

Phil Ice, Ed.D.
VP, Research & Development
American Public University System

Introduction

Student persistence or retention has been a documented issue in higher education in the United States since the late 1800's (Thelin, 2004). Formal research studies on the topic of retention began as early as 1926 (Braxton, 2000) with publications of research on retention escalating in the 1970's with academics such as Astin (1993), Tinto (1993), and Braxton, Hirschy, & McClendon (2004) publishing influential research on the topic of student retention.

A number of researchers have identified that the higher the high school grade point average (GPA) and the higher the Scholastic Aptitude Test (SAT) or American College Testing (ACT) exam scores of a college student, the stronger the chance that the student will persist in college and graduate (Astin, 1993). In fact, institutions with the most rigorous admissions selectivity have exhibited the highest persistence or retention rates (Tinto, 1993). Conversely, institutions with the lowest selectivity criteria (open enrollment) generally have the lowest retention rates.

Researchers have also identified the importance of social integration in the student retention rates of colleges (Astin, 1993; Spady, 1970; Tinto, 1993). Tinto's model of student persistence theorized that the greater the level of academic and social integration, the greater the student's chances of persisting until graduation (Tinto, 1993). However, relatively little has been written about retention at the online institutions. For purposes of this study, the term "online" refers to accredited institutions of higher learning that utilize the Internet as the sole medium of instructional communication between professor and student with no presence of professor or student in a physical classroom at the same time. Online institutions offer access to academic programs to any student who has access to the Internet and a computer. Online institutions are also convenient in that (a) a student is not required to attend a class held at a physical location that may or may not be close by to his place of work or his home, and (b) student participation is not restricted or confined by traditional class times and days. In most cases, online institutions offer their classes asynchronously which means that the student and the instructor are not required to be present in the classroom at the same time (Sloan Consortium, 2009). This study examined variables related to retention of students in a fully online undergraduate program, at American Public University System. The purpose was to determine which factors were most relevant in determining retention, with the intent of creating actionable policy measures

Methods

This study used descriptive statistics and multiple regressions to analyze the relationship between demographic and academic performance data and student retention at APUS, to answer the following research questions:

RQ1: What type of student enrolls at an online institution?
RQ2: What factors influence online student retention?

The data for the study consisted of all students' demographic data collected through the students' applications, enrollment data (courses, degree programs), and academic achievement data (grades). The data were extracted from the institution's data warehouse and aggregated in an Excel spreadsheet where the data in individual fields such as age, military rank, military branch of service, academic credits transferred, GPA, degree program, etc., were evaluated as predictor variables in a regression analysis. Given the large number of degree programs offered at APUS (76) and the number of students enrolled as of December 31, 2009 (63,800), the retention of undergraduate students was analyzed in order to minimize the differences in background characteristics between undergraduate and graduate students. Given that the progression toward graduation takes years and not months, data was extracted for all degree-seeking (control variable) undergraduate students who completed at least one course (control variable) at the American Public University System in 2007. Data included enrollment and academic achievement data through December 31, 2009.

The predictor variables were all of the various student background data downloaded from the APUS data warehouse. Specifically, the data were evaluated to determine if variables would be entered into the regression equation as either interval data or dummy categorical variables. The predictor variables included: Degree Program, Program Level (Associates' or Bachelor's degree), Cumulative GPA, Number of Registrations Taken in 2007, Gender, Race/Ethnicity, Cohort Age (age upon program entry), Military / Civilian Classification, Grade Received in Last Course, New Student/ Returning Student Status, and Number of Transfer Credits Received.

The total number of predictor variables, including continuous variables and dummy variable categories was 116. The n for the study was 20,569. These data sets were regressed on the criterion variable, using suggestions from Cohen, Cohen, West and Aiken (2002).

The criterion variable was Enrollment Status, which was treated as a dichotomous variable. If a student was enrolled or had graduated at the end of 2009, a 0 was entered for Enrollment Status and a 1 was entered if the student was disenrolled.

The Forward Entry method was used to provide a more accurate picture of the overall variance accounted for by significant predictor variables through breaking out cumulative variance as each is added in terms of importance.

Defining student retention in online programs is a complicated and difficult task. The U.S. Department of Education (DOE) defines student success as the students who graduate from a four-year program in six years (CSCSR, 2009). The assumption for that definition is based upon fulltime student enrollment at primarily residential colleges. However, this definition fails to capture the complexities and needs of adult learners who have non-conventional course taking patterns. The following definition of student retention as proposed by Pascarella and Terenzini (2005, p. 374) was used for this study: Retention is "the progressive reenrollment in college, whether continuous from one term to the next or temporarily interrupted and then resumed."

Results and Discussion

Forward method linear regression resulted in 45 of the predictor variables being significant and accounting for a combined 32.8% of variance. However, five of predictors accounted for a combined 28.2% of variance, with none of the remaining predictors accounting for more than .06% of variance. The following table illustrates the contribution of the first five predictors.

Table 1. Forward Regression Model for 2007 Data Set

2007 Model Summary[at]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.398[a]	0.158	0.158	0.433	0.158	3867.774	1	20567	0
2	.451[b]	0.203	0.203	0.421	0.045	1155.298	1	20566	0
3	.491[c]	0.241	0.241	0.411	0.038	1019.476	1	20565	0
4	.518[d]	0.268	0.268	0.403	0.027	769.582	1	20564	0
5	.531[e]	0.282	0.282	0.399	0.014	406.948	1	20563	0

a. Predictors: (Constant), No Transfer Credits
b. Predictors: (Constant), No Transfer Credits, YearProgramRegs
c. Predictors: (Constant), No Transfer Credits, YearProgramRegs, F
d. Predictors: (Constant), No Transfer Credits, YearProgramRegs, F, W
e. Predictors: (Constant), No Transfer Credits, YearProgramRegs, F, W, 4

No Transfer Credit received by the student was the predictor variable with the most predictive significance. The adjusted r-square value for this variable was .158 meaning that this variable accounts for 15.8% of the variance that a student will disenroll. On a standalone basis, this variable accounts for 48% of the aggregate variance explanation of all 45 predictor variables and for 56% of the aggregate variance explanation of the five most significant variables.

Historically, 87% of APUS undergraduates applied to transfer credit from either another college or university, American Council on Education (ACE) evaluated workforce training classes, or some other form of prior learning. More than 82% of the 2007 undergraduate student body received transferred academic credit hours. Of the 3,555 students from the data set who received 0 transfer credit hours, 35 (1%) graduated, 876 (25%) remain active, and 2,644 (74%) were disenrolled.

Another explanation for the significance of the no transfer credits leading to student disenrollment is the part-time status of the majority of APUS students. With students averaging 3.58 courses per year in 2007, a bachelor's degree-seeking student taking the average number of courses would not complete a degree within the 10 year period allowed.

Total Number of Registrations/courses taken in 2007 ranked second in terms of its significance in explaining the variance of disenrollment with an adjusted r-square value of .045. The standardized coefficient beta was -.179. The negative coefficient means that the more courses taken in 2007, the less likely the student would be to disenroll. In reviewing the Total Number of Registrations taken in 2007 data, it can be noted that total courses taken was significantly different for the disenrolled students than for the rest of the population.

The predictor variable with the third largest adjusted r-square value represented students whose last grade received was an F. The adjusted r-square value was .038. The standardized coefficient beta was .239. Of the 3,400 undergraduate students with a last grade of F (as of December 31, 2009), approximately 63% were disenrolled and the remainder were active. While APUS has an academic policy allowing students to retake any course in which an F is earned, the military's tuition assistance plan requires the student to reimburse the military for the course in which the F is earned.

Given the smaller number of courses taken in 2007 and the limited number of lifetime courses taken by the disenrolled group of students, it is clear that many of these students did not enroll for another course after receiving a grade of F. Last Grade of F is the largest count of a single grade for Disenrolled Students with 31.4% of the subset receiving that grade versus 12.3% of the active students who have received an F as their last.

Last Grade Received of W is the fourth predictor variable in terms of the adjusted r-square ranking with a value of .027. The standardized coefficient beta is .167. A grade of W is similar to an F in terms of a student's GPA as no academic credit is awarded for a W. Similar to a grade of F, the military tuition assistance plan will not reimburse a student for additional classes taken until the W grade is resolved. A W grade does not carry a grade point value and thus does not affect a student's overall GPA.

A grade of W has a different financial impact on the student, regardless of the student's tuition payment source. Generally, regulators and accrediting bodies require that colleges and universities publish a refund schedule for students who withdraw from class(es). At APUS, the first week of every semester is a "free" drop/add week, similar to many other universities. After that first week has been completed, students who choose to withdraw from a class are charged a prorated portion of tuition up until the mid point of the semester after which no tuition refund is provided.

More than half (56.6%) of the W's awarded to the 2007 student data set were awarded to students whose current academic status is disenrolled. Last grade of W represents 14.7% of the disenrolled population. As previously noted with the Last Grade of F, the disenrolled civilian student population has a higher percentage of W's (20.8%) versus the military student population (13.8%). When combined with Last Grade of F, the two grades account for 46.1% of all disenrolled students and 57.3% of civilian disenrolled students versus 44.4% of military disenrolled students.

The fifth predictor variable in terms of ranking is GPA 4.0. The adjusted r- square value is .014. The standardized coefficient beta is .121. The mean GPA for all 2007 students was 3.00 with a median GPA of 3.34. The mean GPA for active students was 3.17 and for graduates, the mean was 3.54. For disenrolled students, the mean GPA was 2.47, with a median GPA of 2.85. In this instance, 13.2% of disenrolled students had a GPA of 0.00 and 9.8% of disenrolled students had a GPA of 4.00.

A review of exit interview summaries of students who disenrolled from 2007 provides a reason why GPA of 4.0 would provide a positive correlation coefficient and an adjusted r-square value of .014. The top two explanations given by students who disenrolled were that they did not have the time to complete the program and/or that the program was too difficult. Another of the top five explanations that disenrolling students expressed for leaving was that they perceived the curriculum to be too easy. Another explanation could be that the high achieving students decided to transfer to a more recognized or traditional college program after earning good grades at APUS.

Conclusion

Analysis of data from APUS demonstrates two trends in retention in online programs that merit further research. First, the high amount of variance accounted for by the presence of transfer credit and the tendency of a significant number of students to disenroll after two courses, indicates that initial attempts at college enrollment may be more exploratory than in the traditional university. Given the anytime, anywhere nature of online learning this finding is not surprising, however, it should give pause to administrators and national bodies such as IPEDS. Specifically, it is illustrative of a casual, on-demand approach to learning in which individuals may tentatively explore their options and, if they believe they have the means to complete a degree, move between a number of institutions before completing a degree.

Second, as evidenced by the variance accounted for by annual enrollments, activity should be considered a primary catalyst for degree completion. Considerable research is needed in this area to determine what actions catalyze activity. While it is likely that some pro-active engagement measures by institutions may be responsible, it is also likely that there is a social aspect to learning that should be considered as well. Specifically, the impact of the establishment and perpetuation of social presence needs to be given considerable weight in future studies. This includes inquiry into formal models such as the Community of Inquiry Framework and analysis of relational data that can be extrapolated from student involvement in institution-centric social networking media.

References

Allen, E. I., & Seaman, J. (2009). Learning on demand: Online education in the United States, 2009. Retrieved from http://www.sloanconsortium.org/publications/survey/pdf/learningondemand.pdf

Astin, A. (1993). What matters in College: Four critical years revisited. San Francisco, CA: Jossey-Bass.

Braxton, J. M. (Ed.). (2000). Reworking the student departure puzzle. Nashville, TN: Vanderbilt University Press.

Braxton, J. M., Hirschy, A. S., & McClendon, S. A., (2004). Understanding and reducing college student departure. ASHE-ERIC Higher Education Report, (30, 3). San Francisco,CA: Jossey-Bass.

Pascarella, E., & Terenzini, P. (2005). How college affects students: Vol. 2: A third decade of research. San Francisco, CA: John Wiley & Sons.

Sloan Consortium (2009). Retrieved on from http://www.aln.org

Thelin, J. R. (2004). A history of American higher education. Baltimore, MD: The Johns Hopkins University Press.

Tinto, V. (1993). Leaving college: Rethinking the causes and cures of student attrition (2nd ed.). Chicago, IL: The University of Chicago Press.

U.S. Department of Education (2010). National Center for Education Statistics. Integrated postsecondary education system. Retrieved from http://nces.ed.gov/ipeds/resource/

About the Presenters

Wallace Boston, Ed.D., is President and CEO of American Public University System.

Address: 111 West Congress Street
Charles Town, WV, 25414
Email: wboston@apus.edu

Phil Ice, Ed.D., is VP of Research & Development of American Public University System.

Address: 111 West Congress Street
Charles Town, WV, 25414
Email: pice@apus.edu

Improvement of Student Success Through the Establishment of a Student Resource and Assistance Center (SRAC)

María del Pilar Toral
Title V Project Director
University of Puerto Rico at Carolina

Rubén García García
Title V Project Director
University of Puerto Rico, Medical Sciences Campus

Introduction

The University of Puerto Rico (UPR) System is the public, state-supported university system in the Commonwealth of Puerto Rico, comprising 11 campuses around the island. The University of Puerto Rico at Carolina (UPRC) offers transfer programs, as well as associate and baccalaureate degrees, while most of the offerings of the UPR Medical Sciences Campus (UPR-MSC) are graduate and professional (health). The majority of the student population of both institutions is Hispanic, low income, parents never attended college, studied at a public school, receive federal or state financial aid, and have student loans.

The Student Resource and Assistance Center (SRAC) center was established at UPRC in year two (2006) of a five year Title V Cooperative Grant (2005-2010) from the U.S. Department of Education to provide additional student support services to disadvantaged students. Since many of the factors that contribute to low student performance and retention can be attributed to deficient student support services, the SRAC undertakes a proactive stance to assist its predominantly low-income and at risk students to make a successful adjustment to college life and attain their educational goals. Its goal is to increase student academic achievement; increase courses' passing rates; increase the freshmen to sophomore persistence rates in UPRC's Natural Sciences Department; and decrease repeating rates of gateway/bottleneck courses.

Implementation Strategy

Research shows that the success of entering freshmen often depends on their first year experience. Lack of adequate and timely counseling, being academically under prepared, improper time management skills, and lack of adequate study skills are a few of the reasons reported as probable causes of failure at the freshmen level (Hudson, Henderson & Henderson, 2002). Research also indicates that the success of entering freshmen often depends on their first year's experience. Strategies that include directing the student to proper resources and providing valuable tools for personal growth can help to increase student academic achievement and retention (Hudson et al., 2002).

The SRAC was established to offer much needed student support services. This center, located in the Library's first floor, is equipped with whiteboards and six computers for individual/group tutoring and mentoring services or individual study. Services include career counseling, peer mentoring (online and on-campus), in-site tutoring, online course tutorials, and other pedagogic tools targeting the use of technology and specific gatekeeper/bottleneck courses in math, science (chemistry and physics), and business administration (accounting). It also offers workshops and online tutorials in a variety of subjects (i.e. Time Management; College Surviving Skills; Study Strategies; Strengthening Personal Motivation), as well as use of technology and information literacy to help students develop learning and study strategies for an adequate adjustment to university life and for personal growth. The partner institution, UPR-MSC provides graduate students as mentors and tutors to UPRC's students.

The SRAC Coordinator is a professional counselor. She coordinates the SRAC's services for UPRC students with critical academic, professional, and personal needs. These services include online and in-site tutoring in Math, Accounting, Chemistry, and Physics. These courses were chosen because UPRC's course statistics from 2000-2001 to 2004-2005 revealed that 40% or more of the students enrolled in these courses obtained F, D, or withdrew.

Byra (2006) defined peer tutoring is defined as the system of instruction in which students support each other's learning. Research shows that peer tutoring is effective for improving academic achievement (Sutherland & Snyder 2007; Taylor & Alber 2003; Yurick, Robinson, Cartledge, Lo, & Evans, 2006) and to have positive effects on motivation, reflection, self-esteem, and commitment (Anderson et al., 2000).

UPRC students in need of peer tutoring can be self-referred or referred by faculty, guidance counselors, or mentors to the SRAC. Peer tutors are selected from the top UPRC 10% junior and senior students as well as from graduate UPR-MSC students. They participate in special workshops to ensure an understanding of pedagogy and to develop their tutoring skills. At the beginning of each quarter term, the SRAC Coordinator coordinates with faculty and tutors the pedagogic materials to facilitate the tutors' performance. Meetings are held during the quarter term to facilitate feedback and supervise the tutor's work. Each tutor offers tutoring 10 hours/week for 10 weeks in each of the three quarters of the academic year.

The SRAC also provides a Mentoring Program for freshmen science students to help them in their adaptation to the rigorousness and discipline of the Natural Sciences, the health professions, and general performance in the university setting. A faculty member from UPR-MSC is the Mentoring Program Coordinator. She works in collaboration with the SRAC Coordinator in organizing, managing, and selecting the UPR-MSC mentors and pairing them with their mentees.

The starting point for our mentoring component was two very successful experiences that UPR-MSC had with previous federal funded projects: a mentoring component in a previous Title V Individual Project (2001-2006) and a mentoring model from the Master of Clinical Research (funded by NIH). Mentors are usually individuals with advanced experience, knowledge, and skills who provide support through an interactive relationship (Baugh & Fagenson-Eland, 2005; Bozeman & Feeney, 2007). Research shows that mentoring enhances student development, academic achievement, and increases retention (Rodger & Tremblay, 2003; Smith, 2002; Wells & Grabert, 2004). Mentors and mentored students have reported positive and enlightening experiences, especially when the mentoring relationships are between graduate and undergraduate students (Bettencourt, Bol, & Fraser, 1994; Wells & Grabert, 2004).

Our mentors are graduate students from the UPR-MSC who know "the ropes" of the university, have demonstrated academic excellence, and have the willingness to share their time with their fellow students. They provide support, encouragement, and guidance, and act as role models for the undergraduate students to emulate, demonstrating behaviors that lead to self-responsibility and self-directedness. The Mentoring Program works with UPRC students enrolled in UPRC's articulated transfer programs to the UPR-MSC. Mentors can refer students for counseling, tutoring, or other needed services. Mentors also participate in special workshops to ensure an understanding of their roles. There is one mentor for every three science students. Meetings and online communication are conducted during the quarter term to facilitate feedback and supervise the mentor's work.

Heisserer and Parette (2002) have emphasized the need for Web support for at-risk students with services that can include a range of online information, counseling and guidance services, and interactive elements (e.g., discussion groups, chat rooms, e-mail) that can be useful to students. Universities should provide a

blend of instructional materials to accommodate various learning styles, as well as self-paced materials such as Web-based tutorials, which support learning by reading (Overholtzer, 2001).

Following this concept, UPR-MSC and UPRC moved to close the gaps in their student services by exploring ways of using online programs and resources to support and enable students to access academic tutorials and valuable information that could help them increase their academic achievement and in creating their own career goals and educational plans. Online tutorials (course-specific, use of technology, information literacy, and personal development) were developed by faculty form both campuses. These faculty members attended workshops and worked with an instructional designer and a graphic artist to develop their tutorials. In addition, an online technology help-desk service was available for faculty and students. These online services provided the quickest, easiest, and most convenient method for students to access pertinent services and the information required for successful adaptation and persistence in the university setting, as well as helping them becoming life-long learners.

Results

Results with SRAC's services were outstanding. During the four years, from four to nine tutors were available each year, for a total of 27 tutors trained and 530 students tutored. A satisfaction survey showed an average of 86% satisfaction with the tutoring services that scaled from 78% in the first year to 91% in the final year (Goal: 70%). These students had an average course completion rate of 81% that increased from 58% in the base year (Goal: 68%). In addition, their GPAs were .08 points higher than students who did not receive the services and their academic achievement increased 43%, from 49% in the base year to 92% in the fourth year (Goal: 82%).

Regarding the mentoring services, 13 to 19 mentors were trained each year and 455 first year natural sciences students were mentored during the four years (Goal: 350). The freshmen to sophomore persistence rate in Natural Sciences increased 67% (from 30% in the base year to 97% in the final year (Goal: 50%) and a satisfaction survey with these services showed an average of 88% satisfaction.

A total of 39 online tutorials were developed by faculty: Physics, Chemistry, Math, and Accounting (7); Use of Technology (12); Information Literacy (9); and Personal Development (i.e. study habits, test-taking, time management) (11).

Since October 1, 2010, the SRAC was institutionalized, and UPRC students continue to receive these services.

Conclusion

Through this initiative, UPR-MSC and UPRC developed strategies to create an optimal academic environment that provides students the skills and competences necessary for success, not only during their college years, but also during their professional careers. Since the UPR-MSC is mostly a graduate, health-professions campus in which students need a strong background in math and sciences, this cooperative agreement provided a unique opportunity for UPRC's science students to be mentored and/or tutored by outstanding students and recognized health professionals from the UPR-MSC.

The joining of resources, strengths, and experiences has produced excellent results. By working together in this cooperative project, partner institutions have learned from each other; developed and fostered their capabilities; and established a collaborative model that addresses the needs student academic support services at the undergraduate level.

The university must play a key role in educating its students for lifelong learning, collaborating with society in the pursuit of an educated citizen that can sustain and renew a multicultural and technologically oriented society in which Hispanics play vital major roles. That was the ultimate goal of this project.

References

Anderson, A., Cheyne, W., Foot, H., Howe, C., Low, J., & Tolmie, A. (2000). Computer support for peer-based methodology tutorials. *Journal of Computer Assisted Learning*, *16*, 41–53.

Baugh, S. G., & Fagenson-Eland, E. A. (2005). Boundaryless mentoring: An exploratory study of the functions provided by internal versus external organizational mentors. *Journal of Applied Social Psychology, 35*(5), 939–955.

Bettencourt, B. A., Bol, L., & Fraser, S. C. (1994). Psychology graduate students as research mentors of undergraduates: A national survey. *Psychological Reports, 75,* 693-970.

Bozeman, B., & Feeney, M. K. (2007). Toward a useful theory of mentoring: A conceptual analysis and critique. *Administration & Society, 39*(6), 719–739.

Byra, M. (2006). Teaching styles and inclusive pedagogies. In D. Kirk, D. Macdonald, & M. O'Sullivan (Eds.), *The Handbook of Physical Education* (pp. 449–466). London: Sage Publications Ltd.

Heisserer, D., & Parette, P. (2002). Advising at-risk students in college and university settings. *College Student Journal, 36*(1), 69-83.

Hudson, W.E., Henderson, D., & Henderson, J. (2002). The retention of entering and returning freshmen enrolled at Florida A & M University's School of General Studies during the fall semester 1997-2001. *Education, 123*(1), 210-12.

Overholtzer, J. (2001). A support crisis of our own making? Training versus equipping. *Educause Quarterly*, 4.

Rodger, S. & Tremblay, P. (2003). The effects of a peer mentoring program on academic success among first year university students. *The Canadian Journal of Higher Education, 33*(3), 1-18.

Smith, K. (2002). Should faculty or peers mentor new students? Study finds successful middle ground. *Recruitment and Retention in Higher Education, 16*(8), 5.

Sutherland, K. S., & Snyder, A. (2007). Effects of reciprocal peer tutoring and self-graphing on reading f uency and classroom behavior of middle school students with emotional or behavioral disorders. *Journal of Emotional and Behavioral Disorders, 17*, 105–118.

Taylor, L. K., & Alber, S. (2003). The effects of classwide peer tutoring on the spelling achievement of f rst graders with learning disabilities. *The Behavior Analyst Today, 4,* 183–201.

Wells, C.V. & Grabert, C. (2004). Service-learning and mentoring: Effective pedagogical strategies. *College Student Journal, 38*(4), 573-78.

Yurick, A. L., Robinson, P. D., Cartledge, G., Lo, Y., & Evans, T. L. (2006). Using peer-mediated repeated readings as a f uency-building activity for urban learners. *Education and Treatment of Children, 29,* 469–506.

Acknowledgements

This project was funded by Title V Cooperative Grant P031S050055 from the United States Department of Education.

About the Presenters

Dr. Toral has a Ph.D. in Computing Technology in Education and is currently Project Director of two Title V grants. She is knowledgeable in distance education, technology, instructional design, and Hispanic student learning styles. As a consultant, she developed the Distance Education Guides and Document Requirements for the Puerto Rico Council of Higher Education

and has served in several Evaluation Committees for the establishment of online degree programs. Dr. Toral writes grants, which include technology integration in the teaching/learning process and campus-wide online services, trains faculty in distance learning and technology, and presents at conferences in Puerto Rico and abroad.

Address: University of Puerto Rico at Carolina
PO Box 4800
Carolina, P.R. 00984
Email: maria.toral@upr.edu
Phone: 787-257-0000, ext. 3104; 4015

Dr. García has a Ph.D. in Physiology and is a professor at the School of Health Professions, University of Puerto Rico, Medical Sciences Campus. He is currently Project Director/Co-Director of two Title V grants and an active leader in administration, technology, and curriculum development. He has held several managerial positions, including Assistant Dean, Office for Integration of Technology and Information Access in Academia; and Director, Center for Technologic Support to Learning. He is also active in presenting at conferences, grant writing and evaluation.

Address: University of Puerto Rico, Medical Sciences Campus
PO Box 365067
San Juan, P.R. 00936
Email: ruben.garcia3@upr.edu
Phone: 787-758-2525, ext. 4616

Information Sessions

PK-12 Virtual Schooling Track

Is Online and Blended Learning Cost-Effective?

Fiona Hollands
Research Associate
Center for Cost-Benefit Studies of Education

While online learning has existed at some level in both K-12 and higher education for over two decades, the last five years have witnessed an explosion of virtual and blended models of education (Watson, Murin, Vashaw, Gemin, & Rapp, 2010). The models vary in size and structure, ranging from state-run virtual schools such as the Florida Virtual School with 150,000 statewide annual enrollments to stand-alone schools experimenting with programs that fall somewhere between home schooling and traditional classroom education. Cavanaugh (2010) attributed the variations in models to "different policy and budget ecosystems" (p.22). In the current environment of fiscal tightening, many states, districts and individual institutions of education perceive online learning as a means to reduce overall costs, while simultaneously increasing learner access to educational opportunities (Foundation for Excellence in Education, 2010). However, few such interventions have been examined thoroughly under operational conditions to establish the all-in financial costs of online learning and weigh these against the benefits or effectiveness in terms of educational outcomes (Bates, 2005).

Cost-effectiveness (CE) analysis aims to facilitate efficient use of educational resources (Levin & McEwan, 2001). Given a target objective, for example, decreasing the high school drop-out rate in a district by 10%, CE analysis can identify the lowest cost alternative to achieving this objective. The process involves assessing the costs of various interventions that aim to reduce the drop-out rate and reviewing the evidence that the 10% reduction objective can be met. Alternatively, given a fixed budget, a CE analysis can identify the costs of each intervention and indicate which one is expected to decrease the drop-out rate the most.

With respect to online learning, there are two parts to the cost-effectiveness question. The first is whether online learning costs more, the same or less than traditional face to face classroom teaching. The second is whether online learning is more, less or equally effective in promoting positive educational outcomes for students. Administrators and policymakers are currently overly focused on the cost element and often carelessly substitute the word "cost-effective" for "cheaper" in references to the benefits of online education. Effectiveness is either ignored or assumed. Teachers and parents, on the other hand, are concerned about effectiveness. This paper will provide a brief overview of the existing research addressing each part of the question and subsequently focus on a particular blended learning intervention to illustrate in detail both a cost analysis and effectiveness studies.

To address the issue of costs of online education, the Center for American Progress surveyed 20 directors of virtual schools in 14 different states. The resulting report by Cavanaugh (2009) indicated an average annual cost of $4,310 per full-time online student in 2008. Compared with the NCES reported average per pupil expenditure in public schools for 2007-2008 of $10,297, the face value savings are staggering. However, while this comparison may seem attractive for states facing slashed education budgets, the services offered by traditional schools far exceed what is provided by such online schools. As Cavanaugh notes, traditional schools provide not just academic courses but also transportation and nutrition services, school counselors and nurses, college guidance, libraries, media specialists and resources, clubs, activities and professional development services. Decisions to replace traditional schools with virtual ones must factor in the costs of losing these services or providing alternate ways to access them.

In another study, Anderson, Augenblick, DeCesare and Conrad (2006) convened panels of online program providers to estimate the operating costs of virtual schools. The authors concluded that these costs, while varying from $3650 to $8300 per full-time equivalent student, are, on average about the same

as those of regular brick-and-mortar schools when similar services are being provided, excluding transportation and capital costs. The authors acknowledged that these estimates need to be refined to be relevant to specific conditions in a particular state or district. In both this study and the Cavanaugh study above, cost estimates are based on self-reported information from online education administrators. Neither estimate represents the costs of a specific, identifiable intervention nor is there any attempt to balance costs against benefits or actual student outcomes.

Effectiveness of online learning can be measured in different ways. For some decision makers, higher test scores are the only meaningful measure of effectiveness of an educational intervention. For others, the aim is to allow students to learn more content and skills within a fixed amount of time. Another goal is to promote faster learning of a fixed amount of material to allow for speedier student graduation or promotion. At the high school level, the focus may be to increase the completion rate of a course or the school graduation rate. The latter is the aim of online credit recovery programs.

To date, very little rigorous research has been conducted with respect to effectiveness of online or blended education, especially at the K-12 level. The most significant recent study was a meta-analysis by Means, Toyama, Murphy, Bakia, and Jones (2009, Revised 2010) sponsored by the U.S. Department of Education. The meta-analysis included 99 studies comparing the learning outcomes in online and blended learning situations with traditional face-to-face learning. The study concluded that blended instruction is more effective than conventional face-to-face classes for older learners (undergraduates and adults). Pure online learning was found to offer a small advantage, again for older learners, although treatment conditions for both online and blended learning situations often included additional learning time, materials, and opportunities for collaboration. Positive effects were not found at the K-12 level, but this conclusion was based on only five studies that qualified for inclusion in the analysis.

To conduct a rigorous cost analysis of any educational intervention, Levin and McEwan (2001) proposed the ingredients method or resource cost method for identifying costs. By reviewing program documents, interviewing personnel involved in the development and delivery of the intervention, and observing the intervention in a typical field situation, the various components of a program are identified. These will fall into categories such as personnel, which often account for about 75% of the costs of any educational intervention; facilities; equipment and materials; other inputs such as insurance and electricity; and client inputs such as transport costs. Levin and McEwan's general methodology was followed to estimate costs of School-of-One (So1), a blended learning intervention for math instruction. The costs were separated into up-front costs of developing the So1 technology platform and adoption costs, which would be experienced by schools deciding to substitute their regular math instruction program with So1.

School-of-One is a recent initiative of the New York City Department of Education. Initially piloted in 2009-2010 as an afterschool program, a summer program, and briefly, as an in-school alternative to the regular math program, it has now been fully integrated into the school day at three public middle schools to provide highly individualized daily math instruction for 1,500 students. Students spend 70 minutes a day in one of eight modalities: learning with software, independent work, peer tutoring, learning with a remote tutor online, small or large group instruction with a face-to-face teacher, small group collaboration, and integrated learning projects. Around 10 minutes daily are spent completing an individual assessment that allows a computer-based "Learning Algorithm" to determine how the student is progressing along a math skills map and what still needs work. Each student's daily lesson plan or "playlist" is generated by the Learning Algorithm system and displayed on terminals as students enter the classroom.

Development costs for So1 are estimated at about $7,000,000 total over two years. An estimated $4,000,000 of this total was paid to an outside vendor to build a computer system that: houses 5,000 math lessons that can be completed and assessed online; tracks individual student progress and determines which skills still need mastery; and generates a daily playlist for each student. A panel of math experts developed a math skills map and reviewed 25,000 possible lessons in order to select the 5,000 chosen. The estimated cost of this process is $150,000. The 5,000 lessons were purchased from 50 different vendors and adapted for the So1 system at an estimated cost of $500,000. A team of 12 education and technology professionals worked with the outside technology vendor in developing the system and interfacing with schools participating in the pilots. The estimated total costs for these professionals are $1,200,000 per annum.

Annual adoption costs for a hypothetical New York City school using the So1 system are estimated based on a middle school of 480 students. It is assumed that four groups each of 120 students work with So1 for 70 minutes per day, five days a week for 36 weeks a year. The school employs four fully certified math teachers and two student teachers. It is assumed that these teachers would be employed at the school regardless of whether So1 is utilized, so the teacher cost of approximately $380,000 per year would not be specific to So1. Additionally, it is assumed that the school already has Internet access for all students and wireless connectivity. Any school adopting So1 that is not already wired would need to factor in costs of approximately $25,000 per annum for Internet access and $50,000 amortized over 5 years for wireless connectivity.

New costs that are directly associated with adopting So1 are estimated as follows for the first year:

- $200,000 in construction costs to open up space to accommodate 120 students with 100 laptops or personal computers. These costs are amortized over 5 years.
- $8,000 for teacher professional development in the use of So1 for one week prior to the start of the school year.
- $80,000 for a full-time in-house digital content manager to provide ongoing technical support and professional development and to interface with the So1 developers.
- $110,000 for hardware costs including 100 personal computers or laptops, four printers, one projector, and two 48” terminals for displaying student playlists. These costs are amortized over three years.
- $150,000 school-wide licensing charge from So1 for access to the Learning Algorithm, all content and provision of daily playlists.
- $10,000 in ongoing weekly professional development for the math teachers from a So1 developer.
- $324,000 for virtual tutors, assuming 15 tutors are engaged 4 hours per day, 180 days per year at $30.00 per hour.

These first-year costs are summarized in Table 1, which shows the cost of each component for the entire school of 480 students and the cost per student. The total cost per student is estimated at $1,217 although it should be noted that the virtual tutoring component is by far the largest cost, at $540 per student. If this option were eliminated, the cost per student would drop to $677.

Table 1. *Estimated Marginal Costs of Adopting the School-of-One Program at a Hypothetical Middle School of 480 Students in New York City*

Component	Cost per annum for school of 480 students	Cost per annum per student
Construction*	$40,000	$83
Initial professional development	$8,000	$17
Digital content manager/technology support	$80,000	$167
Hardware**	$36,667	76
School of One license	$150,000	$313
Ongoing professional development	$10,000	21
Virtual tutoring	$324,000	$540
Total	**$619,000**	**$1,217**

* Cost amortized over 5 years
** Cost amortized over 3 years

Having estimated the cost of the program per student, the second part of the cost-effectiveness question is whether So1 has a large enough impact on student outcomes, compared with traditional classroom learning, to justify the extra costs. The currently available evidence is limited to studies of So1 pilots in summer school, afterschool, and briefly as an optional in-school alternative to the traditional math program. An evaluation of the summer school pilot found that 80 rising 7th graders who were exposed to So1 for four hours a day, five days a week for five weeks (a total of 100 hours or the equivalent of 4/5 of a regular year of math instruction) gained an average of 28.2% from pre-test to post-test scores (Light, Reitzes & Cerrone, 2009). Lack of a comparison group prevents determination as to whether this gain was greater than would be achieved by traditional teaching methods. Additionally, the summer program was highly resource intensive, employing 10 adult educators and three high school interns for 80 students.

During the 2010 school year, three middle schools invited students to opt into an afterschool pilot of So1 from February through May. A total of 600 students participated but an internal evaluation by The New York City Department of Education's Research and Policy Support Group (2010) concluded that math test score improvements for So1 users, compared with the students who did not opt in, were only significantly higher in one of the schools. This latter school implemented So1 with all sixth graders as a substitute for the regular in-school math program from May through June, 2010. The evaluators of this implementation found no significant impact on math test scores for So1 users as compared with a comparison group.

In the case of School-of-One, cost-effectiveness would be best judged by determining the effectiveness of the full year in-school model and comparing this with the actual costs of delivering the program over that period. The inconclusive effectiveness evidence from the pilot program evaluations suggests that the - estimated costs of $1,217 per student, above and beyond the costs of traditional face-to-face teaching, are not currently merited. In the case of virtual schools and pure online courses, significant costs savings are likely if student-to-teacher ratios are allowed to increase and if non-instructional services are eliminated. However, without rigorous documentation as to how learning outcomes compare with traditional situations, it will not be possible to claim that they are cost-effective.

References

Anderson, A., Augenblick, J., DeCesare, D., & Conrad, J. (2006). *20/20 costs and funding of virtual schools*: Augenblick, Palaich, & Associates

Bates, A. W. (2005). *Technology, e-learning and distance education* (2nd ed.). New York: Routledge.

Cavanaugh, C. (2009). *Getting students more learning time online: Distance education in support of expanded learning time in K-12 schools*: Center for American Progress

Cavanaugh, C. (2010). The evolving online landscape. *School Administrator, 67*(4), 22-25.

Foundation for Excellence in Education. (2010). digital learning now! Retrieved from http://www.excelined.org/Docs/Digital%20Learning%20Now%20Report%20For%20Governors.pdf

Levin, H., M., & McEwan, P. J. (2001). *Cost-effectiveness analysis: Methods and applications* (2nd ed.). Thousand Oaks, CA: Sage.

Light, D., Reitzes, T., & Cerrone, M. (2009) *Evaluation of the school of one summer pilot: An experiment in individualized instruction.* Retrieved from http://www.schoolofone.org/resources/edc_2009_eval.pdf

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009, Revised 2010) *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies* Washington, DC: U.S. Department of Education.

New York City Department of Education Research and Policy Support Group (2010) *School-of-One Evaluation: 2010 Spring afterschool and short-term in-school pilot programs.* Retrieved from: http://www.schoolofone.org/resources/so1_final_report_2010.pdf

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2010). *Keeping pwith K-12 online learning: An annual review of policy and practice.* Evergreen Education Group

About the Presenter

Fiona Hollands conducts cost-benefit and cost-effectiveness analysis of educational interventions at the Center for Cost-Benefit Studies of Education and does research and evaluation on the effectiveness of technology in education at the Center for Technology and School Change. She has a particular interest in assessing how interventions that have proven successful with disadvantaged students can be scaled up in a financially feasible manner. Fiona also teaches program evaluation methodology and policy analysis at Teachers College, Columbia University.

Address: Teachers College, Columbia University
Box 181, 525 West 120th Street
New York, NY 10027
E-mail: fmh7@columbia.edu
URL: www.cbcse.org
Phone: 917.509.0549
Fax: 212.877.1069

Virtual Schooling for Students at Risk: Interventions for Success

Cathy Cavanaugh, Associate Professor
University of Florida School of Teaching and Learning

Jeanne Repetto, Associate Professor
University of Florida School of Special Education,
School Psychology, & Early Childhood Studies

Nicola Wayer, Instructional Designer
University of Florida College of Education Office of Distance Education

Introduction

Because the majority of today's online high school teachers have prior or concurrent teaching experience in traditional school classrooms (Dawley, Rice, & Hinck, 2010), the views expressed by classroom teachers about teaching students who are at-risk for failing or dropping out are relevant to the online setting. The 2010 MetLife Survey of the American Teacher (MetLife, 2011) stated that 91% of surveyed teachers placed a high priority on strengthening programs and resources that will help high-need learners meet college and career readiness standards. Further, "teachers in schools with many high-need students value a range of resources to address the different learning needs of individual students …including access to online and other technology-based resources to help personalize education (MetLife, 2011, p. 2)."

Although 13.6% of all K-12 students being served have a disability (U.S. Department of Education, 2009a), the exact number of students with disabilities being served by virtual school programs has yet to be definitively determined because many virtual schools are not credit-granting and report grades to a students' on-ground school, which maintains IEP data are often not shared with the online school. While online programs have begun to serve students with special needs and effective practices have emerged (Repetto, Cavanaugh, Wayer, & Liu, 2010), the national cadre of teachers and leaders who have specific expertise in online programs for students with disabilities is severely limited. Most online teachers have little or no experience working with students with disabilities, let alone in an online setting (Rice et al., 2008). Current professional development programs for online educators focus on accessibility issues such as captioning media and making web pages accessible for screen reading software; they do not focus on understanding the unique needs of students with disabilities as learners (Fichten et al., 2009; Weir, 2005).

Students at risk for dropping out of school, including those with and without disabilities, are increasingly choosing virtual schooling. From the literature on at-risk students, we have identified five areas of impact that can contribute to student engagement in school (Christle, Jolivette, & Nelson, 2007, 1999; Dunn, Chambers, & Rabren, 2006; Kortering & Braziel, 1999; NLTS2, 2005; Scanlon & Mellard, 2002). These 5 Cs are learner Control, a flexible and rigorous Curriculum, a safe Climate, a Caring Community, and Connection to students as individuals and their future goals. An analysis of the International Association for K-12 Online Learning (iNACOL, 2008) professional standards for quality online teaching and the Council for Exceptional Children's standards demonstrates shared priorities and ideals that can support better practice in meeting the needs of at-risk students through virtual schooling.

Five general themes are evident in the at-risk literature that can impact practice. First, students need to understand the connection between what they are learning and the skills they need outside

the school setting. Second, they need to be provided with a safe and supportive climate in which to learn. Third, students need to understand and learn how they control their learning and behaviors. Fourth, students need engaging curriculum grounded in effective teaching strategies that supports their learning. Fifth, they need to be part of a caring community that values them as a person and learner. Based on these five themes The 5 Cs of Student Engagement Model was proposed as an active model with each area influencing the other to provide a relevant learning environment to support students. Addressing four objectives promotes increased student success in online courses. Each of these objectives relates to one or more of the 5 Cs of connect, climate, control, curriculum and caring community and is supported by recent research findings in virtual schooling. The objectives address curriculum, control, connection, and a caring climate and community. The alignment of the professional practices from organizations representing special educators and virtual school educators is promising as it indicates that many of the current effective practices used by highly qualified teachers support the 5 Cs.

In an effort to better understand the connection between the 5 Cs and virtual schooling, the professional standards from the Council for Exceptional Children (CEC) and the International Association for K-12 Online Learning (iNACOL) were reviewed (Council for Exceptional Children, 2009: International Association for K-12 Online Learning, 2008). These two organizations represent special education (CEC) and virtual schooling (iNACOL). Because CEC has multiple sets of standards specific to disability categories, the set of standards for students with disabilities in general education coursework were chosen to study. It was felt that these standards would best parallel with the iNACOL standards for quality online teaching. An informal review of the two sets of standards to determine their alignment with the 5Cs was conducted.

Since effective practices in curriculum are central to providing good education programs, it seems reasonable that Curriculum has the most number of standards aligning with the 5 Cs. Further analysis of the standards areas' alignment indicated that 47% in the iNACOL and 33% of the CEC standards align with the 5Cs. This alignment of the professional practices from the organizations representing special educators and virtual school educators is promising as it indicates that many of the current effective practices used by highly qualified teachers support the 5 Cs. This is good news because as more and more at-risk students with or without disabilities enter into virtual schooling, their teachers will require the skills to effectively teach them. In addition, as more educators work with these students in virtual schools they will realize they are able to teach students at risk and that at-risk students can succeed in that environment. Another useful outcome of analyzing the commonalities among CEC and iNACOL standards is that essential skills may be identified and incorporated into professional development programs.

Further research is needed to further define these skills but this alignment can serve a foundation on which to build. This review of professional standards designed to guide online teaching and teaching of students with disabilities demonstrates shared priorities and ideals that can support better practice in meeting the needs of at-risk students through virtual schooling. Virtual school administrators and teachers can learn from special educators how to better serve students with disabilities, as well as others at-risk for dropping out, and special educators may come to more widely recognize virtual schooling as a viable educational option for their at-risk students.

References

Christle, C., Jolivette, K., & Nelson, M. (2007). School characteristics related to high school dropout rates. *Remedial and Special Education, 28*(6), 325-339.

Council for Exceptional Children. (2009). Professional standards. Arlington, VA: Council for Exceptional Children. Retrieved from http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/ProfessionalStandards/?from=tlcHome

Dawley, L., Rice, K., & Hinck, G. (2010). Going virtual 2010: The status of professional development and unique needs of k-12 online teacher. Boise, ID: Boise State University.

Dunn, C., Chambers, D., & Rabren, K. (2006). Variables affecting students' decision to drop out of school. *Remedial and Special Education, 27*(5), 314-323.

Fichten, C. S., Ferraro, V., Asuncion, J. V., Chwojka, C., Barile, M., Nguyen, M. N., Klomp, R., & Wolforth, J. (2009). Disabilities and e-learning problems and solutions: An exploratory study. *Educational Technology & Society, 12*(4), 241-256.

International Association for K-12 Online Learning. (2008). National standards for quality online teaching. Vienna, VA: Author.

Kortering, L., & Braziel, P. (1999). School dropout from the perspective of former students: Implications for secondary special education programs. *Remedial and Special Education, 20,* 78-83.

MetLife. (2011). *The MetLife Survey of the American Teacher: Preparing Students for College and Careers*. New York, NY: Author.

National Longitudinal Transition Study 2. (2005). Facts from NLTS2@: High school completion by youth with disabilities. Menlo Park, CA: SRI International. Retrieved from www.nlts2.org/fact_sheet_2005_11.pdf.

Repetto, J., Cavanaugh, C., Wayer, N., & Liu, F. (2010). Virtual high schools: Improving outcomes for students with disabilities. *Quarterly Review of Distance Education, 11*(2), 91-104.

Rice, K., Dawley, L., Gasell, C., & Flores, C. (2008). Going virtual! Unique needs and challenges of K-12 online teachers. Washington, DC: North American Council for Online Learning.

Scanlon, D., & Mellard, D. (2002). Academic and participation profiles of school-age dropouts with and without disabilities. *Exceptional Children, 68*(2), 239-258.

U.S. Department of Education. (2009a). Digest of education statistics, 2008 (NCES 2009-020), Table 50. Washington, DC: National Center for Education Statistics.

Weir, L. (2005). Raising awareness of online accessibility. *T.H.E. Journal, 32*(10), 30-33.

About the Presenters

Dr. Cathy Cavanaugh is Associate Professor of Educational Technology in the School of Teaching and Learning at the University of Florida in Gainesville. Her work focuses primarily on studies of learning environments. She is the 2009 recipient of the Research Award from the International Association for K-12 Online Learning and has been honored as an education innovator by Intel. Dr. Cavanaugh has worked with virtual schools, school districts, and education agencies in several states and countries.

Address: University of Florida Teaching and Learning
PO Box 117048, Gainesville, FL 32611
Phone: 352-273-4176
Email: cathycavanaugh@coe.ufl.edu

Dr. Jeanne Repetto is an associate professor in the Department of Special Education at the University of Florida. I teach courses in transition, teaching strategies, and issues in special education. My research interests lie in the areas of secondary/transition education relating to community, employment, and personal/social choices; middle school education; teachers as effective change agents; health care transition and student outcomes.

Address: University of Florida School of Special Education, School Psychology,
& Early Childhood Studies
1404 Norman Hall
Phone: 352-273-4281
Email: jrepetto@coe.ufl.edu

Nicola Wayer, M.Ed., NBCT, is an instructional designer in the College of Education at the University of Florida. She is also a doctoral student in educational technology, focusing on distance learning for special populations. A National Board certified special education teacher, she previously coordinated a distance and open learning center for deaf high school students and has taught online at the university level.

Address: University of Florida College of Education Distance Education
PO Box 114078
Gainesville, FL 32611
Phone: 352-392-3261
Email: nwayer@coe.ufl.edu

Meeting High School Highly Qualified Teacher Requirements Through Distance Learning

Karen Kaminski
Assistant Professor/Chair Instructional Leadership
School of Education
Colorado State University

Introduction

The state of Colorado has many rural schools that combine to work together as Board of Cooperative Educational Services (BOCES). These rural schools are challenged to meet the state requirements for highly qualified teachers for key subject areas and to meet the Colorado constitutional requirement that the General Assembly "provide for the establishment and maintenance of a thorough and uniform system of free public schools throughout the state" (Giordano vs. State of Colorado). The Colorado Department of Education follows the No Child Left Behind guidelines for highly qualified indicating that educators must hold a degree, be fully licensed, and demonstrate subject matter competency. At the secondary level, subject matter competency requires an endorsement, a degree, 24 semester hours, or passing a Colorado Content test in the assigned field (Colorado Department of Education). The problems for rural schools were compounded in 2010 when the Colorado Commission on Higher Education required K-12 graduates to meet increased collegiate curriculum requirements.

To address this challenge, information/instructional technology faculty and staff at Colorado State University partnered with the East Central BOCES, Northeast BOCES, and Southeastern BOCES to determine how the high schools in eastern Colorado could effectively share teachers within a constrained budget. The result was to develop an interactive video system, managed centrally in each BOCES, with technology classrooms installed in each of the high schools. Each BOCES was able to obtain a United States Department of Agriculture-Rural Development-Distance Learning and Telemedicine Program grant to fund the initial costs (http://www.rurdev.usda.gov/UTP_DLT.html). These grants specifically provide funding for:

- Acquisition of eligible capital assets:
  - Interactive video equipment
  - Audio and video equipment
  - Terminal equipment
  - Data terminal equipment
  - Inside wiring
  - Computer hardware and software
  - Computer network components
  - Other facilities that further DLT services
- Acquisition of instructional programming that is a capital asset
- Acquisition of technical assistance and instruction for using eligible equipment

2004 Grant Award: East Central Board of Cooperative Educational Services (ECBOCES)

Limon, Colorado: $452,154
The East Central BOCES project will upgrade a distance learning system benefiting eight counties, eighteen school districts, and 6,110 students. RUS funds will be used for network improvements that will provide a threefold increase in instructional content, technical performance and critical long-term costs. The equipment will provide two interfaces - one serving existing video equipment and the second for data. Partnering organizations include The School of Education at Colorado State University, Morgan County Community College, and the Colorado Department of Transportation.

2006 Grant Award: Northeast Colorado Board of Cooperative Educational Services (NEBOCES)

Haxtun, Colorado: $240,997
Rural Development funds will be used to establish a wide area network (WAN) linking 11 member school districts in exceptionally rural communities of Colorado for distance learning. The network will extend the existing WAN connectivity of the Haxtun and Holyoke districts to nine additional districts in the Northeast Colorado BOCES. The new network would provide video distance learning to more than 900 high school students who are currently without access to such services.

2007 Grant Awards: Southeastern Colorado Board of Cooperative Educational Services (SEBOCES)

Colorado; $355,924
This video distance learning network will link 12 school districts in rural parts of southeastern Colorado with several local colleges and other providers. It will provide college preparatory, advanced placement and vocational courses for nearly 1000 students.

Design, Installation, and Process

A task force was formed that included the Director and Director Emeritus of the Colorado Rural Education Assistance Program (REAP), the Vice President for Information Technology at Colorado State University, Directors of the BOCES, representation from the Colorado Department of Transportation, and Faculty in the School of Education. They partnered to write the first RUSS grant for the East Central BOCES. Once awarded, the work began. This included installing the fiber to connect the schools. Due to the fact that the Colorado Department of Transportation had unused fiber and was willing to provide this dark fiber for use by K-12 networks, short jumps of fiber was needed to connect the high schools to the backbone. PolyCom Telecommunication Classroom equipment was ordered to create one technology classroom in each high school and for a training room in the main BOCES offices. Finally professional development was scheduled for the teachers

While there were many hurdles to overcome, installation of the equipment was perhaps the easy part. Once the classrooms were built and online, teachers who had never taught via distance or technology needed to prepare to use the system. With years of experience both teaching via interactive video and helping university faculty prepare to teach via interactive video and through other forms of distance learning, I was brought in mid-planning. My role was to facilitate professional development for teachers to prepare them to teach students at a distance via the new Polycom systems. It soon became obvious that there was much work to do in addition to learning how to use the system and engage distance learners. To gain experience with the K-12 settings I located numerous sources to learn from their experience (Dupin-Bryant, 2004; Herring, 2004; MacGregor & Atikinson, 2002; McFarlane & Nissen, 1983; Rayfield & Imel, 2002).

The sessions started with an all-day face-to-face workshop at the BOCES central office. The coordinator in each BOCES determined the need for specific topics and content, and we collaborated to support the teachers. They invited teachers who were interested in learning how the system worked to pilot their courses. During this full-day session the teachers learned how the system worked, how to connect their computer, how to use a document camera, and specific capabilities of the interactive video system. We also discussed best practices for teaching via interactive video and facilitating learning for distance students. We followed this with three interactive video sessions where the teachers connected from their respective schools and I remained at CSU. The teachers were able to practice teaching segments of lessons in a safe environment. They tried different techniques, experimented with different types of visuals, and received feedback from their peers and me.

An important aspect of the professional development sessions was the brainstorming of different questions and challenges the teachers faced. There were many things that had not surfaced until we investigated best practices in distance learning. We discussed and developed plans for submitting and returning homework, meeting with students who needed extra help, attendance policies, how to conduct field trips, and how grades would be reported. Many of the policies could not be determined within our sessions and it became obvious that the role of the coordinator at each site was quickly expanding beyond keeping the system running to facilitating the development of policies and procedures for many of the mechanical aspects of distance course delivery. As a result, each coordinator developed a manual that included information regarding scheduling courses, homework and attendance policies, communicating with students, and more. One coordinator became very engaged in the process and also documented policies and best practices for teaching using the system.

We repeated these workshops each semester for 3 years. Once teachers gained experience using the system they became resident experts and took over the training sessions.

Examples of the Types of Courses Shared Through the Interactive Video System

Math: AP Calculus, College Algebra, College Trigonometry, Survey of Calculus,
English: AP English, English Composition, Introduction to Literature,
Foreign Language: Spanish I, II, and III,
Sciences: College Chemistry, College Biology
Business: Principles of Macroeconomics, College Business Law, Accounting Principles, College Statistics
World Geography, College American Government, History of Western Civilization, College U.S. History; Introduction to Sociology

Benefits and Challenges

While there are many benefits that come with using the system, there were challenges for the teachers, the students, and the coordinators. Benefits of the systems include increased access to courses. Students now had access to higher-level math and science classes and additional levels of foreign language. While many were motivated by these new opportunities, some were not self-motivated to engage in class discussions from remote cites. The remote teachers were challenged to get to know their distance students and to incorporate techniques to engage them in the learning. The teachers were used to being able to walk around the classroom to engage students by presence rather than input. It was a different paradigm for most to engage in a constructivist learning environment, asking the students to share content, present materials, and be more responsible for their own learning. As I visited classrooms via the system I found that some students were engaged and some were completely tuned out. I spent considerable time with the teachers sharing methods to gain the engagement. We brainstormed ideas such as assigning students sections of the content that they would facilitate, calling on the students by name and specifically asking them for input, and including participation in the grading matrix.

Teachers and administrators faced challenges such as how to monitor behavior and attendance in distance classrooms, how students would submit assignments and receive feedback with limited access to computers and the Internet, shared resources such as text books and other required supplies, and how to manage FTE/enrollment numbers (who counts the students). At first, because of simplicity, they assigned an administrative staff to monitor attendance and take calls regarding other issues. Based on limited access to computers and the Internet, they determined that they would fax assignments from the central office, allowing the teachers to have a printed copy that they would mark and fax back. As schools have relaxed their Internet restrictions and more students are connected, it is becoming more common for

students to email their assignments to the teachers. The teachers have learned to use track changes to make their comments and email the assignments back.

One of the greatest challenges was scheduling. Even though the schools are in the same BOCES, they are in different districts that have their own schedules for course times, after school activities, and bussing. It was difficult to find common times when shared courses could be offered. It was ultimately decided that the course would be offered on the schedule of the home school where the instructor resided. The other schools would release their students from local classes to participate in the interactive video classes. This puts an extra burden on the students to constantly be making up what they missed in their traditional class but it was believed that this additional burden was worth the increased opportunities for learning.

One unique benefit is local community college already offered courses via interactive video. The schools have been able to include college level courses in their offerings for those students who are prepared for courses such as advanced math. The rural students can now earn college credit while in high school, providing them the same advantages of those students who reside in larger cities and have access to higher education their junior and senior year.

Future Goals

As the system matures, small changes and larger changes are taking place. Some of the smaller changes include changes in schedules to allow for easier access for all students. As teachers realize the benefits, they are becoming more flexible in changing their schedules to allow for more collaborative work and sharing.

Future goals include connecting college and university admissions counselors and advisors with juniors and seniors as they develop their post-secondary plans. This would not only be a recruiting tool but an excellent avenue for engaging rural students with campus communities for career exploration. A second goal is to provide professional development for members of the community. This would be in the form of night classes and workshops taking advantage of the classrooms when school is not in session. The community members are initially asking for small business, financial planning, and other content that will address economic issues. The school districts would like training for paraprofessionals for employment in the schools. CSU has a goal to provide a Master of Education to the rural teachers where CSU faculty can remain on-campus and teach via the interactive video system.

Planning, with support from our senators, continues with the intention to provide these same opportunities for the western slope of Colorado. While it is not complicated to purchase the technology classroom equipment, the Rocky Mountain range that divides the state from north to south presents a challenge of bringing the high-speed connectivity to these rural communities. Once we break this barrier, the opportunities for these western rural communities will be endless.

References

Dubin-Bryant, P. A. (2004). Teaching styles of interactive television instructors: A descriptive study. *The American Journal of Distance Education.* 18(1). 39-50.

Colorado Department of Education Office of Federal Program Administration Highly Qualified Teacher. Retrieved from http://www.cde.state.co.us/FedPrograms/tii/a_hqt.asp

East Central BOCES Video Networking for Educational and Training Services (VNETS). Retrieved from http://www.ecboces.org/bocesweb/Services/VNETs/tabid/59/Default.aspx

Herring, M. C. (2004). Development of constructivist-based distance learning environments: A knowledge base for K-12 teachers. *The Quarterly Review of Distance Education.* 5(4). 231-242.

MacGregor, S. K., & Atkinson, T. R. (2002). Facilitating learning interactions in the two-way video classroom. *Journal of Educational Technology Systems.* 31(1). 45-62.

McFarlane, R. E., & Nissen, R. J. (1983, Sept.). Two-way teleconferencing: Room design comes first. *Architectural Record.*

Northeastern BOCES Wide Area Virtual Education System (WAVES). Retrieved from http://www.neboces.com/#nogo

Rayfield, R., & Imel, L. (2002). Making interactive video distance learning work. *Principal Leadership,* 56-61.

Southeastern BOCES Technology Department. Retrieved from http://www.seboces.k12.co.us/group_profile_view.aspx?id=9619bc7d-45e3-4200-ab5a-71a17f472e0d

About the Presenter

Karen Kaminski is an Assistant Professor and the Chair of the Instructional Leadership Area of Study in the School of Education at Colorado State University. Her primary work is with the Master of Education with a Specialization in Adult Education and Training. Karen's specialization is instructional design in all areas while often focusing on the inclusion of information and communication technologies for teaching and learning. Another focus is the area of assessment and evaluation of learning events. She has designed and taught courses using various distance delivery methods for over 20 years, serving on distance learning advisory boards.

Address: 213 Education
Fort Collins, Colorado 80523
Email: Karen.kaminski@colostate.edu
Phone: 970-491-3713
Fax: 970-491-1317

Structuring Online Learning as a Response to Intervention

Greg Bishop
Intervention Specialist
Education 2020

Introduction

Online learning has exploded within the past three years. The implementations of online learning are wide reaching, but one of the most critical applications of online learning is in the arena of intervention and credit recovery. While it is easy to utilize online learning options for credit recovery, the goal of increasing learning and intervention with struggling students is a more difficult task and requires specific planning. Structuring online learning as a Response to Intervention takes specific processes. Schools must build a culture to support the intervention. In his book *Failure Is Not an Option* (2004), Alan Blankstein outlined features of a courageous leadership initiative to build culture. In Highly Reliable Organizations (Air Traffic Controllers, Regional Electric Grids) cannot even imagine failure as an option. They share the following characteristics:

- Begin with the core. These are the non-negotiable purpose, values, and intentions.
- Create organizational meaning. Create a positive meaning for yourself and your school.
- Maintain constancy and clarity of purpose. Focus on priorities that are consistent with the purpose of the school.
- Confront the data and your fears. Name and face your fears constructively.
- Build sustainable relationships. Encourage one another to work toward a common purpose. (Blankstein, 2004)

Schools must then develop a collaborative culture totally dedicated to learning. So many times schools place the focus on teaching and not learning. Moving toward an online learning culture is going to take a collaborative effort. This effort is going to require a team of individuals who are going to plan and implement the interventions used in online learning. In assembling a team, leaders should assemble different individuals representing different characteristics. One member of the team should be a mover. This is an individual who will be willing to be creative in the thought process of online learning. They will look for creative ways of providing interventions for students and research the best practices available. The second individual should be an opposer. This individual represents the corrective action of the group. The purpose of this individual is to critique ideas regarding online learning and correct the implementation path. The third individual should be a follower. This individual represents the detailed work needed for implementation of interventions of online learning. This person will help structure details such as time, place and method of delivery of online learning for interventions. The last individual should be an observer. This individual will provide perspective on the implementation of online learning. This person will be able to see potential obstacles and provide questions and potential summative input on the implementation of the interventions.

At the conclusion of forming the teams, schools must determine the Power Standards for interventions. One of the key aspects of interventions is determining the specific standards that are mandatory for all students to learn. In his work on Power Standards, Larry Ainsworth (2004) discusses how educators should define Power Standards. In designing online learning environments for interventions, this step is critical. It provides the standards to evaluate and design in an online learning environment. Power Standards should meet the following criteria:

1. **Endurance –** Will the standard or indicator provide students with the knowledge and skills that will be of value beyond a single test date?

2. **Leverage –** Will this provide knowledge and skills that will be of value in multiple disciplines?
3. **Readiness for the next level of learning –** Will this provide students with the essential knowledge and skills that are necessary for success in the next level of instruction? (Ainsworth, 2004)

Assessment of these objectives to determine students for the intervention and the evaluation of the intervention should be planned next. These assessment items should evaluate the Power Standards and the effectiveness of the intervention at the desired level of competency. This can either be accomplished through embedding assessment items within teacher-derived tests or a separate common assessment for identifying students for intervention. These assessments should happen early within a school year to gain a quick identification of students needing intervention.

Planning the online intervention based upon the identification of students and mastery of the Power Standards should utilize a Backwards Planning Design process by Grant Wiggins and Jay McTighe 2005). In this process, schools should use the following process to develop the implementation of the online learning program for intervention:

- **Identify Desired Results** – What do we want to see happen as a result of the initiative? What knowledge and skills are required to enact the initiative?
- **Determine Acceptable Evidence –** What evidence will we accept to measure the effectiveness of the initiative?
- **Plan Actions to Achieve Goals-**This step happens only after the first two are complete. (Grant P. Wiggins and Jay McTighe, 2005)

In terms of using the process for an adoption of online learning intervention, the task can be divided into three stages:

- **Stage 1 Goal:** What is the vision for online learning implementation? What do we want to accomplish as a result of this initiative?
    - What understandings and attitudes do teachers, administrators, and others need for these goals to be met?
    - What essential questions about online learning and results should guide our actions?
    - What knowledge and skills do stakeholders need for the vision to become a reality?
- **Stage 2 Goal**: Direct Evidence
    - What will count as evidence of success?
    - What are the key observable indicators of short-and long-term progress?
- **Stage 2 Goal**: Indirect Evidence
    - What other data (achievement gaps, staff understandings, attitudes, organizational capacity) should be collected?
- **Stage 3 Goal**: Action Plan
    - What short- and long-term actions will we take to achieve our goal?
    - What strategies will help us achieve the desired results?
    - Who is responsible? What resources will be needed?

There are models that demonstrate the effectiveness of this planning and an overall success of using online learning in a model of intervention. Cousino High School in Warren, Michigan during 2008 utilized online learning as a model with both credit recovery and intervention with struggling learners. Data from 2008 shows the overall success rate of the intervention at 85%. These are students who passed an online learning course after either failing the traditional course or being removed from the traditional course due to gaps in learning. The graph also shows disaggregated data between varying subgroups:

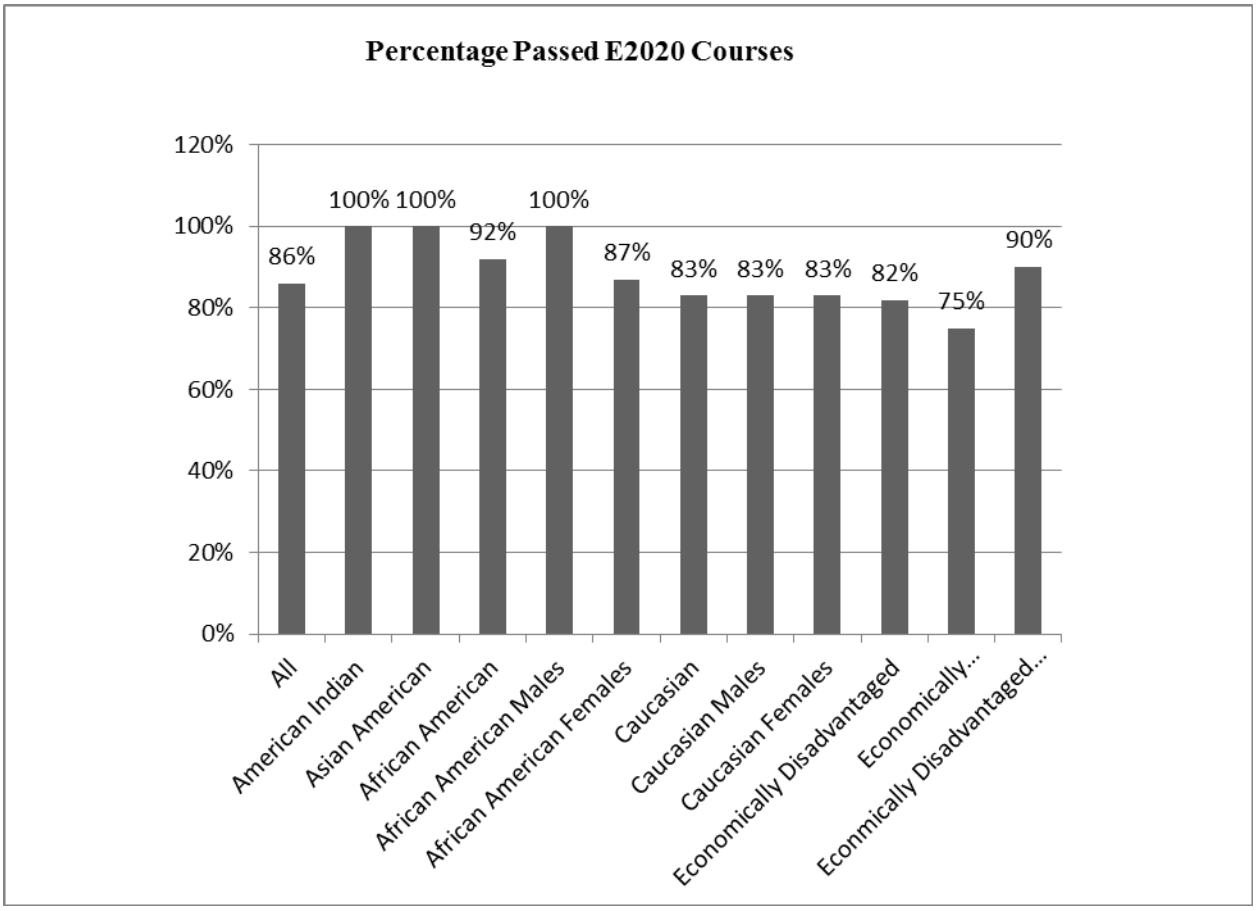


Figure 1. *Disaggregated Data Between Varying Subgroups*

The second graph (Figure 2) shows the rate of students passing the next level of a traditional course after taking an online learning course. The data in this graph show that students passed the next level of mathematics and language arts at over 90% success rate. The entire population of students was identified as failing or struggling students who took online courses. All of these students failed the core academic course in the traditional classroom and recovered the course in online learning.

Other programs as well have experienced success with online learning as a form of intervention with struggling learners. One example is in Highland Park, Michigan. Over 90% of the students enrolled in the Career Academy during the 2009 school year were former dropouts from Detroit Public Schools. Using online learning as an intervention, the Career Academy was able to graduate over 75% of the students that enrolled having junior or senior credits. Many of these students were adult learners who had been away from school for two or more years. Furthermore, East Kentwood High School outside of Grand Rapids, Michigan had a 35% failure rate in Geometry this year. During the winter semester of 2011, they enrolled students in a blended model of online learning. This model has shown results of taking a 35% failure rate and making in about 9%.

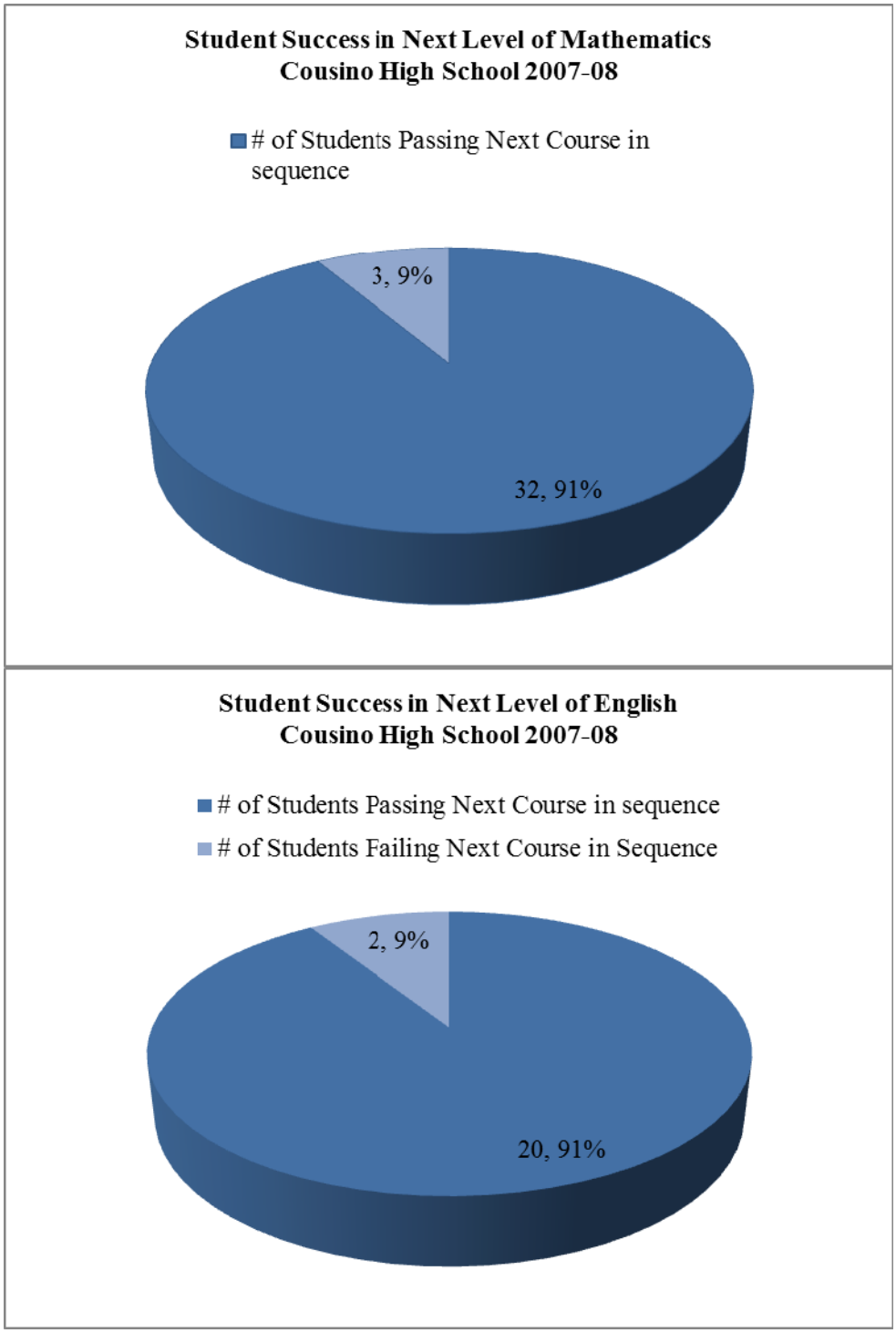


Figure 2. *Rates of Student Success in Next Level of Mathematics and English*.

The commonality in all of these programs was in the customization and backwards planning structure. Each school featured here analyzed the data and made a plan for intervention based on Power Standards. The schools began with the end product in mind and created interventions with online learning that did not compete with any other program. In the book, *Disrupting Class,* Clayton Christensen (2008) stated

the following about implementing technology within schools: "Implement computer based learning by allowing it to compete against non-consumption at the outset, where the alternative is nothing at all."

References

Ainsworth, L. (2004). *Power standards: Identifying standards that matter the most.* Denver, CO: Lead and Learn Press.

Blankstein, A. M. (2004). *Failure is not an option.* Thousand Oaks, CA: Corwin Press.

Christensen, C. M. (2008). *Disrupting class.* New York, NY: McGraw Hill.

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design.* Alexandra, VA: Association of Supervision and Currculum Development.

About the Presenter

Greg Bishop was the principal at Cousino High School in Warren Consolidated Schools and a mathematics curriculum department head and teacher in the Detroit Public Schools over his 19 years in education. Greg was instrumental in leading intervention initiatives in the Warren Consolidated School District which serves over 15,000 students. Greg has co-chaired a district-wide Teaching and Learning Committee which led Warren Consolidated in adopting a Professional Learning Communities model which uses a 45-minute weekly delayed start for professional collaboration. Greg has led initiatives in the district and nationally on virtual credit recovery programs. Cousino High School has also been recognized as a Professional Learning Communities School of Excellence by Richard Dufour, Rebecca Dufour and Robert Eaker and featured on the website All Things PLC. Greg writes articles for the Michigan Association of Secondary School Principals regarding Response to Intervention and Taking Secondary Schools from Good to Great. Greg has also worked with individual districts in Michigan, Tennessee, Georgia, and Texas on implementation of effective intervention and prevention strategies.

Address: 15129 Woodworth
Redford, MI 48239
Phone: 586-634-5626
Email: gbishop@education2020.com

Information Sessions

Program Administration and Management Track

Regents Online Campus Collaborative and the Complete College Tennessee Act

Patrick Wilson, Ed.D.
Executive Director of Programs
Tennessee Board of Regents, ROCC

Raylean Henry, Ed.D.
Associate Vice Chancellor
Tennessee Board of Regents, ROCC

Complete College Tennessee Act

In January 2010, the Tennessee Legislature enacted the Complete College Tennessee Act (CCTA.) The Act requires reform in several areas of public higher education including academic, administrative, and fiscal policies.(Complete College Tennessee Act, 2010) The ultimate goal of the Complete College Tennessee Act is to increase the number of Tennesseans with college degrees.
Approaches

There are several approaches to meet the Act's goal. They include state funding based, in large part, on students completing programs of study rather than enrollment numbers. Tennessee is now diligently working towards common course numbering and titles between the TBR and University of Tennessee systems. Thirty-six universal transfer paths (UTPs) have been approved creating a common associates degree level path that is fully accepted at any public, 4-year institution in the State. Each of these broad initiatives is designed to focus our efforts on successful completion rather than enrollment.
Ouctomes based funding

The outcomes based model called for in the CCTA shifts the focus from enrollment to measures consistent with the State's Higher Education Master Plan. The process considers both the aspirations of the plan as well as the mission and character of the individual institution.

The process scales and weights a common set of data for the institution. The weighting is based on the type of institution under review. For example, a doctoral research institution such as the University of Tennessee at Knoxville would have a higher weight placed on research and grant funding than a school such as Austin Peay State University that focuses more on bachelor's degrees than research and doctoral degrees.(Deaton, 2010)

Eliminating Barriers
In September 2010 document titled "No Time to Waste: Policy Recommendations for Increasing College Completion," the Southern Regional Education Board (SREB) indicated, "the objective should be for state and postsecondary education systems to create clearer, more efficient paths to degree completion for more students. The result should be more students graduating with fewer credit hours and in less time."(Spence, Blanco, & Root, 2010) Consistent with this objective and the Complete College Tennessee Act, TBR and the University of Tennessee systems have developed 36 universal transfer paths across 23 disciplines. A universal transfer path is a common curriculum at all 13 community colleges that will be fully accepted towards a bachelor's degree at any public, 4 year school in the state. Significant progress has also been made towards developing a common course numbering system or rubric to be used throughout the State's community college system.

Introduction to the Collaborative

In 1972, the Tennessee Legislature formed the State University & Community College System of Tennessee, governed by the Tennessee Board of Regents.(Regents) ROCC was formed by TBR in 2001 as an entity to facilitate the development of online degree programs collaboratively among the 23 Technology Centers, 13 Community Colleges, and 6 Universities in the TBR system. Currently, the TBR system serves 190,000 students through locations in 90 of Tennessee's 95 counties. The enrollment makes TBR the nation's sixth largest system of higher education. (Regents) All 42 institutions within the TBR system participate in the Regents Online Campus Collaborative.

RODP offers degree programs at the associates, bachelors, and masters levels. Programs include specific career fields such as criminal justice and nursing as well as flexible programs such as independent studies. Enrollments for the spring semester for the Regents Online Degree Program (RODP) were 22,225.

ROCC Initiatives

Leveraging Resources

Tennessee has three main metropolitan areas: Memphis, Nashville, and Knoxville. Each of these areas is home to multiple public institutions of higher learning. However, the majority of the State and its educational institutions are in less densely populated areas with a broad range of socioeconomic classes among students. One consequence of this uneven distribution of resources can be seen in the field of nursing.

Forty-two counties within the State suffer from a shortage of health professionals such as doctors and nurse practitioners.(Health, 2011) Schools within these same areas are also smaller in terms of enrollment and offer fewer degree options. Based on a number of factors, including the high investment required to operate healthcare programs, schools in high need healthcare areas are not able to provide a broad range of healthcare education. However, through the Collaborative, smaller schools are able to offer programs supported by other institutions in the system.

One example is the Master of Science in Nursing offered through RODP at Austin Peay State University (APSU.) APSU is located in Clarksville, Tennessee. To serve the needs of their students, APSU focused on undergraduate degrees in their School of Nursing. Staffing a MSN degree program, building the curriculum, as well as seeking and maintaining accreditation is a tremendous task. While APSU had interest in the degree and some capacity to support it, they could not dedicate the resources required to create the program on their own. Through RODP, all six universities were able to contribute faculty to build courses, teach, and provide oversight of the program. Thus, all areas of the State were able to offer the MSN program rather than only the larger schools in metro areas.

Another example is the Associates degree programs in criminal justice. Currently, eight of 13 community colleges in the state offer criminal justice programs. Jobs associated with the criminal justice field are expected to grow in Tennessee throughout 2018.(Tennessee, 2011) Participating schools have collaborated in the development of a new program that will soon be offered by all 13 schools. The net result will be a criminal justice program offered in 5 more areas of the state. Access has been expanded for Tennesseans to the criminal justice program through their local school which should translate to a workforce better able to meet upcoming employment demand.

Redesign of Developmental Studies

RODP is also working towards a comprehensive redesign of developmental courses. Students accepted into academic programs with less than a minimum ACT or SAT score in the areas of reading, writing, or math are required to take remedial or developmental studies courses. Currently, these courses fit the

traditional 3 credit hour model and cover a comprehensive range of materials. This presents at least two potential impediments for students. First, many students are deficient in fewer skills than covered in the full course. Second, the traditional 15-week format does not allow students to progress more quickly towards core curriculum.

To address these concerns, developmental studies courses will be replaced by learning support. Learning support is designed to develop only those competencies that an individual student needs. Diagnostic testing mapped to the learning support curriculum will be used to identify these areas. The student then enrolls in learning support units needed and progresses to competency as quickly as possible. Again, RODP provides a place for collaboration and the exchange of ideas and best practices among the TBR schools.

Conclusion

The primary reason cited by institutions for offering distance education programs is to meet student demand for flexible schedules.(Parsad & Lewis, 2008) With 12.2 million students enrolled in distance education courses, clearly demand has grown rapidly and students find value in accessing education in a flexible format. As Tennessee strives towards higher levels of education in the state, RODP continues to be instrumental in expanding access to postsecondary education.

References

Complete College Tennessee Act, 7006, Tennessee Senate § Title 49, Chapter 7, Chapter 8, Chapter 9 (2010).

Deaton, R. (2010). *Tennessee's outcomes-based funding formula*. Nashville, Tennessee: State of Tennessee Retrieved from http://www.tn.gov/thec/Divisions/Fiscal/funding_formula_presentation.html.

Health, T. D. o. (2011). State of Tennessee, Department of Health Retrieved from http://health.state.tn.us/rural/hpsa.html

Parsad, B., & Lewis, L. (2008). *Distance education at degree-granting postsecondary instutions 2006-2007* (N. C. f. E. S. Institute of Education Sciences, Trans.). Washington, DC: United States Department of Education.

Regents, T. B. o. State of Tennessee, Tennessee Board of Regents Retrieved from http://www.tbr.edu/about/default.aspx?id=804

Spence, D., Blanco, C. D., & Root, M. (2010). No time to waste: Policy recommendations for increasing college completion: Southern Regional Education Board.

Tennessee, S. o. (2011). Statewide occupation projections 2008-2018 (D. o. L. a. W. Development, Trans.). Nashville.

About the Presenters

Dr. Patrick Wilson is Executive Director for Programs with the Tennessee Board of Regents Online Campus Collaborative (ROCC.) Dr. Wilson has extensive experience teaching in both online and traditional, face to face formats. In his prior roles, Dr. Wilson has served as Associate Professor of Finance and Accounting at Regis University and Associate Dean of Instructional Leadership at Lakeland College. Dr. Wilson earned his Doctor of Education in Educational Technology at Pepperdine University.

Address: 1415 Murfreesboro Road, Suite 682
Nashville, Tennessee 37217
Email: patrick.wilson@tbr.edu

URL: www.rodp.org
Phone: 615-366-3954
Fax: 615-366-3986

Dr. Raylean Henry is Associate Vice Chancellor for the Tennessee Board of Regents Online Campus Collaborative (ROCC.) Before coming to the Regents Online Campus Collaborative, Dr. Henry was the Director of Continuing Education at Tennessee State University in Nashville, Tennessee. Dr. Henry's previous experiences include numerous positions as training director in various companies in the Nashville area for over fifteen years. Dr. Henry received her Doctorate of Education from Tennessee State University with a concentration in Curriculum and Instruction.

Address: 1415 Murfreesboro Road, Suite 682
Nashville, Tennessee 37217
E-mail: raylean.henry@tbr.edu
URL: www.rodp.org
Phone: 615-366-3917
Fax: 615-366-3986

Demystifying Academic Analytics

Charlene Douglas, EdD
Marketing Manager, Higher Education, North America

Introduction

Accountability, stakeholders, dashboards—this is the language of corporations, not academia, but more and more often these days, academic institutions have to prove their performance to external audiences in order to obtain funding and accreditation. In the United States alone, 19 states have some form of performance funding tying a percentage of budget allocations to an institution's achievement on specified performance criteria. Twenty-seven states have performance budgeting requirements that allow governors and legislators to consider institutional achievement on key indicators as one factor in determining allocations. Thirty-nine states have performance reporting programs mandating that colleges provide periodic updates regarding their performance on key indicators, but they are not directly tied to funding. And many states combine either performance funding or performance budgeting with reporting requirements.

Furthermore, educational institutions need to comply with government mandates, compete globally for researchers and students, review programs and substantiate accreditation and make strategic decisions about whether to build on existing strengths or develop new areas. In order to do this, educational institutions need to better understand their own systemic strengths and weaknesses and create a model for accountability and continual improvement in education. Hard data are becoming the basis for all decisions in academia, including faculty hiring, compensation, and retirement as well as enabling individualized instruction and facilitating professional development.

In order to obtain this indication of performance and campus achievement, academic analytics applications are often utilized. Academic analytics not only provides information to external audiences, it also helps drive decision making about which programs and initiatives are best suited to help the institution meet its goals. Academic analytics allow academic institutions to create an integrated, flexible process to steer performance and increase accountability. A good analytics tool can also clean up data, reduce inefficiencies and streamline the process of preparing and delivering necessary reports such as those often mandated by the state.

Getting Started

Even though there are a number of educational institutions employing academic analytics to better differentiate their institutions in the highly competitive higher education market, it is still a relatively new concept to education. Applying the principles of analytics to academia promises to improve student success, retention and graduation rates and demonstrate institutional accountability (Arnold, 2010). There is very little definition, however, of the categories that need to be measured and the metrics to quantify how well an institution is doing. Additionally, the data are often maintained in silos without appropriate policies governing standards and unique identifiers and there are no benchmarks for comparison. An essential component of continuous improvement is making decisions based on data. This will require fundamental changes in how we collect and use data and in the process we currently use for decision-making and for deriving meaningful interpretations relative to what we want to measure (NETP, 2010).

Return on investment for higher education involves student retention, engagement, time to degree, and students' post-graduation success, in other words, measuring people instead of dollars. Therefore,

parameters that need to be analyzed include a great deal of student information. As such, there are four main core systems of any educational institution — human resources, finance, student information and academia. An enterprise academic analytics system has to provide student and academic reports; financial reports such as budget status of each department, dollar spent per student, dollar spent per class, payroll information, benefit information and so forth; recruitment and admission reports; registration reports; alumni reports; research information and the like.

Educational institutions do not lack for data, but they tend to be unsure how to turn these data into meaningful information to drive change. Nor can they easily access, combine, and repurpose those data seamlessly to support analysis drive decision making and improve student success (Strategic Initiatives, Inc., 2009).

Stakeholders

Stakeholders typically thought of as needing to be able to run various reports and have access to others, include the Chief Information officer, Institutional Research personnel, Planning Directors, Presidents/ Chancellors, Provosts, Vice Presidents/Vice Chancellors, and Enrollment Management. However, it is important that faculty, staff and all administrators—the end users—understand how academic analytics can be leveraged to achieve institutional goals. Not including the campus community at large is to miss a golden opportunity to make sense of the current data and communicate an understandable analytics strategy and path for the future (Strategic Initiatives, Inc., 2009). Essentially, an institution cannot have a culture of constant improvement if they don't have an academic analytics solution available to the right people. In other words, all stakeholders need to have the appropriate data so that they can be successful.

Capturing the Data

The analytics process involves gathering and organizing information (often from different sources and in different forms), analyzing and manipulating data, and using the results to answer questions such as "Why," "What can we do about," or "What happens if we do x"; analytics goes beyond traditional reporting systems by providing decision-support capabilities (Campbell & Oblinger, 2007). Additionally, these data are provided in a format whereby trends and issues can easily be identified. The "why," "what can we do about," and "what happens if we do x" analyses are moot if there is not an easy method to determine issues that need investigating.

Goldstein (2005) provided a useful framework for categorizing key milestones in any implementation of academic analytics:

- Stage 1 Extraction and reporting of transaction-level data
- Stage 2 Analysis and monitoring of operational performance
- Stage 3 What-if decision support (scenario building)
- Stage 4 Predictive modeling and simulation
- Stage 5 Automatic triggers of business processes (alerts)

Campbell and Oblinger (2007), simplified this model even more into

- Capture
- Report
- Predict
- Act
- Refine

But, even before an institution can capture, extract, and report the data, it needs to know what data to obtain. Most institutions are unclear as to what they should measure. Moving from just counting "seats" to business-focused impact metrics requires coordinated planning, meaningful measurement and effective communication (Kelly, 2010). It is important for an institution to identify their goals and expectations for using academic analytics in the first place. Is the institution ready to implement an academic analytics solution, what are the challenges, the risks? What are the problems they are trying to solve with analytics? What is the priority of these problems? Is it an institutional priority? It is also important to help stakeholders make the connection between those priorities and analytics.

Analytics are most often used in education for administrative decisions but the use of analytics is growing in high stakes areas such as academic success and enrollment management (Campbell, DeBlois, & Oblinger, 2007). A few key indicators of academic success include

- Graduation rates
- Retention rates
- Program productivity
- Attendance
- Course/Learning Management System productivity
- Enrollment rates
- Transfer rates
- Passing scores on licensure exams
- Student satisfaction
- Job placement data

Learning Management Systems

With barely one in five Americans over 25 earning a bachelor's degree, retention of students who actually enter college is vitally important to our country's global competitiveness (U.S. Census Bureau, 2007). Yet, nationally, the six-year graduation rate for all colleges and universities is 63 percent (Berkner, 2002) and students in their second and third year of college can be among the least likely to persist (Lipka, 2006). Institutions are turning to academic analytics to help with this growing problem. The issue we are trying to solve is applying the insights of academic analytics to an intervention that current students will accept and not associate with academic profiling or big brother watching them (Campbell, DeBlois, & Oblinger, 2007; Fritz, 2009). Measuring performance and putting powerful information in instructors' hands for just-in-time intervention is critical to student success.

A relationship may exist between student performance as defined by grades and activity in the campus learning management system (LMS). For example, the University of Maryland, Baltimore County has determined that over two academic years, students earning a D or F in 72 courses used the LMS 35% less than students earning a grade of C or higher (Fritz, 2009). This kind of knowledge allows immediate intervention and support for those underperforming students who are at risk of leaving college due to low grades.

Other higher education institutions such as Purdue University and the University of Georgia System have identified a clear relationship between LMS use and student achievement. Through the use of academic analytics, the University of Georgia System has shown that data from their LMS can be used to predict student success, show institutional effectiveness for accreditation, and show trends in student learning outcomes (Finnegan, 2009).

One of the additional benefits LMS academic analytics provides is the ability to run day-to-day, end-of-term or annual reports across multiple courses, sections and programs from one interface. Educators can

customize their own reports and combine data elements such as enrollment, student and faculty activity and grade reports into one big- picture report instead of seeing only one data element at a time. LMS academic analytics also provides a real-time element whereby the path a student takes towards their goals can differ depending on data that feeds workflows looking at such things as learning styles.

Developing a Strategy

Too many times you hear the terms data warehouse, ad hoc reporting tools, analytics, business intelligence and your mind starts racing on all the things you have always wanted to report on or questions you wanted to ask; therefore, the first step is to capture and categorize the questions (M. Cummings, personal communication, February 5, 2010).

- Ask the right people—there are many people who capture and assemble information
- Review your current manually produced reports
- What is the cost of producing the manual reports?
    - Review the reports available
- Review legislative and accreditation requirements
- What are your pain points, what is lacking?
- What would make faculty and staff more successful in their jobs?
- What reporting could faculty and staff use to help students be more successful?
- Prioritize these requirements
- How frequently does this information need to be created?
- How often is this information going to be used?
- Who uses this information?
- Why is it required?
- Review the requirements of an academic analytics solution considering:
    - Difficulty to setup
    - Difficulty to add information
    - Standard reporting available
    - Custom reporting available
    - Ease of importing external information
    - Ease of exporting information
- Money saved by implementing solution
- How the solution will affect the performance of the campus LMS
- Additional information provided that could not be provided in any other method
- Dashboard availability

Three characteristics of successful academic analytics projects are worth highlighting (Goldstein Katz, 2005):

1. Leaders who are committed to evidence-based decision making
2. Administrative staff who are skilled at data analysis
3. A flexible technology platform that is available to collect, mine and analyze data

In addition to the above, the educational institution also has to have a culture that is willing to invest in making the improvements identified. For all of their sophistication, academic analytics tools work best when they are kept simple. Resulting reports and dashboards are a call to action. There tends to be a disconnect between what people think they want and what they actually need (Ramaswami, 2010).

Conclusion

Academic analytics will help shape the future of education just as evolving technology will enable new approaches to teaching and learning (Arnold, 2010). The need for unprecedented speed and agility, increasing compliance requirements and an urgent demand for visibility into real people-management are some of the challenges that will separate great institutions from those that fall behind. When academic analytics solutions are well designed and easy to use, they enable people to work smarter, learn faster and collaborate more closely.

References and Resources

Arnold, K. E. (2010). Signals: Applying academic analytics. *EDUCAUSE Quarterly, 33*(1).

Campbell, J. P., DeBlois, P. B., & Oblinger, D. G.. (2007, July/August). Academic analytics: A new tool for a new era. *EDUCAUSE Review*.

Campbell, J. P., & Oblinger, D. J. (2007). Academic analytics. *EDUCAUSE.*

Finnegan, C. (2009). Academic analytics: Using the CMS as an early warning system. Retrieved from http://www.alt.usg.edu/ publications/impact2006/campbellfinnegancollinsgage_impact06.ppt

Fritz, J. (2009). Using course activity data to raise awareness of underperforming college students. University of Maryland-Baltimore.

Goldstein, P. 2005. Academic analytics.

Goldstein, P., & Katz, R. (2005). Academ ic analytics: The uses of management information and technology in higher education: Key findings. Retrieved from http://www.educause.edu/ecar

Kelly, T. (2010, February). Validation by metrics. *Chief Learning Officer*.

National Educational Technology Plan. (2010). Transforming American education: Learning powered by technology.

Ramaswami, R. (2010, February). Revving up performance. *Campus Technology*.

Strategic Initiatives, Inc. (2009). Making analytics understandable and strategic: Strategic consulting services for colleges and universities. Retrieved from socdemo/education/cps2007.html

About the Presenter

Charlene Douglas has worked for Desire2Learn for almost seven years as an eLearning Consultant, the Director of Small Client Initiatives, and now as the Marketing Manager for North America Higher Education. She has 14 years experience in the corporate environment and 19 years in higher education dealing mostly with the areas of eLearning, data centers, hosting, and Help Desks. During her 5-year tenure as Director, dot.edu, an Application Service Provider of the University of Wisconsin System, she successfully proved the concept of centralized infrastructure. In 2002, dot.edu was selected by Sun Microsystems to become a Center of Excellence in eLearning infrastructure. Charlene has a Bachelor's degree in Elementary Education, a Masters in Counseling and an EdD in Educational Psychology.

Address: 151 Charles Street West Suite 400
Kitchener, Ontario N2G 1H6 CANADA
Phone: 208.476.7405
Email: charlene.douglas@desire2learn.com

Managing Rapid Growth of Online Programs: State of the Practice

Carlos R. Morales, Ph.D.
Vice Chancellor for Academic Affairs and Distance Education Programs
Ana G. Méndez University System

Introduction

Online learning continues to record grow at a constant speed (Allen & Seaman, 2008, 2010). The prediction for online learning is it will continue to increase for the foreseeable future (Nagel, 2011). Colleges and Universities continue to expand their offerings by adding certificates, courses and programs to satisfy the need of non-traditional students (Allen & Seaman, 2008, 2010; Gabriel, 2010). Many institutions continue to add sections of online courses due to the increased preference by students and limited physical infrastructure as they seek options to continue and finish their studies. Similarly, the economy has impacted the landscape of higher education as the unemployed return to school to update their knowledge and skills as well as to retool or just to complete the degree they put off years ago.

With this in mind, our distance education enterprise experienced a growth movement for the academic years 2008-2009, 2009-2010 and 2010-2011 of 28, 27, and 32 percent respectively. The distance-education enterprise growth was extensive in all directions without a specific target or strategy. This growth required a coherent strategy to manage a delicate balance of between keeping up with the growth, capitalize on a motivated faculty, and serve students well, while developing an attractive offer of academic programs. A plan to expand and manage the growth was conceived. It is noteworthy that the growth trend occurred while we faced challenging conditions for funding during the recession of 2008, increased demand for online learning courses and programs, and a faculty eager to embark into online teaching.

In early spring 2008, we received a request from the Provost to accelerate the process of growing our online offerings that included having a complete undergraduate program online and the general education curriculum available via this modality. The best way to achieve this was by creating a process to manage the growth; this plan was proposed to the Provost by mid-spring 2008. The Office of Academic Technology, in collaboration with the Provost's Office, developed a $35,000 budget with the specific purpose to fund the development of online courses from a growth management perspective. In concurrence with the Deans of the School of Education and Human Services and the School of Arts and Sciences, the Office of Academic Technology assigned priorities to programs instead of courses targeting the remaining courses in order to have the program delivered online. This was the case for the undergraduate program in Criminal Justice, which was completed for delivery over the Internet by Spring 2010. The Criminal Justice program in early 2008 had 10 courses already converted to online format of a total of 15 courses that completed the program.

An approach similar to the one described above was developed for six new Master's degrees and the General Education component, with the intent of having 54 credits available in the online learning modality. After the implementation of this approach, our course inventory in Spring 2008 had 120 courses and in Fall 2010, it was comprised of over 175 courses.

Background

In Spring 2008 the Office of Academic Technology at LHU was in the early stages of growth with 32 online courses, 20 faculty and 671 students enrolled. By the summer of that year, 71 courses were on schedule with 40 faculty members and a student enrollment of 1,261. Online learning was growing in all

directions without a specific strategy. These conditions caused many courses to be converted to online delivery without a reason beyond the desire and motivation of the professor. An articulated strategy was needed to grow and manage distance education. In comparison, by Spring 2009 we had 41 online courses, 24 faculty and 1,087 students enrolled for an increase of 62% compared to Spring 2008, while in summer we serviced 1,915 students in 97 courses with 65 faculty for an increase of 36% in course offerings and 51% in student enrollments, compared to Summer 2008. In the fall of 2009, we recorded a 28% growth in student enrollments with 1,143 students, 26 faculty and 45 online courses for a 15% increase. For spring 2010, we had 55 online courses, 29 faculty and 1,387 students; the increase for that semester was 34% for courses and 28% for students enrolled, compared to Spring 2009. Summer of 2010 we serviced 2,078 students in 131 courses with 64 members of the faculty for an increase of 35% in course offerings and 8% in student enrollments in relation to Summer 2009. For the Fall 2010 semester, we serviced 1,748 students in 62 courses with 37 members of the faculty for an increase of 38% for courses and 53% in student enrollments compared to the previous fall term.

The Challenge

The ever-present challenge in distance education—at least one of them—has to do with selecting courses and programs to be delivered online. Developing a criterion that helped us assign priorities to courses and departments while keeping the motivation and interest of faculty high, required us to maintain a delicate balance. We found that developing a quality online learning experience and competent faculty in online pedagogy was a greater challenge with broader implication (Quality Matters, 2011; Shelton, 2010). Course design and subsequent teaching process at LHU, include the use of a Course Quality Checklist where more than 20 items are discussed divided in five categories. The checklist allowed us to provide direction, rigor, and quality to the instructional design for online learning (Shelton & Saltsman, 2005). In addition, we had to create a long-term plan to support the growth of online learning supported with policies and guidelines.

The Procedure

By Spring 2008, the Department of Criminal Justice had the largest number of online courses: 10. This was a good opportunity for us to start a project that provided the structure to create complete programs for online delivery. With this in mind, our office approached the Provost's Office and presented a plan to manage the growth of online learning at LHU. This included setting aside $35,000 dollars to develop online courses that fitted the model established, assigned priorities to majors and departments that were underrepresented in the online modality, and assisting faculty and chairpersons with instructional design consultation and support (Shapiro, Biro, & Morales, 2009; Panda, 2003). As we progressed with the implementation of the process, it was amended to include the General Education requirements to be delivered via online learning.

The Incubator of Ideas: The Criminal Justice Program

This program had 67% of its curriculum already being delivered via online learning and represented a prospect of being a completely online program. On the administrative side, we secured approval and support from the Dean, who allowed us to accelerate the process; Criminal Justice was on the priority list. We met with the faculty and the chairperson of the department and provided a timeline to have the remaining courses converted for online learning.

Our office started working in the fall of 2008 on courses that were selected by the department to be next on the list to be developed; we achieved this by working on converting one course and sometimes two courses per term. We provided consultation, instructional design services, faculty training, and instructional technology advising to transition the faculty of the department to their new reality: online

learning. By Spring 2010, the entire curriculum was converted to online delivery and the faculty of the department was trained in the Learning Management System and online pedagogy.

Conclusion

Current trends indicate that more students will continue to choose online learning to complement face-to-face courses, retool and update their skills, or to complete their studies. Trends suggest that this will continue beyond 2015. It is important that colleges and universities continue to fund these operations and those administrators in charge of the enterprise, and to develop plans that aid them in managing the expansion. Putting together a set of strategies that facilitate planning, resource allocation, and growth make it possible to infuse swiftness in adapting to market conditions. For young programs, assigning priorities and aligning online learning to the strategic plan of the institution may result in a sustainable enterprise, thus impacting student retention, increasing revenues, and institution competitiveness.

References

Allen, I. E., & Seaman, J. (2008). *Staying the course: Online education in the United States, 2008*. Retrieved from http://www.sloan- c.org/publications/survey/pdf/staying_the_course.pdf

Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States, 2010.* Retrieved from http://sloanconsortium.org/sites/default/files/class_differences.pdf

Gabriel, T. (2010). *Learning in dorm, because Class is on the Web.* Retrieved from http://www.nytimes.com/2010/11/05/us/05college.html?_r=2&hp=&pagewanted=all

Monterrey Institute for Technology and Education. (2006). *The Online Course Evaluation Project (OCEP).* Retrieved from http://www.montereyinstitute.org/ocep/

Nagel, D. (2011). *Online learning set for explosive growth as traditional classrooms decline.* Retrieved from http://campustechnology.com/articles/2011/01/26/online-learning-set-for-explosive-growth-as-traditional-classrooms-decline.aspx

National Center for Education Statistics. (2003). *Distance education at postsecondary education institutions*. Retrieved from http://nces.ed.gov/surveys/peqis/publications/2003017

Panda, S. (2003). *Planning & management in distance education (Open and Flexible Learning Series).* Kogan Page, London and Stirling.

Quality Matters Project. (2011). *About quality matters*. Retrieved from http://www.qualitymatters.org

Rusell, T. (2001) *The no significant difference phenomenon: A comparative research annotated bibliography on technology for distance education.* Montgomery: IDECC. Available also at: http://nosignificantdifference.wcet.info/index.asp

Shapiro, P., Biro, S., & Morales, C.R. (2009). *Distance learning growth and change management in traditional institutions*. Proceedings of Distance Learning and Teaching Conference 2009. Retrieved from: http://www.uwex.edu/disted/conference/Resource_library/proceedings/09_19956.pdf

Shelton, K. (2010). A new tool to evaluate the administration of online programs. *Distance Education Report, 14*(21), 4-5.

Shelton, K., & Saltsman, G. (2005). *An administrator's guide to online education*. Greenwich, CT: Information Age.

About the Presenter

Dr. Carlos R. Morales is Vice Chancellor for Academic Affairs and Distance Education Programs at Ana G. Méndez University System. As such, he provides leadership, vision, and planning for the delivery of distance education programs. Dr. Morales has published internationally peer-reviewed journal articles on the topics of instructional technology, educational technology, instructional design, best practices in instructional design, and science education, and is a presenter at national and international conferences.

He has served on numerous professional organizations, including the Editorial Review Board of elearningpapers Europa, Peer Reviewer for the International Journal of ePortfolio Journal, EDUCAUSE Evolving Technologies Committee. He was a Frye fellow in 2009.

Address: Ana G. Méndez University System
P.O. Box 280 Bayamon, PR 00960
Email: crmorales@suagm.edu
Url: www.suagm.edu
Phone: 787-288-1100 Ext 8319
Fax: 787-288-1141

Recruit, Train, Sustain: The Adjunct Value in Distance Learning

Jennifer Cutts
Principal
Spectrum Higher Education

Jessica Gammon
Principal
Spectrum Higher Education

Introduction

The adjunct faculty member has become critical to the online classroom. They act as a representative of the university, influencing the brand reputation, interacting with students and directly affect learning outcomes. Most students, particularly online students, do not even realize there is a difference between full-time, tenured faculty and adjuncts. Adjuncts are responsible for directing and achieving learning objectives, engaging in quality discussion and building community as well as student retention. As administrators are seeing distance education as a growth engine, it is essential to invest in professional development and training of adjunct faculty to increase program quality, ensure an engaging learning environment, and ultimately reduce recruiting costs by retaining a higher percentage of adjunct faculty term-over-term.

Recruiting Top-Tier Adjuncts

In 1996, Baron Perlman and Lee I. McCann stated the following regarding recruiting and hiring faculty:

> In the 1950's fewer than half the finalists were interviewed prior to being hired; now the interview is a major step in the selection process. Doctoral school prestige, still important, was critical in the 1950's, and the importance of institutional prestige made hiring closed and preferential. Getting a job in higher education used to depend on what doctoral institution one attended and whom one knew. Larger applicant pools, greater attention to the candidates work, more importance of the campus interview, and greater expectation new faculty will influence the department. (p.5)

In 1996, Distance Education was an embryo and in the traditional environment it was difficult to find and keep a qualified individual. Fifteen years later, the demand has increased and the roles of our professors have been titrated into lead and facilitator roles, so we can accommodate significant enrollment growth due to online learning without sacrificing quality. Here lies the rise of the adjunct, the debate of their place in the classroom and department, and the question on how to develop, coach, and engage a professional individual in an academic environment. While, Perlman and McCann tout the interview, which is important, we are here to discuss the process in which to *get* to the interview, and what happens *after*.

How do you find a qualified professional individual to teach an online course? In the past, referral networks were picked clean to ensure a good *fit* with the candidate and institution. While that may work in today's environment for the short-term, the long-term strategy demands a different approach, particularly if growth is an objective. How many nurses with terminal degrees do you personally know that can fuel a growing MSN program with multiple sections in one term? How many health informatics professionals do you personally know who have not been sucked into the evolution of health care reform and have time to teach as an adjunct? What about a statistician? A bio-medical ethics individual? And while you may post a position on popular list aggregator websites and receive hundreds of applications

for an English opening, these individuals are *self-selected* not *recruited* or proactively *targeted*. How do you manage the volume? What kind of time-consuming activity has adjunct recruitment become? The way adjunct faculty are found is different today and will continue to change as institutions need to fill this role as their student enrollment continues to grow.

A referral network is the beginning. Yet, proactive searching will give you an opportunity to set a baseline, use a metric oriented approach, and create a database of a diversely qualified group of professional individuals. Develop a marketing campaign and utilize pay-per-click advertising to begin to recruit for a specific subject matter topic. Set the criteria of the top attributes you desire of candidates. Create three levels of screening, with the first being electronic to weed out un-qualified individuals. Preliminary research with Spectrum Higher Education indicates that within 60 days, a database of 200+ candidates ranging in the following categories can be created (see Table 1). Some have experience in teaching and some do not. With a unique marketing campaign, defined screening criteria, and a proactive approach to searching for adjuncts, a sustainable pool can be created and maintained to fuel your program growth.

Table 1. Three Levels of Screening.

Classification	% of Database	Industries
Unqualified	15%	Engineering, Business, Chemistry, Math, Education, Healthcare, Early Childhood Education, Science, and Psychology
International	5%	
Master's Degree	45%	
Doctoral Degree	35%	

The infrastructure and community are important to keep the pool of possible adjuncts alive and fresh. While the recruitment process can be fragmented among various colleges, departments, and disciplines, a holistic approach can create efficiency, standardization among the process, and equality in the treatment and engagement of potential employees.

Training for Success

Now that you have spent the time searching, screening, and selecting the right candidate, what happens now? This person is a successful individual in their profession, most likely holds a leadership role, and may or may not have taught online before. The on-boarding of a new adjunct faculty member is critical to the success of the class, the program, student retention, and sets the individual up for personal success as well. The ever-changing landscape in the academic arena calls for a unique approach to prepare a new faculty member for teaching online. The institution culture and mission, the program vision, the ability to teach, and also balance a full-time job and family can make supporting the adjunct population a complex endeavor. According to Judith M. Gappa, Ann E. Austin, and Andrea G. Trice in *Rethinking Faculty Work: Higher Education's Strategic Imperative*, the changes in traditional higher education:

> . . . mean that traditional academic appointments, employment policies and practices, and supports for faculty work are no longer fully appropriate for today's faculty members and the work they undertake. For example, if faculty members working in non-tenure track appointments are to be in a position to do their best work, leaders must provide equitable working conditions and ensure these faculty members inclusion in the campus community. If today's diverse faculty members are to satisfactorily balance their professional and personal lives, current expectations for academic careers will have to become more flexible. (p. 4)

Welcoming, on-boarding, preparation, engagement, development, community and assessment and evaluation are critical to set a foundation of mutual success for both the faculty member and the institution. How do you successfully accomplish this from a distance?

We suggest the ORIENT and EDUCATE approach. **Orientation** permits a new faculty member to become acclimated to the culture of the institution. **Resources** should be available for new and existing faculty. **Integration** into the department, into the campus culture creates loyalty and value. **Engagement** creates a dynamic relationship with the faculty that sustains energy, positive momentum, and relates to increased retention. **Nurturing** and **teamwork** allows faculty to be invested in the department and university mission. **Encouragement**, **development**, and offering a **unique platform** where distance faculty can unite stimulates creativity and innovation in teaching styles. A faculty **community** strengthens commitment. **Assessment**, **training**, and **evaluation** ensure quality, integrity, and helps define the future. Again, you may ask, how do you accomplish this from a distance?

Higher education institutions are beginning to invest in the training and development of adjunct faculty (McCarthy & Samors, 2009). Both a holistic and individual department approach to a formal orientation and on-boarding platform can be very successful. A new adjunct faculty members needs orientation to the culture and mission of the institution, an understanding of the program goals, a tutorial for the online learning platform, discussion, grading, feedback, and resolving conflict. A systemic approach is to develop a community platform assessable and useable by all faculty that becomes the hub of resources, department knowledge, interaction, and the place where faculty can interact similar to the way we ask out students to engage in the learning environment. The *Academy of Educational Leadership Journal*, stated "Creating opportunities for adjunct faculty to come together provides a way for them to develop connections with each other and with the university, reduces isolation, and makes first-term teaching less daunting." Similar to the student support structures developed to increase academic achievement and retention, faculty at a distance require the same thoughtful design to their participation and long-term future with an institution.

Retain to Sustain

The article Faculty Turnover: Discipline Specific Attention Is Warranted begins with a statement affecting faculty across disciplines, "Although some amount of faculty turnovers are necessary and have positive influences, such as creating opportunities for 'new blood' that brings along fresh ideas, high turnover rate always has strong undesirable consequences including lost return on previous investment, disruption of research and teaching programs, discontinuity in student mentoring, as well as the monetary cost of recruiting a replacement and the time of other faculty diverted in the hiring process" (Xu, 2008). In an environment where full-time faculty are at capacity, it is imperative to keep new faculty members recruited.

In addition to the faculty orientation and on-boarding platform, adjunct faculty need clear expectations for their role, and evaluation process to understand how to achieve reward and recognition, constant communication, the ability to see forward momentum, and where appropriate, increased responsibility. Adjunct faculty manage the tactical applications of an online course, participate in the discussion, and complete the grades and offer feedback. An adjunct faculty can be so involved in the granular activities of the course, they may lose perspective regarding student feedback and successful courses.

Frequent communication through conference calls, video conferencing, instant messaging allows a distant faculty member to feel included and engaged in the department. An article written by Jay R. Dee from the University of Massachusetts, contends, "Institutional effectiveness is diminished when courses cannot be offered or projects cannot be completed because of faculty turnover. Under conditions of high turnover, faculty morale is likely to suffer" (Dee, 2004). The over-arching effort is to find the right person who will

be a good fit and become a part of the institution. In today's climate of rapid growth, increasing competition, is it critical to program survival to keep the qualified faculty originally recruited.

The similarities between supporting distance students and distance faculty emerge from the need to be included, reduction of isolation, the ability to assess resources, and clear instruction to navigate and understand electronic resources is critical. Adjunct faculty have professional acumen, achieved a position of success in their field, and migrate to teaching to encourage their profession, test the academic environment, and hopefully positively influence future graduates. In the long term, the upfront investment in sufficiently orienting faculty, the continued investment in supporting and rewarding faculty creates a mutual beneficial environment where the institution keeps a veteran in online learning and the adjunct faculty feels meaningful in their daily activities.

References

Dee, J. R. (2004). Turnover intent in an urban community college: Strategies for faculty retention. *Community College Journal of Research and Practice, 28*,593-607. ISSN: 1066-8926 print/1521-0413 online DOI: 10.1080/10668920490467242.

Gappa, J., & Austin, A., & Trice, A. (2007). *Rethinking faculty work: Higher education's strategic imperative.* Jossey-Bass.

McCarthy, S., & Samors, R. (2009). Online learning as a strategic asset. Vol. I: A resource for campus leaders. Online Education Benchmarking Study, A♦P♦L♦U-Sloan National Commission on Online Learning.

West, E. (Dec 2010). Managing adjunct professors: Strategies for improved performance. *Academy of Educational Leadership Journal* 14(4).

Yonghong, J. X. (2008). Faculty turnover: Discipline-specific attention is warranted. *Research in Higher Education, 49,* 40-61. DOI 10.1007/s11162-007-9062-7.

About the Presenters

Ms. Cutts's has over 11 years of distance education experience. She has been a leader with two distance education powerhouses, Bisk Education and Compass Knowledge Group. Within these organizations she has focused efforts in the areas of instructional design, faculty recruitment, training and retention, student recruitment and managed program operations for a portfolio of institutions. Ms. Cutts is currently an adjunct instructor for the University of Illinois at Chicago. As a leader within Compass Knowledge Group, Ms. Cutts has had the pleasure of working with top-tier institutions and presenting at industry events. Over the past three years, Ms. Cutts has presented to dozens of institutions regarding distance learning operations and has had the pleasure to co-present on retention services at the Annual Sloan-C International Conference on Online Learning as well as present on Faculty Development at the Summit on e-Learning Innovation.

Address: P.O. Box 561427
Orlando, FL 32856-1427
Phone: 407-590-5194
Email: Jennifer@spectrumhighered.com
URL: www.spectrumhighered.com

Ms. Gammon has over dozen years experience in educational marketing with seven years in higher education distance learning operations with a specialization in marketing. She has been paramount in the brand strategy and positioning development within the advertising industry and Compass Knowledge Group. Ms. Gammon managed the marketing, recruitment, course development, and retention operations for a number of diverse institutions of higher education. Within the companies she focused on research,

brand development, positioning, and the portfolio management of a multi-million dollar marketing budget. Ms. Gammon has presented on distance learning operations and infrastructure evaluations to dozens of institutions, specializing in marketing, course-development strategy and faculty orientation to online learning.

Address: P.O. Box 561427
Orlando, FL 32856-1427
Phone: 407-590-5194
Email: Jessica@spectrumhighered.com
URL: www.spectrumhighered.com

Strategic Distance Learning Leadership in Higher Education

Dr. Pam Northrup
Interim Dean, College of Professional Studies
Associate Provost, Academic Innovation
University of West Florida

Introduction

In 2010, enrollment in distance learning courses across 2,500 colleges and universities in the US rose by one million students bringing the number of students taking online courses to approximately 5.6 million. This increase represents the largest ever year-to-year increase (Allen & Seaman, 2010). This widespread increase indicates that nearly 75% of institutions report that economic issues have increased the demand for online courses. Times have changed so much in the past 3-4 years with public institutions receiving less money from the state to operate, with stimulus funding going away and with more students on our virtual doorstep. This "new normal" in higher education requires institutions to rethink core mission and how to bring in funding to the institution without overburdening the student, without significant faculty and staff layoffs, while maintaining competitive advantage. At the same time, faculty, chairs and college deans are still concerned about rigor and larger class sizes for both face to face and online students. According to Christenson (2011), distance learning is a disruptive force in higher education with focus on teaching and a new business model emerging to support and ultimately it is a key strategy to increase enrollments. In addition to student enrollment increases, distance learning as a disruptive technology and faculty continuing to express desire for quality at all costs this 'new normal' is gaining significant attention from institutional presidents, provosts, from statewide bodies such as Boards of Governors and at the national level with new Integrity Guidelines for compliance. This paper will focus on strategically leading distance learning as a key institutional strategy through these times of significant change in higher education.

The New Normal in Higher Education

Many institutions have been wrestling with exactly what this means in terms of higher education costs vs values coupled by inflation. This translates into inflated tuition dollars educating the same (or similar) number of students as in previous years with less support from the state. In Florida, state support has declined significantly in the past 3-4 years and at present, state support is at 50% of full time equivalent (fte). Historically, state support was much higher along with more dollars available for requests for new dollars (translated into new faculty lines, new buildings, new projects, etc.). According to Stephen Laster, CIO of Harvard Business School this translates into the "real" question: *Is this higher education cost basis sustainable?* No one sees the trend going back to 'business as usual' but rather trying to determine what pressures will continue to be on higher education institutions to be more efficient with their financial and human resources (Grush, 2010). According to David Gergen, Harvard JFK School of Government, "we're not going to spend our way out of this budget crunch, we're not going to tax our way out of it. We're going to have to innovate our way out of it as a country." (TIA-CREFF) The sentiment exists on campuses across the country. At the University of West Florida, the leadership team, led by the President, has been holding "New Normal retreats" for the past academic year to try to figure out our new normal for higher education. Many creative ideas have emerged; importantly to this discussion is the rationale to continue to invest in distance learning as a long term strategy for the institution. This may include more expansive marketing, more possible program areas geared toward specific audiences (such as the military's request for shorter duration courses) and really thinking beyond the traditional campus experience for students that are non-traditional learners. So, for many institutions across the country as

evidenced by the over 1 million NEW distance learners in higher education in 2010, this is an institutional strategy for many.

Grappling with the "Existing" Normal Within a College

The federal stimulus provided a two year intermission from budget cuts and layoffs. With the federal stimulus going away, institutions are faced once again with contemplating its operational model to better meet core mission. At the University of West Florida, distance learning has been recognized as a significant multiplier for enrollments. As an institution that is at the tip of the panhandle with another state to its west and north and the Gulf of Mexico to the south, it was decided many years ago that distance learning would be a focus of enrollment growth and access to higher education and it has paid off with over 25% of all enrollments campus-wide coming from distance learning students. Investments were made to create 23 programs fully online with faculty incentives, incentives to colleges for enrollment growth, consistent and ongoing faculty support and student support. Much has been accomplished in the seven years since this decision was made, institutionally. Within the College of Professional Studies at UWF, 55% of all enrollments are taught through fully online courses. The policies and practices of establishing distance learning and institutionalizing it as a core priority was done at the institutional level where the larger infrastructure and support was put in place.

As a guide for the institution, the Academic Technology Center developed an active conceptual framework to support systemic distance learning using it as the framework to engage each level of the institution in planning and continuous improvement to meet university-driven goals. The framework includes alignment to institutional mission, quality curriculum, faculty support, student support and continuous improvement (Northrup, 2004). The conceptual framework (http://uwf.edu/atc/index.cfm) represents literature and best practices in the field. UWF's conceptual framework was crafted based on Southern Association of Colleges and Schools (SACS) Definitions and Principles for Distance Education, Western Interstate Commission on Higher Education and the Southern Regional Electronic Board (SREB), Sloan-C Consortium's Pillars of Effective Practice for Distance Learning, and the Department of Defense Principles of Good Practice and Quality Matters. Each document has a common goal of framing quality systemically and has similar areas of alignment. Continuous quality improvement is also evident in each of the documents, with Sloan-C representing a solid framework of metrics and progress indices. What is evident by viewing distance-learning quality as a set of interconnected parts all working together to achieve a common goal is the ability to look not only at the discrete parts, but also the interconnectedness of the components (Northrup, 2009).

With a robust conceptual framework in place, The College of Professional Studies Dean has taken the metrics within the institutional framework to personalize it to the level of a college and academic unit. To do so, the Dean established a college-level Distance Learning Task Force to spend the year reviewing institutional best practices, reviewing college level data, surveying each respective academic department and surveying the college faculty to determine next steps for supporting distance learning within the college. Although much has been done institutionally to shape best practice, most decisions about adjunct usage, faculty training, course development and offerings, student advising and faculty evaluations are handled within the college, most occurring within the academic department itself. As a college with high distance learning student enrollments, it was anticipated from the outset, that this faculty driven task force would identify areas that still required resolution although there would be best practices resident within the college itself.

Although this seems like a logical next step, the level of planning within an academic unit and even within a college to consider how distance-learning programs are implemented is a challenge. Taking into account unit accreditation requirements, such as NCATE within the college and the role of continuous improvement for teacher preparation programs presents opportunities to better align what the institutional

policy frames to the needs of a Professional Education Unit that emphasizes such things as clinical practice in multiple locations, including virtual school student teaching. Considered also are data collection and monitoring for all program areas emphasizing the role of the chair and the expectations for reporting in annual reports at the departmental level. Finally, the role of a faculty member to teach an online course taking into account how quality can be achieved, how student identity is verified and how assessment can be purposeful and align to institutional policies for academic integrity. It truly is where "the rubber meets the road" in systemic planning for distance learning.

Findings from the College Level Task Force

Findings within the College of Professional Studies resulted in six primary areas of interest to include administration, student access and support, faculty/adjunct support, the role of the faculty member, instructional environment/ course quality and technology usage. Based on the institution's conceptual framework for distance learning, there were both best practices and areas of need still existing within the college to strengthen the distance learning experience. Although our students were achieving equal grades face to face or online and were completing courses at impressive rates (88-100% course completions based on program), there are still areas of improvement needed. The table below identifies the indicators within the six primary areas of interest that are to be addressed in upcoming strategic planning for the College.

Table 1. Areas of Interest for College-Level Distance Learning Success

Interest Area	Indicators	Interest Area	Indicators
Administration	Evaluation of courses Realistic course assignments	**Student Access and Support**	Student experience Student opinion (recognition) Accommodation of student needs Advising Office hours
Faculty/Adjunct Support	Required adjunct training Required faculty training Support Compensation	**Instructional Environment/Course Quality**	Learning outcomes achievement Creativity Inconsistency across courses Organization Student engagement Academic Integrity
Technology Usage	LMS issues eDesktop Web conferencing Pulling in external content Software available	**Role of the faculty member**	Presence in course Feedback Design skills Development skills Ability to teach online

As a result, there were several recommendations made that will be incorporated into strategic planning for the upcoming year within the college to support faculty, adjuncts and students. In these times of core mission focus, strategic budgeting and planning and the new normal, any focused effort must be tied to direct needs and to increase the overall virtual footprint of the college. Growth without a solid foundation and continuous improvement would not result in desired ends. Our faculty are very committed to quality

online courses and ultimately wish to grow their skill sets. However, tolerance for courses that are not well designed or not well supported (faculty presence, engagement and feedback) will no longer be allowed. This requires academic chairs to monitor closely student evaluations and to be more attuned to what is happening in online courses as well as face to face courses. Ultimately, taking a proactive approach to training, using Quality Matters as a benchmark for quality online courses and supporting faculty and students is the tactic to be taken within our College. The notion of continuous improvement by using data, selecting key interventions for improvement and judging success is the strategic model that will be used.

Overall decisions were made as follows:

1. Train all faculty in best practices for teaching online to establish quality in all online courses. This will include student engagement, student presence, self-directed learning, the role of the faculty member, student, and the promotion of academic integrity and ongoing instructor feedback.
2. Recognize faculty and adjuncts who have demonstrated high standards for online learning.
3. Promote high quality online advising.
4. Expand knowledge base of chairs to provide evaluation of online teaching through annual evaluation channels.
5. Collect data by program, monitor and make continuous improvement.
6. Initiate more focus on blended learning programs.
7. Provide and support a service structure for online services delivery (beyond regular service hours).
8. Build strong departmental plans for when and how distance learning is being used to provide access to students and monitor plan (through data collection protocols established college-wide).
9. Expand marketing efforts for online programs beyond institutional marketing.
10. Make a conscious effort to hire adjuncts early to provide mentoring and adjunct training.

Conclusion

If distance learning is truly to disrupt the academy, there are many tactical things that must be in place to include looking at the business model to support distance learning, the type of faculty that are tasked to teach online, the efficiencies that can be gained through strategic partnerships and new models to expand access to teaching and learning. Regrettably, at most institutions, there are still tactical 'tweaks' that need to be made to make this type of transformational effort a success. In the interim, better understanding the needs of individual faculty, departments and supports for non-traditional learners must be in place and monitored continuously.

References

Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States.* Babson Survey Research Group. Needham, MA. The Sloan Consortium.

Christensen, C. M, Horn, M. B., Caldera, L., & Soares, L. (2011). *Disrupting college: How disruptive innovation can deliver quality and affordability to postsecondary education*. Center for American Progress. Retrieved from: http://www.americanprogress.org/issues/2011/02/disrupting_college.html

Grush, M. (2010). *Higher education IT in the New Normal*. An interview with Stephen Laster. Campus Technology. Retrieved from: http://campustechnology.com/Articles/2010/04/28/Higher-Education-IT-in-the-New-Normal.aspx?Page=1

Moore, J. C. (2005). *The Sloan Consortium quality framework and their five pillars*. Sloan-C Consortium. Retrieved from http://www.sloanconsortium.org/publications/books/qualityframework.pdf

Northrup, P.T. (2004). A guide to quality distance learning at the University of West Florida. Retrieved from http://uwf.edu/atc/quality.htm

Northrup, P. T. (2009.) Studio e^{TM}: Building a framework for online course quality with faculty professional development. *Proceedings from the 25th annual conference on Distance Teaching and Learning*, Madison, WI.

PRNewswire. (December 3, 2010). A new normal for higher education in the 21st century announced at the TIAA-CREFF Institute 2009 higher education leadership conference. Retrieved from: http://www.prnewswire.com/news-releases/a-new-normal-for-higher-education-in-the-21st-century-announced-at-the-tiaa-cref-institute-2009-higher-education-leadership-conference-78410507.html

SACS. Best practices for electronically offered degree programs. Retrieved from http://www.sacscoc.org/pdf/commadap.pdf

Southern Region Education Board (2004). *Principles of good practice: Foundations of quality for Southern Region Education Board's electronic campus.*

About the Presenter

Dr. Pam Northrup is the Interim Dean for the College of Professional Studies and Associate Provost for Academic Innovation at the University of West Florida. She has spent several years leading the integration of innovative technologies for teaching and learning. Most recently, she is involved in developing a highly immersive curriculum for the National Flight Academy. She has been involved with the U.S. military in deploying mobile devices to service members for the continuation of academic coursework while deployed. She also has spent a number of years developing and implementing online programs with direct responsibility for leading an innovative center that designs, develops and implements online learning.

Address: University of West Florida
11000 University Parkway
Pensacola, FL 32514
E-mail: pnorthru@uwf.edu
URL: http://uwf.edu/atc
Phone: 850-474-3255
Fax: 850-474-3205

Improving Student Retention: What the Research Tells Us

Bill Bloemer, Mike Lane, Dan Matthews, Shari Smith, and Karen Swan
Center for Online Learning, Research & Service
University of Illinois Springfield

Introduction

Online learning is no longer an anomaly in American higher education. According to the Sloan-C annual survey (Allen & Seaman, 2010), in the Fall 2009 semester, over 5.6 million, or 30% of all higher education students in the United States took at least one online course. Moreover, the 21% growth in online enrollments for that year far exceeded the 2% growth in the overall higher education population. Sloan-C also estimated that the total number of K-12 students engaged in online learning in the 2007/2008 school year was over 1 million, a 47% increase from the 2005/2006 school year (Picciano & Seaman, 2009). All indications are that online learning will continue to grow at these astonishing rates in the near future, not in the least because of the access it affords non-traditional learners. However, despite growing evidence that students learning online are more engaged (National Survey of Student Engagement, 2009) and learn at least as much if not more (Means, Toyama, Murphy, Bakia, & Jones, 2009) than students learning in traditional face-to-face environments, the notion that online learning is inherently inferior to face-to-face learning continues to be held by a large percentage of educators (Seaman, 2009).

One area in which many educators believe online learning is clearly inferior to face-to-face learning is that of retention/persistence (Gabrielle, 2001; Hiltz, 1997). Some studies estimated that the dropout rates for distance education is twice that of traditional education (Willging & Johnson, 2004), while others report that the average dropout rate from online courses is 50% (Oblender, 2002).Dutton, Dutton and Perry (1999), for example, found that undergraduate students had a 72% chance of completing an online computer science course as compared with a 90% chance of completing a face-to-face version of the same course. Carr (2000) found course completion rates for online students ranged from 80% down to 50%; Frankola (2001) similarly put dropout numbers as between 20% and 50%. In fact, most institutions highlighted as exemplary in a recent special issue of the *Journal of Asynchronous Learning Networks* on ways of improving retention (Moore & Fetzner, 2009) reported retention rates that were 2-5% lower for online enrollments than for face-to-face enrollments.

On the other hand, there is some evidence that students can be more likely to complete online courses, especially when these are compared with traditional, text and television distance courses (Jung & Rha, 2000). Indeed, Carol Twigg's course redesign projects (Twig, 2003; 2004) introduced online elements into traditional, large lecture courses and improved drop/withdrawal/failure rates in the majority of projects—from 28% to 19% in an introductory psychology course, for example, from 49% to 39% in a computer programming course, from 45% to 11% in a fine arts course, and from 39% to 25% in a sociology course. No traditional courses in this study had better retention rates than their redesigned, technology enhanced versions.

This wide range of findings concerning retention/success in online courses and programs suggests, not only that the area needs further investigation, but that there must be a variety of factors strongly affecting student success. A review of the literature reveals that some such factors have been explored, and these will be summarized below, but also that there are no clear measures of persistence. A common measure is *course completion*, or students who were enrolled as of a certain date who are still enrolled at the end of the semester, regardless of their grades (Bloemer, 2009; Shelton, 2009: Willging & Johnson, 2004), or all students still enrolled except students with failing (F) grades (Fasse, Humbert, & Rappold, 2009; Lenrow, 2001; Nash, 2005; Twig, 2003), although these measures vary even more by the date at which students

are considered "enrolled." The latter is also true of the related measure, *success*, which refers to students remaining enrolled and obtaining a grade of C- or better (Clark, Holstrom, & Millacci, 2009; Dziuban, Moskal, & Dziuban, 2000; Roblyer, & Marshall, 2002;2003; Wojciehowski & Palmer, 2004). Another commonly used measure is *retention*, which is defined as semester-to-semester enrollment (Boston, Diaz, Gibson, Ice, Richardson, & Swan, 2009; Chyung. 2001; Meyer, Bruwelheide, & Poulin, 2006), but again, there is no common agreement on a definition of "enrollment". Clearly, common measures of success need to be established so that factors affecting persistence can be explored across institutions. The lack of such common measures should furthermore be kept in mind in the discussion that follows.

While there are no specific models of retention in online higher education programs, two models developed to explain persistence among traditional (Tinto, 1975) and non-traditional (Bean, & Metzner, 1985; Metzner, & Bean, 1987) face-to-face higher education students are often evoked in the literature on persistence in online environments. Tinto's (1987; 1998) *Integration Model* views persistence as determined by a series of causal factors related in a longitudinal process. In Tinto's model, learner characteristics affect commitment, which in turn affects academic performance and interactions with faculty and peers, which lead to the students'being more or less integrated into the academic and social systems of an institution. Academic and social integration, then, predict retention. A good deal of research involving traditional, face-to-face students supports this model (eg., Astin, 1984; Nora, 1987; Pascarella & Terenzini, 1980). However, others have found the model needs to be adapted for non-traditional students. Bean and Metzner (1985), for example, found that although academic integration definitely mattered, the most important influences on persistence were the perceived utility of courses being taken (academic integration) and the encouragement, not of faculty and peers within the institution, but of family, friends and employers outside the institution (social integration).

There has been quite a bit of research done on the effects of elements of these models on the success of online students. Much of it centers on learner characteristics. Researchers have found, for example, that technology skills and experience (Bernard, Brauer, Abrami, & Surkes, 2004; Dupin-Bryant, 2004; Maki, & Maki, 2002; Pillay, Irving, & McCrindle, 2006); good attitudes toward computers and online learning (Pillay et al., 2006), and technology self-efficacy (Bernard et al; Osborn, 2001), although some findings dispute the importance of such factors (DeTure, 2004; Waschull, 2005). Similarly, content knowledge and skills, and experience with the content being taught have been found to support persistence (Cheung, & Kan, 2002; Slykhuis, & Park, 2002).

The strongest predictor by far, however, of persistence and success in online courses and programs is students' GPA (Bernard et al., 2004; Cheung & Kan, 2002; Dill & Mezack, 1991; Dupin-Bryant, 2004; Gibson & Graf, 1992; Willging & Johnson, 2004; Wojciechowski & Palmer, 2005). In addition, students who have a good environment in which to study (Osborne, 2001), easy access to a computer (Waschull, 2005), and/or who attend tutorials (Cheung, & Kan, 200) are more likely to complete online courses successfully. There is some evidence that females are more likely to persist than males (Cheung & Kan, 2002; Willging & Johnson, 2004).

Researchers have also found that self-motivation (Richards & Ridley, 1997; Waschulle, 2005) and/or self-directedness (Bernard et al., 2004; Hardy & Boaz, 1992) are predictors of success in online environments. Internal locus of control has also been shown to be a strong predictor of persistence online (Dille & Mezack, 1991; Parker, 2000; Wang & Newlin, 2000). In a similar vein, Dziuban, Moskal, & Dziuban (2000) discovered that students who identified themselves as dependent on a measure of reactive behavior patterns were less likely to thrive in online courses. Learning styles (Gibson & Graf, 1992) and field dependence/independence (DeTure, 2004), however, have proved to have little influence on online success.

Peggy Roblyer has developed a survey instrument that assess a set of learner characteristic to predict student success in virtual high school courses (Roblyer & Davis, 2008; Roblyer, Davis, Mills, Marshall, & Pape, 2008; Roblyer & Marshall, 2002/2003). Her Educational Success Prediction Instrument (ESPRI) has been refined through ongoing research to address four factors—technology skills/access/self-efficacy, achievement beliefs, academic independence, and self-organization. It can correctly predict 93% of students who are successful, but only 30.4% of those who fail. Thus, she suggested that it be used to identify those students most in need of extra supports to be successful online learners.

Within courses, research demonstrates that the perceived interactivity (Fosse, Humbert, & Rappold, 2009; Lenrow, 2009) and utility (Meyer, Brunwelheide, & Poulin, 2006) of courses, and faculty responsiveness (Lenrow, 2009; Shelton, 2009) are good predictors of course completion. The strongest predictor of program retention, however, seems to be perceived social presence of the instructor and peers (Boston et al., 2009; Lin, Gomez, & Yen, 2009; Meyer et al., 2006). Findings related to within course learning environments, therefore, seem also to support the notion that Tinto's concepts of academic and social integration are collapsed into one construct in online learning.

The kinds of extra supports for online learners most likely to result in their retention in online courses and programs is suggested by another line of research that looks at the effects of online learning environments on student success. Taken all together, this research seems to suggest that, in the online environment, academic and social integration are interwoven. For example, research has shown that peer mentoring, the mentoring of current students by others who have completed a course, can significantly affect student success (Bogle, 2008; Boles, Cass, Levin, Schroeder, & Smith, 2010). Similarly, participation in online student learning communities (Rovai, 2003; Santovec, 2004), orientation programs (Lenrow, 2009; Wojciechowski & Palmer, 2005), and freshman interest groups (Rovai, 2003) have been shown to predict student persistence. Ongoing student support services (Chyung, 2001; Frid, 2001) and the use of specialized program coordinators to whom students can turn for help (Boles et al.) have also proved effective in improving retention.

Although nowhere near as extensive as the research on retention/persistence in general, research on retention/persistence in online learning is growing, How can we put it to use? Again, a direction for putting research into practice comes from the general retention literature. Alan Seidman (2005) offered a practical model for supporting student success as a formula:

$$\text{retention} = \text{early}_{\text{identification}} + \text{early+intensive+continuous}^{\text{intervention}}$$

Simply stated, Seidman recommended identifying students at risk for dropping out early and then providing those students with intensive and ongoing support. Applying this to what the research tells us about retention/persistence online suggests the following: that we identify students at risk for dropping out using learner characteristics identified in the research; that we make sure such students enroll in courses that they perceive as useful and in which the faculty are responsive and facilitate interaction among students; and that we provide them with ongoing, research-proven supports.

The following tables provide some ideas for identifying and supporting students at risk for dropping out of online classes and programs in terms of identified predictors of persistence—learner characteristics, course characteristics, and support characteristics. The left-hand columns give the predictors and the research from which they are taken, and the right hand columns provide ideas for using these to support students at risk.

LEARNER CHARACTERISTICS	
PREDICTOR (references)	**IMPLICATIONS FOR PRACTICE**
students' GPA (Bernard et al, 2004; Cheung & Kan, 2002; Dupin-Bryant, 2004; Gibson & Graf, 1992; Willging & Johnson, 2004; Wojciechowski & Palmer, 2005)	Prior to start of each semester, look at GPAs to identify at-risk students Review institutional data to find cut-off for your institution/program
self-directedness (Bernard et al, 2004; Hardy & Boaz, 1993); **self-motivation** (Ricahrds & Ridley, 1997; Waschulle, 2005); **self-organization** (Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)	Inform students of importance of self-direction, motivation, & organization. Provide tutorials/classes to teach these skills Instructor should watch for/intervene early if student self-directedness and related skills aren't apparent.
internal locus of control (Dille & Marschall, 2002/2003; Roblyer & Davis, 2008; Parker, 2003); **independence** (Dziuban, Moskal & Dziuban, 2000; Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)	Instructor and designer establish & communicate parameters for success that promote independence and self-discipline. Examples: Instructor provides timelines and feedback; use announcements to alert students to due dates
achievement beliefs (Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)	Change fatalistic beliefs; include information about the central importance of effort in academic success in orientations
content knowledge and skills (Cheung & Kan, 2002; Slykhuis & Park, 2002)	Prior to start of semester, use content-specific assessment to advise students on course selection.
technology skills & experience (Bernard et al, 2004; Dupin-Bryant, 2004; Maki & Maki, 2002; Pillay et al., 2006; Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)**; technology self-efficacy** (Bernard et al, 2004; Osborn, 2001; Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)**; good attitudes toward computers & OL** (Pillay et al., 2006)	Assess students' skills and attitudes toward technology; provide support if needed. Provide clear, consistent, easily navigable course designs; avoid unnecessarily complicated technologies Incrementally introduce more complicated technologies
good study environment(Dille & Marschall, 2002/2003; Roblyer & Davis, 2008; Parker, 2003); **easy access to a computer** (Dziuban, Moskal & Dziuban, 2000; Roblyer & Marshall, 2002/2003; Roblyer & Davis, 2008)	For on-land students taking an online course, provide access to computers in a good study environment. Inform online-only students of the importance of easy computer access and good study environments.
participation in tutorials (Cheung & Kan, 2002)	Provide tutorials & orientations to online learning.
female (Cheung & Kan, 2002; Willging & Johnson, 2004)	Be aware that risks may differ by gender; work to integrate everyone into courses & programs

COURSE CHARACTERISTICS	
PREDICTOR (references)	**IMPLICATIONS FOR PRACTICE**
social presence Boston et al., 2008; Lin et al., 2009; Meyer et al., 2006	Provide & reward opportunities for student-student & student-instructor interactions
perceived interactivity (Fosse et al., 2009; Lenrow, 2009)	Provide multiple & varied opportunities for interaction – student-student, student-instructor, student-content.
perceived utility (Meyer et al., 2006)	Make practical applications of course content & activities explicit.
faculty responsiveness (Lenrow, 2009; Shelton, 2009)	Instructors should provide timely responses Instructors should provide responsiveness expectations

SUPPORT CHARACTERISTICS	
PREDICTOR (references)	**IMPLICATIONS FOR PRACTICE**
peer mentoring (Bogle, 2008; Boles et al., 2010)	Establish a peer mentoring program.
participation in student learning communities (Rovai, 2003; Santovec, 2004)	Design courses to facilitate and encourage student learning communities. Avoid learning in isolation, uni-directional teaching-learning models.
participation in orientation programs (Lenrow, 2009; Wojciechowski & Palmer, 2005)	Provide orientation activity. Make orientation activities mandatory for participation in online program
participation in freshman interest groups (Rovai, 2003)	Provide for freshman interest groups for online students.
ongoing student support services (Chyung, 2001; Frid, 2001)	Provide ongoing student support services that are readily accessible by online students.
specialized program coordinators to whom students can turn for help (Boles et al., 2010)	Instructors alone aren't enough – institutions should provide programs with specialized support staff for online students.

References

References for this paper are far too extensive for these proceedings, but will be provided on request. Please email Karen Swan at: kswan4@uis.edu

About the Presenters

Karen Swan is the James J. Stukel Distinguished Professor of Educational Leadership at the University of Illinois Springfield. Her research is in the area of media, technology, and learning on which she has published and presented extensively. She has authored over 100 publications on educational technology topics, as well as several hypermedia programs and two books. Her current interests include online learning, ubiquitous computing, and data literacy. Dr. Swan received the 2006 Sloan Consortium award for Outstanding Achievement in Online Learning by an Individual and this year was inducted into the first

class of Sloan-C Fellows. She also received a 2010 Distinguished Alumnus award from Teachers College, Columbia University, her alma mater.

Address: One University Plaza, BRK 377
Springfield, IL 62703
Phone: 217-206-7494
Email: kswan4@uis.edu

Daniel Matthews is an Associate Professor in the Department of Educational Leadership at the University of Illinois at Springfield. His responsibilities include teaching on campus and online educational research methods and guiding graduate students through their master's research projects. He earned his Ph.D. from the University of Illinois at Urbana Champaign in 1993. His professional interests and experience include online/distance education, the evaluation of educational programs and projects, and stakeholders' perceptions of educational programs, policies, or projects.

Address: One University Plaza, BRK 377
Springfield, IL 62703
Phone: 217-206-7521
Email: dmatt1@uis.edu

Building an Integrated Marketing Approach while Keeping the End in Mind

Brad Gibbs
Chief Growth Officer
PlattForm Higher Education

Summary

Oftentimes a marketing representative gets excited about a marketing concept, a new medium or the chance to build an integrated marketing plan for their institution. Deans, instructors, admissions and other staff members want to give their input on the plans and message, too. All the while, the President and the CFO pull the reins and tighten up the budget. These actions are all inevitable and could be what is hindering the growth of your institution.

So what do you do?
Consider Marketing 101. Go back to the basics. What you learned in marketing class and introductory business classes (macro- and micro-economics) should be thrown into the mix.

Stephen Covey's book *The 7 Habits of Highly Effective People* demonstrates many habits we should all practice on a daily basis. While practicing every habit can help you build the right business and marketing plan, there are two habits that are crucial: 1.) First things First; 2.) Start with the End in Mind.

In order to get where you want to go, you must first determine where you are currently. Here are a few questions you should ask yourself before you get started:

- What are your enrollment goals?
  - Do you have goals by program?
  - Do you have goals by location?
- What is your expected CPE?
- What does that include?
  - Do you have goals by program?
  - Do you have goals by location?
- What is your marketing budget?
- How many admissions reps do you have?
- How many inquiries are optimal for an admissions rep to work?
- What is your competition doing?
- How many competitors do you have in your market?
  - How much are they spending?
- What is your unique selling point, message and brand?

When institutions start a new division, add new programs, add new locations, or build out their online divisions, asking these questions and practicing the above habits can be very beneficial. You must always have a detailed plan of action, solid strategy and an end goal to work toward.

Now that I know where I am, where are my competitors?
Successful institutions focus a significant portion of their marketing budgets on interactive efforts and for good reason. Therefore, understanding the reality of interactive advertising is crucial.

Listed below are average interactive costs and conversation rates:

- Average cost-per-inquiry for CPI programs: Campus - $45 Online - $60
- Average cost-per-inquiry for PPC programs: Campus - $110 Online - $125
- Average conversion from I-E for CPI programs: Campus - 3% Online - 1.5%
- Average conversion from I-E for PPC programs: Campus - 7% Online - 4%
- Average conversion from I-E for website inquiries: Campus - 12% Online - 8%
- Average cost-per-inquiry for banners: You don't want to know!

These numbers are not exact, but they are averages from several thousand schools. There will be variations depending on spend level, brand awareness, programs, number of campus locations, etc. Are these different from what you were expecting? And what does this mean? See Table 1 and Table 2.

Let's do the math.

Table 1

Enrollment Goal = 100		
CPI Inquiries 2000 x $60 = $120,000	PPC Inquiries 600 x $125 = $75,000	Website Inquiries 300 x $10 = $3,000
Total Cost = $198,000		

Table 2

Enrollment Goal = 100		
2,000 CPI Inquiries @ 1.5% conversion = 30 enrollments	600 PPC Inquiries @ 4% conversion = 24 enrollments	300 Website Inquiries @ 8% conversion = 12 enrollments
Cost per Enrollment = $3,000		
Total Enrollments = 66		

Ouch! Higher cost and fewer enrollments than you were expecting? From these numbers, you should be thinking, "What about the other 34 enrollments? What if we could increase conversions by as little as 1%?" Well, you would over sit your starts because you just enrolled 107 new students. You lowered your CPE from $3,000 to $1,850.

How does traditional media impact interactive advertising?
A recent iProspect study revealed that 67% of students' online actions are driven by offline messages. When it comes to traditional media, we are comfortable with what we are used to utilizing. Most of us interact with television, radio and newspaper daily. However, it is just as important to consider the possibilities of billboard, transit, movie theatre advertising and direct mail.

Many schools receive 60 percent of their inquiries for campus-based institutions from the Internet. This number is even higher for online institutions, a staggering 90 percent! So as you develop your integrated marketing strategy, it would be wise to include traditional media outlets. There are many factors that influence which traditional mediums you should use:

- Are you going national or targeted?
- What is the competition doing?
- What are your enrollment goals?
- What market are you in?
- What programs are you offering?

Understanding the demographics and psychographics of your students will play a large role in the channels you utilize. Once you have established your demographics and psychographics, you can look at which mediums are the best fit for your institution. Additionally, since so much of your traditional media traffic drives prospective students to the Internet, it is important to understand which of those you can control and track. The use of specific 800 numbers and tracking URLs are important and sets the foundation for cross-channel tracking.

What else can I do?

Now that you have added Internet marketing and taken advantage of traditional media, more than likely your inquiry volume is up and your conversions are down overall. Combine that with the fact that prospective students do not enroll within the first 28 days (it could be anywhere from 3 to even 18 months). You must make sure that you stay in touch with your prospects. Utilize remarketing and capitalize on what you've already invested in. Build a consistent matriculation plan using email, direct mail, newsletters, and mobile applications.

Next, utilize retargeting. Have you ever noticed that once you visit your competitor's website, you then go to ESPN and see a banner for that same competitor? Your competitors are not spending their dollars doing banner ads. They are taking advantage of cost-effective retargeting.

Social media is a growing medium that many institutions are often afraid to fully take advantage of. Often, because they do not understand all of the advantages and capabilities social media has. There is much more to social media than Facebook and Linkedin and it is ever-changing. That is why you must start now, if you haven't begun already. Tracking social media regularly is a must. See what works for your institution and stick with it. Social media can be used for recruitment, matriculation and branding. Has your institution ever considered building your own social media site? If not, you are behind.

Determining your enrollment goals is the first step to building your plan for enrollment marketing. Answering the questions above and following this approach to interactive marketing, traditional media, remarketing, retargeting and social media will help your institution achieve the success and growth it desires. Always remember, it's crucial to start with "the end in mind."

References

Multi-channel trivia challenge. (2010). Kansas City, MO: Engagement Systems.

About the Presenter

Brad Gibbs joined PlattForm Advertising in 1999 and currently serves as the Chief Growth Officer. Brad directs all sales and public relations initiatives for the company and is responsible for making sure PlattForm's services provide clients with the results they deserve. He works closely with clients, ensuring the success of their campaigns. He has provided solutions to thousands of schools, always striving to

deliver the best prospects to their doorstep. As CGO, Brad is constantly looking for new outlets and resources that will ultimately provide clients with additional solutions and inquiry flow.

Address: 15500 W. 113th St., Suite 200
Lenexa, KS 66219
Phone: 913-254-6061
Email: bradg@plattformad.com
Website: www.PlattFormHigherEducation.com

No Professor Left Behind: Transforming the Hesitant Campus

Angela Velez, Ph.D.
Coordinator of Learning Technologies
Jane Peller, LCSW
Professor of Social Work

Northeastern Illinois University

Introduction

Even though research reports about online education show its ubiquity in higher education and its growing presence in other forms of learning (Allen & Seaman, 2010), some campuses have resisted the trend towards offering more online courses (Olcott & Wright, 2005). That resistance could be from an ill-informed administration that is holding on to the tradition of face-to-face teaching, hoping that it can survive without the launch into cyberspace; it could be from the faculty who teach at the institutions who are also reluctant to subscribe to any other form of learning than what they know and practice regularly. Regardless of the reason, campus administrators and faculty members need to understand that online learning is growing exponentially, and it will continue to grow with or without their support. Students might seek an education where their needs for flexibility and different learning environments are met. What that could mean for them, however, is that they and perhaps their institutions will be left behind.

The First Step Towards Transformation

The first step is to make sure the right person is hired to assist the campus and the faculty in the transition not only from the action of teaching face to face to the action of teaching online, but in the thinking about what online teaching is, what it means for them, the campus, and their students (Meyer & Barefield, 2010). The leader needs to be someone with a unique skill set, a dynamic personality, enthusiasm, and experience.

If the campus does not have a distance education leader, it needs to find one. Look for someone with experience in traditional higher education teaching, online teaching, and someone experienced in learning management systems. The experience component helps faculty trust the individual because the leader will know what it is like to be a faculty member. In addition, having online teaching experience will validate the leader's qualifications to promote such a learning environment.

The leader needs to be someone who communicates effectively, with administrators, tenured faculty, junior faculty, adjuncts, and others on campus. This person needs to have personality traits integral to a good leader: honestly, transparency, trust, enthusiasm, energy, and compassion. This person will also need to have a strong sense of purpose because transforming a hesitant campus is a difficult task. That person should be tied with a campus department that faculty members can regularly visit or contact for continual help and support (Simpson, 2010).

Start With the Administration

Once the person is hired, that person needs to start at the top and work his or her way down to the faculty. The administrators need to share their viewpoints about online education and what the institution's plans are (Simpson, 2010). This strategic plan has the potential to change the campus culture from one of resistance to one of embracing technology (The Association of Public Land-Grant Universities & Alfred P. Sloan Foundation, 2009). If a plan is available, that plan should be disseminated from the administrators to the campus. Starting with administrative support for online initiatives will help the process of getting faculty support for the endeavor.

The leader should meet with Deans and Chairs of departments in order to introduce who the leader is, what his or her qualifications are, and the vision for transforming the campus. The leader needs to be aware of any fears, apprehensions, or questions that departmental administrators have and deal with them as they are presented. The movement of departments towards accepting online learning has a lot to do with the leaders of departments (Simpson, 2010).

Design an Introduction to Online Teaching

A reason why some faculty have been resistant to exploring online education is that it is something they have not experienced. Engaging in an activity that seems foreign can be intimidating (Yick, Patrick, & Costlin, 2005). Therefore, the leader should design an online learning experience for the faculty. The class should be an introduction to online teaching, but it could also be practice in using the learning management system as well (Gahungu, Dereshiwsky, & Moan 2006). In order to get faculty interested in such a course, especially if they are participating without compensation, several steps should be taken first.

When discussing the transformative vision for the campus with Deans and Department Chairs, the leader should discuss the course that has been designed. The leader should show much enthusiasm for the class and discuss that research clearly indicates that faculty members need to be properly prepared to teach online in order to do it well (Muirhead & Betz, 2002). Ask about faculty members in the department who might be interested and follow up by contacting those faculty members personally to invite them.

Limit the course to a certain number of participants. Once all departments are made aware of the class, and the class size limit, then a campus announcement should be written to have faculty sign up. The announcement should be comprehensive and clearly indicate the class size limit. More classes might need to be offered if interest is high.

Offer Opportunities to Learn Technology

This leader should not only lead an online course, but also lead face-to-face professional development workshops aimed at introducing faculty members to areas of technology like: the learning management system (basic, intermediate, and advanced levels), social networking tools, using video and audio in classes, free tools like polleverywhere.com, and others that can enhance face-to-face learning (Zhen, Garthwait, & Pratt, 2008). These workshops should be offered several times a month so faculty members have continual opportunities to learn and get comfortable with technology (Weaver, Robbie, & Borland, 2008).

Engage other faculty members in showcasing their work in online teaching and/or technology. The leader should seek suggestions from departments about who is being innovating and contact the faculty member to offer a workshop on the tools that he or she uses. This showcase is powerful because it helps connect faculty members with their peers and helps them learn from each other **(**McQuiggan, 2007).

An option is to offer a summer “boot camp” on using technology. Gather as many faculty members as available who can present a tool, an idea, or their own classes to each other in a conference-like atmosphere. The leader can offer sessions on the learning management system, such as using the grading system, creating assessments, using discussions, and others.

Maintain and Nurture Relationships

Once faculty complete the online course experience, keep track of them and reach out often to answer questions, assist with design, or offer additional workshops, research, and awareness of issues in online

learning. Nurturing these relationships is key to making sure that the leader is creating a group of supporters who have a similar vision, and who have a shared understanding about what is needed to teach online.

When it comes time to make difficult administrative decisions involving online education, or to make policy and/or protocol statements, having a group of supporters is key to making sure that online initiatives have backing (Meyer, 2002). In the case of unionized campuses, this is even more important. If the leader has support from administration, and from a number of faculty members, then it is more likely that online learning initiatives will continue to move forward on the campus.

If possible, create a virtual location, either within the campus internal technology infrastructure, or through the learning management system, that the online course graduates and the supporters can interact with one another. Having a group like this helps bring people together who are supporting the leader, and makes it easier for the leader to communicate his/her goals, upcoming events, new information, and keep the group interested in the campus movement. In addition, encourage the faculty members to share with each other, whether that's course content materials, tools, articles, or ideas. What this activity does is encourage the development of a community of practice (Sherer, 2005).

Include the Students

Most campuses have a student association, such as student government. It is likely that the students have an opinion about online learning and the number of courses that are offered or are not offered on the campus (Allen & Seaman, 2007). The leader can seek information by meeting with the student government and sharing his/her goals with the organization. Having student support for online initiatives might not only help guide the initiatives (by including the needs of the students that are expressed through the meeting), but provide additional pressure on the administration and individual departments.

Having the leader cite evidence that online learning is a positive endeavor may not have as much weight on an administration as frustrated students who desperately need and want the flexibility of more online classes (Larreamendy-Joerns & Leinhardt, 2006). If departments and administrators have to answer tough questions from students in terms of why more online classes are not offered, the result might be increased momentum and support for the initiatives.

Ask for a Campus Taskforce

The leader does not have to be the sole person on campus who is creating these initiatives and pushing the campus forward to technological transformation. The leader should ask the administration to not only make its plan clear about online learning, but also establish a campus taskforce to develop policies and suggestions for the campus.

This taskforce should include the leader, as well as faculty members on campus who are experienced in teaching online, and representation from the campus IT department. This taskforce can assist the leader with making campus-wide plans towards offering quality online courses and what the campus can do to make strategic decisions to improve online course offerings and experiences for the students.

More Doesn't Mean Better

An area that has not yet been discussed is the idea of quality. While it is ideal to offer more online courses on a campus that is offering too few, a campus offering classes without an indication of quality could be devastating (Parscal & Riemer, 2010). The leader needs to engage the discussion of quality from the beginning of his/her interactions with administrators. The administration should be aware of quality metrics like Quality Matters and how using the metrics can help ensure that online courses are designed

with quality. Faculty members should be introduced to a quality metric during their online course experience and the leader should initiate a discussion about the importance of quality in course design.

By investing time and effort into using a quality metric, the leader doesn't need to worry about how well the courses look because the metric can be used to evaluate the course before it is ready to be taught. It can help with revision as well as the revision of courses that previously had been designed prior to adopting a quality metric.

Dealing With the Inevitable

Even with a great leader, a solid plan, and successful steps in the right direction, difficult and sometimes very vocal faculty members can make progress difficult. This is especially true on unionized campuses. The leader needs to be aware of any political issues that might interfere with the vision, as well as devise strategies to deal with them (Foley, 2003). The leader also needs to attempt to diffuse situations that threaten the success of the plan. Most often, what is being diffused is a disgruntled faculty member.

People do not like change, especially people who are used to the way they teach (Betts, 1998). The leader needs to understand that not everyone supports online learning, or the use of technology and while it seems counterproductive to the vision, the leader needs to choose his or her battles wisely if he or she wishes to win the war.

The leader needs to remain open-minded and listen to the thoughts, complaints, fears, and apprehensions of all faculty members. If that faculty member is willing, the leader should meet one on one to discuss the problem or issue. If the leader is skilled in communication, it is possible that the faculty member will feel less threatened if he or she knows that the leader is not expecting every faculty member to change or engage in online teaching.

Final Thoughts

When a campus has hesitated to accept online learning and is technologically behind other universities, making a cultural change is difficult. Having the right person lead the way is a good start, but involving as many people on campus as possible on the path to change will increase the likelihood of success for the transformation. It is not easy, but it can be done. Online education is an inevitable part of our educational future and resisting it is a futile, and perhaps destructive, endeavor.

References

Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham, MA: Sloan Consortium.

Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009*. Babson Park, MA: Babson College Survey Research Group.

Association of Public and Land-Grant Universities-Sloan National Commission on Online Learning. (2009, August). Online learning as a strategic asset. Retrieved from http://www.aplu.org/NetCommunity/Page/aspx?pid=311

Betts, K. S. (1998). Factors influencing faculty participation in distance education in postsecondary education in the United States: An institutional study. *Dissertation Abstracts International, 59*(7). (UMI No. AAT 9900013)

Foley, A. R. (2003). Distance, disability, and the commodification of education: Web accessibility and the construction of knowledge. *Current Issues in Comparative Education, 6*(1).

Gahungu, A., Dereshiwsky, M. I., & Moan, E. (2006, Summer). Finally I can be with my students 24/7, individually and in group: A survey of faculty teaching online. *Journal of Interactive Online Learning, 5*(2). Retrieved from http://www.ncolr.org/jiol

Larreamendy-Joerns, J. L., & Leinhardt, G. (2006). Going the distance with online education. *Review of Educational Research, 76*(4), 567-605.

McQuiggan, C. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration, 5*(3).

Meyer, J. D., & Barefield, A. C. (2010, Fall). Infrastructure and administrative support for online programs. *Online Journal of Distance Learning administration, 13*(3).

Meyer, K. A. (2002). Does policy make a difference? An exploration into policies for distance education. *Online Journal of Distance Learning Administration*, 5(4).

Muirhead, B., & Betz, M. (2002, January). Faculty training at an online university. *USDLA Journal, 16*(1). Retrieved from http://www.usdla.org/html/journal/JAN02_Issue/article04.html

Olcott, D., Jr., & Wright, S. J. (1995). An institutional support framework for increasing faculty participation in postsecondary distance education. *The American Journal of Distance Education 9*(3), 5–17.

Parscal, T., & Riemer, D. (2010, Summer). Assuring quality in large-scale online course development. *Online Journal of Distance Learning Administration, 13*(2).

Sherer, P. (2005). Web-based technology improves faculty development. *Academic Leader, 21*(1), 2-8.

Simpson, C. M. (2010, Spring). Examining the relationship between institutional mission and faculty reward for teaching via distance. *Online Journal of Distance Learning Administration, 13*(1).

Weaver, D., Robbie, D., & Borland, R. (2008). The practitioner's model: Designing a professional development program for online teaching. *International Journal on E-Learning, 7*, 759-774.

Zhen, Y., Garthwait, A., & Pratt, P. (2008, Fall). Factors affecting faculty members' decision to teach or not to teach online in higher education. *Online Journal of Distance Learning Administration, 11*(3).

About the Presenters

Dr. Velez has been in higher education for 13 years. She has taught traditional college courses in English and Humanities and started teaching online in 2005. She started working full time in online faculty training, support, and development in 2007 and has personally trained many hundreds of faculty members to teach online. She has also designed and created over a dozen online courses. She serves many roles in her current position, including instructional designer, faculty trainer, workshop facilitator, LMS Administration, and change agent.

Address: Northeastern Illinois University
5500 N. St. Louis Ave.
Chicago, IL 60625
312-919-8223
Email: a-velez4@neiu.edu

Jane Peller is a professor of Social Work for over 30 years, teaches three courses a term as well as consults as a Licensed Clinical Social Worker. She is renowned in her field for innovative thinking and teaching practices. . During the past several years she has used the Lectora program to develop modules for online education in social work. Professor Peller has trained many faculty and staff at her University. She has an engaging, entertaining style of interacting with the audience and makes all presentations hands-on and practical.

Address: Northeastern Illinois University
Phone: 773-442-4497
Email: j-peller@neiu.edu

Information Sessions

Research Track

A Replicable Model of Online Mentoring: An Ongoing Study

Rana Khan
Director, Biotechnology Program
University of Maryland University College

Arhonda Gogos
External Evaluator

Introduction

The Professional Science Master's Biotechnology program (http://www.umuc.edu/programs/psm.shtml) at the University of Maryland University College (UMUC) is offered fully online and has students who are geographically dispersed, with some even living abroad. As one of 11 degree granting institutions in the University System of Maryland, UMUC has a reputation of providing quality programs to the working professionals. One of the primary goals of the Biotechnology program is to develop a strong and sustained relationship with the industry since the majority of the graduates are either employed or will seek jobs in the private sector. Our mission is to assist students think about and develop their career goals, as they progress through the degree program, as well as identify ways to achieve them.

To achieve the aim of fostering a closer relationship with the biotechnology industry and also guide the students towards setting realistic career goals, we have developed a novel, web-based mentoring program (psmmentoring.umuc.edu) that can easily be replicated and customized to fit the needs of other programs or departments at any institution.

Empirical studies indicate that mentoring programs enhance student learning and have a positive impact on the personal and professional development of students (Levinson, 1978). A more recent study at Stanford University (Bettinger et al., 2011) indicates that "coaching" of undergraduate students leads to 13% higher completion rate and 10-15% higher retention rate.

Biotechnology Professional Mentoring Program

Web-Based Mentoring Model

To address the needs of our students and in-line with the mission of the biotechnology program, we have developed a novel online mentoring program that pairs students with mentors from the biotechnology industry, with the goal of improving student retention and students' career prospects.

In the model developed by UMUC, students within the first 18 credits of the master's program are eligible to apply for the mentoring program. The ones selected are paired with a mentor, a volunteer from the biotechnology industry. The students seek advice from the mentors as they progress with their degree. Each pair is assisted by a mentor assistant, an alumnus of the biotechnology program.

This model has the following key features that set it apart from other mentoring programs:

- It is offered at graduate level and is embedded in the degree program.
- It utilizes Web-based technologies that enable easy access and participation, provide flexibility and easier management of resources.
- It provides industry guidance to students in exploring and developing realistic career goals
- It employs Mentoring Assistants, graduates of the degree program, to facilitate the interaction of the mentors with the mentees.
- It is potentially sustainable through the participation of program graduates as mentors.

Specific objectives addressed through the mentoring program include:

- Assisting students in exploring and developing realistic career goals.
- Preparing students with an awareness and skill set for successful careers.
- Providing an opportunity for the industry to have a direct say in shaping future employees.
- Developing online components to enhance the mentoring interaction and data collection.
- Disseminating the model to other programs and institutions.

The pilot of the mentoring program was launched in the Fall of 2009 with 19 pairs of mentors/mentees. Since then, the participation has more than doubled with 41 participating pairs in Fall 2010 and two students graduating in the Fall of 2010.

Program Participation

The number of students and mentors who completed each semester since the start of the program is shown in Figure 1. Blue, orange, and yellow indicate the participants who joined the program in fall 2009, spring 2010, and fall 2010 respectively.

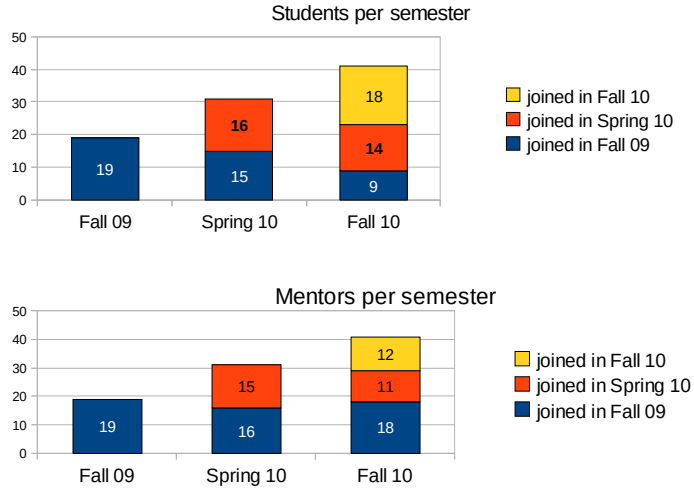


Figure 1. *Number of Students (top) and Mentors (bottom) Who Completed Each Semester.*

Notably, some of the students and mentors left the program in their second or third semester. Most common reason provided was time limitations due to personal or professional responsibilities.

Fall 2010 End-of-Semester Questionnaires

Feedback from the participants is regularly reviewed and suggestions for improvement are considered and implemented before the start of the next round of fresh applicants. Twenty-nine of 41 students and 22 of 41 mentors responded to the assessment questionnaires at the end of the fall 2010 semester. Table 1 shows a sample of their responses. For similar statements between mentors and students (e.g. setting goals, or taking advantage of networking opportunities), the students' most common responses were more favorable than the mentors' most common responses.

Table 1. Sample of Student (A) and Mentor (B) Responses to the Fall 2010 End-of-Semester Questionnaire.

A. Sample of statements to students:	**SA**	**A**	**SlA**	**SlD**	**D**	**SD**
My mentor is helping me set short-term goals and work through them.	34.5%	37.9%	17.2%	6.9%	0.0%	3.4%
My mentor is helping me develop a long-term plan for career development or career change.	41.4%	31.0%	13.8%	6.9%	3.4%	3.4%
My mentor facilitates networking opportunities in my field of interest.	44.8%	20.7%	20.7%	6.9%	3.4%	3.4%
B. Sample of statements to mentors:	**SA**	**A**	**SlA**	**SlD**	**D**	**SD**
With my assistance, my mentee set short-term goals and is working through them.	4.5%	54.5%	31.8%	9.1%	0.0%	0.0%
With my assistance, my mentee developed a long-term plan for career development or change.	9.1%	27.3%	40.9%	22.7%	0.0%	0.0%
My mentee has begun taking advantage of networking opportunities.	14.3%	23.8%	47.6%	4.8%	9.5%	0.0%

Note. 29 of 41 students (70.7%) and 22 of 41 mentors (53.7%) responded. SA: Strongly Agree; A: Agree; SlA: Slightly Agree; SlD: Slightly Disagree; D: Disagree; SD: Strongly Agree.

The participants were also asked to rate the program on a 5-level scale (*Poor* to *Excellent*). The program ratings have been consistent through the three semesters of the program implementation.

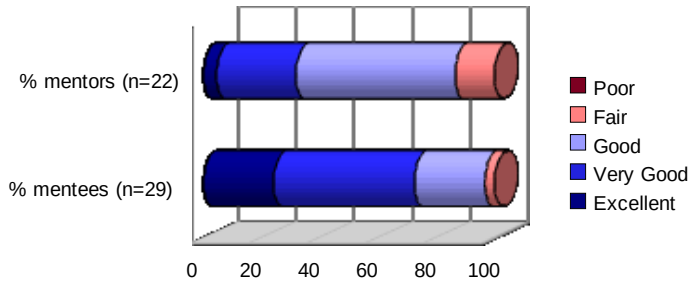


Figure 2. *Program **R**ating by Mentees and Mentors at the End of Fall 2010* (shown as % of participants for each rating level). Twenty-nine of 41 students (70.7%) and 22 of 41 mentors (53.7%) responded.

As illustrated in Fig 2 the rating of the program by the Fall 2010 participants who responded to our questionnaire mostly ranges from good to excellent. Most of the mentors rated the program as "good" and most of the mentees as "very good." This difference is significant, according to a Mann-Whitney test: U=467, p=.005, r=.39. (Due to the small size of the mentoring program and the use of non-parametric tests, we consider all values of $p<0.01$ to be significant. The Mann-Whitney test and the Wilcoxon signed ranks test were performed on the VassarStats website of Dr. Richard Lowry, Vassar College (http://faculty.vassar.edu/lowry/VassarStats.html). The effect size r is calculated as $z/\sqrt{N}$, where Z is the z-score and N is the total number of observations, in this case the total number of participants and non participants in each comparison (Rosenthal, 1991).

In summary, the overall experience of mentors and mentees appears to be positive and meaningful.

Results from the Fall 2010 Student Data

Table 2. Wilcoxon Signed-Ranks Tests Comparing the Academic Performance of Mentoring Program Participants With Non-Participants.

Wilcoxon Signed-ranks tests	**n**	**Median (mentees)**	**Median (comparison group)**	***Z***	***p***	***r***
Number of classes completed by the mentees vs. the comparison group by the end of Fall 2010.	41	6	5	2.6	.009	.41
GPA of the mentees vs. the comparison group at the end of Fall 2010.	41	3.75	3.5	3.14	.0017	.49
For the mentees who took at least 1 class before joining, number of classes completed *after* joining vs. their comparison group.	33	2	1	2.88	.004	.5
For the mentees who had GPAs before joining, GPA for semesters *after* joining, vs. their comparison group.	24	4	3	2.78	.005	.57

The data collected so far (Table 2) suggests that the participating students successfully completed all their classes. In summary, the Fall 2010 mentees' academic performance appears to be significantly better than the academic performance of the comparison group, based on student GPA and number of courses completed. This difference is still significant when limiting the sample to students who took classes or had a GPA before joining the program and comparing their performance after they joined the program. These results indicate a possible effect of student participation in the mentoring program and will be re-evaluated in subsequent semesters.

Replication of the Model

The mentoring model that we have developed is unique in its simplicity and structure. The forms to be completed by the participants are minimal and all material is Web-based. There is more responsibility on the students to post minutes from their monthly meetings with the mentors. All participants are required to complete the assessment forms at the end of each semester. The interaction mode is flexible and up to

the pairs, they can use the mentoring platform, video chat, Skype, email or a telephone call. The Master of Arts in Teaching (MAT) program at UMUC decided to replicate the mentoring relationship to increase the retention of teacher candidates and to integrate knowledge and use of technology tools by teachers and MAT teacher candidates for instruction and programming. Both programs share the common use of Web-based technologies including the use of a platform that the mentor and the mentee can both access, the use of web conferencing technologies, and similar application and assessment surveys. We envision that the outcomes of this program will be similar to those of the biotechnology program, and will lead to better academic performance of the students and higher retention rate.

References

Bettinger, E. P., & Baker, R. (2011). The effects of student coaching: An evaluation of a randomized experiment in student mentoring. *NBER* Working Paper No. 16881.

Levinson, D. J. (1978). *The seasons of a man's life*. New York, NY: Knopf.

Rosenthal, R. (1991). Effect sizes: Pearson's correlation, its display via the BESD, and alternative indices. *American Psychologist, 46*(10), 1086-1087.

About the Presenters

Rana Khan is a professor in the Biotechnology Program at the University of Maryland University College. Her research interests include developing strategies to enhance the synergy between industry and academia and to increase graduate degree attainment among minorities. Recipient of several awards in recognition of her dedication and commitment to the cause of education and two grants from the Department of Education, she received a Ph.D. in Cell and Molecular Biology from the University of Maryland at College Park.

Address: University of Maryland University College
3501 University Blvd East, Adelphi, MD 20783
Email: rkhan@ umuc.edu
URL: http://www.umuc.edu/programs/grad/biotech_studies/index.shtml
Phone: 240-684-2430
Fax: 240-684-2402

Arhonda Gogos is the External Evaluator of projects implemented at the Biotechnology Program, University of Maryland University College, and supported by the Department of Education, Fund for the Improvement of Postsecondary Education. As a Research Associate at AAAS, Project 2061, she worked on the clarification of science learning goals, identification of student misconceptions, and development and evaluation of science assessment items. She also has extensive research experience in the Biotechnology industry, with expertise in methods for structure-based drug design. She received a Ph.D. in Biophysics from the Johns Hopkins University.

Email: arhonda.gogos@gmail.com

Defining Quality in Distance Education: Examining National and International Standards for Online Learning

Barbara Lockee, Virginia Tech

Ross Perkins, Boise State University

Ken Potter and John Burton, Virginia Tech

Sigrid G. Kreb, Robert-Bosch-Krankenhaus

Introduction

What factors determine the quality of distance-delivered instruction? Given the rapid proliferation of distance education (DE) across a variety of contexts, there has been much discussion regarding the importance of the effective design of DE courses. Consequently, many organizations have established a variety of criteria and standards that detail the essential qualities of effective distance learning experiences. Accreditation groups, professional associations, foundations, and even individual institutions have created sets of guidelines and requirements to serve as evaluation frameworks for DE. Due to the extensive growth of distance education in K-12, corporate, military, and higher education environments, an analysis is warranted as to how varying organizations define "effective" design of distance learning experiences. More broadly, information presented from this study can provide insights to the instructional design community, particularly with regard to increasing awareness of the importance of the ID process in the design of distance delivered programming. Therefore, the purpose of this paper is to present findings of a qualitative analysis of standards related to distance course design, including commonalities and differences among organizations with regard to defining quality distance learning experiences.
Perspective/Theoretical Framework

Valuing, or rating, the usefulness, importance, or worth of an educational experience is at the heart of evaluation (Sanders, 1994). Hence, evaluation standards are inherently "value" driven, as they reflect a perceived set of values by a given organization. The practice of instructional design is conducted by individuals and entities with a widely varying range of knowledge and experience regarding the theoretical and practical aspects of ID (Larson & Lockee, 2009). Unfortunately, the design and development of instruction is often performed by people and/or agencies with little to no awareness of the ID process as a formalized activity, much less its theoretical underpinnings.

Related to this idea, exponential growth is occurring in the number of organizations that engage in the practice of distance education. Corporate, higher education, K-12, government, and non-profit groups alike are leveraging the ability to offer instructional programs through distributed means. In responding to this growth, there is widespread interest in maintaining the quality of distance learning experiences. As regulatory and policy-making bodies ranging from professional associations to accrediting agencies create standards of practice related to the instructional design of DE courses, awareness and adoption of ID is (or is not) reflected in these specifications.

Methodology

A qualitative approach was utilized to analyze standards related to the design of distance-delivered courses. Data about each organization was collected through a combination of website reviews, policy documents, and phone interviews with staff members and institutional clientele. Document analysis comprised the majority of this review, with phone interviews serving in a supplementary capacity.

Seventeen organizations, U.S.-based and international, representing a broad array of educational interests were reviewed for the purposes of this investigation. The following groups possessed a set of standards

related to the effective design of distance education courses for postsecondary education. While this data set is not exhaustive, this study strived to encompass a wide variety of entities in order to gain a comprehensive perspective on perceptions related to quality distributed learning experiences. Standards from the following organizations in Table 1 were included in this study.

	Organization Name	Type	Mission
1.	Distance Learning Accreditation Board (DLAB) http://www.usdla.org/html/resources/accreditation.htm	Accrediting service	Provides accrediting services for distance courses/programs on behalf of its parent organization, the United States Distance Learning Association (USDLA).
2.	Monterey Institute (MI)	Non-profit organization	The Monterey Institute for Technology and Education is committed to improving access to education.
3.	Sloan Consortium (Sloan-C) http://www.sloan-c.org/effective/pillarreport1.pdf	Special interest group (sponsored by the Sloan Foundation)	The purpose of Sloan-C is to help learning organizations continually improve quality, scale, and breadth of their online programs.
4.	Southern Regional Education Board (SREB) http://www.sreb.org/programs/edtech/pubs/2006Pubs/06T05_Standards_quality_online_courses.pdf	Nonprofit organization	The SREB helps government and education leaders in its 16 member states work together to advance education and improve the social and economic life of the region.
5.	Institute for Higher Education Policy (IHEP) http://www.ihep.org/assets/files//publications/M-R/QualityOnTheLine.pdf	Nonprofit organization	The IHE is dedicated to access and success in postsecondary education around the world.
6.	Southern Association for Colleges and Schools (SACS) http://www.sacscoc.org/pdf/081705/distance%20education.pdf	Regional accrediting agency	The primary regional accrediting body for the eleven U.S. Southern states (Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia).
7.	The Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org	Professional accrediting agency	Provides accreditation services for private, postsecondary institutions in the United States offering predominantly allied health education programs, including those offered via distance education.
8.	Accrediting Commission of Career Schools and Colleges of Technology (ACCCT) www.accsct.org	Professional accrediting agency	Provides accreditation standards and services for private, postsecondary career schools and colleges.
9.	Accrediting Council for Independent Colleges and Schools (ACICS) www.acics.org	Specialized accrediting agency	Advances educational excellence at independent, nonpublic career schools, colleges, and organizations in the United States and abroad.
10.	Distance Education and Training Council, Accrediting Commission (DETC) www.detc.org	Specialized accrediting agency	Provides educational standards and accreditation services specifically for distance education providers. A variety of clientele are served by this organization, including k-12 schools, post-secondary institutions, military agencies, and professional associations.
11.	Canadian Recommended E-learning Guidelines (CanREGs) http://bit.ly/canregs2002	(created by what was formerly a non-profit)	Services include professional research, proposal writing & project planning, project management, policy development and analysis, strategic & business planning, evaluation and ROI analysis, and provision of workshops and training.
12.	European Institute for E-Learning http://bit.ly/eifel-oeqls	Non-profit	Support organizations, communities, and individuals in building a knowledge economy and a learning society through innovative and reflective practice, continuing professional development and the use of

			knowledge, information and learning technologies.
13.	Open & Distance Learning Quality Council (UK) http://www.odlqc.org.uk/standard.htm	Non-profit	The aim of the Council is to identify and enhance quality in education and training, and to protect the interests of learners. The Standards set out the Council's definition of quality. Open and distance learning providers who meet those standards are eligible to apply for accreditation by the Council.
14.	European Foundation for Management Development http://bit.ly/efmd-cel	Non-profit	EFMD is a global organization devoted to the continuous improvement of management development.
15.	Australasian Council on Open, Distance, and e-Learning (ACODE) http://www.acode.edu.au/benchmarks.php	Non-profit	Enhance policy and practice in open, distance, flexible and e-learning in Australasian higher education.
16.	Open ECBCheck (EFQUEL) http://bit.ly/ecb-check	Non-profit; part of European Foundation for Quality in eLearning (EFQUEL)	Supports capacity building organizations to measure how successful their e-learning programs are and allows for continuous improvement though peer collaboration and benchlearning
17.	French Forum for Open and Distance Learning http://bit.ly/fffod-cop	Non-profit	Contribute to reflection and dialogue; Facilitate collaborations; Develop proposals for a development policy for Open and Distance Learning and Multimedia Educational; Develop links and cooperation with counterparts in Europe and in the Francophone world; Give members access the organization's electronic information system for discussions and information exchange.

Table 1. Organizations maintaining standards for distance education programming.

Results

Themes

Analysis of the criteria for "quality" distance education courses and programs revealed a set of thematic issues: the relative lack of emphasis on actual design standards, the comparative nature of the standards with regard to campus-based instruction, mandates for interaction, media selection issues, faculty training requirements, and student support. Each theme is discussed as follows.

Instructional Design

Examining the 17 sets of standards from an instructional design lens, there is a clear lack of mention of instructional design as a term, much less a guiding framework for distance course planning and development, particularly amongst the U.S.-based organizations. Only one of the U.S. organizations referred to the instructional design process by name (Distance Education and Training Council, 2009): "The organization and presentation of instructional materials are in accord with sound principles of learning and grounded in sound instructional design principles" (p. 2). While ID did not appear as a process by which to guide distance course development, all of the groups identified one or more components of ID in their standards related to distance coursework. The DLAB stated that "Distance learning courses must be pedagogically sound. They must be compatible with the technology and attuned to the nature and needs of participants" (Distance Learning Accreditation Board, No date, p. 3). The DETC, ACCST, and the IHEP delineated the need to specify instructional objectives or learning outcomes. All organizations identified the need for course or program evaluation.

Among all 10 sets of U.S.-based standards, the Monterey Institute of Technology and Education (Online Course Evaluation Project, 2006) offers the only recommendation for a theoretical basis for distance

course development:

> Instructional philosophy refers to the theories of learning that underlie the presentation of content, the kinds of activities and assessments created for the course, and the role of the instructor and the learner in the process of learning. Varying instructional philosophies include 1) linear progression, fixed sequence, 2) drill and practice—presentation, memorization, and assessment, 3) constructivist learning in which learners construct new learning based on prior learning (p. 9).

While this representation of various learning theories is limited at best, it at least acknowledges the need to ground design of coursework on established theoretical constructs.

The standards promoted by the seven international organizations represented in this study, on the other hand, make consistent use of some form of the term "design" or "learning design," and delineate expectations related to it. The Canadian Recommended e-Learning Guidelines (2002), for example, note in standard 3.11 that evidence of program success comes from a "routine review and evaluation" of a number of factors, including instructional design (p. 7). The comprehensive guidelines created by the European Foundation for Quality in eLearning (EFQUEL) (2010) indicate in Standard A.2 Technical and organizational requirements states that "Staff involved with the design, management, administration, and evaluation of the programme is qualified," (p. 2) and among these the specifically note *instructional designers* among them. The French guidelines (French Forum for Open and Distance Learning, 2004) make a clear effort to separate "training course engineering" and "pedagogical engineering" (i.e., instructional design). Its Standard 3.3 is essentially a prescription for the well-known ADDIE (analysis, design, development, instruction, and evaluation) process that undergirds the vast majority of ID models.

A Comparative Perspective

One of the more interesting themes that appears across most of the standards promoted by the U.S. organizations is that they tend to be written from a comparative perspective. In an earlier analysis of accreditation standards, Lezberg (2007) concurs, stating that the standards assume that "the success of education depends on its taking place at certain times and in certain places where the faculty member and his or her students are present in a locale appropriate for learning…" (p. 405). So strong has been this assumption that historically institutions did not offer the same credit for correspondence courses, many times assigning continuing education credit only (Lezberg).

The comparative perspective is most often represented in terms of measuring the effectiveness of student learning. Half of the organizations analyzed (ABHES, ACCST, ACICS, SACS, and Sloan) specifically indicated that the effectiveness of distance courses is to be measured in terms of comparing the achievement of distance students to campus-based students. For example, the ABHES website states that distance education evaluation reports must contain "a comparison study/analysis including the overall examination and final grade results for those students enrolled in similar courses/programs of study on a residential basis versus those engaged in distance education" (Accrediting Bureau of Health Education Schools, No date, p. 136). The ACCST guidelines state that

> Observable, measurable, and achievable student performance outcomes must be identified so that programs or courses of study offered through distance education methods can be compared to programs or courses of study with similar subject matter and objectives, whether offered by DE methods or residential means (Accrediting Commission of Career Schools and Colleges of Technology, No date, p. 90).

One of Sloan's "Five Pillars of Excellence" in online learning is learning effectiveness, which contends that "On-campus and online instruction achieve comparable learning outcomes" (Moore, 2005, p. 5). While the validity of such comparisons has been criticized with regard to determining the effectiveness of DE (Head, Lockee, & Oliver, 2002; Lockee, Burton, & Cross, 1999), recent federal endorsements of such an approach will likely perpetuate this evaluation strategy (U.S. Department of Education, 2008).

Other comparison points between campus-based and distance courses relate to the content and duration of

programs, assuming that both instances should be the same. For example, the ACCST states that, "The school must demonstrate that the content and length of a distance education program or course of study are comparable to residential programs. The school must justify any deviations from established clock-to-credit hour conversions, if applicable" (Accrediting Commission of Career Schools and Colleges of Technology, No date, p. 90). The ACICS standards indicate that, "Requirements for successful completion of distance education courses and programs must be similar to those of residential courses/programs" (Accrediting Council for Independent Colleges and Schools, No date). Again, the assumption is made that programs are being transitioned from place-based instruction to a distance approach, not that unique needs are being addressed through the creation of new, audience-specific educational programming.

The notion that distance learning should be comparable to on-campus learning is a phenomenon that has existed throughout the history of distance education (Thompson & Irele, 2007). There would seem to be a certain irony in this in that the university system itself grew up when the primary technology of content transmission were books which were rare and expensive (Cobban, 1975). Education took place in the church or in the homes of the wealthy. The early universities were a cheaper solution to make content available to those who were not wealthy (although in England inclusion of commoners was not encouraged until the 1500s) nor were they interested in a monastic life. In some cases professors wrote books. In other cases they annotated books the books of others. In all cases they taught the book (Cobban, 1975). Lecture was the primary method in order to transmit the book. Interaction between student and professor was very much the interaction between the student and the content. Then, as now, professors did not study pedagogy or design or any method that might be helpful to structure and transmit knowledge let alone models that might not involve "transmission" from teacher to student. Yet, Schalick (2006) says,

> Universities, long immune to change by virtue of their role as societal institution, are challenged by technologies on all levels, and are being reinvented with or without planned strategies. The extraordinary growth of means of communication, of access online to university courses, of new Internet-facilitated access to the vast resources of international libraries once held close to the smaller academic community, has exploded the concept of where knowledge resides and how it is to be accessed (p. 2).

Unsurprisingly, the traditions of the universities and colleges conflict with the potential offered by new technologies. Nowhere is this more evident than in the standards for distance education. Again, with the exception of Sloan which promotes asynchronous learning networks, economy of scale, and new "markets," (Moore, 2005), many of the standards for distance learning assume that all things should be comparable between face-to-face students on campus and distance learning students off campus.

Among the international organizations' standards, the "comparison" approach seems not to be the primary tactic for assessing quality distance instruction. Rather, the documents are consistent in establishing quality based on broader measures that should in fact cover any course, distance or otherwise. The standards of the European Institute for E-Learning (2004), along with the Canadian standards (2002) on which they are almost entirely based, do note a comparison to traditional programs, but not in terms of "quality" per se. The emphasis is instead on the value place on the courses, credits, or degree programs – as students would want assurances that their work would be readily accepted by other universities, employers, and so on. Interesting, the Australian Council on Open, Distance, and e-Learning (2007) standards, though they do not compare traditional courses to distance courses in terms of quality, do mention that "the vast majority of pedagogical applications are the complete realisation of an existing institutional learning and teaching strategy" (p. 11). Like the European standards, this benchmark indicates that providers need to be consistent, at the very least, in their DE offerings. Such an expectation does not make the traditional courses the bi-facto the measuring stick, as is what a number of the U.S.-based organizations who promote standards seem to do.

Mandatory interaction

The majority of these organizations require opportunities for interaction between the instructor and

student and/or among students, but do not define a purpose for such interaction. For example, the SREB requires that "the course or program provides for appropriate interaction between faculty and students and among students" (Standards for Quality Online Courses, 2006, p. 5). The IHEP maintains a similar requirement: "Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and email" (Quality on the Line: Benchmarks for Success in Internet-Based Distance Education, 2000, p. 2). Learners are not as convinced of the importance of such interaction (see, e.g. Su, Bonk, Mafjuka, Liu, & Lee, 2005) and, depending on the delivery approach (synchronous versus asynchronous), find it in opposition to some of the reasons they enroll in distance education.

> In contrast with other requirements for interaction, the DETC specifies the inclusion of interaction for the purpose of student support. Encouragement of Students: An active program, designed to optimize interaction between the institution and the student is followed to encourage students to start, continue, and finish the program in which he/she is enrolled, if continuing and finishing are the student's goals (Distance Education and Training Council, 2009, p. 3)

The emphasis within this criterion is communication between the institution and the learner to facilitate student progress within a program, rather than interaction for instructional purposes. While interaction certainly has beneficial manifestations within instruction (i.e., practice, feedback), mandating interaction without clear purpose does not contribute to the instructional effectiveness of the DE experience (Lockee, Cennamo, Potter, & Burton, 2007). While some of the international standards contain little by way of prescriptive interaction between students and instructors, the European Foundation for Management Development (2011) sets forth that "student/participant interaction with the teaching staff, other students/participants and/or interactive learning software is an essential characteristic of the program and is facilitated through a variety of ways" (p. 6). The standards do not go on to specify how such interactivity is fostered, but further on do specify that feedback from instructors is expected on a regular basis (p. 7). Interestingly, the European Institute for E-Learning (2004) standards, though generic in guidance with respect to interactivity, specifies that comprehensive courses will ensure that concept mapping activities and simulations would be available (p. 6), as should be collaborative activities (p. 5), yet provide no explanation as to why these are important. The implication seems to be that these activities would be required no matter the topic area. On the one hand, the French standards (2004) recognize the facility with which instructors in traditional settings can interact with learners, and recommend that distance teachers look for mechanisms that will allow them to interact as easily, but

> In distance learning these spontaneous indicators no longer exist and it is essential to invent new ones and to reach a compromise concerning the inevitably longer period of time between a warning or request for assistance being voiced, and a solution being found. (p. 33)

The "Code of Practice" document does not go on to formulate how this takes place. Where there is guidance toward best practice (ex., collaborative learning opportunities), the authors of the French standards are careful to make the case for them:

> Collaborative or cooperative work is not an absolute requirement for e-learning. However in a good many cases it may provide a solution to learners' isolation and provide support for their motivation through the sense of belonging that it creates. These asynchronous or synchronous group relations will be more or less organized and will have tools to achieve the educational aims that are expected of them: social cohesion, sharing of knowledge or the production of knowledge. (p. 37).

It is worth noting that the Australian (2007) standards are also not prescriptive, yet offer sound advice that any activities chosen for DE courses should, among other things, "be based on sound educational research and good practice" (p. 10). Perhaps all standards documents should have include this guidance at the very top of any discussion about pedagogical interventions in courses no matter their mode of transmission.

Media Selection

Distance course design choices related to media selection can be organized into two categories: delivery

mode and media attributes (Head, Lockee, & Oliver, 2002). With regard to distance delivery mode, the ACICS maintains a different set of requirements if courses take an asynchronous approach. Their standards for self-paced instruction state that "Institutions must notify and receive approval from ACICS prior to using self-paced as a mode of delivery" (Accrediting Council for Independent Colleges and Schools, No date). Additionally, if teaching self-paced courses, "Institutions must shift from a teacher-centered to a learner-centered environment" (Accrediting Council for Independent Colleges and Schools). The interesting aspect of this requirement is that there is not a parallel mandate for "learner-centered" synchronous distance offerings. Some of the guidelines analyzed do reflect the importance of choosing a delivery approach that supports instructional goals. The IHEP contends that learning outcomes should drive the media delivery mechanism, not the availability of technology (Quality on the Line: Benchmarks for Success in Internet-Based Distance Education, 2000).

With regard to media attributes of distance delivery systems, the MITE guidelines describe different media types and how they might be appropriately used to achieve certain objectives in distance courses. For example, "Audio can be used as a narrative clarification for still images, to introduce instructional elements in the course, or to create more interactive ways to learn" (Online Course Evaluation Project, 2006, p 9). This set of standards provides the most detailed recommendations regarding media selection from an instructional design standpoint.

In some cases of media selection, expectations exceed practicality. For example, according to the SREB, quality online courses "must utilize technology that enables the teacher to customize each student's learning experiences through tools and formats such as video, interactive features, resources and links to related information" (Standards for Quality Online Courses, 2006). These courses are expected to include multiple learning opportunities or multiple learning paths to master the content, based on student needs. Although technologically possible, this level of customization is not achievable through technology alone but also requires the services of qualified instructional designers with knowledge of the multiple factors influencing student learning experiences. A more realistic approach is seen in the following standards: "The institution uses appropriate and readily accessible technology to optimize interaction between the institution and the learner and enhance instructional and educational services" (Distance Education and Training Council, 2009), and, "The technology used is appropriate to the nature and objectives of the programs and courses and expectations concerning the use of such technology are clearly communicated to students" (Southern Association of Colleges and Schools, 2006).

The Canadian and European standards suggest that the inclusion of media in DE courses should only be included if the media enhances understanding rather than detracts from, following the same guidance of U.S.-based organizations. In careful language, the French document (2004) captures the spirit of similar standards in this way, "experience shows that sobriety and simplicity are better than too much animation which can impede acquisition/understanding of contents" (p. 24).

Faculty Training

Another common theme among the standards is a requirement or the provision of faculty training for distance environments, with a particular emphasis on such training in the international organizations. The focus of training across national and international standards, however, seems to be technological proficiency rather than pedagogical preparation for distance instruction. For example, the ABHES requires that, "Faculty is adequately trained in use of distance education technologies" (Accrediting Bureau of Health Education Schools, No date, p. 136). However, the DETC goes beyond simply requiring training and expects that faculty will maintain an approved professional development plan that includes regular participation in programming related to teaching at a distance. Interestingly, the same consideration is typically not given to the importance of planning campus-based instruction (Spector, 2008). The Open and Distance Learning Quality Council (2005), based in the United Kingdom, encourages DE providers to "be committed to the continuous professional development of staff and tutors" (p. 14), and this same expectation is found among the Canadian, European, and Australian

standards.

Student Services

Another facet of the comparative nature of the standards relates to the offering of services for distance students. Taking what works on campus and moving it off campus leads to further difficulties with student services. Consider the following standards:

> Students have adequate access to the range of services appropriate to support the programs, including admissions, financial aid, academic advising, and delivery of course materials, and placement and counseling (Southern Association of Colleges and Schools, 2006).
>
> The institution must provide student services such as counseling, academic advising, guidance, financial aid, and employment assistance for students enrolled in distance education courses/programs. (Accrediting Council for Independent Colleges and Schools, No date)

These standards have multiple problems when applied to distance education courses and programs. Many financial aid requirements are established by the federal government and distance education students taking a single course in a term may not qualify. Counseling services and employment assistance typically are offered on an institutional basis and not on a course or program basis. Diffusion of these services to distance education students is likely to lag well behind campus services, especially given that these services were specifically designed for traditional, campus-based learners.

Standards for student support as expressed by the organizations outside the United States are equally expressive in terms of ensuring that students have a satisfactory learning experience (the Australian standards use the word support more than 80 times). One of the more interesting standards, though, is found in the document by the United Kingdom's Open and Distance Learning Quality Council. In its document, it not only delineates standards for support of current students – it has an entire section dedicated to it – there are also standards to ensure that courses and programs are marketed to prospective students in a fair, candid manner – evidently seeking to avoid some of the problems that have beset for-profit DE providers in the U.S. of late. Though some standards across the international organizations related to support are fairly generic, all of the guidance offered makes clear that support needs to exist not only at technological levels, but pedagogical levels as well.

Final Thoughts

The standards for distance education espoused by the various organizations discussed in this study have been created to support and enhance the quality of the educational experience for all students. As one considers the differences found among the standards, particular when comparing U.S. and international perspectives, it is important to keep in mind that each set of standards was created within a unique context. The expectations from place to place vary not only due to different policies, but also based on the type of distance learning providers impacted by the standards, as well as the degree to which DE providers are actually held accountable to the standards. While there are certainly important differences among the standards, and though there is certainly room for improvement among some, there can be no doubt that the standards are a critical step forward in helping to promote and ensure quality among distance programs, which of course has the greatest benefit for the millions of learners who are enrolled in them.

References

Accrediting Bureau of Health Education Schools. Appendix I: Distance Education. Retrieved from http://www.abhes.org.

Accrediting Commission of Career Schools and Colleges of Technology. Section IX Distance Education. Retrieved from www.accsct.org.

Accrediting Council for Independent Colleges and Schools. Appendix H Principles and Guidelines for Nontraditional Education. Retrieved from http://www.acics.org/publications/criteria.aspx#AppH.

Australian Council on Open, Distance, and e-Learning. (2007). ACODE benchmarks. [Electronic document]. Retrieved from http://www.acode.edu.au/resources/ACODE_benchmarks.pdf

Canadian Recommended e-Learning Guidelines. (2002). [Electronic document]. Retrieved from http://www.futured.com/pdf/CanREGs%20Eng.pdf

Cobban, A.B. (1975). *The Medieval Universities: Their Development and Organization.* London: Methuen Publishing.

Distance Education and Training Council. (2009). *Accreditation Standards.* Retrieved from http://www.detc.org.

Distance Learning Accreditation Board (DLAB). United States Distance Learning Association. Retrieved from http://www.usdla.org/html/resources/accreditation.htm.

European Foundation for Management Development (EFMD). (2011). EFMD CEL criteria, indicators and standards. Technology-Enhanced Learning accreditation for ICT-based learning programmes. [Electronic document]. Retrieved from http://www.efmd.org/images/stories/efmd/downloadables/Criteria-Indicators-Standards.pdf

European Foundation for Quality in eLearning (EFQUEL). (2010). Open ECB Check. [Electronic document]. Retrieved from http://www.qualityfoundation.org/openecbcheck/images/stories/docs/openecbcheck-programmes-and-courses-version2010.pdf

French Forum for Open and Distance Learning. (2004). *Code of Practice: Information technologies e-learning guidelines*. [Electronic document]. Retrieved from http://www.fffod.org/media/20070613-RBPZ76001-EN.pdf

Head, J. T., Lockee, B. B., & Oliver, K. M. (2002). Method, media, mode: Clarifying the discussion of distance education effectiveness. *Quarterly Review of Distance Education, 3*(3), 261-268.

Larson, M., & Lockee, B. (2009). Preparing instructional designers for different career environments: A case study. *Educational Technology Research and Development 57(*1), 1-24.

Lezberg, A. K. (2007). Accreditation: Quality control in higher distance education. In M. G. Moore, (Ed.), *Handbook of distance education* (2nd ed., pp. 403-417). Mahwah, NJ: Lawrence Erlbaum.

Lockee, B. B., Burton, J. K., & Cross, L. H. (1999). No comparison: Distance education finds a new use for no significant difference. *Educational Technology Research and Development, 47*(3), 33-42.

Lockee, B., Cennamo, K., Potter, K., & Burton, J. (2007). IDT on-line: Using authentic contexts for the conduct of distance education research. In M. Orey, J. McClendon, & R. M. Branch (Eds.), *Educational media and technology yearbook* (pp. 43-47). Westport, CT: Libraries Unlimited.

Moore, J. M. (2005). The Sloan Consortium Quality Framework and The Five Pillars. The Sloan Consortium. Retrieved from http://www.sloan-c.org/effective/pillarreport1.pdf.

Online Course Evaluation Project (2006). A request for proposals by the Monterey Institute for Technology and Education.

Open and Distance Learning Quality Council. (2005). Standards in open and distance learning. [Electronic document]. Retrieved from http://www.odlqc.org.uk/

Quality on the Line: Benchmarks for Success in Internet-Based Distance Education. (April, 2000). Institute for Higher Education Policy (IHEP). Retrieved on July 25, 2008 from http://www.ihep.org/assets/files//publications/MR/QualityOnTheLine.pdf.

Sanders, J. (1994). *The Program Evaluation Standards: How to Assess Evaluations of Educational Programs.* Joint Committee on Standards for Educational Evaluation. Thousand Oaks, CA: Sage Publications.

Schalick, J.A. (2006) Technology and Changes in the Concept of the University: Comments on the Reinvention of the Role of the University East and West. In, Technology Management for the Global Future. Istanbul: Published proceedings of PICMET, 3, pp. 1140-1146.

Southern Association of Colleges and Schools. (December, 2006). Distance Education Policy Statement. Retrieved from http://www.sacscoc.org/pdf/081705/distance%20education.pdf.

Spector, J. M. (2008). What makes good online instruction good. In J. Visser & M. Visser-Valfrey (Eds.), *Learners in a changing learning landscape: Reflections from a dialogue on new roles and expectations* (pp. 251 - 266). Dordrecht: Springer.

Standards for Quality Online Courses. (November, 2006). Southern Regional Education Board. Retrieved from http://www.sreb.org/programs/edtech/pubs/2006Pubs/06T05_Standards_quality_online_courses.pdf.

Su, B., Bonk, C.J., Magjuka, R.J., Liu, X., & Lee, S. (2005). The importance of interaction in web based education: A program-level case study of online MBA courses. *Journal of Interactive Online Learning. 4*(1), pp. 1-19.

Thompson, M. M., & Irele, M. (2007). Evaluating distance education programs. In M. G. Moore, (Ed.), *Handbook of distance education* (2nd ed., pp. 419-). Mahwah, NJ: Lawrence Erlbaum.

U.S. Department of Education, Office of Innovation and Improvement. (2008). *Evaluating Online Learning: Challenges and Strategies for Success*, Washington, D.C. Retrieved from http://www.ed.gov/admins/lead/academic/evalonline/

Contact Information:

Barbara Lockee
Phone: 540.231.9193
lockeebb@vt.edu

Ross Perkins
Phone: 208-426-4875
rossperkins@boisestate.edu

Adult Learner Assessment Trending (ALAT): A Comprehensive Study of Today's Adult Distance Learning Population

Jeff Stevens, PhD
Assistant Professor
Professor of Computer Science, Colorado Tech
Institute for Advanced Studies
Business Intelligence and Research & Writing

Introduction

The landscape, as well as the horizon, of higher education has forever change with the emergence of the adult learner. This longitudinal study covered more than three years and spanned across the United States. The ALAT Study focused on a number of major aspects that encompasses the new adult learning population within the United States in a distance-learning environment. Among the major aspects of this study on the adult were issues related to what attracted the adult learner population to a university in a distance-learning environment as well as financial, motivating factors, apprehensions, continuity issues and retention challenges.

This mixed methodology study focused mainly on a quantitative methodology with the use of a questionnaire. The qualitative methodology of this study focused on follow up phone conversations with some of the participants to further detail aspects within the study's six sections. A MASK Model, created by the author, analysis is utilizes to highlight differences between the adult student and that of a traditionally aged student in a distance learning environment.

About the Presenter

Dr. Jeff Stevens holds a PhD. from Texas A&M University in process engineering and leadership. He has pioneered many strategies related to adult learning within virtual learning platforms. Dr. Stevens has worked in higher education for 17 years as an instructor, accreditation, online and on ground program development as well as in various managerial roles. He continues to pioneer adult learner initiatives within adult learning platforms and exploring ways to engage more adults and military personnel in higher education opportunities.

Address: Colorado Tech – IAS
5801 Spring Village
San Antonio, TX 78247
Email: drstevens@wsc.cc

Adaptation of Mathematics Anxiety Rating Scale-Revised (MARS-R) for Adult Online Students

Arfe Yucedag-Ozcan, Ph.D.
Doctoral Research Faculty
University of Phoenix

Susan Brewer, Ph.D.
Director, Instructional Assessment
University of Phoenix

Problem

Both children and adults experience math anxiety, and it is often related to test taking in math, particularly for performing well on high stakes tests (Marikyan, 2009). High math anxiety in students hinders their ability to perform in the college environment by causing poor academic achievement in math areas (Woodard, 2004). In a study of undergraduate students, individuals high in math anxiety were found to have reduced working memory span, which in turn resulted in increased reaction time and increased errors when performing math tasks (Ashcraft, 2001).

Experiencing high math anxiety may be even more prevalent for nontraditional students. Malinsky et al. (2006) reported that older students (age 25 and above) showed higher anxiety than younger students (less than 25 years old). Additionally, in this study, female college students experienced higher math anxiety when measured by MARS-R than male students. This finding is noteworthy for University of Phoenix students because of the composition of the population: University of Phoenix students tend to be relatively older than traditional college students, and a greater proportion of the students are female (University of Phoenix, 2009).

.

Instrument

The Mathematics Anxiety Rating Scale used in this study is adapted from MARS-R, revised by Plake and Parker (1982). The scale has 24 questions and is scored from 1 to 5, where *1* indicates *no anxiety* and *5* indicates *high anxiety*. There are two factors in the scale. The first factor is Learning Math Anxiety, which includes items that measure anxiety experienced during activities that deal with learning mathematics, such as *listening to another student explain a math formula.* The second factor is Math Evaluation Anxiety, which contains eight items that measure the anxiety experience of being evaluated, such as *taking an exam in a math course*.

Originally, MARS was developed by Richardson and Suinn (1972) as a 98-item tool to diagnose and recommend treatments for mathematics anxiety. Initially, the tool had one general factor; later, factor analysis by Rounds and Hendel (1980) showed that the tool actually contained two factors. Factor 1, the Mathematics Anxiety Scale, consisted of items related to learning, such as studying, test taking, and so on. Factor 2, Numerical Anxiety, consisted of items pertaining to daily use of mathematical concepts and computations.

Later, the scale was shortened to 24 items by Plake and Parker (1982) for the purpose of efficiency. They wanted to achieve a reliable and valid instrument with one-fourth of the original items. They still had two factors with similar reliability and validity numbers. Internal consistency was $\alpha = .98$. They labeled the first factor as Mathematics Learning Anxiety and the second factor as Mathematical Evaluation Anxiety.

Plake and Parker (1982) concluded that the relationship pattern of the 24-item MARS-R was similar to the 98-item MARS and also that there were clearly two factors.

Hopko (2003) designed a study to measure construct validity of MARS-R. After confirmatory factor analysis using a larger sample, he eliminated 12 of the 24 items but maintained the two-factor model, suggesting that Mathematics Evaluation Anxiety should be called Mathematics Testing Anxiety.

Purpose

The purpose of this study was twofold. The first purpose was to adapt MARS-R for online students, which included developing validity and reliability measures. The second purpose was to investigate whether academic success in math decreases math anxiety. Additionally, the factors that predict MARS-R post scores were investigated. Data was analyzed for these purposes after establishing that the instrument was valid and reliable.

Research Hypotheses

The researchers tested three hypotheses in this study:

1. Adapted MARS-R is a valid and reliable instrument to measure math anxiety of online students.
2. Academic success in math will decrease the level of math anxiety, evidenced by students with above average end-of-course grades having significantly lower post–MARS-R scores compared to their MARS-R pre scores
3. For students with below average end-of-course grades, there is no significant difference between the pre– and post–MARS-R scores.

Method

This study was carried out using quantitative research methods. The research design was quasi-experimental due to the lack of random selection of the sample. The sample consisted of 800 students enrolled in multiple sections of an Algebra 1-2 course, delivered primarily in the online modality with some sections in the face-to-face environment, who also used the online system for lessons and tests. Two versions of the course were utilized; one set of courses that lasted 5 weeks each, and another set of courses that lasted 9 weeks each. The instrument was embedded in online course materials as part of the weekly assignments. The students responded to the instrument during the first week and last week of the course. The study was planned as a pre-test post-test design, to establish a baseline with pre scores and to test if academic success in math decreases math anxiety. Where necessary, the wording of items on MARS-R was changed to accommodate online students. For example, the original item was *buying a math textbook*. In the current version, it has been changed to *downloading a math book*.

Data Analysis

The first research hypothesis was tested by analyzing students' MARS-R pre scores. Cronbach's alpha was used to determine internal consistency, which was the same method used by other researchers who have tested the reliability of the instrument (Hopko, 2003; Plake & Parker, 1982). Validity of the instrument was tested by analyzing the students' MARS-R pre scores and their end-of-course grades. The literature shows that math anxiety and academic success in math are negatively correlated (Malinsky et al., 2006; Woodard, 2004). If students who score high on the anxiety scale receive a low end-of-course grade, the instrument will be valid.

A factor analysis was also applied to determine the existence of the two subscales in the current MARS-R. Varimax rotation was used to clearly identify the dimensions. Hypotheses 2 and 3 were tested by

employing paired t-test analysis after the sample was divided into two groups of students, those who received above average end-of-course grades and those who received below average end-of-course grades.

Findings

Validity and Reliability

Factor analysis included 452 students' MARS-R pre scores. Principal component analysis was used for the extraction method and Varimax rotation was also utilized. A scree plot clearly showed two dimensions in the scale. Initially, the first dimension explained 67% of the 73% explained total variance. After the rotation, Math Evaluation Anxiety explained 38% and Math Learning Anxiety explained 35% totaling 73%.

The 7 items with factor loads smaller than .70 were deleted from the analysis. According to Hair et al (2006) a factor load of .70 and higher shows well-defined structure. After deleting items 2, 4, 8, 12, 13, 15 and 22, the explained variance increased to 76%. The same method was followed in terms of extraction method and rotation. Math Evaluation Anxiety explained 40% of variance and Math Learning Anxiety explained 36% of the variance. Math Evaluation Anxiety had 9 items and Math Learning Anxiety 8 items to measure anxiety (see Table 1 for factor loads).

The students' MARS-R pre scores were used for a reliability test. The internal consistency of the instrument with 17 items was tested using Cronbach's alpha and α=.97, N=456. As a validity measure, students' end-of-course grades were used. The correlation analysis showed that students' anxiety pre scores and their course grades are negatively correlated (r= -.186, p<=.01, N=587), consistent with findings noted in the literature. Overall, the adapted MARS-R consisting of 17 items was a valid and reliable instrument to measure math anxiety of online students.

Math Instruction and MARS-R Anxiety Scores

Hypothesis 2 asserts that math instruction will make a difference in students' MARS-R post scores. Specifically, students with above average grades will have significantly lower post–MARS-R scores than their MARS-R pre scores, indicating that academic success in math is associated with decreasing levels of math anxiety. Hypothesis 3 further asserts that there is no significant difference between the pre and post math anxiety scores of the students who received below average end-of-course grades.

Table 2 presents the descriptive statistics for pre and post MARS-R scores. The students' overall anxiety from pre to post scores did not show a significant change (t=1.504, df=310, p<=.134). Two sub groups were created, representing students who earned above average end-of-course grades and those who earned below average final grades. Paired t-test analyses results showed that students who earned below average grades had slightly increased post anxiety scores, but the increment was not statistically significant (t=-.816, df=111, p<.416). However, students who earned above average grades had reduced post anxiety scores and the difference was statistically significant (t=2.40, df=198, p<.018).

Conclusions

Adaptations to the MARS-R resulted in a reliable and valid revised version of the instrument for online students. The final version of MARS-R contained 17 items and it was highly reliable. The 17- item MARS-R is also a valid instrument to measure math anxiety of adult students in an online environment, as evidenced by students' academic achievement in math being negatively correlated with their anxiety level, as expected from the literature.

Furthermore, this study investigated whether higher academic achievement would lead to lower anxiety at the end of a math course. Above average performing students had significantly decreased anxiety levels. On the other hand, below average performing students had increased anxiety at the end of the course, but the result was not statistically significant.

Table 1. *Factor Loads of Revised MARS-R for Online Students (*n=*526)*

	Components	
Items	Math Evaluation Anxiety	Math Learning Anxiety
21. Taking a final examination in math class	**.889**	.222
10. Taking a quiz in a math course	**.833**	.399
16. Receiving a homework assignment of many difficult problems due the next class meeting	**.812**	.381
6. Thinking about tomorrow's upcoming math test	**.812**	.384
19. Working on an abstract mathematical problem	**.763**	.455
18. Waiting to get a math test returned in which you expected to do well	**.760**	.399
14. Getting ready to study for a math test	**.750**	.492
11. Reading and interpreting graphs and charts	**.731**	.426
20. Completing a graded assignment in math class	**.731**	.426
5. Downloading a math textbook	.236	**.822**
7. Watching a video where the teacher works an algebraic equation on the board	.341	**.804**
23. Listening to another student explain a math formula	.367	**.774**
2. Logging into a math class	.416	**.755**
3. Having to use the tables in the back of a math book	.415	**.750**
17. Listening to a recorded lecture for a math class	.391	**.739**
9. Logging in to an online tutoring program to work on a homework assignment	.424	**.719**
1.looking trough the pages in a math book	.437	**.711**

Note. Bold numbers shows which factor the item belongs to.

Table 2. *Descriptive Statistics of MARS-R Scores*

	Pre		Post	
	Mean	N	Mean	N
Total Scores	51.7 (18.9)	397	50.8 (19.2)	517
Above Average[a]	48.5 (19.4)	199	46.5 (18.8)	199
Below Average[a]	55.4 (17.8)	112	56.2 (18.6)	112

Note. Standard deviations are shown in the parenthesis.
[a]Groups were created using students end of course grade. Above average represents C+ and above, below average represents C and below.

References

Ashcraft, M. H. & Kirk, E. P. (2001). The relationships among working memory, math anxiety and performance. *Journal of Experimental Psychology: General*, *130*(2), 224-237.

Hair et al. (2006). *Multivariate data analysis*. Upper Saddle River, NJ.

Hopko, D. R. (2003). Confirmatory factor analysis of the Math Anxiety Rating Scale–Revised. *Educational and Psychological Measurement*, *63*(2), 336–351. DOI: 10.1177/0013164402251041

Malinsky et al. (2006, Winter). Math anxiety in pre-service elementary school teachers. *Education*, *127*(2), 274–279.

Marikyan, G. (2009). Notes on math anxiety among students: Cause-and-effect, pro-and-con. *The International Journal of Learning, 16*(1), 211-21.

Plake, B. S., & Parker, C. S. (1982). The development and validation of a revised version of the Mathematics Anxiety Rating Scale. *Educational and Psychological Measurement*, *42*(2), 551–557. DOI: 10.1177/001316448204200218

Richardson, F. C., & Suinn, R. M. (1972) The Mathematics Anxiety Rating Scale: Psychometric data. *Journal of Counseling Psychology*, *19*(6), 551–554.

Rounds, J. B., & Hendel, D. D. (1980). Measurement and dimensionality of mathematics anxiety. *Journal of Counseling Psychology*, *2*, 138.

University of Phoenix (2009). *Academic annual report*. Retrieved from http://www.phoenix.edu/about_us/publications/academic-annual-report.html

Woodard, T. (2004, Spring . The effects of math anxiety on post-secondary developmental students as related to achievement, gender and age. *Inquiry*, 9(1).

About the Presenters

Dr. Yucedag-Ozcan has been involved in educational research over 20 years including program evaluation and assessment studies with K-12 schools and colleges. She has been conducting research in online education for last 5 years and involved in projects focused on teaching and learning in online education. Dr. Yucedag-Ozcan has also performed student learning assessments as well as programmatic assessment in online education institutions. Currently, she is a full-time doctoral research faculty with School of Advance Studies, where she teaches qualitative and quantitative research methods and pursues research agenda related to faculty and students engagement in online education.

Address: University of Phoenix
Online Campus
East Elwood Street
Phoenix, AZ 85034

Phone: 602-384-7225
Email: Arfe.Ozcan@apollogrp.edu

Dr. Brewer is currently the Director of Instructional Assessment at the University of Phoenix. She has worked there as an Instructional Designer and Strategist for start-up projects. Previous professional experience includes work redesign, research, and counseling with criminally insane patients. Susan holds a BA in clinical psychology and psychodrama from University of Redlands, and Master's and Doctorate degrees in Learning and Instructional Technology from Arizona State University. Her current academic interests are assessment and online collaboration. She is active in intergenerational groups within the American Buddhist community, supports Golden Retriever rescue, and participates in hobby level ballroom dancing.

The Interaction Equivalency Theorem: Research Potential and Its Application to Teaching

Terumi Miyazoe, Associate Professor
Tokyo Denki University

Terry Anderson, Professor
Athabasca University

Introduction

This paper aims to overview the Interaction Equivalency Theorem posited by Terry Anderson (2003). It clarifies the position of the theorem in distance education and provides a definition that includes its essential composites. Two research studies are introduced: a meta-analysis on the theorem to show its validity and an empirical research study using the theorem to demonstrate an application of the theorem in teaching and designing. The theorem is useful when analyzing the existing instructional design(s) of a specific learning context and deciding on the optimal interaction design that meets the needs and limitations of the learning context. This paper is an update of two 2010 journal papers by the same authors (Miyazoe & Anderson, 2010a; 2010b).

Background

Location in the Distance Education History

In this paper, interaction is defined as "reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events mutually influence each other" (Wagner, 1994, p. 8). This definition is the one used by Terry Anderson because of its simplicity and inclusiveness (Anderson, 2003). Historically, the "Three Types of Interaction" model (Moore, 1989) is regarded as the first systematic definition of interaction. This model defines critical interaction in educational contexts as having three essential components—learner–content, learner–instructor, and learner–learner interaction. The third element of learner–learner interaction may not appear new to present-day readers. However, at the time when Moore configured this model, online information delivery was not as developed in primary independent study modes of distance education and learner–learner interaction was a "new dimension" and a "challenge" (Moore, p. 4).

The Modes of Interaction

In their extension of Moore's interaction model, Anderson and Garrison (1998) advanced an interaction framework called the Modes of Interaction. Aside from the three interaction dyads proposed by Moore, the three dyads of teacher–teacher, teacher–content, and content–content interaction were also conceptualized as indispensable components to support deep and meaningful learning in online and distance education. This extension is propelled by the transition from the traditional distance education delivery system to the currently available, digitally networked learning environment, in which networks afford and can realize a much greater degree of interaction. Digital resource sharing, teacher networks and teachers' active involvement in making and sharing digital instructional materials are examples of teacher–teacher and teacher–content interaction. Another critical point is that Anderson considers both human and nonhuman interactions are integral components that help create a high-quality educational experience. This perspective highlights the new nature of student–content and even content–content interaction, in which students actively work online with artificial intelligence programs, the latter working together by transferring data multi-directionally to support online learning.

The Interaction Equivalency Theorem

The Interaction Equivalency Theorem posited by Anderson (2003) is the core of this paper. By extending the Modes of Interaction, the theorem aims to provide "a theoretical basis for judging the appropriate amounts of each of the various forms of possible interaction." The main features of his theorem are condensed into the following two theses:

> **Thesis 1.** Deep and meaningful formal learning is supported as long as one of the three forms of interaction (student–teacher; student–student; student–content) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience.
> **Thesis 2.** High levels of more than one of these three modes will likely provide a more satisfying educational experience, although these experiences may not be as cost- or time-effective as less interactive learning sequences.

Figure 1 is a tentative visualization of the theorem conceptualization (Miyazoe & Anderson, 2010a). The first thesis refers to the equivalency of *value*, (i.e., the *quality* of the interaction). In the most extreme case, it proposes that only one of the interaction elements is necessary to ensure high-quality learning. For example, a student could achieve a high-quality learning experience via intense interactions with other course members (e.g., collaborative or cooperative learning) even if the teacher is unavailable, and the course content is inappropriate. Other examples of high levels of student–teacher and student–content that still support quality learning were also developed in the original 2004 paper. In contrast, the second thesis refers to the *quantity* of the interaction (i.e., there might be an educational situation in which a student engages in intense interactions with the course teacher, the course content, and/or other students). Such a course would likely provide a high quality of learning, but the cost of producing the content and the time commitments that would be required of the students and the teacher would likely create a course that is expensive and unsustainable.

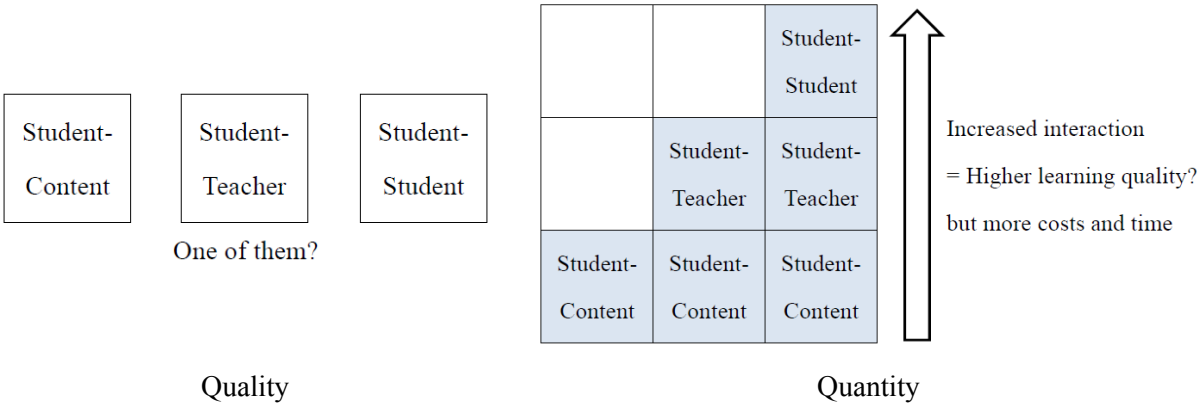


Figure 1. *A Visual Representation of the Interaction Equivalency Theorem.*

The conceptualization of the theorem clarifies further dimensions that need to be considered in the interaction design. One of these dimensions is the diversity of educational delivery contexts (i.e., closed vs. open systems). In a *closed* system, due to the limitations of cost and other resources, the designer may have to choose which possible interaction is the most important. In an *open* system, positive and accidental interaction surpluses (e.g., a course teacher voluntarily adding new online resources or inviting a guest lecturer to activate the course) are possible. The cost and time issues are relative to the system chosen as the framework of the course design. Another dimension refers to the priority order of the interaction dyads that may differ in specific instructional designs. In one setting, an emphasis on student–student interaction may be deemed the most effectual (in terms of both cost and learning). However, in another setting, prioritizing student–content interaction may be the best choice. In addition, accumulating research data and practice may allow the creation of sharable prototypes that people can reference to identify the most appropriate learning designs. In sum, the strength of the theorem lies in its ability to provide educators with the means to analyze and evaluate which methods will produce the most effective and efficient design in a given online and distance learning environment—without unilaterally prejudicing one type of interaction over another

Research on the Interaction Equivalency Theorem

There have been increasing numbers of studies, including doctoral studies, focusing on the theorem and its applications. Here, two studies with different orientations are introduced to demonstrate the theorem's scope. One is a meta-analysis on the theorem by Bernard et al. in 2009 designed to test the theorem's validity, and the other is an empirical study on the theorem executed by the authors to provide a specific example of the theorem's applications.

Meta-Analysis by Bernard et al. (2009)

The meta-analysis executed by Bernard et al. is the most recent comprehensive approach to test the validity of the theorem. To this end, it examined distance education research between January 1985 and December 2006. The total number studies examined for inclusion/exclusion was more than 6,000, and, out of 1,034 potential courses, a total of 77 satisfied all of the criteria (including treatment and control groups and measurable outcomes) for the final analysis. In this study, interaction was considered to be an intervention and is called the interaction treatment (IT). IT is defined as "the instructional and/or media conditions designed into DE [distance education] courses, which are intended to facilitate student–student (SS), student–teacher (ST) or student–content (SC) interactions" (p. 2) to codify the applied treatment into categories. The term *value* (or importance) for Thesis 1 and *strength* (or magnitude) for Thesis 2 were used for its conceptualization. Although the terminology appears different,

Bernard et al.'s interpretation seems highly consistent with the one articulated in this paper. In addition, the two categories of *achievement* and *attitude* are used as outcomes to calculate the effect size.

The basic findings are as follows: (1) Thesis 1 was supported, especially in relation to the SS and SC interaction treatments, which had higher values than ST for both achievement and attitude. (2) Not all of the combinations of the interaction treatments necessarily strengthen achievement and attitude, but (3) only SC contributes to higher achievement and attitudes. (4) Of the three possible combinations of SS+ST, ST+SC, and SS+SC, the combinations of SS+SC and ST+SC contribute to an increase in achievement. However, SS+ST and attitude did not support the thesis regarding increased effectiveness. In summary, the meta-analysis supports both Theses 1 and 2.

Bernard et al.'s meta-analysis revealed that combinations of different interaction dyads have not always assured higher levels of achievement and attitude. In particular, the combinations of student–student and student–teacher interaction might not increase the level of either achievement or attitude. This signifies that, although more efforts have recently been made to increase the level of interaction in online and distance learning in the hope of bridging the physical and psychological gap between students and teachers, this may not be the appropriate or lead directly to the type of gains expected and enhanced achievement or attitude. Furthermore, the meta-analysis suggests the importance of focusing on the interaction dyads paired with content elements. (In the tests of both Theses 1 and 2, increases in student–content interaction had a stronger effect than student–teacher or student–student.) In other words, it seems that if we can only ensure increases in one type of interaction, ensuring student–content interaction may be the most efficient and effective solution, followed by student–student interaction (as opposed to student–teacher interaction. This implication is contrary to earlier studies and perceptions of many teachers and students that teacher–student interaction is mostly highly valued and arguably most influential in a variety of outcomes—for example, see a review by Lamport (1993).

Empirical Application by Miyazoe and Anderson (2010b)
The purpose of this study was to test the validity and functionality of Anderson's two core theses using the author-made survey inventory. The research was conducted at four universities with undergraduate students ($N = 236$). The inventory asked the respondents to rank the interaction dyads in the order of the most to least critical to ensure a high-quality learning experience. The six patterns of the interaction dyads are listed in Table 1. For example, if you think that, of the choices of teacher, student, and content, content is the least negotiable element to ensure a high-quality learning experience and is followed by teacher and then by student, your priority order for high-quality learning is Pattern 5: content–teacher–student. This configuration is sustained by the hypotheses that, if Anderson's theses were valid, (a) respondents would be able to value one interaction over the others, and (b) they could rank the three interaction elements in order from most to least important.

Table 1. Six Priority Order Patterns of the Interaction Equivalency Theorem

Pattern	Rank 1	Rank 2	Rank 3
1	Teacher	students	content
2		content	students
3	Students	teacher	content
4		content	teacher
5	Content	teacher	students
6		students	teacher

Aside from investigating general perceptions about the priority order, the survey questioned the respondents to compare their learning mode parameters and subject orientations (i.e., face-to-face vs. online vs. blended learning modes and skill-oriented vs. knowledge-oriented subject orientations). The premise for these subcategories is that, if the results successfully detect the most optimal interaction order in a specific situation, customizing a course design fitting to the specific focus or context of the course program could produce higher levels of learning.

The results confirmed the validity of both Theses 1 and 2. Thesis 1 is confirmed because the students in this study could pinpoint, with no hesitation, the type of interaction that was the most important to them. This result suggests that each student has clear criteria for choosing his or her most preferred interaction. Thesis 2 is confirmed because they could also rank the three kinds of interaction in the order that it was the most suitable for their own learning. In addition, this study suggests that this ranking likely changes depending on differences in the learning modes and learning subjects. In addition, in online learning, the students ranked student–content, student–student, and student–teacher interaction in this order of

importance, which is consistent with Bernard et al.'s meta-analysis results from distance education research.

Discussion

This paper has provided background needed to understand Anderson's Interaction Equivalency Theorem (2003). It clarified its historical position with respect to online and distance education, provided the conceptual articulation of the two core theses, and overviewed the research evidence that supports its validity. This section introduces several topics for further research and practice using implications of the theorem.

Perspective Shifting

Thus far, research has only covered the three dyads of student–content, student–teacher, and student–student interaction (i.e., those seen from only the students' perspective). This is understandable for many practical reasons, such as the relative ease of executing survey research that asks students about diverse aspects of their learning experiences. It is more difficult to determine how to quantify and evaluate the other three dyads of teacher–teacher, teacher–content, and content–content interaction. The extension of Anderson's two core theses to include perspectives that take into account the roles of teachers and course content is useful for further exploring and quantifying the learning effectiveness and efficiency of online and distance education. That is we can expand the theory to include two new theses:

> **Thesis 3**: Deep and meaningful formal *teaching* is supported as long as one of the three forms of interaction (*teacher–student; teacher–content; teacher–teacher*) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience.
> **Thesis 4**: Deep and meaningful formal *teaching and learning* are supported as long as one of the three forms of interaction (*content–student; content–teacher; content–content*) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience.

Theses 3 and 4 demand a shift in perspective from a student-centered approach to a teacher- and content-centered approach. The personification of content is consistent with Anderson and Garrison's decision to add the three more dyads of interaction and the increasing capacity of "smart content" to update itself, communicate with other non-human entities and benefit from semantic web type inferences. Furthermore, developing ways to quantify these new dimensions of education will lead to more analytical and evaluative attitudes toward online teaching and learning.

Learning Design

Research by Miyazoe and Anderson (2010b) suggested that various teaching and learning contexts may demand different interaction dyads to realize a high-quality learning experience. Of the various factors that need to be taken into account when creating an instructional design, differences in teaching and learning modes (face-to-face, online, and blended learning) and in subject orientations (knowledge vs. skill-oriented) were tentatively tested, and the study suggested that these two parameters are helpful for enabling finer analysis and decision-making regarding the optimal interactions for instructional design. The importance of this study lies in its exploration of the interaction design and its application based on the appropriate assessment of each teaching and learning context. With the articulation of the two learning mode and subject orientation variables, we can determine the most effective and efficient interaction for various teaching and learning contexts. Finally, the results from Miyazoe and Anderson (2010b) also point to the perhaps obvious implication that different type of disciplinary knowledge may set constraints and expectations on types of interaction both needed and expected by students and teachers.

Further Research

Thus far, this research has not examined Thesis 2 in terms of the parameters of cost and time. This direction is important because if, in reality, doubling or tripling the interaction dyads brings little or no improvement in the quality of learning, it would be much wiser to concentrate on pursuing the mechanism of Thesis 1. It would be helpful if we had a table that could tell us how much money and time would be needed to increase the level of interaction for each dyad. The necessary cost and time may vary depending on the specific economies of various countries (i.e., in some countries, human factors may cost less than content factors). We may be able to further determine which interaction element is the most effective and efficient in terms of learning, cost and time. In this regard, testing Thesis 1 may eventually result in the most efficient and effective instruction with the least time and cost.

Due to the limits of space and time, this paper could only introduce two studies dealing with the general and specific aspects of the theorem. However, more research studies on the theorem are being executed as doctoral dissertation research, such as the works of Rhode (2008, 2009) and Byers (2010). There are countless research studies that do not explicitly mention the theorem but, in effect, use the hypotheses of the theorem. The reason that more studies on the application of the theorem are now being produced is certainly related to the recent development of new technologies that fully support the interaction dimension that Anderson predicted. As a researcher, it is exciting to participate in the long research tradition examining interaction in online and distance learning. As five years have passed since Bernard et al.'s 2006 meta-analysis, another sampling of the theorem dealing with the years 2007-2011 may be necessary to highlight the outcomes that recent developments in technology have brought to interaction design in distance education.

Resource-Sharing

For now, we have a Website course that collects relevant references and resources for the study of the theorem on a Moodle (http://miyazoe.info/moodle/). We welcome people who have a serious interest in research regarding the theorem. We would be happy if you contact us for further information sharing and collaborative research projects regarding the development of the theorem.

References

Anderson, T. (2003). Modes of interaction in distance education: Recent developments and research questions. In M. G. Moore, & W. G. Anderson (Eds.), *Handbook of distance education* (pp. 129-144). Mahwah, NJ: Lawrence Erlbaum.

Anderson, T., & Garrison, R. (1998). Learning in a networked world: New roles and responsibilities. In C. Gibson (Ed.), *Distance learners in higher education* (pp. 97-112). Madison, WI: Atwood

Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. *The International Review of Research in Open and Distance Learning*, *4*(2). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/149/230.

Bernard, M. R., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research*, *79*(3), 1243-1289.

Byers, A. S. (2010). *Examining learner-content interaction importance and efficacy in online, self-directed electronic professional development in science for elementary educators in grades three – six*. (Doctoral Dissertation). The Faculty of the Virginia Polytechnic Institute and State University, Virginia, US.

Lamport, M. (1993). Student-faculty informal interaction and the effect on college student outcomes: a review of the literature. *Adolescence,* 28, 971-991.

Miyazoe, T., & Anderson, T. (2010a). The interaction equivalency theorem. *Journal of Interactive Online Learning*, *9*(2), 94-104, available at http://www.ncolr.org/

Miyazoe, T., & Anderson, T. (2010b). Empirical research on learners' perceptions: Interaction Equivalency Theorem in blended learning, with Terry Anderson, *European Journal of Open, Distance and E-Learning*, available at http://www.eurodl.org/

Moore, M. (1989). Editorial: Three types of interaction. *The American Journal of Distance Education*, *3*(2), 1-7.

Rhode, J. F. (2008). *Interaction equivalency in self-paced online learning environments: An exploration of learner preferences*. (Doctoral Dissertation; AAT 3291462). Capella University.

Rhode, J. F. (2009). Interaction equivalency in self-paced online learning environments: An exploration of learner preferences. *Interactional Review of Research in Open and Distance Learning*, 10(1), from http://www.irrodl.org/index.php/irrodl/article/view/603/1178

Wagner, E. D. (1994). In support of a functional definition of interaction. *The American Journal of Distance Education*, *8*(2), 6-26.

About the Presenters

Terumi Miyazoe is an associate professor of e-learning and learning design at Tokyo Denki University and Open University, Japan. She earned an MA in TESOL (UK) and an MA in Distance Education (Canada) through online distance learning courses taken from Japan. Her research interests include online learning, semiotics, and foreign language education. Ph.D. in educational technology.

Address: 2-2 Kanda-Nishiki-cho
Chiyoda-ku
Tokyo, 101-8457, Japan
Email: t.miyazoe@mail.dendai.ac.jp
URL: http://members3.jcom.home.ne.jp/t.miyazoe/

Terry Anderson is a professor and the Canadian Research Chair in Distance Education at Athabasca University, Canada's leading online and distance open university. He teaches educational technology courses in Athabasca University's masters and doctorate programs in Distance Education. He has been the research mentor of Terumi Miyazoe since 2005.

Address: 1 University Drive
Athabasca ABT9S 3A3, Canada
E-mail: terrya@athabascau.ca
URL: http://cde.athabascau.ca/faculty/terrya.php
http://terrya.edublogs.org/

Developing Technologies for Learning Objects on Mobile Platforms

Moses Wolfenstein, Ph.D.
Associate Director of Research

Joe Nelson
Senior Developer

Academic ADL Co-Lab
University of Wisconsin–Extension

Summary

The Academic Advanced Distributed Learning Co-Lab (Academic Co-Lab) is currently in the process of developing a system that allows for the easy assembly and publication of content for mobile platforms including the iOS and Android operating systems. The Academic Co-Lab has two aims in developing the Mobile Access to Supplementary Learning Objects (MASLO) system: 1) Creating a usable piece of technology that enables even the less technologically adept to create mobile learning experiences. 2) Developing an open source research platform that allows educational technology researchers to explore questions about the design and use of digital learning resources, especially on mobile devices. Within the purview of our current R&D process, the Academic Co-Lab is particularly concerned with asking questions about how to effectively create middleware that enables the production of better digital media for learning, and how mobile devices can be used as vehicles for supplemental learning materials.

In work on MASLO thus far, the Academic Co-Lab has developed and tested a desktop tool for the design and publication of content packs for mobile devices through a user centered research and development method. The process began with needs analysis around the instructional design tasks the tool seeks to enable, and the development of wireframes and an array of other conceptual and design documents. The Academic Co-Lab then utilized an iterative paper prototype development process in which a rough version of the possible states of the interface was sketched out and tested with users. Upon achieving consistent response from users, the R&D team began development of the prototype software demonstrated at this conference. Development of both a local and cloud database solution are also currently underway, as is the initial development of the user interface for the mobile content player. A fully functioning prototype system will be completed by early in 2012, at which time both the alpha software and the source code for each element will be available for download at the Co-Lab's website www.academiccolab.org

Presenter Bios

Moses Wolfenstein, Associate Director of Research, has been conducting research on digital learning technologies at the Academic ADL Co-Lab since Fall 2010. He holds a doctoral degree in Educational Leadership & Policy Analysis from the UW-Madison where he worked extensively on topics including e-learning and game-based learning.

Joe Nelson, Senior Developer, has been working with the Academic ADL Co-Lab since June 2006 as a developer and SCORM auditor. His areas of expertise include software architecture, database structures, web interface design, and pure mathematics.

Contact Information:
Moses Wolfenstein
Phone: 608.263.9199
moses.wolfenstein@uwex.edu

Developing Technologies for Learning Objects on Mobile Platforms

Moses Wolfenstein, Ph.D.
Associate Director of Research

Joe Nelson
Senior Developer

Academic ADL Co-Lab
University of Wisconsin–Extension

Summary

The Academic Advanced Distributed Learning Co-Lab (Academic Co-Lab) is currently in the process of developing a system that allows for the easy assembly and publication of content for mobile platforms including the iOS and Android operating systems. The Academic Co-Lab has two aims in developing the Mobile Access to Supplementary Learning Objects (MASLO) system: 1) Creating a usable piece of technology that enables even the less technologically adept to create mobile learning experiences. 2) Developing an open source research platform that allows educational technology researchers to explore questions about the design and use of digital learning resources, especially on mobile devices. Within the purview of our current R&D process, the Academic Co-Lab is particularly concerned with asking questions about how to effectively create middleware that enables the production of better digital media for learning, and how mobile devices can be used as vehicles for supplemental learning materials.

In work on MASLO thus far, the Academic Co-Lab has developed and tested a desktop tool for the design and publication of content packs for mobile devices through a user centered research and development method. The process began with needs analysis around the instructional design tasks the tool seeks to enable, and the development of wireframes and an array of other conceptual and design documents. The Academic Co-Lab then utilized an iterative paper prototype development process in which a rough version of the possible states of the interface was sketched out and tested with users. Upon achieving consistent response from users, the R&D team began development of the prototype software demonstrated at this conference. Development of both a local and cloud database solution are also currently underway, as is the initial development of the user interface for the mobile content player. A fully functioning prototype system will be completed by early in 2012, at which time both the alpha software and the source code for each element will be available for download at the Co-Lab's website www.academiccolab.org

Presenter Bios

Moses Wolfenstein, Associate Director of Research, has been conducting research on digital learning technologies at the Academic ADL Co-Lab since Fall 2010. He holds a doctoral degree in Educational Leadership & Policy Analysis from the UW-Madison where he worked extensively on topics including e-learning and game-based learning.

Joe Nelson, Senior Developer, has been working with the Academic ADL Co-Lab since June 2006 as a developer and SCORM auditor. His areas of expertise include software architecture, database structures, web interface design, and pure mathematics.

Contact Information:
Moses Wolfenstein
Phone: 608.263.9199
moses.wolfenstein@uwex.edu

E-coaching and Feedback Practices to Promote Higher Order Thinking Online

David S. Stein, Ph.D.
Associate Professor, Workforce Development and Education
The Ohio State University

Constance E. Wanstreet, Ph.D.
Adjunct Assistant Professor, Workforce Development and Education
The Ohio State University

Paula Slagle
Graduate Student, Workforce Development and Education
The Ohio State University

Lynn A. Trinko
Graduate Student, Workforce Development and Education
The Ohio State University

Introduction

This study examined the effect of coaching in teaching presence and social presence on higher order thinking in online communities of inquiry. Coaching occurred before each chat, and feedback was provided immediately afterwards. The findings suggest that if a group is coached continuously in teaching presence and social presence over time, it can increase the frequency of higher order thinking in chats compared to an un-coached group.

Coaching and Feedback

Discussion that leads to shared meaning is an expectation in many online courses (Wanstreet & Stein, 2011). Stein et al. (2007) suggested that individual meaning can be transformed to shared understanding during chats through questioning and collective exploration as a group. However, Wanstreet and Stein (in press) cautioned instructors not to assume that learners have the necessary skills to integrate information and resolve issues under discussion. They suggested that learners may need coaching and feedback to move beyond merely stating their opinions toward synthesizing ideas and developing a response that improves upon what is known about a subject.

Coaching is a tool that many universities use to help students more efficiently handle course content or set goals for their education (Robinson & Gahagan, 2010). However, coaching students to improve their higher order thinking skills online is less prevalent. Higher order thinking involves synthesizing and integrating information to move the group to resolution of the issues under discussion (Garrison, Anderson, & Archer, 2000).

Because the course under study involved inquiry-based discussion, the Community of Inquiry model was chosen to provide the conceptual framework (Garrison et al., 2000). The model assumes that learning through discussion involves the interaction of three overlapping elements: teaching presence, social presence, and cognitive presence (Garrison et al., 2000). Teaching presence involves course design and administration, discourse facilitation, and direct instruction. Social presence is the ability of learners to project their personal characteristics to others, and cognitive presence involves meaning-making through sustained communication.

Of particular interest to this study is the effectiveness of a teaching presence and social presence coaching and feedback intervention in increasing cognitive presence. The nature of coaching in teaching presence was to encourage groups to name a moderator and summarizer for the following week so that undue time was not spent organizing themselves each week and to summarize their answer and gain agreement from the other members that the response reflects their perspective before moving on to the next part of the discussion question. Summarizing, in effect, synthesizes the perspectives, which indicates integration, evidence of higher order thinking. The social presence coaching involved suggestions for dialogue that helped establish a cohesive group.

Fundamentally, coaching is a process that enables cognitive, emotional, and behavioral changes to occur (Grant, 2001) by unlocking a person's potential to perform at a maximal level (Whitmore, 1995). In this study, coaching is defined as a task-based focus that has deliberative and motivational support to enhance learning and performance (Averweg, 2010; Bluckert, 2005; Longnecker, 2010). In the course under study, coaching was conducted electronically. E-coaching has been characterized as a "developmental partnership" that is enabled through computer-mediated communications, such as email, online chat, or threaded discussion (Averweg, 2010, p. 48). According to Averweg, e-coaching can be more time efficient than coaching conducted face-to-face, achieving goals more quickly and in fewer sessions.

Regarding feedback from instructors to online learners, the conventional wisdom is the more feedback the better. Immediate feedback is necessary to keep learners engaged, correct errors, and meet learner expectations that their work is noticed (Tallent-Runnels, Cooper, Lan, Thomas, & Busby, 2005). Feedback is also useful to keep learners on task and to provide guidance as to navigating through an academic chat room (Stein et al., 2007). Stein and Wanstreet (2008) have suggested that in the absence of feedback, learners in the chat room will allocate their time in social, teaching, and cognitive presence in a similar way from chat to chat. Over time, learners do not seem to change their strategy for achieving resolution, nor do learners change the pattern of how they allocate their chat time.

Loewen and Erlam (2006) varied the type of feedback in an online class on language acquisition. Feedback was either implicit (response is correct or not) or explicit (response is correct or not and the reasoning behind the correct response). The researchers found no significant difference in the performance of the groups on either oral or written examinations because of the type of feedback received. The researchers noted that feedback was not immediate due to the ways in which chat messages are received. Also noted was the idea that when feedback was provided, learners were not asked to make an immediate correction. Thus a delay in receiving and acting upon feedback might hamper performance.

Feedback has been studied in the group development literature as it relates to time and group efficacy. Pescosolido (2003) found that fostering the impression of group efficacy early on led to improved short-term performance and long-term effectiveness. Baker (2001) studied how group efficacy changed over time as groups received feedback on a meaningful task. As team members worked on problem-solving tasks over time, their assessment of group efficacy increased if they had received regular feedback.

The project was designed to answer the following research question: What effect did coaching and feedback in teaching and social presence have on cognitive presence in synchronous discussions?

Method and Procedure

This study assessed how teaching presence and social presence help groups move to higher levels of learning. The groups were part of a graduate/undergraduate-level course at a large Midwestern university in the history and philosophy of adult education in America. Online learner-led discussions are a feature of the course.

Learners were randomly assigned to groups. One group was randomly selected for continuous coaching and feedback interventions by the co-investigator. A second randomly selected group served as the control. All groups received feedback on the content of their chats from the instructor of record.

The coaching intervention occurred shortly before each chat, and feedback occurred within one hour after each chat. Teaching presence coaching and feedback focused on naming a moderator and summarizer for the following week, summarizing their answer, and gaining agreement that the response reflects the input of all group members. Social presence coaching focused on promoting the use of cohesive language, such as "we, our, and us." Feedback assessed how well the group achieved the goals of the coaching.

A quantitative content analysis of transcripts from group chats was used to determine frequencies of cognitive presence indicators. Four transcripts from each group were analyzed to track changes over time. Three coders working independently determined the units of meaning (in this study statements and paralanguage) that represented cognitive presence according to the template developed by Anderson, Rourke, Archer, & Garrison, (2001). Reliability testing for cognitive presence was conducted on the transcripts using Krippendorff's (2004) alpha (α = .96. .97, and .99) and surpassed the theoretical minimum of 80% (Riffe, Lacy, & Fico, 2005).

Summary of Findings

A mixed MANOVA was conducted to assess differences between learners who were coached in teaching and social presence and those in the control group in the frequency of cognitive presence at the beginning and end of the term. Results indicated no significant multivariate main effects of group (coached or uncoached; F (3,8) = 1.6, p = .26) or time (beginning or end of term; F(3,8) = .79, p = .54) or group by time interaction (F (3,8) = 3.4, p = .07).

However, the follow-up repeated measures ANOVAs for each dependent variable show that the interaction between group and time is significant for cognitive presence (F (1,10) = 6.2, p = .03). There was a change over time for cognitive presence between the coached and control group. The coached group produced a statistically significant higher frequency of cognitive presence than the control group and, with more integrative statements than the control group, had more evidence of higher order thinking at the end of the term.

Conclusion

These results suggest that time by itself is not going to bring about a change in the frequency of cognitive presence; but if a group is coached in teaching presence and social presence over time, it can increase the frequency of higher-order cognitive presence compared to an un-coached group. The idea of coaching in teaching and social presence reflects the assertion by Garrison et al. (2000) that those presences support cognitive presence. The results also suggest that coaching in discussion processes needs to occur continuously throughout the course. In addition, coaching that occurs shortly before a chat and feedback that is provided immediately afterwards can increase the level of cognitive presence.

References

Anderson, T., Rourke, L., Archer, W., & Garrison, R. (2001). Assessing teaching presence in computer conferencing transcripts. *The Journal of Asynchronous Learning Networks, 5*(2). Retrieved from http://www.aln.org/publications,jaln/v5n2/v5n2_anderson

Averweg, U. R. (2010). Enabling role of an intranet to augment e-coaching. *Industrial and Commercial Training, 42*(1), 47-52.

Baker, D. F. (2001). The development of collective efficacy in small task groups. *Small Group Research, 32*(4), 451-475.

Bluckert, P. (2005). The foundations of a psychological approach to executive coaching. *Industrial and Commercial Training, 37*(4), 171-178.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Grant, A. M. (2001). *Towards a psychology of coaching.* Sydney: University of Sydney Coaching Psychology Unit.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* 2nd ed.). Beverly Hills, CA: Sage.

Loewen, S., Erlam, R. (2006). Corrective feedback in the chatroom: An experimental study. *Computer Assisted Language Learning, 19*(1), 1-14.

Longnecker, C. O. (2010). Coaching for better results: Key practices of high performance leaders. *Industrial and Commercial Training, 42*(1), 32-40.

Pescosolido, A. T. (2003). Group efficacy and group effectiveness: the effects of group efficacy over time on group performance and development. *Small Group Research, 34*(1), 20-42.

Riffe, D., Lacy, S., & Fico, F. G. (2005). *Analyzing media messages: Using quantitative content analysis in research,* 2nd ed. Mahwah, NJ: Lawrence Erlbaum.

Robinson, C.. & Gahagan, J. (2010, September-October). Coaching students to academic success and engagement on campus. *About Campus, 15*(4), 26-29.

Stein, D. S., & Wanstreet, C. E. (2008). Chats and shared understanding: How instructors can help learners use academic chat rooms. *Distance Learning, 5*(1), 49-54.

Stein, D. S., Wanstreet, C. E., Glazer, H. R., Engle, C. L., Harris, R. A., Johnston, S. M., Simons, M. R., & Trinko, L. A. (2007). Creating shared understanding through chats in a community of inquiry. *The Internet and Higher Education, 10*(2), 103-115.

Tallent-Runnels, M., Cooper, S., Lan, W., Thomas, J., & Busby, C. (2005). How to teach online: What the research says. *Distance Learning, 2*(1), 21-27.

Wanstreet, C. E., & Stein, D. S. (2011). Gender and collaborative knowledge building in an online community of inquiry. In V. C. X. Wang (Ed.), *Encyclopedia of information communication technologies and adult education integration* (pp. 707-722). Hershey, PA: IGI Global.

Wanstreet, C. E., & Stein, D. S. (In press). Presence over time in synchronous communities of inquiry. *The American Journal of Distance Education.*

Whitmore, J. (1995). *Coaching for performance: A practical guide to growing your own skills*. London: Nicholas Brealey.

About the Presenters

David Stein currently serves as an associate professor in the College of Education and Human Ecology at The Ohio State University. Dr. Stein specializes in adult teaching and learning. He has conducted workshops on principles of adult teaching and has served as a consultant to professional associations and other universities on adult education. Presently, Dr. Stein is researching online learning and its influence on adult learning. He has presented at national and regional conferences and has written extensively on how adults learn.

Address: The Ohio State University
College of Education and Human Ecology
305 W. 17th Ave.
Columbus, OH 43210
Email: stein.1@osu.edu
Phone: 614-292-0988

Constance E. Wanstreet is an adjunct assistant professor in the College of Education and Human Ecology. Dr. Wanstreet has developed and implemented training programs for adult learners in workplace settings and has served as a consultant to the Ohio Board of Regents. She has presented at national and regional conferences, primarily on how adults learn in online environments.

Address: The Ohio State University
2200 Olentangy River Road
Columbus, OH 43210-1035
Email: wanstreet.2@osu.edu
Phone: 614-688-8242

Paula Slagle is a Ph.D. student in Workforce Development and Education at The Ohio State University and an adjunct faculty member at Franklin University and The University of Maryland where she teaches human resources and business administration. In her position as vice president of operations learning and development for JPMorgan Chase, she develops and evaluates the effectiveness of training programs within the organization.

Address: 5895 Winebrook Dr.
Westerville, OH 43081
Email: pylesp@franklin.edu
Phone: 614-204-5632

Lynn A. Trinko is a doctoral candidate in Workforce Development and Education at Ohio State. She currently serves as the director of educational and media technology at The Ohio State University Lima campus. Lynn specializes in educational technology in distance education and pedagogy. Currently, Lynn's research interests are online interactive learning, videoconferencing, and coaching. She has presented at national and regional conferences.

Address: The Ohio State University
335 Galvin Hall
Lima, OH 45804
Email: trinko.1@osu.edu
Phone: 419-995-8412

Information Sessions

Teaching/Training Strategies Track

What Faculty Can Do to Build Connections and Community

Hilda R. Glazer
Faculty Chair for Educational Psychology
Harold Abel School for the Social and Behavioral Sciences
Capella University

Mary R. Breslin
Faculty Development, Center for Teaching and Learning Excellence
Capella University

Introduction

The most widely cited theoretical framework for building online community in the course room is the Community of Inquiry (COI) model, first proposed over a decade ago (Garrison, Anderson, & Archer, 2000.) The model posits three types of "presence"— social, cognitive and teaching—that a student needs to experience within the community in order to support learning. More recently, the same authors noted the importance of the interaction between the three types of presence to creating and sustaining a community of inquiry (Garrison, Anderson, & Archer, 2010).

Figure 1. *Community of Inquiry Model*

Hundreds of studies cite the COI model as their theoretical underpinning (Rourke, & Kanuka, 2009). There are also a significant number of other views concerning elements critical to an online learning community (Beattie, 2002; Glazer & Wanstreet, 2009; Gunawardena et al., 2006; Hayes et al., 2010; Lee, Carter-Wells, Glaeser, Ivers, & Street, 2006; Liu, Magjuka, Bonk, & Lee, 2009; Mykota & Duncan, 2007; Palloff & Pratt, 2003; Rovai, 2003; Rourke & Kanuka, 2009; Thurston, 2005). However, few, if any, studies have asked the faculty about their perception of what is involved in building online community.

Problem and Research Questions

The problem that this study addressed arose in part from previous internal research at the institution, including two separate efforts that resulted in very similar sets of expectations that faculty place on themselves (Breslin, personal communication, August 14, 2008). However, a subsequent empirical study of over 100 course sections showed that a minority of faculty achieved even modest levels of online teaching practices and strategies compared with these expectations (Breslin, 2008). A number of aspects of these expectations bear on the creation of online community, such as responsiveness of the faculty

member in course discussions, and the nature of their contributions in furthering the discussions. This suggested gap between what faculty are saying and what they are doing could therefore be critical to the creation and sustenance of the online learning community.

The focus of our work has been to answer this question: How do the faculty view creating a learning community, and what does teaching in the online environment mean to them? Eighteen faculty members participated in asynchronous discussions of the following questions over the course of several weeks:

1. What does it mean to create a community of learners at our university?
2. What is the culture of community for learning at our university?
3. Is creating a community in the courseroom part of an expectation that faculty place on themselves? That our university places on faculty?
4. How do you describe the different types of presence a faculty member can have in the courseroom, such as teaching, learning and social presence? How do you see yourself projecting one or more types of present (teaching, learning, social)?

Methodology

The entire Capella faculty roster was invited; we held a lottery among those who indicated an interest to arrive at a group of 20, of which 18 actually participated. The format for the discussions followed a focus group model (Krueger, 1994). We used an online course platform and set it up so that names did not appear with the posts on the discussion board. We introduced a new question each week, and the focus of the discussion switched accordingly. We captured these asynchronous discussions in a transcript and analyzed them using a phenomenological approach (Creswell, 2009).

Results

The participants defined community as interaction and as relationship, seeing technology as both supportive of and detracting from it. The group noted the importance of support services for online students, and the ways in which these services contributed to community in the courseroom by establishing a more enduring connection to the institution. Some participants felt the lack of such an enduring connection themselves, and explored the nature of the culture of the institution, and how online teaching is isolating for the individual faculty member. The group considered whether it is possible for an individual faculty member to create a community in an online course if he or she does not feel part of the larger community of the institution, or of a community of faculty members within the institution. Some felt that the consistency of course structure and format helped to inform the culture and therefore the community, while others felt this tended to alienate faculty.

The question of a culture of learning within this institution mirrored the experience of faculty teaching for other universities, where students' sense of entitlement and generally being over-committed in their lives weakens the culture of learning. The roles of faculty in teaching online courses also mirrored the teaching experience at other universities, where the online instructor must guide, facilitate learning, cheerlead, assess, grade, and occasionally enforce standards of behavior (professional or otherwise).

Discussion

The faculty functioning in a dynamic online community saw themselves as actively working to create a community of scholars in their online courses but noted that it is often a difficult task. At the same time, there was also concern about feeling part of the community of faculty and concerns about the culture and the community in which this occurs. This concern was related to being adjunct faculty and not feeling that

they are part of a greater whole. This feeling of fragmentation was a theme in all the posts, but was seen as being outside of what goes on in the individual courses.

Creating community in an online course was seen as encompassing the development of norms, having a shared purpose and shared values, and scaffolding knowledge. The faculty see themselves taking on various roles to do this: facilitator, teacher, mentor, and guide who model professional behavior and share experience. The faculty appears to be defining their role in terms of what Garrison, Anderson and Archer (2000) defined as teaching presence. Teaching presence is seen "as a significant determinant of student satisfaction, perceived learning, and sense of community" (Garrison & Arbaugh, 2007, p. 163). While they did see themselves in the Community of Inquiry model, they differed in their view of their own social presence. Some did not see social presence as being appropriate for them; these individuals defined social presence as sharing details about their lives rather than the more general concept of projecting themselves as real people. The faculty sees their role as significant to the building of community and of encouraging the learning of the students through the establishment of a community of learners.

We think that there is value in encouraging faculty to develop a sense of themselves through the COI model. The model provides a common lexicon and conceptual framework that can support collegial interaction between faculty with the purpose of identifying strategies to build community in online courses.

This study and other work at the university has informed a model for faculty engagement. The model illustrates how faculty members can engage in the development of a classroom in a way that fosters connection. The model includes the role of the faculty member, building connections, and presence as defined by the Community of Inquiry Model. The role of the faculty member in creating and sustaining online learning communities remains a topic that generates at least as many questions as it addresses.

References

Beattie, M. (2002). Educational leadership: Modeling, mentoring, making and re-making a learning community. *European Journal of Teacher Education, 25*(2&3), 199-221.

Breslin, M. R. (2008). *Teaching practices at a standard level: Analysis of perceptions and observations.* Unpublished manuscript. Center for Teaching and Learning Excellence, Capella University.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: Sage

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *Internet and Higher Education, 10*(3), 157−172.

Glazer, H. R, & Wanstreet, C. (2009). *Virtual reality: Research on e-learning* . Midwest Research to Practice Conference, Skokie, IL.

Gunawardena, C., Ortegano-Layne, L., Carabajal, K., Frechette, C., & et al. (2006). *New model, new strategies: Instructional design for building online wisdom communities.* Open & Distance Learning Association of Australia. Retrieved from http://search.proquest.com/docview/217795998?accountid=27965

Hayes, S., Vickers, J., Gozza-Cohen, M., Uzuner,S., Ruchi M., Valchova, A., & Rangan, P. (2010). A re-examination of the community of inquiry framework: Social network and content analysis. *Internet and Higher Education, 13*, 10–21

Kreueger, R. A. (1994). *Focus groups: A practical guide for applied research* (2nd ed.) Thousand Oaks, CA: Sage.

Lee, J., Carter-Wells, J., Glaeser, B., Ivers, K., & Street, C. (2006). Facilitating the developing of a learning community in an online graduate program. *Quarterly Review of Distance Education, 7*(1), 13-33. Retrieved from ProQuest Education Journals. (Document ID: 1040201251)

Liu, X., Magjuka, R. J., Bonk, C., & Lee, S. (2009). Does sense of community matter. In A. Orellana, T. L. Hudgins, & M. Simonson (Eds.). *The perfect online course: Best practices for designing and teaching* (pp. 521-543). Charlotte, NC: Information Age Publishing.

Mykota, D., & Duncan, R. (2007). Learner Characteristics as Predictors of Online Social Presence. *Canadian Journal of Education*, 30(1), 157-170. Retrieved from EBSCO*host*.

Rovai, A. P. (2003). The relationships of communicator style, personality-based learning style, and classroom community among online graduate students. *Internet and Higher Education, 6,* 347-363.

Rourke, L., & Kanuka, H. (2009). Learning in communities of inquiry: A review of the literature. *Journal of Distance Education*, 23(1), 19-48. Retrieved from EBSCO*host*.

Thurston, A. (2005). Building online learning communities. *Technology, Pedagogy, and Education, 14*(3), 353-369.

Palloff, R. M., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners.* San Francisco, CA: Jossey-Bass.

About the Presenters

Hilda R. Glazer, Ed.D is chair of educational psychology at Capella University. Prior to joining the faculty at Capella, she was associated with Walden University, holding a number of faculty and administrative positions including dean of the School of Psychology. Dr. Glazer was also an associate professor at the University of Texas Southwestern Medical Center at Dallas. She has researched mentoring in the online environment and connectedness in the online university.

Address: Capella University
Capella Tower, 225 South 6th Street, 9th Floor
Minneapolis MN 55402
E-mail: Hilda.Glazer@Capella.edu
Phone: (888) CAPELLA ext 6116

Mary R. Breslin is a supervisor in Capella's Center for Teaching and Learning Excellence, and is also writing her PhD dissertation in educational psychology, also at Capella University. Prior to joining the faculty at Capella, she worked in e-learning development; her employers include Allen Interactions. Prior to her e-learning work, Mary served for 10 years as a full-time instructor and department chair at Skyline Community College in San Bruno, California.

Address: Capella University
Capella Tower, 225 South 6th Street, 9th Floor
Minneapolis MN 55402
E-mail: Mary.Breslin@Capella.edu
Phone: (888) CAPELLA ext 5562

Fostering Better Instructor Presence in Your Online Programs

Lauren Wright
Program Development Manager
Deltak Innovation

Courtney Moke
Program Development Manager
Deltak Innovation

Introduction

Studies (Garrison, 2007; Anderson & Elloumi, 2004; Shea, Pickett & Pelz, 2003) show that a higher degree of faculty engagement positively impacts a student's learning experience, influencing student satisfaction and retention. Defining the student learning experience has traditionally been owned by the faculty, but new methodologies in online instructional design often dictate that faculty members are teaching courses that they did not create. The main task of the faculty becomes that of class facilitator, responsible for instruction as well as maintaining and/or increasing student retention and satisfaction.

Garrison, Anderson, and Archer's (2000) community of inquiry (COI) framework is an excellent model for illustrating how purposeful faculty engagement positively influences student learning experiences. The COI framework (Garrison, Anderson, and Archer, 2000) espouses, "learning occurs within the Community through interaction of three core elements" (p. 88): cognitive presence, social presence, and teaching presence. Student engagement results from the interaction of all three COI elements, yet we emphasize the teaching presence in this paper as the core method for creating impacting engagement experiences with students.

The COI framework defines the *teaching presence* as 'the design, facilitation and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, p. 33). In the online modality, faculty members assist students with the comprehension of the material and the completion of the outcomes without the benefit of being able to fully capture the attention of the student.

Establishing Faculty Engagement

Faculty are the engineers of their courses, defining the educational experience for students through the course objectives, critical learning paths and activities that assess student outcomes. Engagement is considered inherent through the design of the educational path and assessment methodologies. Most instructors have developed specific approaches for building rapport with their students while teaching on-ground class sessions. However, the pedagogical strategy that has always succeeded for an on-ground instructor does not necessarily translate directly to the online environment. The unique nature of the online environment necessitates that pedagogical instructional methods be modified.

Online students need more from faculty than a blueprint of the learning experience. They require specific types of communications and relationship building from the instructor to ensure that the student remains an active participant in the class and benefits from the social aspects of participating in learning activities.

In on-ground classroom sessions, students experience some level of affiliation through their proximity to instructor and peers. In the online learning environment, students connect to their course through their computer or mobile device and can essentially choose their level of connectivity to the activity going on

in the course (Branch, Chen, and Jang, 2010). Should students opt to only participate when necessary and not engage with the activity going on in the classroom, their level of engagement with the course will not be as high as on-ground, face-to-face instruction or even that of their peers who are more active in the course. It is the responsibility of the course instructor to attract the attention of the students and encourage them to participate in the classroom (Easton, 2003).

Whereas in the on-ground classroom, students are sequestered in a classroom free from outside distraction, online students are battling a large number of interruptions when sitting down to complete their coursework. Students have a seemingly infinite number of diversions in the form of other online activities, family interruptions, full-time work obligations, and day-to-day responsibilities around the home (Roper, 2007). These elements tend to interfere with students' feelings of connection with his/her program, the other students in his/her online course, and the faculty member. Specific types of faculty instruction and interaction can reduce the "perceived" distance that online students may feel in their online courses (Garrison, 2007).

Top Ten Ways to Engage Online Students

It is important to engage students during their very first interaction with your course, but it is even more critical to keep that engagement going throughout the duration of the learning experience. Below are ten recommendations for engaging students in online courses.

1. Student Introductions – This may seem like an obvious suggestion, yet we find that as students progress through their degree program, they reduce the information shared in their introduction. It is the responsibility of the faculty member to rejuvenate the introduction, asking questions that students will want to answer or that will instantly connect the student to the subject matter. Suggestions here include asking students to state a goal as it relates to the subject matter or conversely, stating their fear of the material so that the instructor can locate information to help make certain course concepts easier to understand.
2. Webcam Instructor Introductions – Instructor welcome videos are an important instructional tool available to faculty for free. Welcome videos allow instructors to present their digital personality, share their experience and passion for the subject matter, and outline expectations. This is a simple technique which reduces the "perceived distance" an online student may experience during the course. Most laptops come with integrated webcams, not necessitating an additional purchase for the hardware. Free software such as Windows Movie Maker and iMovie make this suggestion virtually free and easily reusable for future sections of a course.
3. Google Alerts – Set up Google Alerts that relate to each module in your course, and then let Google do the work for you! Google will email the faculty new information on those topics according to the options selected when establishing the alert. The faculty member can simply scan the article and post a link to the course. When students observe an immediate application of the course content, there is an increase in satisfaction levels with the course.
4. Audacity – Audacity is a free piece of software that allows faculty members to record voice presentations. The presentations can be exported as mp3's and easily uploaded to an LMS. The key with this suggestion is brevity as the idea is to connect with students, not lecture to them. LMS's also often have size limitations, so keeping the mp3 small is a good idea.
5. RSS Feeds – This is a similar concept as the Google Alert, but it gives you continuous updates from an entire website instead of just specific topics. iGoogle does an excellent job of managing RSS feeds. As educators, we highly recommend the New York Times: Education, Washington Post: Education, and NPR Topics: Education.
6. Jing – Jing is a wonderful tool for taking videos and screen shots of your computer. A fee-based version does exist, but we find that the free version exceeds our screen capturing needs. This

software is particularly vital for industries where demonstrations of computer software are essential.

7. Wordle – Wordle is a great tool for presenting themes from student submissions or module topics. Wordle is an example of a tool that creates word clouds, which are graphical representations of words. The clouds give greater prominence to words that appear more frequently in the source text. You can tweak your clouds with different fonts, layouts, and color schemes.
8. Text-based Summary – Text-based summaries are created using the announcement or discussion tools accessed through your learning management system, such as Angel, Blackboard, or eCollege. A weekly summary is a powerful learning tool, which allows instructors to recap themes presented in student submissions, ask additional questions that challenge perspectives, and transition to the next topic.
9. Create Your Own Facebook – Bonding with others is so much easier when you can connect a face to a name. This same concept also applies to the online environment. Ask students to post a picture to the discussion forum as well as upload it to the LMS. Students who are camera shy can create an avatar using free online software. The faculty member should lead the effort by having their picture already in the course when it opens to students.
10. Voicethread – Voicethread is a collaborative, multimedia slide show that allows students to interact with the presentation by leaving comments and feedback directly on the slides via audio, video, or text. Voicethread allows faculty to replicate the types of interaction that occur naturally in on-ground classrooms.

Conclusion

The presence, interaction, and engagement of faculty influence the sense of community, connection, and confidence students have of their learning experience (Heyman, 2010). It is possible to make enhancements to the online experience that do not cost a significant amount of time or money. Including our simple and effective solutions into your online classroom will increase the likelihood that students become actively involved in their courses, remain engaged in their program of choice, and continue with their degree to completion.

References

Anderson, M. (2010). What's it like to teach an online class? *MultiMedia & Internet@Schools, 17*(6), 20-23. Retrieved from EBSCO*host*.

Anderson, T. (2004). Teaching in an online learning context. In t. Anderson & F. Elloumi (Eds.) *Theory and practice of online learning* (4th ed., pp. 273-293). Athabasca, Ca: Athabasca University.

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a compute conferencing context. Journal of Asynchronous Learning Networks, *5* (2).

Branch, R. M., Chen, K, & Jang, S. (2010). Autonomy, affiliation, and ability: Relative salience of factors that influence online learner motivation and learning outcomes. *Knowledge Management & E-Learning: An International Journal, 2*(1).

Easton, S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education, 52*(3), 87-105.

Garrison, D. R. (2006, August). Online community of inquiry review: Social, cognitive, and teaching presence issues. Invited paper presented to the Sloan Consortium Asynchronous Learning Network Invitational Workshop, Baltimore, MD.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education, 2*(2-3), 87-105.

Roper, A. (2007). *How students develop online learning skills*. Retrieved from www.educause.edu

Shea, P., Pickett, A. M., and Pelz, W. E. (2003). A follow-up investigation of "teaching presence" in the SUNY learning network. *Journal of Asynchronous Learning Network, 7*(2), 61-80.

About the Presenters

Lauren Wright has over 15 years experience in instructional design, management, and leadership. She has designed, produced, and managed the administration of course development for graduate programs in Nursing, Allied Health, Psychology, MBA, Teacher Education, Law, Criminal Justice, and others at over six universities. She is currently a Program Development Manager with Deltak Innovation in Oakbrook, Illinois. Her main responsibilities include working with universities to transition their on-ground programs to the online environment. In addition to working with higher education, Lauren has worked in corporate learning and development where she designed curricula in many areas, from sales management, leadership, operations to new employee orientation. Lauren earned her Master of Arts in Counseling Psychology from the University of Denver in Denver, Colorado. She earned her Bachelor of Arts in Psychology from the University of California, Irvine, in Irvine California. She is a recent graduate of the University of Wisconsin-Madison Professional Development Certificate Program in Distance Education.

Address: 851 Trafalgar Court, Suite 420
Maitland, FL 32751
Phone: 407-618-5495
Email: lauren.wright@deltak-innovation.com

Courtney Moke has been a Program Development Manager with Deltak Innovation for over four years, focusing her efforts on quality course development and comprehensive faculty training for some of Deltak's many premier partner schools. She guides a team that creates and maintains over 100 courses per year while serving as the lead faculty trainer for over 150 active instructors. Courtney's undergraduate degree in Computer Information Systems is from the Kelley School of Business at Indiana University in Bloomington, Indiana. Her first master's degree is in Instructional Systems Technology from the Indiana University School of Education. Courtney also holds a Master's in Business Administration from Benedictine University in Lisle, Illinois. She served as a panelist at the 2011 IST Conference in February and teaches online courses at both the undergraduate and graduate level.

Address: 1415 West 22nd Street, Suite 400
Oak Brook, IL 60523
Phone: 630-366-2982
Email: courtney.moke@deltak-innovation.com

Climbing the Trellis:
Using a Theoretical Examination of Online Communication Patterns for Course Improvement

Betsy J. Bannier, Ph.D.
Assistant Professor of Chemistry and Mathematics Online
Lake Region State College

Introduction

The 2010 conference paper and presentation, "Understanding our Adult, Undergraduate Learners: Designing Courses for Success," discussed the highlights of a three-year, mixed-methods, research-to-practice loop centered on understanding and serving the broad learning needs of adult learners enrolled in online, undergraduate general chemistry courses. Key research findings related to the motivation and autonomy of adult, online students at the undergraduate level were discussed within the context of the Trellis Theory of Online Learning, which emerged from this grounded theory study. In the year that followed, additional data were studied, and communication patterns within the Trellis Theory were reconsidered and refined. At the 2011 conference, we will explore how a new understanding of the ways in which online communication patterns differ between the highest achieving online students and their lesser achieving peers might steer online educators toward straightforward and effective course improvements.

Part I: Quantitative Motivation Scale Development

Motivation as a construct is both divergently defined and domain specific. In its most succinct presentation, motivation can be defined as an energizing force that guides behavior in the direction of a goal (Karsenti & Thibert, 1995). Linguistically, the word "motivation" has a Latin root, originating from the word "motivus" meaning "a moving cause" (Ahl, 2006). Behaviorally, renowned psychologist Albert Bandura posited that motivation stems in part from cognitive engagement and is "primarily concerned with the activation and persistence of behavior" (1977, p. 193). Critically, Seibert (1985) argued pointedly that "there is no common concept either of human motivation, or of mutually agreed explanations" (p. 46). It is clear, however, that motivation research spanning the last four decades has increasingly shifted its collective emphasis toward understanding internal factors such as perception and interpretation of specific situations (e.g., experiences with specific academic subjects or courses; Dweck, 1986).

In Part I of this project, a reliable and valid scale appropriate for measuring the academic motivation of online, undergraduate students was developed. An item and scale analysis measuring strength of learning goals was completed, based upon data obtained from 212 student volunteers. Goal theory, which posits that the types of goals students set for themselves are dependent upon both the students' self-efficacy and their learning environment, guided this work (Locke & Latham, 1990; Seifert & O'Keefe, 2001). According to goal theory, students with high self-efficacy are most likely to set challenging learning goals (Bandura, 1991), which in turn are assumed to reflect a higher and more sustainable level of student motivation than performance goals. Scale items were intended to measure the strength of adult students' learning goals, as well as their self-efficacy regarding those learning goals. Sample items included statements such as "My goals are very specific," "I fully believe that I have the ability to achieve my goals," and "Achieving my goals depends upon my own hard work more than anything else."

The overall reliability of the scale ($\alpha = 0.865$) is relatively high. Means of scale items range from 4.13 – 5.27 on a 1 – 6 scale, with standard deviations ranging from 0.839 – 1.781. It is favorable for reliability purposes for the mean of each item to be near the midpoint of the possible choices (in this case, using a 1-6 range, a mean of 3.5 would be ideal), and for the standard deviation of the responses to be high. Discrimination analyses of each item, representing the correlation between the item and the overall subscale, are favorable. Discrimination values near zero would suggest that there is essentially no

correlation between the item and the subscale; negative discrimination values suggest a troublesome inverse relationship between the item and the subscale. Favorably, 8 of the 12 items revealed high discrimination values ranging from 0.743 – 0.840.

Part II: Qualitative Student Communications

To understand the motivation and learning needs of adult, online students on a personal and open-ended level, twelve former online chemistry students were interviewed using a two-step process of autophotography and photoelicitation. This approach involved students taking symbolic photographs representing their motivation, goals, and experiences with online learning. These photographs were then used to guide semi-structured phone interviews lasting approximately one hour each.

While the findings gleaned from these interviews are complex overall, several straightforward patterns emerged. First among these patterns was the revelation that most of the interviewed students lacked autonomy in that their decision to pursue a degree was often forced by life circumstances. Similarly, interviews revealed the oft-stated belief that the option of completing coursework online was absolutely essential to fitting a college degree program into adult students' already busy lives.

Consider the experience of Pam, a single mother in her 40s, who explained

> I am an LPN at the [local] hospital – I've worked there for almost 28 years. All of the LPNs found out one year ago that we would have to either go back to school or find another job. For most of us, the only choice we had was to return to school to get our RN – something we all should have done years ago. … Life got in the way and I just never went back because of kids, work, and a non-supportive husband. … As a single mom with a mortgage, car payment and just the everyday bills, I knew I needed to continue with the same amount of pay or I would never make it, so it wasn't an option to find something else.

The significance of having an online learning option became clear as her story unfolded:

> Chemistry was one of the general education classes we needed to take for the nursing class. …Due to working full time and not being able to "go" to classes, that were most of the time scheduled in the middle of the workday, we chose to go the online route… It was the only choice. With some luck and a LOT of hard work, I am planning on graduating in May. …the same year my youngest daughter graduates from high school.

As she described her experiences both leading up to and completing her degree, Pam's inherent need to complete general chemistry in an online environment became strikingly clear. Similarly, her transformative realization of threatened job loss combined with her situational standpoint of being a single parent fed her tightly woven academic goals and motivation for completing online chemistry so organically that the distinction between these multiple variables was often difficult to identify. This was true for other participants as well.

To understand the motivation and learning needs of adult, online students on a more broad level, asynchronous discussion board postings were studied. Originally, approximately 1,200 asynchronous discussion board postings completed by the 12 interview subjects were examined and coded for grounded theory analysis. Communication patterns emerging from this process are presented as part of the Trellis Theory of Online Learning, below.

Part III: The Trellis Theory of Online Learning

The trellis theory explains the motivation and help-seeking behaviors of adult learners in online, undergraduate courses from a growth standpoint rather than a deficit perspective. According to the trellis theory, core variables of "transformative realization" and "situational standpoint" are firmly rooted in a foundation of life experience. "Goals," in turn, are nurtured by and grow from the learners' transformative realizations, while "motivation" is nurtured by and grows from the learners' situational standpoint. Together, these core variables and their subsequent growth variables comprise the outer, primary structure upon which adult learners enrolled in online undergraduate courses build their overall learning experience.

The inner, lattice structure of the trellis theory was originally comprised of five modes of development: completing required communication, building camaraderie, seeking clarification, gaining confidence, and drawing connections. The overall relationship between the core variables, growth variables, and five modes of development is illustrated in Figure 1.

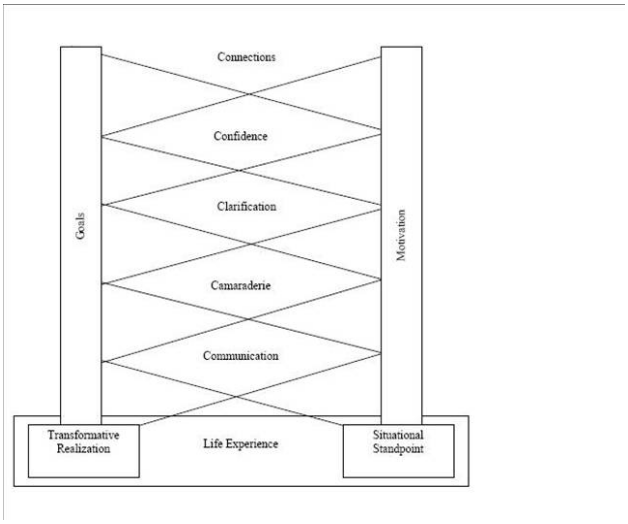


Figure 1. *Trellis Theory of Online Learning*

At time of press, the five modes of development were being reconsidered by applying the original coding process to asynchronous discussion board postings completed by two distinct groups of former students: students completing their respective courses in the top 20% of their class sections, and students completing their respective courses in the bottom 20% of their class sections. Preliminary analyses suggest that several alterations to the Trellis Theory might be appropriate. Preliminary analyses also point toward specific ways in which instructor-led communication guidelines might be altered to improve overall course design and foster greater student success. These alterations will be explored during the conference presentation.

References

Ahl, H. (2006). Motivation in adult education: a problem solver or a euphemism for direction and control? *International Journal of Lifelong Education, 25*(4), 385-405.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-regulatory mechanisms. In R. Dienstbier (Ed.), *Perspectives on motivation: Nebraska symposium on motivation* (Vol. 38, pp. 69-164). Lincoln: University of Nebraska Press.

Covington, M., & Dray, E. (2002). The developmental course of achievement motivation: A need-based approach. In Wigfield, A., & Eccles, J. (Eds.) *Development of Achievement Motivation* (pp. 33-56). San Diego, CA: Academic Press.

Deci, E., Vallerand, R., Pelletier, L., & Ryan, R. (1991). *Educational Psychologist, 26*(3 & 4), 325-246.

Dweck, C. (1986). Motivational processes affecting learning. *American Psychologist, 41*(10), 1040-1048.

Karsenti, T., & Thibert, G. (1995, April). *What type of motivation is truly related to school achievement? A look at 1428 high-school students.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Locke, E., & Latham, G. (1990). *A theory of goal setting and task performance.* Englewood Cliffs, NJ: Prentice-Hall.

Seibert, H. (1985). Research on motivation for further education in the Federal Republic of Germany. In J. Knoll (Ed.) *Motivation for adult education* (pp. 35-40). Müchen: Saur.

Seifert, T., & O'Keefe, B. (2001). The relationship of work avoidance and learning goals to perceived competence, externality and meaning. *British Journal of Educational Psychology, 71,* 81-92.

Vallerand, R., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality, 60,* 599-620.

About the Presenter

Betsy Bannier is an Assistant Professor of Chemistry and Mathematics Online at Lake Region State College in Devils Lake, North Dakota. She holds a Ph.D. in Adult & Continuing Education with an emphasis in online science education, as well as an MS in analytical chemistry. She has 13 years of experience teaching in higher education, primarily in the field of undergraduate, online laboratory chemistry. In her current position, Dr. Bannier serves as both an online Master Course developer and a mentor for new online faculty.

Address: Lake Region State College
1801 College Drive N
Devils Lake, ND 58301-1598
Email: betsy.bannier@lrsc.edu
URL: http://www.lrsc.edu/staff/my_page.asp?fName=Betsy&lName=Bannier
Fax: 701-662-1570

Eliciting Substantive Discussions: Socratic and Divergent Questioning

Rebecca J. Sisk, PhD, RN, CNE
Associate Professor
Chamberlain College of Nursing

Introduction

Both faculty and students participating in online courses are required to make at least a minimum amount of posts to threaded discussions per week by course policy. Simultaneously, the evidence demonstrates that the frequency of faculty interaction in discussions is related to both better grades and student satisfaction (Bedi & Lange, 2007). For faculty, the challenge of facilitating discussions is to encourage participation with stimulating, thought-provoking questions. For students, stimulating discussions make meeting course requirements easier. Good questions lead to good discussion responses. The purpose of this presentation is to describe the potential use of two techniques, Socratic and divergent-thinking questions, to motivate students, to add depth and breadth to courses, and to help students meet course objectives. Very little research is available related to Socratic and divergent-thinking questions. Therefore, in this presentation, examples of Socratic and divergent-thinking questions are presented, followed by a possible research agenda related to the types of questions that best elicit substantive discussions.

Theories Related to Online Teaching and Learning

Several theories have been applied to online teaching and learning. With respect to threaded discussions, adult learning theory and social constructivist theory are especially applicable. According to adult learning theory (Knowles, Elwood, & Richard, 2005, p. 5), adults are self-directed and want to learn what is applicable to their real world experiences. The instructor assumes the role of facilitator, the "guide on the side," as opposed to the "sage on the stage." In online courses, much of the interaction in threaded discussions focuses on student experiences related to the topic at hand. The intent is to help students build knowledge through readings and previous learning and experiences.

In social constructivist theory (Vygotsky, 1962), learning occurs when students are brought together in a collaborative environment to build knowledge together. Social constructivist learning is learner centered and includes three basic concepts. First, the *zone of proximal development* is the stage at which students are ready to learn. In online courses, this is analogous to the student's decision to enter a course ready to learn and armed with appropriate prerequisites. *Scaffolding* is the state at which the student learns a new idea or task. In online learning, scaffolding occurs through readings, assignments, and discussions related to course objectives. *Cooperative learning* is the ability of students to collaborate with each other and the teacher to learn something new, within a socio-cultural context. Threaded discussions are not meant to be a recitation of facts but instead should help students explore all aspects of a question.

The faculty role is to facilitate the interactions for the good of the entire class. Both students and faculty grow into a community of scholars. For the faculty member, in addition to letting go of the traditional lecture/testing format, questioning skills and tools are important to help students develop as learners. Both critical thinking and divergent thinking skills can be nurtured by faculty in discussions (Kim & Bonk, 2006).

Critical Thinking and Socratic Questioning

Online discussions should promote critical thinking, help students make connections between ideas, and promote a community of scholars who think critically. For the purpose of this presentation, critical

thinking is defined as "the art of analyzing and assessing thinking with a view to improving it" (Elder & Paul, 2009, p. 267). Critical thinking involves not only learning facts and principles but also figuring out how to analyze, apply, and evaluate knowledge for deeper understanding—digging deeper holes. According to Dr. Robert Ennis (2010), from the University of Illinois at Urbana-Champaign, critical thinkers are open-minded and well-informed individuals. They are able to (a) judge the credibility of information; (b) judge the quality of an argument, including its reasons, assumptions, and evidence; (c) ask appropriate clarifying questions; (d) formulate plausible hypotheses; (e) define terms in a way appropriate for the context; and (f) develop and defend a reasonable position

Modern Socratic questioning is a process of inductive questioning used to lead a person to learning successfully through small steps (Maxwell, 2009, para. 5). For faculty, this means helping students gain knowledge and skills together as they apply what they have learned to their personal and professional lives. Potentially, a question posed to one student is read and considered by all, stimulating further posts. Socratic questioning stimulates critical thinking by asking students to think deeper and harder (Paul & Elder, 2007; Yang, Newby, & Bill, 2005).

Using Socratic questioning helps students focus on reasoning, correlating, and looking at alternatives rather than mere facts and keep students engaged in the material they are studying (Elder & Paul, 2007). Several purposes of Socratic questioning have been identified (Changing Minds, 2009; Elder & Paul, 2007). In all, the teacher is playing devil's advocate:

- *Clarifying concepts* involves exploring the clarity, precision, and accuracy of information the student has about the topic and determining how the student defines the concepts. Examples of clarifying concepts questions include: "What do you mean by ...?" "How about an example of ...?" and "How are you defining …?"
- *Probing for assumptions* involves determining how the student defines concepts and exploring the student's assumptions and point of reference. Examples of probing or assumptions questions include: "What are the author's assumptions here?" and "What is your belief about ...?"
- *Probing for rationales and evidence involves e*xploring the student's process of coming to a conclusion. Examples of probing for rationales and evidence questions include "What is your evidence that ...?" and "Who is your source of information for ...?"
- *Probing for implications* involves exploring whether the student is able to see all points of view and whether the student can infer future events from today's facts. Examples of probing for implications questions include: "What would happen if ...?" and "How does this build upon what you learned in other courses?"
- *Questions about the question/issue* involve determining the student's agenda. Examples include: "Why is that information important to you?" and "What are you thinking when you ask that question?"

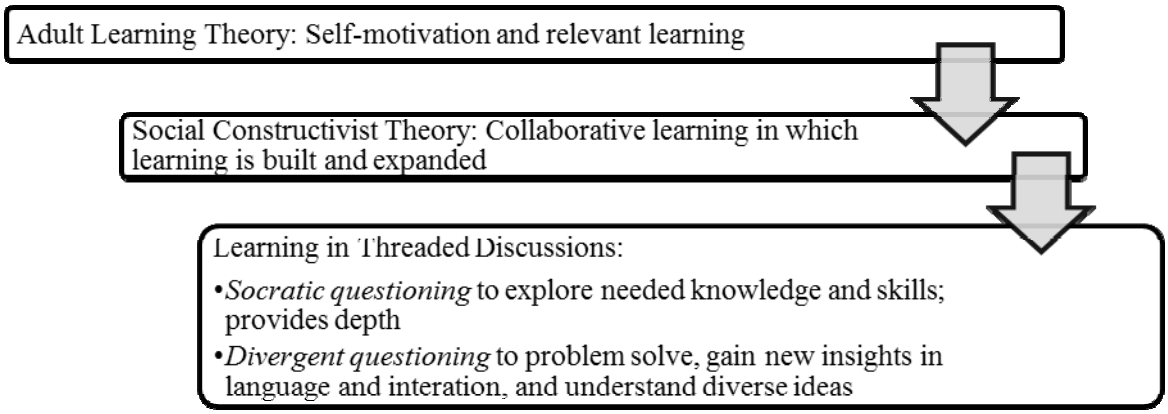
Divergent Thinking and Divergent Questioning

Twenty-first century complexities mean that students need to be prepared to develop new ideas and work within a diverse community. "Meeting the intellectual and creative challenges of the 21st century demands using every ounce of creativity available" (Siemens, 2008, para. 1). Being able to think creatively is enhanced through development of divergent thinking skills. Divergent thinking is the ability to think creatively, including fluency, flexibility, originality, and elaboration (Guilford, 1967). *Fluency* is the ability to quickly come up with multiple possible solutions to a problem. *Flexibility* is the ability to weigh several options simultaneously. *Originality* is the ability to think up new ideas. *Elaboration* is the ability to carry out new ideas. Divergent thinking involves thinking outside of the box and digging new holes rather than deeper holes. According to de Bono (2003), critical thinking is reactive, in that it is used to examine *what is,* but divergent thinking is proactive, because it is used to derive new ideas. Therefore,

threaded discussion questions that help students examine issues creatively can lead to new learning for online students.

Divergent thinking requires critical reflection, new ways to look at old issues, and openness to new ideas; it often occurs within a social context (Freedman, 2010; Hernandez & Varkey, 2008). While critical thinking is based on logical, left-brained, divergent thinking is based on right-brained thinking. Divergent thinking is systems thinking, which is complex and requires both reasoning and imagination. Multiple ideas have been posed to encourage divergent thinking. Examples that can easily be applied to threaded discussions are brainstorming (searching for all possible solutions to a problem), rearranging ideas ("What if" questions), walking in someone else's shoes, and connecting unlike ideas. An example of the latter is displayed in Table 1, which provides ideas for combining these examples of divergent questioning with Socratic questioning. In one of the few studies done on lateral thinking in threaded discussions (Bradley, Thom, Hayes, & Hay, 2008), brainstorming improved both the quantity and quality of student responses.

How do Socratic and divergent questions apply to threaded discussions? The progression from adult learning to construction of knowledge in online learning to Socratic and divergent questioning is displayed in Figure 1.



These suggestions for questioning in threaded discussions are untested. Therefore, research is needed on the following research agenda, which is merely a beginning:

- Comparison of Socratic questioning, divergent questioning, combined Socratic and divergent questioning, and no special form of questioning on student participation, quality of posts, and student interaction.
- Determining whether a faculty seminar on the use of Socratic and divergent questioning improves student participation, quality of posts, and student interaction.
- Determining whether Socratic questioning improves critical thinking as well as threaded discussion and overall course grades.
- Determine whether divergent questioning produces increased scores on frequency of posts and cultural competency or other measures of broad-mindedness.

Table 1. *Relationships Between Socratic Questions and Divergent Thinking Questions*

	Type of divergent thinking question			
Type of Socratic question ⇩	**Brainstorming/ discovering attributes of a situation**	**Rearranging ideas**	**Walking in someone else's shoes**	**Connecting unlike ideas**
Clarifying concepts	What are all the possible meanings of ...?	What if you define X as ...?	How would (fish in the ocean, people from another culture, etc.) define this concept?	How is X similar to Y (a widely different idea or perspective)?
Probing for assumptions	What are all the possible assumptions behind this idea?	What if you were going by ...'s assumptions?	What kind of assumptions would a ... have about this phenomenon?	What are you assuming about X in comparison to Y?
Probing for rationale and evidence	What are all the possible reasons for ...?	What if the evidence pointed another way?	What evidence do you think ... has for their perspective?	How would (professional group) justify this stance as opposed to (another professional group)?
Questioning viewpoints	Who are all the players who may be affecting this issue?	What if (social group) started to believe ...? What if we substitute XX with Y?	What do you think would be the (professional organization)'s stance on this issue?	What would (an animal, a person from a different age group, etc.) think about this idea as opposed to people in your profession?
Probing implications	What are all of the possible implications of ...?	What would ...'s opinion be about this issue?	How would this phenomenon affect (other professions or groups)?	If this were to happen to ... what would be the effect?
Questions concerning the question	What are the possible reasons why someone would ask this question?	Can you ask that question in another way?	How would ... ask that question?	What if you asked this question from the perspective of a (lobster, kangaroo, Christmas cactus)?

References

Bedi, K., & Lange, H. (2007, December). *The impact of faculty interaction on the learning experiences and outcomes of online learners*. Procedings ascilite 2007, Singapore.

Bradley, M. E., Thom, L. R., Hayes, J., & Hay, C. (2008). Ask and you will receive: How question type influences quantity and quality of online discussions. *British Journal of Educational Technology, 39*(5), 888-900.

Changing Minds (2009). *Socratic questions.* Retrieved from http://changingminds.org/techniques/questioning/socratic_questions.htm

deBono, E. (2003). Critical thinking is not enough. *Educational Leadership, 42*(1), 10-17.

Elder, L. & Paul, R. (2007). Critical thinking: The art of Socratic questioning, Part II. *Journal of Developmental Education, 31*(2), 3-5

Elder, L. & Paul, R. (2009). Close reading, substantive writing and critical thinking: Foundational skills essential to the educated mind. *Gifted Education International, 25, 286-295.*

Ennis, R. L. (2010). *A streamlined conception of critical thinking*. Retrieved from http://criticalthinking.net/definition.html

Freedman, K. (2010). Rethinking creativity. *Art Education, 63*(3), 8-15.

Guilford, J. P. (1967). *The nature of human intelligence.* New York, NY: McGraw-Hill.

Hernandez, J. S., & Varkey, P. (2008). Vertical versus lateral thinking. *The Physician Executive, 34*(3), 26-28.

Kim, K. & Bonk, C. (2006). The future of online teaching and learning in higher education: The survey says … *Educause Quarterly, 29*(4), 22-30.

Knowles, M. S., Elwood, F. H., & Richard, A. S. (2005). *The adult learner: The definitive classic in adult education and human resource development* (6th ed.). San Diego, CA: Elsevier.

Maxwell, M. (2009). Introduction to the Socratic method and its effect on critical thinking. Retrieved from http://www.socraticmethod.net/

Paul, R. & Elder, L. (2007). Critical thinking: The art of Socratic questioning, part III. *Journal of Developmental Education, 31*(3), 34-35.

Siemens, G. (2008). Boundary-less living, working, and learning. Retrieved from http://www.elearnspace.org/blog/2008/01/08/boundary-less-living-working-and-learning/

Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Yang, Y. C., Newby, T. J., & Bill, R. L. (2005). Using Socratic questioning to promote critical thinking skills through asynchronous discussion forms in distance learning environments. *The American Journal of Distance Education, 19*(3), 163-181.

About the Presenter

Rebecca J. Sisk, Ph.D., RN, CNE, is an Associate Professor at Chamberlain College of Nursing, Devry University. She has taught as an adjunct faculty member for several online schools and has many years of experience in nursing education. She has designed and implemented both undergraduate and graduate courses, has a certificate in online teaching from Indiana University, and is a National League for Nursing Certified Nurse Educator.

Address: 7214 West Legion Hall Road
Dunlap, IL 61525
Phone: 309-472-2824
Email: rsisk@chamberlain.edu

Information Sessions

Tools, Media, & Technology Track

Expanding Our Anywhere, Anytime With Mobile Learning: A Course Pilot

Alicia Swaggerty, MS
Instructional Designer

Jin Sung An, MEd Candidate
Multimedia Specialist

The Pennsylvania State University

Introduction

Learning Design at Penn State World Campus initiated a Mobile Learning Research Team in January 2010. This team was charged with taking a broad look at what we mean by mobile learning (mLearning), reviewing the literature to determine of what is currently being discussed about the topic (both nationally and internationally), and to pilot mobile approaches in select courses. Our white paper is now published on the Learning Design at Penn State World Campus website. "Key goals of our research study were to assess the current state of mobile learning, find out what kind of educational content and information students are interested in getting on their mobile devices, and to determine how course content and information delivery on mobile devices impact the students' motivation to learn" (Mockus, Dawson, Edel-Malizia, Shaffer, An, & Swaggerty, 2011).

Course Pilot: Incorporating mLearning Activities
(Mockus, et al, 2011)

In total, 10 courses in the Adult Education, Special Education, Introductory Accounting, Library Studies, and Engineering disciplines were selected for the pilot, which ran for the first five weeks of the Spring 2011 semester. Approximately 400 students were invited to participate in the mobile learning study if they had a mobile device (smart phone or tablet). Students were offered several mobile activities, as shown in Table 1.

Table 1. Mobile activities and Applications Offered in Course Pilot

Mobile Activity	Application
mobile course website: ▪ syllabus ▪ course schedule ▪ course announcements ▪ blog aggregator	Web pages using javascript library called jQuery mobile, hosted on existing World Campus servers
audio podcasts	Downloadable MP3 files from World Campus servers
mobile flashcards study tool	iOS: *Mental Case* app, Android: *Kaka Flashcards* app

Students were asked to try out the mobile activities and complete a 27-question survey that was designed to gather demographic and mobile device usage data, as well as motivational and attitudinal data, related to their use of the mobile course activities. To devise the motivation questions, we utilized the Website Motivational Analysis Checklist (WebMAC) (Small,1997). The WebMAC is an instrument used for designing and assessing the motivational quality of websites and is based, in part, on Keller's Attention

Relevance Confidence Satisfaction (ARCS) Model of Motivational Design. WebMAC is structured around four characteristics: *engaging, meaningful, organized, and enjoyable*.

Survey Says ... Mobile Site Analytics Say More
(Mockus, et al, 2011)

We gained much knowledge by looking at the motivation survey results and the mobile site analytics. While no sweeping conclusions can be made solely on the survey results due to low response rate, it is worth paying attention to the trends in students' attitudes and emphasize the importance of mLearning as evidenced by the mobile site traffic. Although only 13 students (3.25%) responded to the survey, 94 students (23.5%) accessed the mobile site, and 72 students (18%) returned to the site multiple times, as shown in Figure 1.

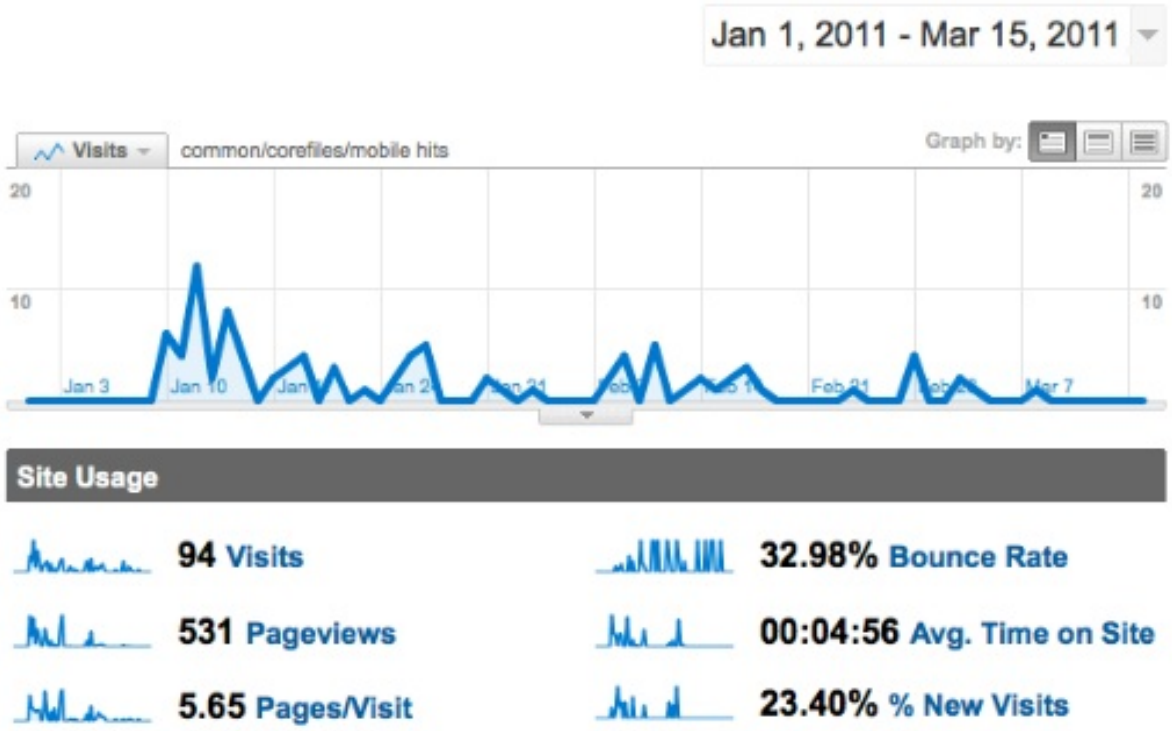


Figure 1. *Google Analytics Mobile Web Site Traffic Summary.*

The survey feedback (Figure 2) showed that content delivered on the mobile devices can motivate students to learn, but it needs to be engaging, meaningful, organized, and enjoyable. Students want to access important course resources, as well as a variety of administrative tasks on their mobile devices. If learning activities are delivered on their mobile devices, they need to be tightly connected to the subject matter. Finally, the mobile content should be engaging and allow for an active learning process.

Figure 2. *Sample Comments From Students Stating That mLearning Improved Their Learning Experience.*

One intriguing finding came from the mobile site analytics. While many researchers in the field do not classify iPads as mobile devices, our team found that students are using iPads more frequently than previously thought and consider them to be "mobile." It is now clear that iPad-like tablet devices are becoming a very effective learning tool because of their portability, accessibility, interactivity, and always-on feature. In addition, compared to smartphones, the larger screen sizes allow students to engage in more activities that were traditionally limited to computers. Figure 3 shows a breakdown of mobile devices students used to access the course mobile site.

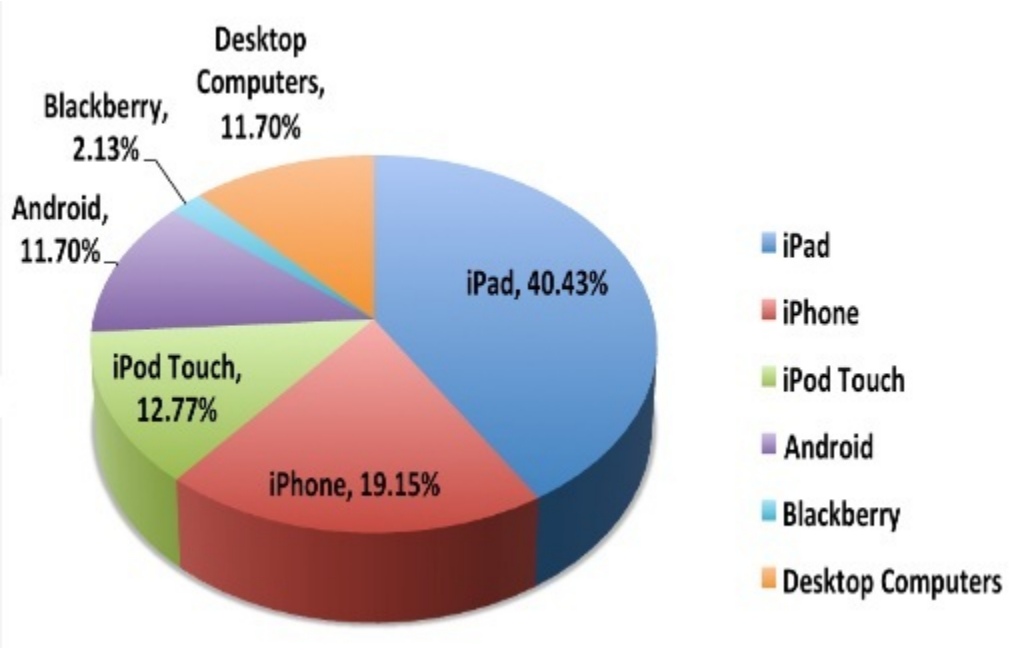


Figure 3. *Course Mobile Site Visitors' Mobile Devices.*

Perhaps the most important finding of this mobile learning study was that nearly half of the respondents claimed that content delivered on their mobile devices would motivate them to learn. They said that learning on the mobile device was enjoyable and that they would look for future courses with integrated mLearning. Additionally, the students indicated that mobile content was useful and meaningful to them.

This study pointed out a trend toward the desire for personalized learning--students want to decide where, when, and how they interact with the content and the learning experience. In order to meet these learner-centric demands, education will need to be accessible through a wide range of technologies and devices. Learning is becoming more personalized, and students want to be able to choose their preferred devices

with the expectation that the materials will be accessible. Educators and designers should work to increase motivation by utilizing the power of personalized learning that mobile delivery provides.

Expanding the Anywhere, Anytime Even More
(Mockus, et al, 2011)

Though it is imperative to continue to explore how to reach many students and devices, it is even more important to be cognizant that it is impossible to keep up with technology. As this study indicates, students want more mobile content, and higher education institutions would benefit greatly by moving ahead and starting to produce courses and content that are mobile-friendly, rather than waiting for the technology to mature. There is no question that technology will continue to move forward, and mobile devices may not look and function in the same way. Therefore, the focus in mobile content development needs to shift toward the devices' capabilities rather than the devices themselves. Thus, a greater effort and emphasis should be placed on rethinking how courses and learning objects are designed for mobile devices in order to make use of their unique features.

In the short term, our team proposes that World Campus Learning Design focus on developing more learning objects that students can access on mobile devices. This will allow further research to better determine the amount of resources that should be planned for mobile design. A good idea for a future study would be to hold a focus group and register students for the study in advance, so the number of responses to be gauged will increase.

Based on the current trends and the results of this study, our team anticipates that entire courses and even degree programs will be mobile friendly in the future. Although some may advise against putting all content into mobile friendly format or "miniaturizing" an entire course, the students could make the choice that best fits their own technology, learning style, and lifestyle. As course design continues to be more learner-centric, the student should be able to complete the majority of his or her course in a mobile device such as a smart phone or tablet, if they so choose.

This ambitious push towards an entire course that is mobile friendly would mean that content, activities, and communication should all be accessible through mobile devices. One of the main features of an LMS should be the ability to easily incorporate and support mLearning.

Finally, as 4G networks become more widespread, the technical requirement for World Campus students will need to shift to take mLearning into account. Currently, mLearning activities are optional and supplement traditional online content. In the future, however, if learning activities are designed to leverage features that are unique to mobile devices, then smartphones and mobile broadband connections should become required tools for World Campus students.

References

Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in Web- or Internet-based surveys. *Educational and Psychological Measurement*, *60*(6), 821-836. doi:10.1177/00131640021970934

Mockus, L., Dawson, H., Edel-Malizia, S., Shaffer, D., An, J. S., & Swaggerty, A. (2011). *Mobility as a motivational platform for teaching and learning*. Learning Design @ Penn State World Campus. Full white paper available at http://learningdesign.psu.edu/

Small, R. V. (1997a). *Assessing the motivational quality of World Wide Websites* (No. ED407930). Retrieved from http://www.ils.unc.edu/daniel/214/MotivationSmall.html

Small, R. V. (1997b). Motivation in instructional design. ERIC Digest. Retrieved from http://www.ericdigests.org/1998-1/motivation.htm

About the Presenters

Alicia Swaggerty is an instructional designer for World Campus Learning Design. Alicia has worked as an instructional designer since graduating with her master's degree from Bloomsburg University in 1989 in the settings of government, corporate, and higher education. Since January 2000, she has been assisting faculty on creating various Penn State online courses. She is currently the lead designer for the Master of Education in Adult Education and the Bachelor of Science in Nursing. Since August 2003, she has continued her Penn State position from a distance, living in Knoxville, Tennessee with her husband and two daughters.

Address: The Pennsylvania State University
Phone: 814-321-3831
Email: ams21@psu.edu

Jin Sung An is a multimedia specialist for World Campus Learning Design. Jin started off his career at Penn State as a programmer at Penn State's Information Technology Service and started at World Campus in 2007 as a programmer supporting learning management systems. Since, he has transitioned into a multimedia developer position and supports the instructional designers and faculty in providing multimedia learning objects such as audio/video lectures and podcasts, interactive flash, graphics and images, as well as animations. He is also heavily involved in researching and deploying mobile web sites and learning objects.

Address: The Pennsylvania State University
Phone: 814-863-7720
Email: jsa161@psu.edu

Education, Multimedia and Social Media: Are We Ready for Showtime?

Dr. Marianne Castano Bishop
Director of Distance Learning
Instructional Strategist, University Center for Excellence in Teaching
Indiana University South Bend

Jim Yocom
Director of Instructional Media Services
Indiana University South Bend

Introduction

The intersection among education, multimedia and social media is full of possibilities and realities that need to be teased out as we strive to enrich our students' lives, reinvent ourselves as educators, and maximize the affordances of distance learning tools. One of the ways for educators - and that includes faculty and staff – to be ready for showtime is to come together to find ways that support students' optimal learning through collaborative, creative and constructive multimedia projects with the integration of social media environments.

For the purpose of this paper, we refer to multimedia as video production projects created by students using various hardware such as video cameras and computers. It also includes the use of video production software programs that are either web-based or commercially licensed. With regards to social media, we adopt the definition provided by Andreas Kaplan and Michael Haenlein (2010). Social media is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content" (p. 60).

Multimedia and Social Media

There is a plethora of multimedia tools that are more easily available to students nowadays, for example, video cameras from their cell phones and other small hand-held devices. While these may not be the ideal technological tools to do multimedia production for coursework assessment, students' abilities to use these multimedia tools have provided them with the basics they need to embark on a broader project. At the same time, many academic institutions have invested on staff who could assist both faculty and students to do multimedia production projects. Additionally, social media venues for posting multimedia productions such as YouTube are increasingly becoming ubiquitous.

As students are more interested and adept at conceptualizing and producing multimedia presentations, they have been asking faculty to give them the option of creating such presentations as part of coursework. With the availability of social media websites, it is becoming easier for faculty and students to find a suitable venue, usually free, to post students' work.

This scenario is making it ripe for educators to want to acquire skills that could help them in assessing appropriately and meaningfully students' work based on guidelines inspired by best practices in multimedia production as well as learning schemas. Moreover, faculty are constantly looking for ways to piggy-back on students' interests and skills in order to scaffold their learning experiences.

Learning is a multi-sensory and multi-stimuli process. The advantage of having students engage in multimedia-enriched projects is that these projects tend to be intrinsically engaging, while promoting critical thinking and creativity through the lens of an instructor's unique curriculum and student's unique abilities. Multimedia as part of coursework, particularly through video production, addresses the diverse

ways that students learn. Social media, on the other hand, has made it easier for faculty and students to post student work that could be viewed, critiqued, revised and/or appreciated by themselves and their classmates.

Resources, Assessment and Other Considerations for Student Coursework

In order for faculty to appreciate the benefits of having their students engage in multimedia production and for students to appreciate the benefits of immersing themselves in creative and constructive work, each party will have to understand what it means to assess the work and to be assessed. Assessment guidelines could include the following: (a) an investigation of what some academic institutions and individuals have done and how they offer technology and assessment support; (b) an elaboration of social media and how they are being used effectively for video sharing of student work; (c) knowledge of guidelines for faculty to consider before posting student video coursework in social media Websites, such as copyright issues; and (d) finding and using "teacher-student friendly sites" that allow content that supports academic excellence.

There are several academic institutions, individuals, and free online tools that provide guidelines and rubrics for multimedia course assessment. They include ISTE, Kathy Schrok's Guide for Educators, North Carolina State, Penn State, University of Wisconsin-Stout, and Utah Education Network. Rubistar (http://rubistar.4teachers.org) is available free to educators to create quality rubrics.

With the advent of Web 2.0, several social media sites have proliferated that allow users to generate content to share with others on the Web. There are social media sites for video sharing. YouTube leads the pack. However, there are social media sites that not only allow video sharing, they also afford other users and visitors to the site to comment on videos and/or collaborate on group videos such as Viddler and Nico Nico Douga.

With the proliferation of video-related social media sites, several issues need careful consideration as educators and students use these sites for coursework submissions. For instance, Copyright, Fair Use, and TEACH Act should be discussed with students to help them understand what is expected of them and why. Moreover, teacher-student friendly sites will have to be determined prior to having students post their videos. These sites allow for creative freedom but also advocate responsibility and a strong sense of purpose, form and function.

Conclusion

Indeed, as educators support their students' desire, or at least interest, to engage in multimedia coursework, the equation for making this proposition successful for both the educators and their students is complex. Putting together the different elements such as faculty preparedness, availability of campus resources and support, assessment considerations, and determination of social media sites as part of the equation for appropriate coursework implementation seems a daunting task. Notwithstanding, this direction, when taken by educators, could open up a whole new world for themselves and their students, with good potential for optimizing student learning since it elevates where the students are. It also helps educators, faculty in particular, to refresh their own teaching and transform themselves out of what could have been their defaulted comfort zone.

References

ISTE HyperSIG (2011). Multimedia Mania 2004: Judges' rubric. Revisions by North Carolina State University. Retrieved from http://www.ncsu.edu/mmania/mm_docs/mm_judge_rubric2.html

Kaplan, A. M. & Haenlein, M. Michael (2010). Users of the world, unite! The challenges and opportunities of Social Media". *Business Horizons* 53, *1*, 59-68. Retrieved from http://www.sciencedirect.com/science/article/B6W45-4XFF2S0-1/2/600db1bd6e0c9903c744aaf34b0b12e1

McCullen, C. (2011). Multimedia Project rubric. *MidLink Magazine.* Retrieved from http://www.ncsu.edu/midlink/rub.mmproj.htm

Penn State University (2011). Penn State learning design community hub. Retrieved from http://ets.tlt.psu.edu/learningdesign/webdesign/media/video

Schrock, K. (2011). Kathy Schrock's Guide for Educators. Retrieved from http://school.discoveryeducation.com/schrockguide/assess.html

University of Wisconsin-Stout (2011). Video and Multimedia Project Rubrics. Retrieved from http://www.uwstout.edu/soe/profdev/rubrics.cfm#video

Utah Education Network (2011). Multimedia Presentation Rubric. Retrieved from http://www.uen.org/Rubric/rubric.cgi?rubric_id=16

About the Presenters

At Indiana University South Bend, **Dr. Marianne Castano Bishop** is Director of Distance Learning and Instructional Strategist at the University Center for Excellence in Teaching. She is also associate faculty in the School of Education, the Computer Science/Informatics Department, and the Psychology Department. She has a Certificate in Distance Education in Systems Planning and Management from Indiana University Bloomington. She holds a doctorate in Human Development and Psychology as well as a master's degree in Human Development and Psychology, specializing in Technology in Education, from Harvard University. Her other interests include assistive technology, research and evaluation, diversity, and cross-cultural communication.

Address: 1700 Mishawaka Avenue
South Bend, IN 46634
Email: cbishopm@iusb.edu
URL: http://ucet.iusb.edu/staff.shtml
Phone: 574.520.4543

At Indiana University South Bend, **Jim Yocom** is Director of Instructional Media Services and associate faculty in the Ernestine M. Raclin School of the Arts. Jim holds a Bachelor of Applied Science Degree in Audiovisual Communication from Siena Heights University, and is a Certified Technology Specialist and active member of the Consortium of College and University Media Centers. Jim's interests include media production for mobile delivery, media technology, and development of online learning objects.

Address: 1700 Mishawaka Avenue
South Bend, IN 46634
Email: jyocom@iusb.edu
URL: http://ims.iusb.edu/staff.shtml
Phone: 574.520.4806

Integration of Google Apps and Maps in Interactive Learning

Lee Ann F. Gillen
Instructional Designer & Project Manager
North Carolina State University: DELTA

John J. Classen
Associate Professor of Biological & Agricultural Engineering
North Carolina State University

David Howard
Associate Director, Instructional Design, and Course Production
North Carolina State University: DELTA

Introduction

The education literature is replete with research on the importance of interactive learning for student engagement. It is also important that students are able to utilize what they are learning in the classroom and take it into a real world situation, even if the real world is a simulated one. The Google Apps Education Edition ™, which has recently been adopted at North Carolina State University gives the students the opportunity to do just that. In addition, Google Maps were also used as part of the interactive exercises. This paper discusses through a series of three case studies from two courses, how Google Apps and Maps tools as well as the Google Visualization API's were used to support interactive learning activities for students. Both of these courses wanted to place the course content into a wider view of the world outside the narrow boundaries of the classroom, whether face-to-face or virtual.

Overview of Google Apps Education Edition™, Google Visualization API's, and Google Maps™

The Google Apps Education Edition™ allowed users to work simultaneously on the same documents, with everything stored on the cloud. The tools used in these projects were the Google Sites™ and Google Docs™ apps. Google Sites™ allowed students to easily create Web pages, input content, and add images. Google Docs™, which included a spreadsheet and a form tool allowed the user to construct seven possible question types: Text, Paragraph Text, Multiple Choice, Check Boxes, Choose from List, Scale, or Grid. These apps were used for surveys, choices, peer reviews, and data entry purposes. Two Google Visualization API's, Geo Map and Table were used in conjunction with a form to create an interactive map for displaying data visually. Google Maps™, in addition to providing location information and directions, allowed a user to create their own maps, called My Map™. These user designed maps contained place markers, and pop-up windows containing text, links, and images, which were then shared.

Case Study 1: CS 224 – Conducting Surveys using Google Forms

Problem. Seeds, Biotechnology, and Societies is a course designed to investigate the impact of seed modifications and the biotechnology of agriculture on developed and developing societies. **Before** the introduction of Google apps, the instructor wrote a paper survey of 10 – 12 questions and handed it out to her class. The students conducted the surveys during a class period, asking people on campus to fill out the survey. Around fifty responses were received. When the students returned to class, the instructor inputted the responses into an Excel spreadsheet and made charts to display the results. The problem with this approach was that it was labor intensive for the instructor, and the students were essentially spectators (data collectors) in the survey process.

Solution. After the instructor received an NC State DELTA IDEA grant to create a distance education version of her course, we examined ways to continue these two surveys, but looked for ways to do this both in an online environment, and even more importantly, with greater student engagement. Using Google apps, the students in both the f2f and the online sections of the course, worked together to develop the questions and the survey forms collaboratively. The students then conducted the surveys both virtually (by sending the surveys' URL out to their friends), and in-world by using laptops on campus, either their own or borrowed from the library. Because we were using the Google Form / Spreadsheet app, the results were input into a spreadsheet automatically. Then the instructor made charts and wall size posters of the results to display on campus and share with her distance education students as well.

Implementation. Within NC State's LMS – Moodle, the students were given written instructions on editing Google forms, and some good survey type questions were modeled. A template survey was constructed and "shared" with editing privileges for them. The students would edit each other's questions, and the instructor had the final say on the questions ultimately developed. The students were given a week to develop each survey and both the face-to-face and online students worked together. The survey was still limited to 10 – 12 questions, so the students had to integrate their class readings and discussions, to come up with the kinds of questions that they thought would further their understanding of the greater world's view on the topic.

In conducting the survey, students took laptops or checked them out on campus and to the library. They also sent the surveys' link to their friends and families. The survey became totally portable and could go anywhere in the world. The students were also vested in getting as many and diverse respondents as possible. On the first survey on Biotechnology, there were 681 respondents, and on the Global Hunger survey, there were 660 respondents. You can also choose from around 100 different themes to make your survey look professional. See Figure 1.

The Google app survey tool also has the ability to create charts that are a summary of the results. The results are shown as total numbers / parts of numbers and percentages of choices responded, so you can very quickly have usable data. You can export the spreadsheet to another spreadsheet application, such as Excel for further manipulation of the data and to make additional charts of the results.

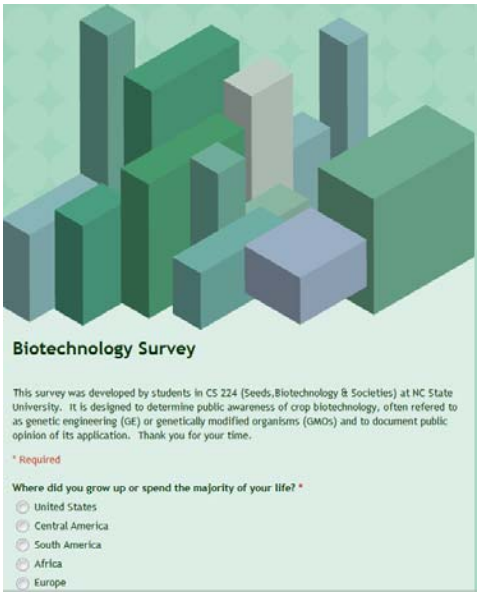


Figure 1

Case Study 2: System Design Evaluation Using Google Maps and Forms

Problem: In BAE 578, Agricultural Waste Management, a team system design project in this biological agricultural engineering course was supposed to bring all of the previous course topics studied to bear on a single realistic situation: how to collect and handle the waste products from a livestock production facility. The problem with this approach was that many students had no on-farm experience, so their options were limited because their understanding of what was possible was not well developed. In the distance education environment, we couldn't bring them to a real farm even if we could find a cooperator to host us. Past solutions had been to present idealized, somewhat sterile descriptions of livestock production sites with a set of assumptions to match. But the instructor wanted a more realistic approach.

Solution. As part of an NC State DELTA IDEA grant, we were able to explore an application of Google Maps for this problem. We selected several real farms by simply looking at Google Maps satellite images of eastern North Carolina. In Fig. 1, you can identify animal farms in eastern North Carolina by the long buildings seen in this satellite view from Google Maps. The shorter buildings with red or brown ponds are swine farms with their lagoons; the longer buildings house poultry. Students then had to develop a realistic solution for their team's farm and then compare their solutions to information provided on the land application permit available at the regulatory agency, Division of Water Quality (DWQ).

Implementation: The Instructor worked with DWQ to find the size, type and coordinates of each farm he identified on the Google map. He created a Google Map (My Map) for each team with the basic information in the edit box for the main farm place marker. Each team then had to provide additional information for the edit box, and develop a plan that addressed the needs of their farm based on number of animals, soil type, possible crops, waste handling, and other parameters. They had to outline the land application fields using the shape editor tool found in Google Maps. They also had to enter into the edit box for each field, its soil type, crop grown, expected yield and nitrogen removed (from the waste). Students were also encouraged to insert images in these boxes. Since these were private farms, the instructor emphasized that the students could not enter the farm to take photos without permission of the owners. Therefore, the images used were photos of typical crops that could be grown on that type of farm, with the identified soil type, and nitrogen amounts. See Figure 2.

The students were provided with detailed written instructions for the activity. A video created by the Instructor showed how to use and edit a Google map. The students were also given a short tutorial on using the Web Soil Survey tool, which they needed for this activity.

Since this was a team project, we developed another Google form so each team member could evaluate their own and their team members' participation and communication in this project according to a rubric that the students were provided. As with other forms, the results were accessed in a Google spreadsheet. That spreadsheet could be used like any other spreadsheet to perform calculations. The instructor normalized the results and used the team evaluation scores as part of the students' project grade.

Case Study 3: Production Practices using a WebQuest, Google Sites™, Google Forms™, and Google API Visualization tools

Figure 2

Problem: In BAE 578, as mentioned earlier, many students only had an urban or suburban background, and even students from a farm background often did not understand manure production operations for different species than what they raised. In addition, those students with a farm background, often had trouble visualizing how different operations were across the USA – even for the species with which they were already familiar.

Solution and Implementation: We provided for students an experiential learning opportunity by having them, through the mechanism of a WebQuest, take on the role of an intern in an office that wrote management plans for farms all over the country. Students needed to realize through this learning activity that regulations for animal production practices

varied not only by state but also within species. The WebQuest allowed them to discover information for themselves and guided them in that process on the state that they had chosen, using a Google spreadsheet.

Using Google Sites™, the instructor designed the actual Home page, called Animal Production Practices, for the project and modeled for the students the breadth and depth of information desired on the student created Web pages by creating the North Carolina page, thus precluding any students from using that state for themselves! Every pair of students utilized the same Google sites location to compile their information on their chosen state page, which contained the basic information and links for the state's regulations, technical help for permit writers, and where to find local information on nutrient uptake. The students then created a separate set of pages for each species, which was important for their chosen state. Figure 3 shows the swine page for Indiana. Images were encouraged to be used, to help the students visualize what the different practices looked like from state to state.

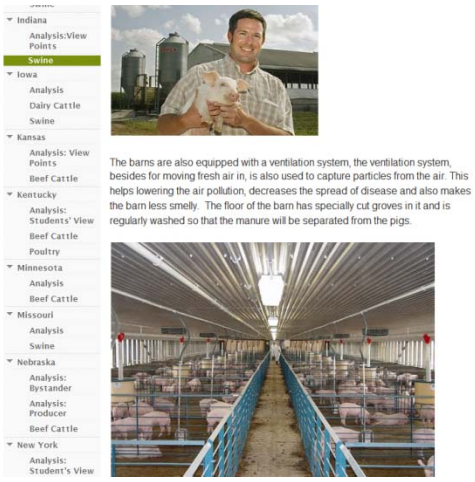


Figure 3

The experiential learning continued by asking the students to role play, in writing, the viewpoint of two stakeholders associated with their farm, the producer, and a consumer who lived nearby. These opinions were also shared via the Google site with other students.

Finally, we wanted the information collected to be summarized and shared with others, to increase further understanding of different manure management practices in other parts of the United States. This was accomplished by the use of an interactive map, which was populated via a Google form, and a Web page made of two of Google's visualization API's.

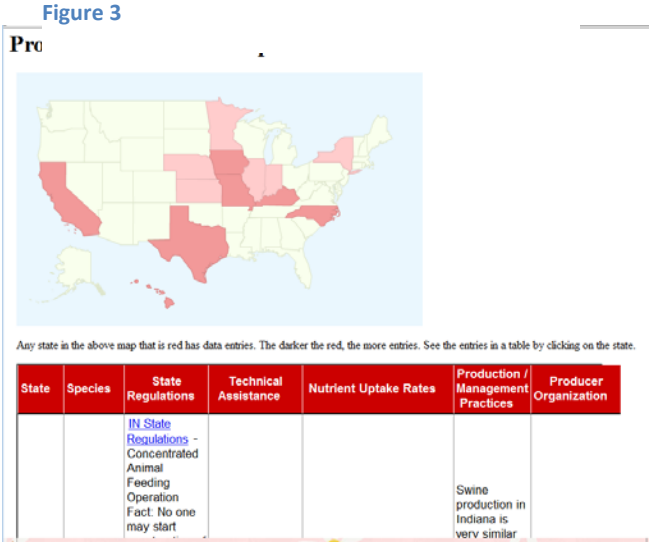


Figure 4

We used another Google Form to input a summary of the information collected into a spreadsheet, which could then be used to create an interactive animal production practices map and table, using two Google visualization APIs. See Figure 4.

There are 33 Google visualization API's available, which are based on JavaScript, and whose code is provided for the end user on the individual web pages for each API described. The various API's available can be seen at: <http://code.google.com/apis/visualization/documentation/gallery.html>

There was some manipulation needed of the information in the spreadsheet in order for it to be displayed correctly in the interactive map, first, because of an inconsistency in how various URL's were provided by the students. Some displayed them as http://, others just www, etc., so the "clean" spreadsheet had to compensate for those variations. In addition, the data needed the correct html tags in order to be used on the html Web page that was developed to house the interactive map. Therefore, a series of concatenation commands were used on the "clean" spreadsheet. There was also some manipulation of the java script necessary as well, since two API's, the Geomap and

the Table were actually used for the interactive map. The interactive map produced from these various API's and the Google forms app, highlighted the states for which data was available. Selecting a state brought up a table with the summary information provided. It is hoped that this map will continue to evolve in its information as future classes participate in this experiential activity and continue to populate the map's additional states.

These three case studies enabled us to showcase some of the uses of various Google apps™ and Google maps™ in activities that engaged students more fully in their content, and helped them develop some crucial critical thinking skills by the use of "hands-on" engagement with the content being taught.

About the Presenters

Lee Ann F. Gillen is an Instructional Designer and Project Manager at North Carolina State University. She works with the DELTA group there, which consults with faculty on the best pedagogy for distance education courses, as well as creating innovative learning technologies for teaching.

Address: North Carolina State University
Distance Education & Learning Technology Applications—DELTA
Venture Center II, Suite 500
Box 7113
Raleigh, NC 27695
Email: leeann_gillen@ncsu.edu
URL: http://www4.ncsu.edu/~lagillen/
Phone: 919-513-5015

John L. Classen is an Associate Professor at North Carolina State University in the Biological and Agricultural Engineering department. He teaches courses in agriculture waste management engineering.

Address: Biological and Agricultural Engineering
D S Weaver Labs 179, Box 7625
NCSU Campus
Raleigh, NC 27695
Email: john_classen@ncsu.edu
Phone: 919-515-7760

David Howard is Associate Director, Instructional Design, and Course Production at North Carolina State University. He provided JavaScript expertise on this project.

Address: North Carolina State University
Distance Education & Learning Technology Applications—DELTA
Venture Center II, Suite 500
Box 7113
Raleigh, NC 27695
Email: david_howard@ncsu.edu
Phone: 919-513-7020

Web 2.0 Tools to Support Digital Storytelling

Katherine Hayden, Ed.D.
Associate Professor of Educational Technology
California State University San Marcos

Stacey Campo
Technology Integration Specialist
Poway Unified School District

Introduction

Storytelling has been used as a form of communication since early times. Some essential uses of storytelling include documentation of historical events, transfer of knowledge about cultural and family beliefs, delivery of instruction (what is the meaning of the story), and sheer entertainment. With modern technology, storytelling now can be recorded, transformed through editing, and shared through the use of digital tools. "Digital storytelling … brings new life to the ancient craft of written or oral storytelling through computer generated text and multimedia content" (Frazel, 2010, p. 1). When involved in digital video projects in K-12 education, students often are found to have more ownership of their projects, feel more connected with peers through learning experiences, develop real-world skills, and demonstrate higher levels of motivation than during traditional classroom projects (Kearney, 2006). Some studies have shown increased student performance when video production has been part of classroom learning experiences. The Director of Technology and Media services in the Escondido Union Elementary School District in California stated that the district has seen a 10 to 30 point increase in standardized test scores when students have been involved in video projects in the classroom, especially students from special groups such as English language learners and special education students (Egerton, 2010).

In 2007, Alan Levine explored the expanse and variety of free Web 2.0 tools available for digital storytelling and developed a Web page that told a story about his dog Dominoe 50 times with 50 different Web 2.0 tools. Levine categorized the Web 2.0 tools he had discovered into themes including (a) slideshow, (b) timeline, (c) mapping, (d) comic, (e) scrapbook, (f) media (audio and video) and (g) mixer (Bull, 2008). In describing the value of the types of tools, Levine indicated that timeline tools are especially attractive for social sciences topics because they allow arranging of events chronologically: mapping tools can facilitate stories that take place across geographic areas, and comic tools provide a familiar "comic book" style available in tools such as *ToonDoo* (http://www.toondoo.com/).While media tools focus on video and audio tracks, mixer tools allow combining of media to tell non-linear stories. An example of a scrapbook tool recommended by Levine is VoiceThread (http://www.voicethread.com), where authors, sometimes a whole group, allow others to contribute audio or text messages to the electronic album hosted on the Web. Many more tools have been added to the inventory of Web 2.0 tools today than were available in 2007. Check out a searchable database of Web 2.0 tools at http://www.go2web20.net/ but be sure to check whether each tool is free or requires a paid membership as many providers are moving to fee-based memberships or pro memberships with added features.

This paper will share strategies, tools and resources that have been identified and used in teaching digital video production and digital storytelling for classroom projects through courses in a certificate program offered at California State University San Marcos.

Background

With more and more emphasis on video production, digital storytelling, and visual literacy, a certificate program was developed at the master's level at California State University San Marcos, to provide an

opportunity for K-12 teachers to become proficient and confident in using a variety of projects in their classroom to engage students in video production and digital storytelling. This certificate program provides teachers with experiences, knowledge of resources, and models for effective implementation of video production with students in their classrooms. The four courses in the certificate program are all fully online and provide a variety of experiences in using Web-based tools, project development based on student needs, and implementation of both content and Visual and Performing Arts standards in engaging classroom activities. The experiences prepare teachers to be teacher-leaders in the area of technology in K-12 educational settings. Teachers are required to implement projects with their students and reflect on the outcomes as part of the coursework. The course titles in the certificate program include: Instructional Technology Planning and Management, Using Visual Literacy to Improve K-12 Student Learning, Digital Storytelling to Inspire Creativity in the K-12 Classroom, and Using Web 2.0 Tools for Collaborative Video and Audio Projects in the K-12 Classroom

Appropriate Tools to Support Digital Storytelling

One of the first things that students learn in each of the certificate courses is that there are a vast array of tools to be explored on the Web and each tool has features that need to be considered before deciding to adopt the tool for classroom use. For instance, many of the tools require that students have an email account to apply for membership. This can be problematic for young students or in schools where students are not allowed to use email. We recommend that teachers consider use of tools that have educational versions such as Glogster (http://edu.glogster.com/). Other considerations for choosing Web 2.0 tools are storage space, ability to download, minimum age requirements, and accessibility of the tool through the school server. Some teachers create multiple accounts for student use in their classroom projects instead of having individual student accounts. This is one way to get around some of the issues with accounts. This strategy also allows teachers easy access to the projects that students upload.

Effective Strategies for Use of Digital Tools and Projects Ideas

Digital storytelling can engage students in active learning supported at three levels of sophistication. The simplest level is to begin creating digital stories using still photos. This strategy focuses the learner on sequencing and content without worrying about editing video or audio. One project assigned at this level of sophistication is to create a photo essay, which involves finding, organizing and presenting photos to support a position or to express understanding of a topic. Student should be required to use a storyboard for planning of their first projects so that this becomes habit in the process. Using a Web 2.0 presentation tool such as SlideShare (http://www.slideshare.com), students can upload and share photos as an essay created in PowerPoint, Keynote, or through video with limited restrictions. Use of Glogser (http://edu.glogster.com) allows a photo essay to be created with limited text, inviting students to create the story through visual images in a poster format. If photos need to be cropped or resized, try using Picnik (http://www.picnik.com/). This Web 2.0 tool does not even require an account to edit photos quickly.

To move to a higher level of sophistication in digital storytelling, ask students to add audio to their stories. A tool for combining images with audio is Yodio (http://www.yodio.com). Or you might incorporate music to add another opportunity for personal creativity. For adding music, we recommend the movie feature of Picasa Web (http://picasaweb.google.com). Using this tool allows students to add not only music, but it allows for pictures from personal collections that can be edited. Using Picasa Web also allows privacy settings to view student work and control audience access. We suggest interweaving topics such as copyright, intellectual property controlling audience access. These issues are best added within project instead of devoting a whole lesson to only learning about digital citizenship.

A more advanced level of sophistication for digital storytelling is to expand the complexity of the project media. A great starting point is to use the American Video Institute's curriculum in which a lesson describes how to film a "Door Scene." In this project, students must storyboard and film a 1-minute scene involving getting through a door. They must create fear, suspense and then relief with the sequence of the story. The only sound they are to use in the video is from a sound effect that is heard but the source of the sound cannot be seen. Curriculum can be found at http://gtmmedia.discoveryeducation.com/videos/42846/E3890C63-1279-3B00-CDD51EC72924FAA2.pdf. Using a cell phone camera, flip camera, or a full video camera, students capture their footage and then edit using a free Web 2.0 editing tool found at JayCut (http://jaycut.com). This tool is an effective resource because you not only edit your movie, but you can also store and share the finished project, with some restrictions, so be sure to read the fine print!

The highest level of digital storytelling is to create projects that utilize still photo, video clips, personal narration, background music and credits. For this, students can use iMovie or MoverMaker to creatively pull together all the elements of a powerful digital story and then post their creation to Vimeo (http://vimeo.com/), which allows teachers to create groups with collaboration tools and ratings.

This paper has provided insight into levels of sophistication in creating digital stories, ideas for sample projects and resources that are free and provide support for the making of powerful digital stories and products. Enjoy using these in your classroom!

References

Bull, G. (2008, February). Storytelling in the Web 2.0 era. *Learning & leading with technology 35*(5), 10-11. Eugene, OR.

Egerton, A. (2010). Video in the classroom. Retrieved from http://podcast.gpaea.k12.ia.us/groups/cornerstone/wiki/2865d/Video_in_the_Classroom.html

Frazel, M. (2010). *Digital storytelling: Guide for educators*. International Society for Technology in Education. Eugene, OR.

Kearney, M., & Schuck, S. (2006). Spotlight on authentic learning: Student developed digital video projects. *Australasian Journal of Educational Technology 22*(2), 189-208.

Levine, A. (2010). *50+ Web 2.0 ways to tell a story*. Retrieved from http://50ways.wikispaces.com/

About the Presenters

Katherine Hayden is an Associate Professor of Educational Technology at California State University San Marcos. She has 21 years of experience teaching in K-12 schools and higher education. Dr. Hayden has designed online curriculum and professional development through her work with more than 30 school districts over the past 15 years. Her research has focused on effective strategies for teaching online and building online communities. She has collaborated with districts in development of virtual school courses and alignment of course structure with effective online standards. Recently, Dr. Hayden has developed a certificate program in video production for K-12 education.

Address: College of Education
California State University San Marcos
333 So. Twin Oaks Valley Rd.
San Marcos, CA. 92096-0001
Email: khayden@csusm.edu
Phone: 760-750-8545

Stacey Campo is an Instructional Technology Specialist for the Poway Unified School District. She has been an educator for 22 years, has a teaching credential, Masters degree, and Administrative Credential.

Stacey is involved in policy-making for Internet safety, assessment, electronic report cards, and manages data systems. She is administrator for the Blackboard Learning Management System that supports 1300 teachers, serves on the District Strategic Planning Committee and the Virtual High School Task Force. Stacey has taught two of the certificate courses for video production at Cal State University San Marcos.

Address: Office of Information Technology
Poway Unified School District
Twin Peaks Road
Poway, CA 92064
Email: scampo@powayusd.com
Phone: 858-774-6660

Meeting Distance Learning Challenges at the USAF Squadron Officer College

Dr. Fil J. Arenas, Professor
Organizational Leadership Studies
USAF Squadron Officer College
Maxwell AFB, Alabama

Capt Peter M. Axt, Professor
Organizational Leadership Studies
USAF Squadron Officer College
Maxwell AFB, Alabama

Introduction

As one of the institutions of higher learning within the U.S. Air Force (USAF), Air University (AU) is the Intellectual and Leadership Center preparing professional military and Department of Defense (DoD) civilian leaders to meet emerging geo-political challenges faced by the United States. Within AU, the Squadron Officer College (SOC) delivers resident and distance learning (DL) programs within the USAF community, supporting a total of nearly 50,000 company grade officers and eligible DoD civilians. These programs involve professional military development, continuing education, and an online master's program accredited by the Commission of Colleges of the Southern Association of Colleges and Schools (SACS). Additionally, SOC employs a motivated team of credentialed faculty using the Air Force Instructional Systems Development approach in the design, development, execution, assessment and review of its curriculum. The following outlines SOC's resident, DL, and faculty development programs and features current innovative challenges in applying three-dimensional (3D) virtual courseware.

Resident Programs

SOC's two resident-education programs provide professional development for junior officers as leaders of integrity ready to fly, fight and win in air, space and cyberspace. The Air and Space Basic Course (ASBC), directed at lieutenants with less than two years USAF experience, and Squadron Officer School (SOS), aimed at captains with between four and seven years experience, are the subordinate schools within SOC, with a total annual throughput of more than 6,000 students.

Air and Space Basic Course

Established in 1998, ASBC offers basic developmental education for second lieutenants on the nature and skills sets required of expeditionary warfare in the twenty-first century. ASBC provides the common foundation for junior officers as leaders of Airmen inspired to articulate and advocate USAF capabilities. Through a shared experience, ASBC enables junior officers to effectively employ Air, Space, and Cyberspace power as a part of the joint warfighting team, comprehend Air Force history, doctrine, and operational capabilities, and embrace the profession of arms while applying the Air Force core values.

Squadron Officer School

Established in 1950, the school traces its roots to the Air Corps Tactical School, an airpower education center that relocated to Maxwell Field, Alabama in 1931. SOS delivers primary developmental education for captains and their Air Force civilian equivalents. During the SOS experience, students identify and reflect on their personal leadership styles while exposed to educational and experiential opportunities that challenge them to become more effective leaders. In doing so, officers broaden their focus on essential competencies including officership, leadership, problem-solving, core values, and the profession of arms.

Faculty & Curriculum Development
The faculty-development process begins with qualified instructors attending the Theories and Principles of Adult Education course, followed by the Practical Applications of Adult Education course. New faculty members then enter a supervised instructional period; six weeks for ASBC and five weeks for SOS. The next phase in the process is participating in teaching skills workshops, attending presentations by subject-matter experts, participating in evaluation and policy discussions, and constructing research presentations. After two-years of teaching experience, faculty members attend the Advanced Principles of Instructional Design course before joining SOC's curriculum-development team. SOC's curriculum is based on educational requirements levied by the Joint-Services Staff, the Headquarters USAF staff, the Air Force Learning Committee, AU, and the Spaatz Center for Officer Development. These requirements are researched and validated by the SOC faculty, which employs an analytical, holistic approach to curriculum development to ensure a coherent and effective educational experience for all SOC students.

Distance Learning

SOS Course 20, the Leadership Development Program (LDP), and the Online Master's Program (OLMP) are SOC's three DL programs with a total annual throughput of more than 10,000 students. These programs provide professional development and continuing education for USAF junior officers and eligible civilian equivalents, and a master's degree for eligible USAF captains.

Squadron Officer School Course 20
Course 20 presents similar, but not parallel, content to the resident SOS curriculum. The course develops students' critical-thinking skills in three leadership-related subcompetencies from the USAF Institutional Competency List. Ethical Leadership deals with the leadership process, the concept of accountability, and the associations between professional and personal lives of leaders and subordinates in order to develop an understanding of ethics, core values, and cultural influences on leadership development. Decision making addresses the differences between decision-making processes in the Air Force and other military services, how risk and uncertainty influence decisions, and how metrics incorporate into the overall decision-making process. Finally, Building Teams and Coalitions addresses the influences on group and team effectiveness, the differences between values and cultures, and comprehending how network development among leadership refines competence at building effective teams and coalitions.

Leadership Development Program
The LDP prepares USAF officers to meet contemporary security and leadership challenges. To allow maximum flexibility, students take these four, self-paced courses via the Blackboard® (Bb) learning management system (LMS). Each course has a specific focus and features interactive multimedia learning tools that provide students an opportunity to understand how the content is relevant to a variety of environments. In addition to readings, audio files, and videos posted to AU's Bb LMS website, some courses feature online mediated scenario-based assessments that present students with series of decision points leading to a variety of outcomes, thus strengthening critical thinking skills. Generally, course content focuses on developing leadership skills that is applicable across all Air Force career fields and each course completion will post in student education records as professional continuing education.

"Officer Development" concentrates on junior officer development and the profession of arms, thus enhancing officers' skills in followership, developing self, speaking and writing, and active listening. "Flight Commander" focuses on increasing officers' abilities to inspire, develop, and take care of diverse groups while leading them to accomplish the mission. "Expeditionary Leadership" examines deployment-specific leadership issues by exploring global, regional and cultural issues associated with joint-service and coalition operations. "Organizational Leadership" addresses skills for leading in complex institutional structures by preparing officers for challenges in resource stewardship while developing their change management acumen and supporting continuous process improvement.

Online Master's Program
The OLMP leadership concentration, developed by SOC and administered by AU's Air Command and Staff College, prepares captains for the leadership challenges and added responsibilities they will face as they progress through their careers in the USAF. The academic program structure targets six- to seven-year captains, and includes seven core courses and four concentration courses for a total of 33 semester hour's credit. Students graduating from the leadership concentration will receive a Master of Military Operational Art and Science degree accredited by SACS.

Innovative Challenges

SOC's quest to infuse innovative multimedia within its distance learning courses was reinforced by the AU's desire to engage its students with innovative approaches to learning. Based on these charges, the SOC faculty embarked on a journey to incorporate the kinds of multimedia that other academic institutions were employing, specifically virtual learning environments (VLE).

Virtual Learning Environments
A VLE is a system designed to support teaching and learning in an educational setting, as distinct from a Managed Learning Environment, (MLE) where the focus is on management of the education process. A VLE will normally employ Internet access to employ a collection of tools such as those for assessment, communication, uploading of content, return of students' work, peer assessments, administration of student groups, collecting and organizing student grades, questionnaires, tracking tools, multimedia, and other teaching aids. SOC employs the Bb Academic Suite as the delivery system for its DL programs and to support its resident curriculum.

According to Pimentel (1999), a *virtual learning environment* was defined as a place that allows learners "to perceive the environment, assess situations and performance, perform actions and proceed through experiences and lessons that will allow them to perform better with more experience on repetition on the same task in similar circumstances" (pp. 75-76). With the demands to support thousands of global students on a daily basis, it is imperative that SOC blends together the latest technological tools available to educate and develop future Air Force leaders.

Popat, Pickering, Heppell, Maclean, Eaves, and Blanc (2007) elaborated on VLEs:

> Learning is breaking out of the narrow boxes that it was trapped in during the 20th century; teachers' professionalism, reflection and ingenuity are leading learning to places that genuinely excite this new generation of connected young school students — and their teachers too. VLEs are helping to make sure that their learning is not confined to a particular building, or restricted to any single location or moment. (p. 1)

Three-Dimensional (3D) Virtual Learning Environments
Research suggests that 3D VLEs use simulations to create environments for a learner to participate in simulations where they can explore the observable world and abstract concepts. It is also suggested that 3D VLEs allow learners to participate in authentic activities, "but with the use of scaffolding provided by teachers and peers" (Burton, 2008). In response to improving technology and increased access to technology, educators, scholars, academics and learning communities are turning to 3D VLEs as powerful learning venues. Nonis (2005) explains that "where a 3D virtual technology is used to create an immersive and interactive environment to facilitate or aid learning, this is known as 3D virtual learning environment" (p. 1). Over the last two years, SOC has employed avatar (virtual representative) vignettes to leverage scenario-based learning. A typical vignette (scenario) engages the student for 5 to 30 minutes and often concludes with an assessment slide in various leadership topics (ethical leadership, decision-

making, conflicts, leading change, etc.). These vignettes support various lesson concepts or distill large amounts of information into virtual content reviews.

Today's high-speed world of technological progression has spawned new learning environments for the world of academe. This trend also affects Air Force learners whose average age is 29 for enlisted members and 35 for officers (*Airman*, 2011, p. 47). "Generation X Airmen" represent 34 to 45-year-olds today, while those falling in the 18 to 33-year-old range are considered "Generation Y Airmen" or "Nexters" as they are also called (Gardner, 2006). SOC's student population is comprised of lieutenants and captains in their early years of development (1-7 years). Educational research indicates that Generation X and Y learners have specific technological needs. "The Nexters chat online while listening to music on their *iPods*, and expertly search the Internet for answers to a history question that they cannot find in a textbook" (p. 87). In a recent survey conducted for job site (CareerBuilder.com) nearly half the respondents noted Generation Y's preference to communicate via blogs, IMs and text messages, rather than on the phone or face-to-face, methods preferred by Boomers and Generation Xers. Using technologically enhanced communication can feel uncomfortable and easily misunderstood by Boomers (46- to 64-year-olds) and Gen Xers (Gelston, 2008).

For educators, understanding the impact of 3D environments, virtual worlds, and immersive learning classrooms in education may be a difficult challenge; however, some innovative pioneers have embraced the possibilities of incorporating such forward-thinking technology within their curriculum. In 2005, *America's Army* developers partnered with the Software Engineering Directorate and the Army's Aviation and Missile Research Development Engineering Center to create a platform to provide virtual government training and simulations. In 2008, the Air Force launched *MyBase*, a 3D virtual and interactive learning environment in Second Life; while AU's Innovations and Integrations Division developed over a dozen Air Force virtual regions as prototypical learning environments. The National Guard Bureau's Joint Advanced Concepts Division's Training Technology Branch's *U.S. Nexus* platform was designed to support training and collaboration across government. Additionally, the Navy's Undersea Warfare Center and Development Lab developed their virtual learning environments for the purposes of learning, designing, and collaborating globally, in addition to developing a virtual submarine attack center to support submarine warfare training. Virtual worlds are engaging spaces whereby students may meet online, for normal class assignments, lectures, discussions, case studies, labs, and so forth.

This environment differs from traditional learning settings due to a 3D graphical setting and using avatars to represent all class participants. Currently, *Second Life* is the largest virtual world platform, developed by Linden Labs in 2003, who currently report over 8.6 million registered users or residents (Annetta, Folta, & Klesath, 2010). Can one educate in virtual worlds? Obviously learning in virtual worlds will not replace other forms of learning, but may provide other possibilities to enhance this experience. The illusion of immersion and embodiment in 3D VLEs induce learners to feel like they are performing or "doing" in lifelike environments. The ability to collaboratively situate students in environments and contexts unavailable within the classroom, corresponds to what Barab and Duffy (2000) call situated learning, or "the perspective that knowledge is situated through experience" (p. 25). Educators can prototype lessons developing alternate realities for difficult concepts to illustrate as in many military scenarios, "for example the relation between distance, motion, and time or abstract science concepts" (Yair, Mintz, & Litvak, 2001, p. 304). SOC's approach to incorporating curriculum within virtual learning environments was inspired by a message from the Air Education and Training Command's commander, General Steve Lorenz, who encouraged his subordinate units to "embrace innovative approaches…to continually enhance our mission effectiveness and efficiency."

In summary, SOC supports nearly 20,000 students annually through its combination of resident and DL programs all designed to develop Air Force leaders. Currently, blended-learning options are being studied for future learning models, as well as additional virtual strategies, to engage emerging innovations

in order to prepare Airmen for the demands of warfighting, enhancing critical thinking and performance. SOC remains committed to its core mission; to develop its officers as leaders of integrity ready to fly, fight and win in air, space and cyberspace.

References

Annetta, L.A., Folta, E., & Klesath, M. (2010). *V-learning.* New York: Springer.

Barab, S., & Duffy, T. (2000). From practice fields to communities of practice. In D. Jonnasen & S. Land (Eds.), Theoretical foundations of learning environments. Mahweh, NJ: Lawrence Erlbaum.

Burton, B. (2008). Collaboration and the use of three dimensional interface within a virtual learning environment and the impact of communication and learning: A case study. Retrieved from http://edt.missouri.edu/Spring2008/Dissertation/BurtonB-042808-D9711/research.pdf

Calongne, C. (2008). Educational frontiers: Learning in a virtual world. *EDUCAUSE Review*, *43*(5), 1-7.

Gardner, S.F. (2006). Preparing for the Nexters. *American Journal of Pharmaceutical Education, 70*(4), 87.

Gelston, S. (2008). Gen Y, Gen X and the baby boomers: Workplace generation wars. Retrieved from http://www.cio.com/white-papers

Nonis, D. (2005). 3D virtual learning environments (3D VLE), Ministry of Education, Singapore 2005. Retrieved from http://www.moe.gov.sg/edumall/rd/litreview/3d_vle.pdf

Pimentel, J. R. (1999). Design of net-learning systems based on experiential learning. *Journal of Asynchronous Learning Networks 3*(2), 64-90. Retrieved from http://www.aln.org/publications/jaln/v3n2/v3n2_pimentel.asp

Popat, K., Pickering, Heppell, S., Maclean, H., Eaves, M., & Blanc, A. (2007). *Virtually there: Learning platforms.* Yorkshire and Humble Grid for Learning Foundation, UK.

United States Air Force. (2011). Database personnel facts and figures. *Airman: The book 2011*, 40(3), 47.

Yair, Y., Mintz, R., & Litvak, S. (2001). 3-D virtual reality in science education: An implication for astronomy teaching. *Journal of Computers in Mathematics and Science Education 20*(3). Retrieved from: http://www.stanford.edu/dept/SUSE/projects/ireport/articles/3D/JCMST203293.pdf

About the Presenters

Dr. Fil Arenas is the professor of Organizational Leadership Studies at the USAF Squadron Officer College at Maxwell AFB, Alabama. He is also the Course Director for three USAF distance learning programs to include the Squadron Officer School DL Course which currently hosts 9,000 active students worldwide, developing advanced leadership skills in their professional military education. He received his doctorate degree from The George Washington University in Higher Education Administration and is currently an adjunct professor with Troy University. Dr. Arenas retired from the military after 28 years of faithful service (14 USAF & 14 USN) in 2005.

Address: Organizational Leadership Studies
Squadron Officer College
125 Chennault Circle, Bldg 1403, Rooms 2248
Maxwell AFB, AL 36112-6430
Phone: 334-953-3551
Email: filomeno.arenas@maxwell.af.mil

Captain Peter Axt is the Director of Operations for Distance Learning at the U.S. Air Force Squadron Officer College, located at Maxwell Air Force Base in Montgomery, Alabama. He manages four leadership-focused DL courses by determining future requirements, standards, continuum of learning

models, and assessment methods for 44,000 company grade officers. He received an M.Ed from *American InterContinental* University and began his 25th year of active duty service.

Address: Organizational Leadership Studies
Squadron Officer College
125 Chennault Circle, Bldg 1403, Room 2246
Maxwell AFB, AL 36112-6430
Phones: 334-953-7231
Emails: peter.axt@maxwell.af.mil

Using Mobile Technology to Empower Student Learning

George Engel
State University at Albany
Clarkstown High School South

Rena Palloff
Fielding Graduate University and Crossroads Consulting Group

Keith Pratt
Walden University and Crossroads Consulting Group

Introduction

Today, cell phones are an integral part of the genre commonly known as mobile technology, which encompasses cell phones, personal digital assistants (PDA), iPod Touches, iPads, and numerous other devices. Devices of this nature have connectivity that allows for access of information and both synchronous and asynchronous communication (Clough, Jones, McAndrew, & Scanlon, 2008; Traxler, 2010). We exclude laptops from the mobile device category because of issues of weight and battery life.

Mobile technology has "nearly infinite possibilities for education, networking, and personal productivity" (Lunsford, 2010, p. 66). Clough et al. (2008) stated,

> With such near-ubiquitous market penetration, mobile devices have attracted the attention of researchers and educators through their potential both as learning tools that support and enhance the learning experience and as a disruptive device with the potential to interrupt and distract. (p. 359)

The near ubiquitous access of these mobile technologies may be the cause of a shift in thinking among educators in higher education, bringing distance or e-learning to prominence because of the technology's "ability to create and sustain communities of learners" (Garrison, 2011, p. 1). Mobile devices allow for an extension of learning beyond the traditional classroom setting, whether physical or digital. The communication and data capabilities of the devices disrupt traditional classroom boundaries and move the classroom outside of the norms of space and time (M. El-Hussein & Cronje, 2010; Yeonjeong, 2011).

Mobile Technology in Higher Education

Though many in higher education see mobile technology as a disruptive influence, one that hinders education rather than enhancing it, mobile technology is quietly gaining a place among distance educators as an effective tool for bringing diverse communities of students together (Garrison, 2011; M. El-Hussein & Cronje, 2010). Palloff and Pratt (2007) indicated that social presence is an essential element of community building. This "social" presence is defined as "the person we become when we are online and how we express that person in virtual space" (Palloff & Pratt, 2007, p. 28). Mobile devices allow individuals to post, comment and share information – to expand their social presence— regardless of geographic location or time (Engel & Green, 2011). With these technologies, individuals are able to contribute to their online presence at any given moment. In fact, mobile devices can go so far as to grant a "sense of continuous availability" (Koole, McQuilkin, & Ally, 2010, p. 61) to students in an online community.

In addition to opening new avenues of communication and strengthening social presence, the nature of distance in the online classroom is negated by the use of mobile technology, which can "amplify the

flexibility of distance and online learning, reducing the significance of geographic location, all the while increasing that of contextuality"(Koole et al., 2010, p. 60).

Contexts of Mobile Learning

Frohberg (2006) attempted to place mobile applications according to the learning context in which they are used the free context, formalized context, digital context, and informal context. By doing so, he presented a model that others could build upon and use as new applications are developed. In a free context application, context is not relevant for the learning activity. In other words, environmental and situational elements do not affect the learning activity. Fee context applications include administrative applications, course management applications, calculators, dictionaries, and similar applications.

Frohberg (2006) defined the formalized context for mobile applications as "learning within a well-defined curriculum, being offered by some educational establishment and led by some central actor, i.e. a teacher, tutor, moderator, and the like." The relevant, contextual environment is the classroom either traditional or virtual (Frohberg, 2006). This could include the use of an audience response application, like polleverwhere.com, for gathering data from the students in the online environment. In addition, social networking tools, like Twitter, could be used in a formalized context for communication and community building. Applications like Twitter can give the learning community insights into the thinking of the community at a particular moment in time (Engel & Green, 2011).

The use of mobile technology in the digital learning context is purely screen based and fully designed as an educational tool. Simulations and microworlds fit this context and are constructivist in design (Frohberg, 2006; Naismith, Lonsdale, Vavoula, & Sharples, 2005; Patten, Arnedillo Sánchez, & Tangney, 2006). "Educational microworlds allow learners to construct their own knowledge through experimentation in constrained models of real world domains" (Patten et al., 2006, p. 298).

Not many of these types of simulations exist at this time due to the limitations of screen size and memory of the devices (Patten et al., 2006). However, new applications like geocaching and foursquare actually allow individuals and groups to become part of the simulation.

Elements of the digital context can flow over into the physical context. When simulations in the digital context break into the physical realm, they begin to impact students in a new way, a way that becomes physical learning. This is a leading component of mobile learning where "the role of mobile technology is to enrich the physical environment in innovative ways" (Frohberg, 2006).

Benefits of Mobile Learning

Informal learning, learning outside of the classroom, is foundational to true lifelong learning (Frohberg, 2006). Mobile technology is one bridge that can aid individuals in becoming informal and thus lifelong learners. Mobile technology "can be used within formal and informal learning contexts and therefore are a tool which may bridge life-wide and lifelong learning" (Beddall-Hill & Raper, 2010).

Because mobile technology is blended into people's everyday lives, it is the ultimate support for informal learning as it can be used at any moment, regardless of location and time (Naismith et al., 2005). The very mobility of mobile technology allows learners to roam and explore concepts freely without constraint -- to manage information, wherever they are. Newer applications on smart phones allow students to search the web based on a picture taken on their phones. Other applications use augmented reality to share information about a location or object. "Mobile technology has a high potential to support this management function in mobile settings, leaving a much higher flexibility, spontaneity, and ad-hoc adaptability than analog settings" (Frohberg, 2006).

Despite the benefits of using mobile technology in appropriate contexts, higher educational institutions, like their secondary counterparts, have yet to embrace mobile technology as an essential part of pedagogical practice (M. El-Hussein & Cronje, 2010). A variety of reasons exits for this. Ubiquity is one driving element for the lack of adoption of mobile technology (Engel & Green, 2011). However, as previously discussed, the majority of college age individuals do own a cell phone if not a smart phone. Furthermore, the Pew poll indicates that minorities are even more likely to use the data and communicative applications of smart phones than non-minorities (Smith, 2010). Another drawback of mobile technology is interactivity and screen size. Market forces have addressed these issues. With the advent of tablets like Apple's iPad and Motorola's Xoom, screen size and usability of lightweight mobile technology increased to a more usable size (Yeonjeong, 2011).

Beyond these physical limitations, others claim that safety and academic integrity issues brought about by mobile technology are too important to ignore; therefore, the technology should not be used as part of pedagogy (Engel & Green, 2011). We agree that these issues are important and should be addressed. However, they should not be reasons to keep mobile technology out of instructional practice. Guidelines should be created by institutions governing the use of mobile technology that supports their pedagogical use while giving guidance with how to deal with violators of academic integrity and student safety rules.

Mobile technology is not a fad or trend of technology that will eventually go away. "Mobile learning is the harbinger of the future of learning" (Keegan & Fern Univ, 2002). Mobile technology has the potential to change learning and teaching as we have known it. The use of this technology can empower students to become true informal learners that carry that knowledge through a lifetime of practice. Higher education stands on the edge of a great precipice of change—change brought about by mobile technology.

References

Beddall-Hill, N., & Raper, J. (2010). Mobile devices as "boundary objects" on field trips. *Journal of the Research Center for Educational Technology, 6*(1), 28-46.

Clough, G., Jones, A., McAndrew, P., & Scanlon, E. (2008). Informal learning with pdas and smartphones. *Journal of Computer Assisted Learning, 24*(5), 359-371. doi: 10.1111/j.1365-2729.2007.00268.x

Engel, G., & Green, T. (2011). Cell phones in the classroom: Are we dialing up disaster. *Tech Trends, 55*(2).

Frohberg, D. (2006). *Mobile learning is coming of age: What we have and what we still miss*. Paper presented at the DELFI 2006, Darmstadt, Germany. http://www.ifi.uzh.ch/pax/uploads/pdf/publication/71/2006_DELFI_Darmstadt_MLearn_Framework.pdf

Garrison, D. R. (2011). *Elearning in the 21st century* (2nd ed.). New York, NY: Routledge Falmer.

Keegan, D., & Fern Univ, H. I. f. R. i. D. E. (2002). *The future of learning: From elearning to mlearning*.

Koole, M., McQuilkin, J. L., & Ally, M. (2010). Mobile learning in distance education: Utility or futility? [Article]. *Journal of Distance Education, 24*(2), 59-82.

Lunsford, J. (2010). Using handheld technologies for student support: A model. *Journal of the Research Center for Educational Technology, 6*(1), 55-69.

M. El-Hussein, M. O., & Cronje, J. C. (2010). Defining mobile learning in the higher education landscape. [Article]. *Journal of Educational Technology & Society, 13*(3), 12-21.

Naismith, L., Lonsdale, P., Vavoula, G., & Sharples, M. (2005). Report 11: Literature review in mobile technologies and learning *NESTA Futerlab Series*.

Palloff, R., & Pratt, K. (2007). *Building online learning communites: Effective strategies for the virtual classroom* (2nd ed.). San Francisco, CA: Jossey-Bass.

Patten, B., Arnedillo Sánchez, I., & Tangney, B. (2006). Designing collaborative, constructionist and contextual applications for handheld devices. *Computers & Education, 46*(3), 294-308. doi: 10.1016/j.compedu.2005.11.011

Smith, A. (2010). Mobile access 2010, from http://pewinternet.org/Reports/2010/Mobile-Access-2010.aspx

Traxler, J. (2010). Will student devices deliver innovation, inclusion, and transformation? *Journal of the Research Center for Educational Technology, 6*(1), 3-15.

Yeonjeong, P. (2011). A pedagogical framework for mobile learning: Categorizing educational applications of mobile technologies into four types. [Article]. *International Review of Research in Open & Distance Learning, 12*(2), 78-102.

Presenter Contact Information

George Engel:
Email: engel.george.b@gmail.com

Keith Pratt:
Email: drkpratt@mindspring.com

Rena Palloff:
Email: rpalloff@mindspring.com

Using iTunes U to Teach Public Speaking Online and More!

Amanda Ireland
Instructional Designer
The Pennsylvania State University

Kristin Bittner
Instructional Designer
The Pennsylvania State University

About iTunes U

More than 350,000 free lectures, videos, readings, and podcasts from universities and institutions worldwide are available on iTunes U (iTunes U, 2011). iTunes U is a service provided by Apple that gives instructors and students access to view, download, and post lectures, slideshows, videos, maps, documents and more. If teaching with an institution that has an iTunes U partnership, instructors can request a dedicated course space to post their materials or link to available content. Instructors can also use the space like a drop box for original student work.

Resources on iTunes U

More than just institutions of higher education contribute resources; volumes of content from art galleries, museums, public libraries, television channels, nonprofit foundations, and more are available for free. These resources can be used as discussion starters, supplemental resources, or last minute lesson replacements. Instructors can link directly to the items or download them to incorporate into your course or learning management system.

Why Use iTunes U resources

The use of audio podcasts or videos can enhance the learning experience by showing content in a dynamic and engaging way. Using audio clips, videos, scenarios, and more can help to clarify key points and enrich the learning experience. In online learning, new methods of teaching allow students to play a more active role in learning and sharing information (Beldarrain, 2006).

The Evolution of an Online Public Speaking Course

Penn State University offers an online public speaking course titled “Effective Speech.” The course has undergone several iterations of speech submission over the seven years it has been offered.

Originally, the students were asked to record their speeches and “snail mail” the taped VHS recordings to the instructor. This process was extremely time consuming, and often the packages got lost in the mail. The instructor then had to ask the students to either re-record their videos or track down the missing VHS tapes. At the time, there were also many varieties of VHS tape (VHS-C, W-VHS, Hi8, micro-tape, etc.). The instructor constantly had to locate different players for each variety of tape.

Due to the number of technical issues with VHS, we transitioned to requiring a CD or DVD to be mailed instead. After another semester of file type issues and slow mail service, we decided to find a way to accept the videos electronically. First, we asked students to upload their videos to YouTube. YouTube was adequate, but privacy concerns quickly arose. When students set their YouTube settings to private, the instructor was unable to access the videos in order to grade their submissions.

After a challenging semester with YouTube, we investigated other video hosting applications and their technical specifications in the spring of 2009. We researched and tested the following tools: YouTube, Viddler, Vimeo, and iTunes U. Each tool had pros and cons* as listed in Table 1:

Table 1. Tools for Video Hosting

Tools	Pros	Cons
YouTube	• Free • Maximum file size: 1 GB • Video file formats such as .WMV, .AVI, .MOV, and .MPG • Private or Public Broadcast options	• Max length 10 minutes • Difficulty sharing the private broadcast options • Processing delay • Privacy Concerns
Viddler	• Free • Nearly unlimited space • Record videos directly to the site using a webcam • Timed comments & tags • File formats: .avi, .dv, .mov, .qt, .mpg, .mpg2, .mpeg2, .mpeg4, .mp4, .3gp, .3g2, .asf, .wmv, .flv	• Difficulty setting up a shared space • Privacy concerns • 500MB per video limit
Vimeo	• Free • Accept any of the following formats: .3g2, .3gp, .3gp2, .3gpp, .asf, .asx, .avi, .divx, .mts, .m2t, .m2ts, .m2v, .m4v, .mkv, .mov, .mp4, .mpe, .mpeg, .mpg, .ogg, .wmv • Easy to use interface	• Compression of files---loss of some quality • 500MB per week limit
iTunes U	• Free to Penn State (due to institutional membership) • Course space locked down to students on roster • "Shared" space allows students to view peers' submissions • Less than 500 megabytes (MB) file size • Mobile and download-able video files • Penn State centralized tech support	• Supports only a few file formats: .mp4, .m4v, .mov or Apple's recommendation-mpeg4 (conversion may be required)

**Note.* Technical specifications listed in this chart are representative of spring 2009

For this course, iTunes U was the best fit. One major advantage was that we could "lock" down the course space to only the students listed in the course roster. In 2006, Penn State had established an institutional partnership with iTunes U, which also meant centralized university technical support is now available for our students and faculty. Centralized support provides instructors and students with a single point of contact for questions or problems with iTunes U. The one drawback of iTunes U is the strict file formatting (.mp4, .m4v, .mov, or. mpeg4). We were able to overcome this disadvantage by providing

students with free online tools such as http://handbrake.fr/ and http://www.zamzar.com/ to easily convert their videos to the required format.

Current State of the Course

Penn State has been using iTunes U to teach "Effective Speech" since the spring semester of 2009. The students are currently required to produce three recorded speeches. The students can use their own cameras (web, video or digital) to record. Or, if they live close to one of Penn State's 20 campus locations, they can use campus provided resources. The students convert their video file (if needed) and upload to their iTunes U course space.

Prior to using iTunes U, the students only received feedback from the instructor. The iTunes U space has a folder for each speech video required for the course. The folders' permissions allow students to upload their videos as well as view and download the videos of their peers. The students are asked to review two peer speeches and write a 150- to 200-word evaluation of the speech using the categories from the provided grading rubric and the critique question prompts. (These resources are available at http://psuitunesu.wikispaces.com/).The rubric helps to guide students towards positive and constructive feedback to their peers—more than just "nice job" comments are required. The faculty member reviews each speech and provides feedback using this same rubric. Students are encouraged to incorporate the feedback from their instructor and peers into their future speeches. This assessment assists in strengthening the student's public speaking skills.

Summary

Courses and technologies are endlessly improving, and this course will continue to evolve over time. We will continue to evaluate iTunes U and other tools and methodologies to ensure we provide the best fit for teaching and learning public speaking online.

References

Beldarrain, Y. (2006). Distance Education Trends: Integrating new technologies to foster student interaction and collaboration. *Distance Education. 27(2). 139–153.* Retrieved from http://www.informaworld.com/smpp/content~db=all~content=a749174134

Handbrake. (2011, March 26). Retrieved from http://handbrake.fr/

iTunes U. (2011, March 28). Retrieved from http://www.apple.com/education/itunes-u/

PSUiTunesU. (2011, April 28). *Using iTunes U to teach public speaking online and more!* Retrieved from http://psuitunesu.wikispaces.com/

Viddler. (2011, April 4). Retrieved from http://www.viddler.com

Vimeo. (2011, April 4). Retrieved from http://www.Vimeo.com

YouTube. (2011, April 4). Retrieved from http://www.youtube.com

Zamzar. (2011, March 26). Retrieved from http://www.zamzar.com/

About the Presenters

Amanda Ireland is an instructional designer for Penn State World Campus. She specializes in online course design and supports online programs in Educational Leadership and the high enrolling English and Communication Arts and Sciences courses. She has a Master of Science in Instructional Technology from Bloomsburg University. Amanda also serves on the Penn State World Campus Equella Committee that is researching and testing the use of digital learning object repositories. Prior to joining Penn State, Amanda was an instructional designer and IT project manager for a financial institution.

Address: Penn State World Campus
100 Innovation Blvd.
Outreach Building Room 225
University Park, PA 16802
Phone: 814-865-5726
E-mail: asi10@psu.edu
URL: http://www.worldcampus.psu.edu

Kristin Bittner is an instructional designer for Penn State Harrisburg and Penn State World Campus. She specializes in online course design and supports online programs in Criminal Justice and Homeland Security. She has a Master of Science in Instructional Technology from Bloomsburg University. Prior to joining Penn State, Kristin was an instructional designer for Lockheed Martin and designed aircrew training for the U.S. Air Force. Kristin also has 10 years of military service and is currently serving as an Education Officer in the Pennsylvania Air National Guard.

Address: W157 K Olmsted Building
Penn State Harrisburg
777 West Harrisburg Pike
Middletown, PA 17057
Phone: 717-948-6207
E-mail: kristin@psu.edu
URL: http://www.worldcampus.psu.edu

Ten Things We've Learned in Ten Years: What You Should Know About Learning Objects

Ann Del Ponte
Wisc-Online.com

Jay Stulo
Wisc-Online.com

When Wisc-Online was launched in 2000, the founders had no idea the website would eventually attract 650,000 unique visitors a month from 208 countries (Google Analytics, 2011). The site, a collaborative effort of the 16 colleges in the Wisconsin Technical College System (WTCS), was designed to use a digital library of learning objects to improve learning for students at WTCS colleges -- it just so happened the rest of the world came along for the ride.

Wisc-Online.com is a searchable website where learners can find, link, and use approximately 2,300 learning objects in more than 50 technical and non-technical categories. These interactive, animated "chunks" of information, authored by faculty at colleges in WTCS, are available to be used at no cost by anyone, anywhere in the world. Despite the fact that the learning objects are written only in English, data from Google Analytics consistently show that only two or three nations in the world have not accessed the site during a typical month.

Going global was not anticipated a decade ago. Even the term "learning objects" was new when the project started. Organizers chose to define learning objects as "web-based, self-contained, reusable, small chunks of learning" (Wisc-Online, 2011). That basic definition has stood the test of time and continues to appear on Wisc-Online.com as well as in the academic literature. In their 2009 article in *Educational Technology Research & Development*, R. Kay and L. Knaack defined learning objects more fully as "interactive web-based tools that support the learning of specific concepts by enhancing, amplifying, and/or guiding the cognitive processes of learners."

The fact that learning objects are designed to be adaptable and flexible in any place of learning was a key reason the Wisc-Online project was awarded a three-year, $1.6 million grant in 1999 from the Fund for the Improvement of Post-Secondary Education (FIPSE). The project purposely did not develop courses or a curriculum (Wiley, 2001). The original plan was to develop a digital library of learning objects for nine WTCS General Education courses. One year into the project, faculty members from math and science disciplines asked to be included because they could see the potential for their students. Today, learning objects in scientific and technical fields are some of the most popular objects on the website, with 437 learning objects dedicated to just electronics.

The most important questions continue to be: Do learning objects live up to the ideal? Do they teach and remediate? Do they match the styles and paces of learners? Do they offer "real world" applications? Are they stimulating and fun?

Some academics question whether learning object technology is used effectively. They warn that learning must not take a backseat to graphics, and that flexibility is no substitute for guidance. "Most apparent is the absence of supportive scaffolding for the student user; interactivity built on an 'exploratory' approach can fall short of achieving its learning objective if support and guidance are missing for the student user who fails to grasp the learning point being offered," writes J. Watson in the *Electronic Journal of e-Learning.* An explicit design is necessary that would allow learning objects to be aggregated into resource sets or "toolkits" (Watson, 2010). Wisc-Online emphasizes that while learning objects stand alone in

terms of illustrating a concept, they have even greater potential when used mindfully as part of a curriculum.

The Electromechanical Department at Fox Valley Technical College in Appleton has combined learning objects into a kind of toolkit for its DC Electronics course. During the 2004-2005 academic year, faculty conducted an evaluation to determine the effectiveness of learning objects. The assessment was performed twice, first to a group of 70 students enrolled in the DC Electronics course during the fall semester, and again to another 45 students enrolled in the same course during the spring semester.

Students were randomly divided into two groups. The groups worked on the same experiments and had access to the same lectures, textbooks, and videotapes. The difference was that Group B was assigned to view learning objects that pertained to the assigned material before the initial quiz while Group A was not. For the second of three quizzes, some of the members of the groups of students were switched; students who had not been given initial access to the learning objects before the first quiz were now assigned to view them before this unit quiz.

The three units were taught by seven instructors and involved 21 learning objects. All of the objects were interactive, requiring students to answer questions while going through the activity. Most of the objects were also animated, allowing electronics students to visualize such things as changes in current, voltage, and resistance. The results showed that students who used learning objects scored significantly higher on assessments than those who did not use them. To date, the creation of Wisc-Online learning objects for technical education has been supported by two National Science Foundation grants.

As shown in the electronics learning object model, it is valuable to evaluate each object to determine its effectiveness. In their 2009 article in *Educational Technology Research & Development*, R. Kay and L. Knaack reported on a Learning Object Evaluation Scale for Students (LOES-S) in a K-12 environment. The objects were judged based on learning, quality or instructional design, and engagement.

In the case of Wisc-Online, FIPSE-funded projects required external evaluators, people with expertise who were not part of the project itself. For the first three years of the project, Wisc-Online worked with three evaluators who reviewed the learning object building process and each learning object. When the FIPSE grant ended, and a consortium of the colleges in the WTCS system took over financial support of the project, the evaluation piece was not continued. However, all authors are still required to have their learning objects peer reviewed by a content expert. Wisc-Online also contains a feedback feature that allows subject matter experts from anywhere in the world to critique any published learning object.

An unexpected endorsement of Wisc-Online came in 2005 when a learning object on the site received the Pirelli International Award in the field of chemistry. The award carried a $15,000 euro prize and was judged by Nobel Prize winners. It was presented in Rome to author Barb Liang, a teacher at Fox Valley Technical College in Appleton. The jury wrote that the object, "Construction of the Cell Membrane," was selected "for its science communication effectiveness and ease of use. This work presents itself as a solid instrument for the teaching of chemistry." The learning object allows learners to build the cell membrane by moving the molecules in a drag-and-drop exercise (Pirelli, 2005).

Recent research has advocated the creation of software that faculty members could use to build their own learning objects without the aid of a multimedia technician (Watson, 2010). Wisc-Online has experimented with templates for both learning objects and games. The game templates, a system called GameBuilder on Wisc-Online.com, have been the more popular option, allowing instructors to enter their own content. The website currently has 15 different templates to choose from. This is the only part of the website that is not free for all users. WTCS faculty can use the templates free of charge; other users pay an annual fee of $1 per template.

The site, which was begun under the name The Wisc-Online Resource Center, was renamed Wisc-Online.com in January of 2010 when it was rebuilt to improve search engine speed and accuracy and to add a variety of features. It now has a more intuitive interface that allows users to find a desired learning object quickly. Learning object thumbnails were placed on the site, and Web 2.0 features were added with the creation of a My Wisc-Online page. The site was designed with best practices in mind to protect users from typical website attacks. User data is protected with 64-bit encryption and secure socket layer certificates. Security policies filter out cross-site scripting attempts that could expose users to malignant sites.

Each learning object has its own unique URL address. Users may copy this address and use it on any document/website they wish. As a member of Wisc-Online, site users have their own public Wisc-Online page, called My Wisc-Online, on which to display their favorite learning objects. They may give the link to this page to other educators, learners, or users.

The repository supports html, Flash (.swf), Director (.dcr), and video in .flv format. Currently, 95 percent of the objects are created in Adobe Flash; however, plans are in place to offer other alternatives for mobile users. Basic metadata standards for title, author, description, and keywords are used following a modified LOM (learning object metadata) standard. Wisc-Online is developing a public API to allow the repository to federate with other learning object-specific websites.

References

Google Analytics (2011) http://www.google.com/analytics/).

Kay, R., & Knaack, L. (2009). Assessing learning, quality and engagement in learning objects: the Learning Object Evaluation Scale for Students (LOES-S). *Educational Technology Research & Development*, *57*(2), 147-168. doi:10.1007/s11423-008-9094-5.

Pirelli International Award. Pirelli. Rome. (2005). Retrieved from <http://www.pirelliaward.com/ed10_chm.html> (20 April 2011).

Watson, J. (2010). A case study: Developing learning objects with an explicit learning design. *Electronic Journal of e-Learning*, *8*(1), 41-50.

Wiley, D. (2001). Connecting learning objects to instructional design theory: A definition, a metaphor, and a taxonomy. Chapter in Battle Stories from the Field: Wisconsin online resource center learning objects project.

About the Presenters

Jay Stulo serves as senior software developer within the Learning Innovations Department at Fox Valley Technical College. In additional to focusing on software development, he is responsible for keeping his department on the cutting edge. As an educational technology consultant, Jay helps bridge the gap between an instructor's ideas and what today's technology can provide. As senior developer of WI Career Pathways.org, Jay built a website that gives high school students the resources they need to plan their educational path to their desired careers. He is responsible for seeing that the site meets the needs of all of Wisconsin's educational groups: the Department of Public Instruction, the University of Wisconsin System, private colleges, and the Wisconsin Technical College System.

Address: Fox Valley Technical College
1825 N. Bluemound Drive
Appleton, WI 54912-2277
Phone: 920-993-5109

Email: stulo@fvtc.edu

Ann K. Del Ponte has been the editor of Wisc-Online since it began in 2001. She has a bachelor's degree in journalism and a master's degree in educational technology. After 20 years as an editor for newspapers and magazines, Ann joined Fox Valley Technical College as a communications skills instructor. Although she left that position to become editor of Wisc-Online, she continues to teach as an adjunct instructor so she never forgets the "audience" for Wisc-Online learning objects.

Address: Fox Valley Technical College
1825 N. Bluemound Drive
Appleton, WI 54912-2277
Phone: 920-831-4336
Email: delponte@fvtc.edu

NOTE:
Wisc-Online.com is a searchable website where learners can find, link, and use 2,500 learning objects in more than 50 technical and non-technical categories. Approximately 300,000 unique visitors come to Wisc-Online each month. The learning objects are interactive, animated "chunks" of information and are available to be used at no cost by teachers and students anywhere in the world. A consortium of the 16 colleges in the Wisconsin Technical College System, whose faculty author the learning objects, continues to support the site.

Demonstrations

Developing Interprofessionalism in Healthcare Students: From Online to Clinical Practice

Catherine Gierman-Riblon, Med, RN
Director, Biomedical Sciences Program
Assistant Professor, Interprofessional Healthcare Studies

Sandra Salloway, DNP, MS, RN
Associate Dean, Student Affairs
Professor, Department of Nutrition

Rosalind Franklin University of Medicine & Science

Summary

The delivery of care in today's complex healthcare system requires providers to collaborate and communicate in interprofessional teams in order to provide the highest quality of care and maximize patient outcomes. As a result, the development of interprofessional attitudes and behaviors is becoming an expectation for healthcare professional students. While group learning theory has been used to develop face-to-face classroom activities that foster these, adept online instructors can translate face-to-face activities into equivalent online experiences that provide no significant differences in learning outcomes.

This demonstration outlines the theoretical foundations of online content, material development, and learning activities, and assessment of online learning experiences that can foster interprofessional attitudes and behaviors early in the curriculums of healthcare students. Upon completion of the activity, structured reflection statements can be used by both faculty and students to assess whether learning has occurred. It is intended that attitudes and behaviors can later be demonstrated in the clinical setting after the student has practiced them in the online environment.

Presenter Bios

Catherine Gierman-Riblon, MEd, RN is currently Director of the Biomedical Sciences Program and an Assistant Professor at Rosalind Franklin University. Her academic career spans 28 years of administrative and instructional positions covering associate degree to graduate level programs, and includes both face-to-face and online teaching and curriculum development for nursing and the allied health professions.

Sandra Salloway, DNP, MS, RN is currently Associate Dean of Students Affairs and Professor in the Department of Nutrition at Rosalind Franklin University. For the past 30 years, Dr. Salloway has taught programs in Nursing, Physical Therapy, Healthcare Management, and Nutrition, the last five years of which have been primarily in the online environment.

Contact information:
Rosalind Franklin University
3333 North Green Bay Rd, North Chicago, IL 60064

Catherine Gierman-Riblon MEd, RN
Phone: 847.578.8789
Catherine.GiermanRiblon@RosalindFranklin.edu

Sandra Salloway DNP, MS, RN
Phone: 847.578.8624
Sandra.Salloway@RosalindFranklin.edu

VetICE: A Cooperative Approach to Veterinary Medical Education

Jeannette McDonald, DVM, PhD
Project Director

Eileen Horn, B.A.
Web Course Developer

School of Veterinary Medicine
University of Wisconsin–Madison

Summary

VetICE is a cooperative of AAVMA-accredited veterinary schools for the purpose of developing and implementing a model for sharing faculty expertise, courses, and educational materials among veterinary colleges across the United States and beyond. Unlike other course-sharing models, the VetICE model accommodates large numbers of students while bypassing the issues of tuition and the granting of credits.

VetICE courses have been developed complete with content, lectures, activities, multi-media, resources, assessments, and teaching guides. They reside on the VetICE Moodle server. If College B wants to use the course for their class they assign a faculty of record to administer the course, list it on their own timetable, have students enroll in the course, and tap into the VetICE server to use the course. VetICE provides the school with their own instance of the course so that the faculty member can customize the course to fit his/her teaching style and schedule. In this way the student gets credit for the course through their own college (so no transfer credits) and the students pay the tuition at their own institution.

We also developed a business plan that builds in growth and sustainability and rewards faculty for contributing courses. The business plan allows for schools to set their own "course materials fee" with VetICE charging a per head administrative fee. This provides incentives for institutions to contribute courses. VetICE is a new twist on a common theme. While there are many models for institutional sharing of courses and collaborative degree programs, veterinary medical education has some challenges not addressed by these other models. VetICE provides creative solutions to these challenges.

Presenter Bios

Jeannette McDonald is the originator and Director of the Technology for Learning Center (TLC) at UW–Madison's School of Veterinary Medicine; her primary goal is to work with faculty and staff to develop educational materials, modules, and courses for use with students, veterinarians, and clients. The TLC works with faculty to explore uses for emerging educational technologies including games and simulations.

Eileen Horn is the instructional designer for the TLC at UW–Madison's School of Veterinary Medicine. She enjoys brainstorming and problem-solving with faculty and the other team members to produce high-quality, engaging activities that support teaching and learning.

Contact Information:
Jeannette McDonald, DVM, PhD
University of Wisconsin–Madison School of Veterinary Medicine
1656 Linden Dr., 108 AHABS
Madison, WI 53706
Phone: 608.263.5170
mcdonal7@wisc.edu
www.veterinaryice.org

Real-world Practice Makes Perfect

Katy Little
Assistant Curriculum Manager and WDL Librarian

Melissa Meltzer
Assistant Faculty Manager

Curriculum and Instruction Departments
Weston Distance Learning, Inc.

Summary

It's true that students benefit from hands-on, real-world activities and assignments. These items give them the opportunities to apply what they've studied in the classroom. Internships are great, but they aren't an option for every course or program offered. Without an internship, how can you ensure that you're best preparing students for their future careers?

Today, technology has closed the gap between the classroom and real world—especially where specialized software is concerned. There are many free programs available, as well as companies willing to work with schools to provide students with access to specialized software at a discount rate.

In this demo, we'll explore two examples of courses that take real-world learning to the next level.

- ChartScript is a browser-based speech-recognition technology solution that large hospitals and clinics use. Weston Distance Learning works with ChartScript to allow medical transcription students to practice editing real medical reports.
- How do you ensure your coding, billing, transcription and medical assisting students are prepared to use electronic health records (EHRs)? Weston Distance Learning also works with Practice Fusion, a Web-based EHR, to provide a lab with hands-on EHR practice.

Throughout this demo, we'll discuss advantages and disadvantages to this type of real-world course design. And, you'll consider how to incorporate similar exercises in to your courses!

Presenter Bios

Katy Little, B.S., M.L.I.S, serves as the Assistant Curriculum Manager and Librarian for Weston Distance Learning, Inc. She has written and edited courses and textbooks on subjects that include office administration, fitness and nutrition, health information management, psychology and English.

Melissa Meltzer, B.S., has 21 years' experience in education, 11 of which have been in distance education, teaching courses in both correspondence and online venues. She currently serves as the Assistant Faculty Manager for Weston Distance Learning's degree programs, where she recruits, trains and supervises faculty.

Contact Information:
Katy Little
Assistant Curriculum Manager and Librarian
Weston Distance Learning, Inc.
2001 Lowe Street, Fort Collins, CO 80525
Phone: 970.207.4520
katyl@westondistancelearning.com

Using Mobile Telepresence in Academia

M. N. Clark, P.I.
Adjunct Faculty
Carnegie Mellon University

David Root
Director of MSE Distance Education
Institute for Software Research

Introduction

Our results provide optimism for physical avatars in education, especially as their underlying core technologies improve in streaming video, voice, mobile bandwidth, and software architecture.

First we define our avatar as a real-world mobile device that represents its human operator so that he/she can see, hear, speak, and can physically move within environments without being corporally present.

Background

Before starting, we presented objectives and processes to our department heads. Next we selected a graduate course "Software Methods" [3] for showcasing the robot because it was offered both on and off campus. We briefed their instructors and received permissions to use a telepresence robot in the classrooms.

Our questions were:

1. Does the mobile telepresence technology add learning value from the perspectives of:
    a. distance student
    b. off-campus instructor
    c. on-campus instructor
    d. distance group settings
    e. on-campus group settings
    f. administrators

2. How does mobile telepresence compare to traditional synchronous learning communications?
    a. to virtual conference rooms
    b. to speaker phone
    c. to computer chat sessions

3. What specific benefits can be achieved with mobile telepresence, what's unique?

4. What are the lessons learned when introducing mobile telepresence in academic settings?

We invited several people to participate and provided them with instructional videos. Individuals operated the platform using a web interface. The principle investigator, a distance instructor who uses a wheel chair, approached the project as a method to enhance his student's educational experiences. Specifically asking: would a physical presence in machine form add value to students?

Our avatar drivers and observers completed surveys to capture fundamental issues: A) was the machine accepted; B) was the experience helpful? We addressed those two points by using these roles:

1. Student, traditional classroom
2. Teacher, traditional classroom
3. Member of a semester Capstone project
4. Briefing Department
5. Giving staff introductions
6. Student consultant
7. Briefing visitors and groups
8. Facility tour guide
9. Business meeting attendee
10. Distance lecturer
11. Open-House greeter
12. Library assistant
13. Mentor for project reviews
14. Recruiter

Innovation

Our innovation is in immersing a surrogate that is three dimensional, dynamic, and self-contained. Whereas collaboration technologies afford some synchronous interaction, most involve static infrastructures. One example is virtual conference centers. These dedicated rooms of microphones, cameras, and projectors are valuable but place burdens on the distance student, staff, instructors, and the local student community. Even with inexpensive mobile web-cameras, the success of distance interaction relies on both parties to use technology. Instead, a person speaking to our avatar does not require technology on their side to interact. The operator controls the robot from a distance to follow its host until the campus environment is understood. This is exactly how a person welcomes a new colleague or guest. Our avatar represents its operator in abstract, machine form, i.e. it sees, listens, and speaks for its human operator.

Awareness Benefit

Instructors and colleagues are less likely to forget distant students in avatar form, and thereby, foster attentiveness. Likewise, our belief is that persons at a distance increase their learning opportunities when they own their exploration space. This technology is unique among present static devices in that side-bar conversation in hallways and student study-rooms are accessible to mobile avatars. Additionally, our avatars can seek individuals or groups. In contrast, chat rooms, web cams, and Skype methods rely on both parties to converge with equipment at a place and time.

Virtual Conference (VC) centers have high infrastructure costs and are typically few in number. Furthermore, professors often leave the comfort of their nearby lecture rooms to accommodate distance students in VCs. Office hours for one-on-one discussions with distance students use phone chats. Whereas a mobile avatar can travel wherever there is sufficient Wi-Fi or cell-phone service available, including the professor's office. Today's universities have pervasive Wi-Fi coverage so we were surprised to discover gaps in wireless connectivity. We learned that traveling continuously across access points require special infrastructure considerations [4]. However, our premise is that smart phone bandwidth and coverage will continue to increase making it possible for distance students, professors, and staffers to use avatars ubiquitously.

Degree of Sensing

How much autonomy does one build into physical, mobile avatars? This question addresses a design trade-decision. While an ideal platform would be capable of robust obstacle avoidance and re-planning to reach a goal, this typically involves uploading local maps to the mobile robot, adding sensors, and placing fiduciaries as navigation guides. The CoBot project [5] [6] [7] has had impressive demonstrations in this regard.

Instead, our platform relied on its operators, in the role of a virtual-visitor, to understand their environment by following human hosts. As needed, the host introduced the avatar to classrooms,

hallways, staff offices, and obstacles in labs, essentially accepting the human operator's virtual presence. If the visitor had prior knowledge of the area, then the host's role was more relaxed, perhaps nonexistent. Subsequent avatar visits from the same operator did not require such first-time "hand-holding".

New Relationships (HMH)

One observation from our case study is that there exists an emerging relationship: human to machine to human (HMH). While a novelty at first encounter, the distant visitor and resident person progress quickly to real work.

Another case-study observation is our expectation to have the avatar work "out-of-the-box". That is, when the robot arrives from its shipper and is turned on, the receiver expects it to function with little preparation. The distance user expects to login and see, listen, and speak with clarity along with having a fine degree of mobility. People who interact with the avatar expect to be seen, heard, and most importantly, feel non-threatened by the device. In no case do we expect either party in HMH to understand its underlying technologies. Additionally we should find it reasonable to ship the machine to other campuses and have a virtual presence ready within an hour of its arrival. Given this perspective, careful consideration should be given if requiring fiduciaries and local maps be uploaded before the robot is ready to function. In this regard our mobile platform uses human-assist technology to augment the operator's skills without adding front-end complexity.

Overview in Pictures

We direct the reader to Figure 1 and the narrative below for examples from our case study.

Insert "A" in the upper left is a snapshot of the beta platform shipped to Carnegie Mellon University from Anybots Corporation on August 23, 2010. Note its single box in the background. An adjustable three-sectional telescoping mast allows the device to reach 5'10". Its height can be seen in Insert "D". The paper's principle investigator holds the avatar at the campus's student center. The platform balances on two wheels and weighs about 30 pounds.

Insert "B" shows the avatar attending a weekly Friday meeting. The distance operator was a Carnegie Mellon University professor residing in Florida. For more than 12 months, the professor attended a weekly meeting by speaker phone. In this insert, the meeting's host asked the professor if he got the meeting slides in last night's email. He responded through his avatar: "yes, but they are in another room. I will just move closer to your screen." Every chair was occupied but the professor nimbly navigated his avatar to the front where the screen was. After the meeting, the host, a world renowned roboticist [8] complimented the professor on his machine's participation abilities.

Insert "C," with the backdrop sign "Pittsburgh Supercomputing Center" places the avatar on the first floor of a shared-space building. Supercomputing takes place on floors three and four. Our classrooms were on the second floor. Frequent wireless disconnects to the robot were initially associated with activities on the floors above. We learned later that our access point was at fault. It had 8 radios, each having their own directional antenna. Tuning the array improved our mobility performance.

Insert "E" and "G" is a glimpse of student Capstone presentations. These are joint, end of semester programs with our Portugal colleagues. The avatar entered several briefing rooms where students present their findings. Mentors and sponsors give advice and ask questions as they travel from room to room. One professor from Portugal logged into our avatar and participated as a mentor [9].

Insert “H” places the avatar on the left, with two lunar-rover prototypes in the frame. The location is the Planetary Robotics high-bay within the Gates Center for Computer Science. The rovers are working prototypes in the university’s international competition for Google’s Lunar X-Prize. Our mobile avatar enabled distant researchers and sponsors to experience the project. We also gave tours to high-school and middle school students using the avatar. Our platform allowed remote scientists to observe other robots in the high-bay like Zoe: The solar Atacama Desert crawler and SCARAB: an extreme incline drilling platform.

Insert “I” shows how students accepted the avatar. In the weeks before Halloween, students decorated the halls and classrooms with skeletons, pumpkins, and cobwebs. They felt comfortable dressing up the avatar with a paper hatchet.

Insert “F” is a small snapshot during a demonstration at our Science and Technology library. Many students would later say how inspired they were at seeing the avatar. The senior librarian discussed several practical ideas that we will share in our conference presentation.

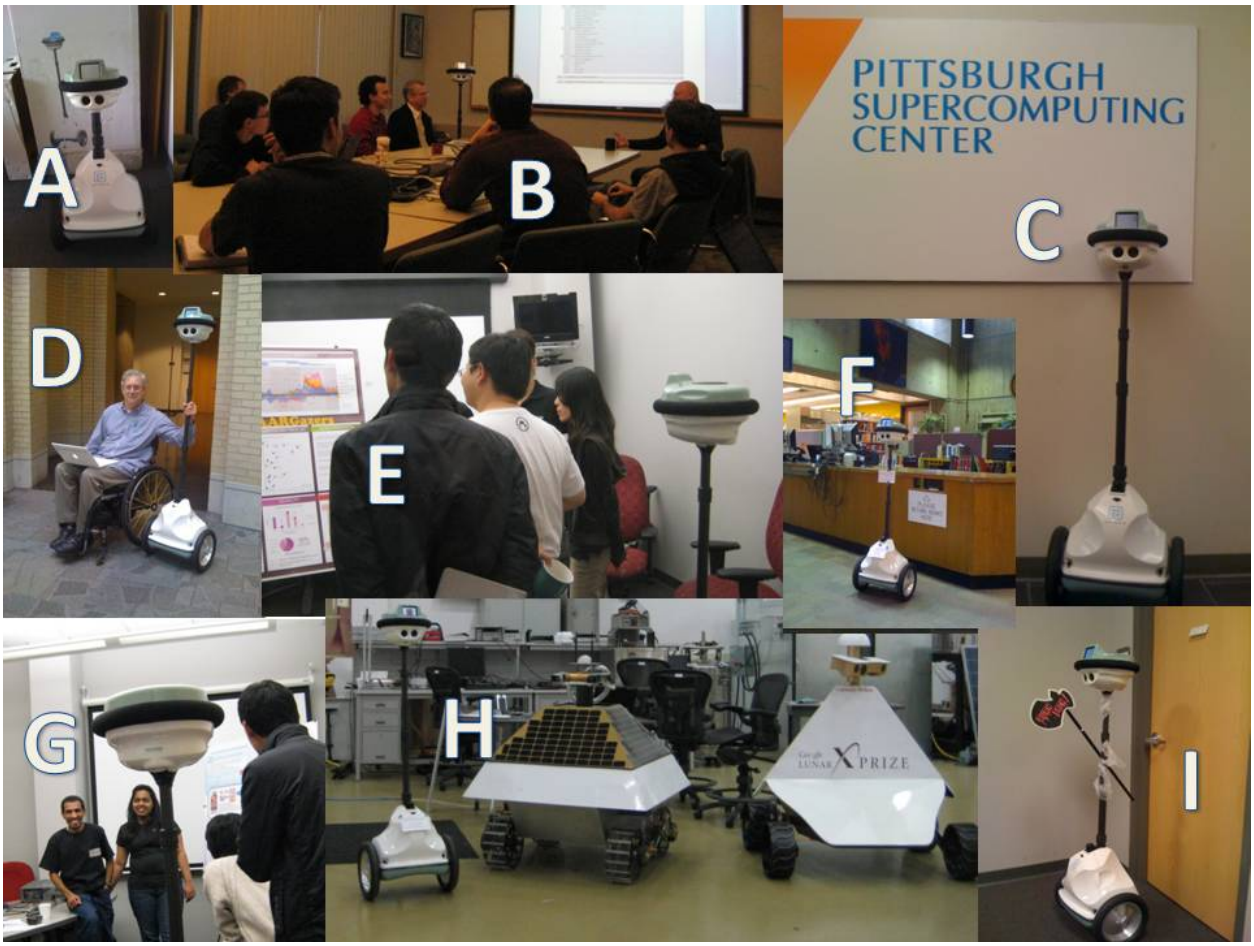


Figure 1. *Examples of Avatar Roles*

References

[1] Anybots Corporation: http://anybots.com
[2] Guizzo, E. When my avatar went to work in *IEEE Spectrum, 4*(9), 26.
[3] Herbsleb, J. Carnegie Mellon University ISR graduate course - M*ethods: Deciding what to design* (F10-17652-D)
[4] Aruba Networks; Solution guide in *Optimizing Aruba WLANS for Roaming Devices, version 3.3*
[5] J. Biswas and M. Veloso; Wi-Fi localization and navigation for autonomous indoor mobile robots- in *Robotics and Automation ICRA, 2010 IEEE International Conference on, pages 4379-4384*
[6] S. Rosenthal, J. Biswas, M. Veloso. An effective personal mobile robot agent through symbiotic human-robot interaction in AAMAS '10: *Proceedings of the 9th International Conference on Autonomous Agents and Multiagent Systems: Volume 1*
[7] M.Veloso; CoBots – Companion Mobile Robots in *http://www.cs.cmu.edu/~mmv/; Description:* CoBot2, functional since early 2010, was developed in collaboration with Dean Pomerleau, from the Intel Labs, Pittsburgh. CoBot2 has a stargazer that it uses to localize and navigate. It can move in bounded and open spaces, robustly and safely avoiding obstacles. A compelling demonstration of those algorithms was given at the Intel Open House on September 28, 2010, among large crowds of visitors.
[8] William "Red" Whittaker, team leader for Astrobotic Technology and Field Robotic Center at Carnegie Mellon University: http://lr.astrobotic.net/
[9] Paulo Rapino at University of Coimbra, Portugal: Carnegie Mellon and Portugal To Launch Major Research and Education Collaboration in *Press Release 26 October 2006* http://www.cmuportugal.org/tiercontent.aspx?id=38&ekmensel=568fab5c_70_0_38_1
[10] M. Shaw, J. Herbsleb, I. Ozkaya, D. Root -Deciding what to design: Closing a gap in software education in *ICSE 2005 Education Track, LNCS 4309, pp. 28 – 58, 2006. © Springer-Verlag Berlin Heidelberg 2006*

About the Presenters

M. N. Clark is a distance instructor for courses in Software Architecture, Real Time Systems, and Contextual Software Design Methods. He has close associations with the University's Robotic Institute, Field Robotic Center.

David Root is the director of Distance Education for the University's Masters of Software Engineering and Director for its Studio Projects. Mr. Root is an instructor for all core courses on campus and courses offered from a distance.

Address: Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh. PA 15213
Office: 412-268-5198
Fax: 412-268-5413

Bringing the Library to the Student in a Blended Course

Beena George, Ph.D.
Associate Professor
Cameron School of Business, University of St. Thomas, Houston, Texas

Mary Kelleher, Ph.D., M.L.S
Associate Professor and Public Services Librarian
Doherty Library, University of St. Thomas, Houston, Texas

The Problem and Context

In a small private university in a large metropolitan city in the south central part of the United States, the blended learning approach is slowly being adopted by instructors. The majority of the students are commuters and typically do not visit campus except for classes; with the blended learning courses, the students have less face-time not only with the instructors, but also other services on campus – including library services. However, these students must receive the same quality of education and achieve the same learning objectives as equivalent courses taught on campus. The reduced access to library services poses a problem; the students in the blended courses, like their counterparts in the in-class courses, are unfamiliar with resources in their academic disciplines and the tools and techniques for accessing these resources. In addition, they were not prepared to evaluate the credibility of the sources and the process of cross-checking information from multiple sources.

Teaching courses that use multiple learning environments puts a heavy load on the instructor, thus limiting the time the instructor can spend helping each student with the requirements of an assignment. Further, given the rapid growth of library resources, instructors are often not current with all the resources and the most efficient way to use these resources. Majority of the graduate students in the program are working professionals and have developed their own independent methods of learning. Given their work schedules, they prefer to work at their own pace and asking the student to meet an individual – be it the instructor or librarian—to complete their assignment is often not practical.

This paper presents the experiences of an instructor-librarian team in addressing the dual limitations faced by the students in information literacy skills and in access to guidance in the use of library resources. To illustrate the approach, we use the example of a graduate elective course offered in the business school of the university; this course was taught using a combination of approaches that included face-to-face sessions, online meetings, and asynchronous exchanges on the course management system. To complete the assignments in the course, students had to complete extensive library research. For example, one of the major assignments required the students to determine the suitability of an organization to be a service provider for a hypothetical client organization. For this assignment, the students had to act as sleuths putting together snippets of information from online and published sources to create a complete picture of a business organization. This paper describes the experiences of the instructor and a librarian, who worked together on the graduate elective course using the embedded librarian approach along with a course-specific research guide that was developed by the librarian.

The Solution

During the summer of 2007 the librarians at the university began a subscription to Libguides© created by the company Springshare©. Since that time, the number of libraries using Libguides has grown astronomically. The advantage to Libguides is that they do more than just list sources a student may use in their research. Because of their interactive features, librarians are able to actually accomplish information literacy through course specific research guides. For those students who cannot attend a face-

to-face library instruction session, Libguides are an ideal alternative. For those students who do attend such a session, Libguides offers a convenient place to find the resources mentioned in the class, to address textual, visual and kinetic instruction for learners of different styles and to provide reminders for points that may have been missed, forgotten or heard incorrectly by the student.

Having heard of these resources, the instructor contacted the reference librarian. They set up a meeting to discuss the syllabus and the assignments. The comments from the librarian during the initial meeting contributed towards fine-tuning some of the requirements on the assignment. More importantly, the librarian developed a research guide specifically for the course that presented resources to the student aligned with the instructor's expectations on different assignments of the course. Further, the librarian agreed to serve as the embedded librarian for the course. The librarian was a member of the class on Blackboard; she was also easily available through the chat functionality in the ResearchGuide.

The "Sourcing Management Research Guide" is a collaboration of the librarian and the instructor. In some cases, the instructor told the librarian what kinds of information the students would need, and the librarian picked the most appropriate resources to highlight. In other cases, the instructor contributed her expertise in the practical aspects of the field and suggested various associations and websites the student should be familiar with. Because MBA courses involve practical as well as scholarly sources of the information, the Libguide format works well to address all of these needs as well as clearly distinguish among them and how they should be used and verified. Students in the course can comment on the various sources, evaluate the guide as a whole and contribute their own resources to the guide.

The librarian visited the class room on the first day and introduced herself to the class. Descriptions of the assignment by the instructor were followed by descriptions of available resources by the librarian. As the students completed minor assignments on Blackboard discussion board forums, the librarian was able to review those and add research resources to the Research Guide. The librarian could easily send email messages to all students in the course from the course management system, informing them of such changes.

As the students started working on the major assignments, the librarian took a more active role in the classroom. She demonstrated different ways students could approach the gathering and cataloging of data. The availability of the librarian at the students' time of need and the relevance of the resources demonstrated by the librarian to the students' work encouraged the students to use library resources more extensively than they usually would.

The Outcomes

The librarian and the instructor worked together as a team bringing together complementary knowledge and skill sets. The librarian invested significant amounts of time in understanding the specific course topics and the requirements of the assignments. This understanding helped the librarian to guide the students in their research. As the students completed their assignments, they also learned effective research skills that they could take ways and apply to other projects in other courses. The online access and resources developed by the librarian along with the presence of the librarian in the physical and virtual class spaces matched the content delivery methods in the course, thus making it easier for the students to use the library resources. The qualitative section of the end-of-course evaluations revealed that students were highly satisfied with the learning that took place in the course.

During the semester, the students worked closely with the librarian, giving the librarian an insider perspective (from the student side) on the assignment. The feedback from the librarian was extremely useful for the instructor as she answered questions from the students on the assignments. Finally, the

finished assignments were of much higher quality than that produced by students in the same program in previous semesters, leading to the satisfaction of the librarian and instructor.

This success has led to continued efforts by the librarian and the instructor to enhance the ResearchGuide. The librarians have put together ResearchGuides on various courses and continue to edit and update the older ResearchGuides each academic year or semester as well. The recent acquisition of a subscription to RefWorks, a bibliographic management system, shows continued effort to improve student research and citation skills. Links to RefWorks and tutorials are provided through the ResearchGuides for online instruction, and face-to-face instruction is provided by the librarian to the class or through workshops outside of class. Both instructor and librarian will continue to collaborate to provide the best instruction and the best resources to the blended learning students.

About the Presenters

Beena George, Ph.D. is Associate Professor in the Cameron School of Business of the University of St. Thomas, Houston, Texas. She completed her graduate studies in business administration at the Indian Institute of Management, Calcutta, India and her doctoral studies at the University of Houston, Texas. She received the Online Teaching Certification with a specialization in Blended Learning from the Sloan Consortium. Beena has published and presented several articles on the adoption and use of technology, including the use of technology for teaching and learning.

Address: Cameron School of Business
University of St. Thomas
3800 Montrose
Houston TX 77006
Email: georgeb@stthom.edu
Phone: 713-942-5903
Fax: 713-525-2110

Mary Kelleher, Ph.D., M.L.S. is Associate Professor and Public Services Librarian at Doherty Library of the University of St. Thomas. Her degree in library science is from University of North Texas in Denton, TX, and her doctoral degree in English is from New York University in New York, NY. She manages the reference services at Doherty Library and collaborates closely with the Information Literacy Librarian. She has participated in Doherty Library's embedded librarian services both as a librarian and as an instructor. She has published in College and Undergraduate Libraries and Library Journal.

Address: Doherty Library
University of St. Thomas
3800 Montrose
Houston TX 77006
Email: kellehm@stthom.edu
Phone: 713-525-3891
Fax: 713-525-3886

Course Development for Teaching Non-traditional Subjects: AutoCAD and Freehand Sketching

Matthew Kubik
Associate Professor

DJ Marshall
Associate Professor

College of Engineering, Technology, and Computer Science
Indiana University–Purdue University Fort Wayne

Summary

This presentation provides course design strategies for design and development of courses usually taught in a computer lab or design studio. Using software and video demonstrations the presenters will explain teaching/learning strategies, technology used, and course outcomes. Samples of course materials/lectures/ demonstrations and resulting student work will be shown. Attendees are encouraged to engage in a discussion of shared teaching experiences.

Presenter Bios

Matthew Kubik, tenured Associate Professor of Interior Design, holds a B.A. and Bachelor of Architecture degree from the University of Notre Dame. He did post-graduate studies at the Royal College of Art and graduated from the Architectural Association School of Architecture in London, England with a Graduate Diploma (M.Arch equivalent). As coordinator he developed the curriculum for the Interior Design Bachelor's Degree program at Indiana University–Purdue University in Fort Wayne. His teaching includes the development of the distance education course Freehand Sketching traditionally taught in a classroom studio.

DJ Marshall is a tenured faculty and coordinator of the Architectural Engineering Technology program at the Indiana University–Purdue University joint campus in Fort Wayne, Indiana. Professor Marshall has a Masters Degree from Harvard in Computer-Aided-Design and has taught CAD, primarily AutoCAD and now REVIT, since 1985. He has also been involved in the development of several software programs related to CAD and other digital media. He has developed and successfully taught distance education courses in AutoCAD, Revit, and Construction Materials and Systems using captured lectures and video demonstrations.

Contact Information:
Matthew Kubik
Associate Professor
Indiana University–Purdue University Fort Wayne
Engineering, Technology, and Computer Science
2101 Coliseum Blvd. East
Fort Wayne, Indiana 46805-1499
Phone: 260.481.6581
kubik@ipfw.edu

JD Consult: Ten years of experience in 2 hours

Jeannette McDonald, DVM, PhD, Project Director

Michael T. Collins, DVM, PhD, Professor of Microbiology

Eileen Horn, B.A., Web Course Developer

School of Veterinary Medicine
University of Wisconsin–Madison

Summary

JD-Consult is a game for veterinary students that helps them become experts in the management of Johne's disease (JD), an important disease of dairy cattle. Veterinarians who advise farmers on how to manage the disease must take into account the management style and business goals of the farmer, the prevalence of disease on the farm, and decide what combination of management changes and diagnostics are feasible and affordable for the farmer. The disease progresses slowly and it may be five years before a veterinarian can see the impact of his/her control recommendations. Because of this, traditional veterinary curricula cannot provide students with hands-on experience managing the disease. JD-Consult uses gaming techniques including situated context and feedback, to provide a realistic learning experience.

In the game, the student must glean information from farmer characters telling their stories that reveal clues about their management styles and prevalence of the disease on the farm; graphics that show the conditions and layout of the farms; and a boss character who serves as a mentor, modeling his thinking about management strategies that may work on each farm. The mentor also provides hints and highly customized feedback on the recommendations the student makes on each farm. The JD-Consult game is a novel and useful tool for modeling expert behavior and helping practitioners gain clinical experience with JD control in a virtual farm setting.

Presenter Bios

Jeannette McDonald is the originator and Director of the Technology for Learning Center (TLC) at the UW–Madison's School of Veterinary Medicine, whose primary goal is to work with faculty and staff to develop educational materials, modules, and courses for use with students, veterinarians, and clients.

Michael T. Collins is an internationally renowned expert in the field of Johne's disease prevention and control. Improving methods of detecting the disease is the primary focus of his laboratory, the Johne's Testing Center, at UW–Madison's School of Veterinary Medicine.

Eileen Horn is the instructional designer for the TLC at UW–Madison's School of Veterinary Medicine. She enjoys brainstorming and problem-solving with faculty and the other team members to produce high-quality, engaging activities that support teaching and learning.

Contact Information:
Jeannette McDonald, DVM, PhD
University of Wisconsin–Madison
School of Veterinary Medicine
1656 Linden Dr., 108 AHABS
Madison, WI 53706
Phone: 608.263.5170
mcdonal7@wisc.edu

A Virtual Environment for Geologic Education Integrating Mathematics and Chemistry

Brian M. Slator, Donald P. Schwert, Guy Hokanson, Otto Borchert, Bernhardt Saini-Eidukat
North Dakota State University

Jeffery Terpstra
Western Michigan University

John Reber
Concordia College

Lisa Daniels
University of Central Arkansas

Sara Forness
West Fargo High School

Matti Kariluoma
WoWiWe Instruction Co.

Introduction

The Geology Explorer 3D (GeoEd) system is a virtual world targeting environmental science (specifically environmental geology) to juniors and seniors in high school, developed by the World Wide Web Instructional Committee (WWWIC) at North Dakota State University (NDSU).

WWWIC is an ad hoc committee of faculty, staff, and students working to advance education through the use of Immersive Virtual Environments (IVE) (Slator et al., 2006). WWWIC has implemented educational IVEs for a wide range of scientific disciplines including anthropology, biology, economics, geology, and computer science (Hokanson et al., 2008; Saini-Eidukat, Schwert, & Slator, 2001; Slator & Farooque 1998; White, McClean, & Slator, 1999). Each of WWWIC's IVEs are designed under a proven set of guidelines: they are collaborative, multi-user, are constructed with the help of content experts, employ strong cognitive and pedagogical features to assist the players in learning the content, and allow for consistent evaluation of learning outcomes (Borchert et al., 2010).

The GeoEd IVE employs authentic instruction and scenario-based assessment. GeoEd combines math and chemistry goals with geologic concepts. In this way, teachers in high school mathematics, chemistry, and environmental science can use GeoEd in their classrooms. Due to the multi-user design of the game, players can collaborate with one another while completing their tasks (Borchert et al., 2008).

Background

The Geology Explorer was originally created in 1998 as a supplement to an introductory college level geology course at NDSU. A number of studies were done to determine its efficacy as a teaching tool at that grade level (McClean, 2001). Students who played the Geology Explorer did significantly better on content and scenario-based assessment than students who completed alternative exercise covering similar topics. The software was also shown to improve student learning with no gender bias (Slator et al., 2005).

Scenario-based assessment of student learning has long been a part of formal educational evaluations. For instance, mathematical word problems, open-ended questions, and writing prompts have scenario-based components. Vocational schools have adopted scenario-based assessments, using workplace-derived

measures of competent performance to assess students (Losh, 2000). Scenario-based assessments are used for training by the FBI and major business corporations (Swanson et al., 1995).

The attraction to such assessment is its effectiveness. There is little separation between "test performance" and real learning, so students cannot feign competence (Shepard, 2000). Scenario-based assessments are a part of a larger category of evaluation called "authentic assessment," where student performance on intellectual tasks is directly examined (Wiggins, 1990).

System Design

Students enter the GeoEd world and begin by taking a short tutorial to become familiar with the interface. This tutorial then leads them to a series of pre-treatment assessments. These assessments gauge student content knowledge (e.g., How are dissolved oxygen and temperature related?), confidence in that content knowledge, and attitudes towards earth science, mathematics, and computers (e.g., rate your attitude on a five point scale from "*I love science*" to "*I absolutely hate science*").

The students are asked to measure a river for levels of pollutants. These data are automatically placed into a table as the student takes measurements, and students can generate a line graph based on these data using an in-game interface. Students analyze their data and determine the location of a toxic level of any pollutants. They then answer a series of formative assessment questions related to the task.

Students then use a pygmy meter (a device used to measure river depth and velocity simultaneously) to create a cross section of the river. They then combine a lesson on significant figures with the velocity and cross sectional area to determine the discharge of the river. As with the water quality task, they are asked a series of formative assessment questions related to significant figures upon the completion of the task. Finally, students are asked to complete a series of post-treatment summative assessments to determine how their attitudes and knowledge have changed over the course of their exploration of the environment.

Experimental Results

The GeoEd software has been pilot tested for usability in a local high school with positive results. Students were able to complete their tasks in a relatively short period. They also expressed enthusiasm for the project and showed small gains in confidence from pre- to post-treatment.

We coordinated a user testing "event" at West Fargo High School in the Spring of 2008. This was a preliminary event designed to test the software systems: tutorial, immersive experience, and assessment and evaluation. As part of this, we created a summative assessment exercise to gauge the effectiveness of the GeoEd IVE. Data were collected concerning student confidence in their answers, in both the pre- and post- assessments. In the same assessment we used a similar interface to determine the attitude of students towards math and science and also to gauge how important students felt math was towards geology.

Analysis of the data obtained from our pilot testing (Table 1) indicated slightly higher means in content knowledge, confidence, and attitude as a result of playing GeoEd. Although no overall statistical difference from pre- to post- treatment was found, the *p*-values for the confidence scores indicated promise for future research with larger sample sizes (Note: lower score indicates improved attitude).

Statistical Analysis for the Geology Explorer 3D Spring 2008 Experiment

Table 1. ***The Statistical Results Compiled for n=26 High-School Environmental Science Students***

Comparison	**Pre-Treatment Mean**	**Post-Treatment Mean**	***P*-value**
Content Question 1	0.96	0.77	0.025
Content Question 2	0.73	0.85	0.317
Content Question 3	0.81	0.85	0.564
Content Question 4	0.42	0.42	1.000
Content Question 5	0.42	0.58	0.206
Content Question 6	0.46	0.5	0.655
Content Confidence 1	0.82	0.85	0.688
Content Confidence 2	0.77	0.84	0.107
Content Confidence 3	0.76	0.85	0.047
Content Confidence 4	0.61	0.79	0.003
Content Confidence 5	0.81	0.9	0.055
Content Confidence 6	0.71	0.83	0.021
Attitude 1	2.23	1.62	0.380
Attitude 2	2.61	1.31	0.538
Attitude 3	1.39	1.31	0.327
Attitude 4	0.77	0.89	0.083
Attitude 5	1.58	1.50	0.538
Attitude 6	1.19	1.35	0.103
Attitude 7	2.42	2.46	0.574
Attitude 8	1.15	1.15	1.000

Acknowledgments

This research was supported by National Science Foundation grant GEO-0608082. Human subject testing was conducted under NDSU IRB Protocol SM-08137.

References

Borchert, Otto,, Slator, B. M., Hokanson, G., Daniels, L. M., Reber, J., Reetz, D., Saini-Eidukat, B., Schwert, D. P., & Terpstra, J. (2008). Computer supported collaborative learning in the geology explorer. Midwest Instructional Computing Symposium (MICS-08). La Crosse, WI. April 10-11, 2008, pp. 532-546.

Borchert, O., Brandt, L., Hokanson, G., Slator, B. M., Vender, B., & Gutierrez, E. J. (2010). Principles and signatures in serious games for science education, in gaming and cognition: Theories and practice from the learning sciences. R. Van Eck (Ed.). IGI Global, 312-338.

Hokanson, G., Borchert, O., Slator, B. M., Terpstra, J., Clark, J. T., Daniels, L. M., Anderson, H. R., Bergstrom, A., Hanson, T. A., Reber, J., Reetz, D., Weis, K. L., White, R., & Williams, L. (2008). Studying Native American culture in an immersive virtual environment. *Proceedings of the IEEE International Conference on Advanced Learning Technology* (ICALT-2008). IEEE Computer Society Press. Santander, Spain. July 1-5, 2008, 788-792.

Losh, C. L. (2000). *Using skill standards for vocational-technical education curriculum development.* Information Series No. 383. ERIC Identifier: ED440295

McClean, P., Saini-Eidukat, B., Schwert, D. P., Slator, B. M., & White, A. R. (2001). Virtual worlds in large enrollment biology and geology classes significantly improve authentic learning. In Jack A. Chambers (Ed.), *Selected papers from the 12th international conference on college teaching and learning (*ICCTL-01), (pp.111-118). Jacksonville, FL: Center for the Advancement of Teaching and Learning. (April 17-21, 2001).

Saini-Eidukat, B., Schwert, D. P., & Slator, B. M. (2001) Geology Explorer: Virtual geologic mapping and interpretation. *Journal of Computers and Geosciences, 27*(4).

Shepard, L. (2000) The role of assessment in a learning culture: Using assessment in the process of learning. Educational Researcher, 29(7), 4-14.

Slator, B. M., Beckwith, R., Brandt, L., Chaput, H., Clark, J. T., Daniels, L. M., Hill, C., McClean, P., Opgrande, J., Saini-Eidukat, B., Schwert, D. P., Vender, B., & White, A. R. (2006). electric worlds in the classroom: teaching and learning with role-based computer games. New York, NY: Teachers College Press. Columbia University.

Slator, B. M., & Farooque, G. (1998). The agents in an agent-based economic simulation model. *Proceedings of the 11th International Conf. on Computer Applications in Industry and Engineering* (CAINE-98) November 11-13, 1998, Las Vegas, Nevada USA.

Slator, B. M., Dong, A., Erickson, K., Flaskerud, D., Halvorson, J., Myronovych, O., McClean, P., Saini-Eidukat, B., Schwert, D. P., White, A. R., & Terpstra, J. (2005). Comparing two immersive virtual environments for education. In G. Richards (Ed.), *Proceedings of E-Learn 2005, World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education.* October 24-28, Vancouver BC, Canada, pp. 2394-2401.

Swanson, D. B.; Norman, G. R.; Linn, R. L. (1995). Performance-based assessment: Lessons from the health profession. *Educational Researcher; 24*(5):5-11, 35.

White, A. R., McClean, P., & Slator, B. M. (1999). The virtual cell: A virtual environment for learning cell biology. *Proceedings of the Tenth International Conference on College Teaching and Learning: Innovation in a Global Learning Community*. April 14-17. Jacksonville, FL.

Wiggins, G. (1990). The case for authentic assessment. ERIC Digest. ERIC Identifier: ED328611

About the Presenters

Brian M. Slator is a Professor of Computer Science and Operations Research and the Director of the NDSU Computer Systems Institute at North Dakota State University.

Address: North Dakota State University
IACC Building, Rm. #262E
Fargo, ND 58105
Email: Brian.Slator@ndsu.edu

Donald P. Schwert is a Professor of Geology and Director of the Center for Science & Mathematics Education at North Dakota State University.
Email: Donald.Schwert@ndsu.edu

Guy Hokanson is a Research Technician for the Computer Science Department at North Dakota State University.
Email: Guy.Hokanson@ndsu.edu

Otto Borchert is a PhD candidate and Research Technician in the Computer Science department at North Dakota State University.
Email: Otto.Borchert@ndsu.edu

Bernhardt Saini-Eidukat is an Associate Professor of Geology at North Dakota State University.
Email: Bernhardt.Saini-Eidukat@ndsu.edu

Jeffery Terpstra is an Associate Professor of Statistics at Western Michigan University.
Email: jeffrey.terpstra@wmich.edu

John Reber is an Assistant Professor of Mathematics and Computer Science at Concordia College.
Email: reber@cord.edu

Lisa Daniels is an Associate Professor of Education at the University of Central Arkansas.
Email: LDaniels@uca.edu

Sara Forness is an environmental science teacher at West Fargo High School in West Fargo, ND.
Email: Forness@west-fargo.k12.nd.us

Matti Kariluoma is a software developer for WoWiWe Instruction Co. in Fargo, ND.
Email: Matti.M.Kariluoma@ndsu.edu

Challenges of Developing Three Health Studies Online Accelerated Courses

Paula L. Griswold, PhD
Assistant Professor

Annette Tommerdahl, PhD
Assistant Professor

Jessica Dolecheck, PhD
Associate Professor, Department Head

Department of Health Studies
University of Louisiana at Monroe

Summary

The online courses offered in the Department of Health Studies at the University of Louisiana at Monroe are in a compressed time format of 8 weeks. This has created significant challenges in course design and delivery. Three courses, Research Design for Healthcare, Healthcare Ethics, and Health Studies Practicum II were the most challenging to effectively adapt to the online learning environment.

The Research Design for Healthcare course is a capstone junior level course that focuses on research design and critical thinking. This course utilizes various types of assignments that facilitate learning such as research videos and exceptional websites. In the online Healthcare Ethics course, it is important to make the topics relevant for students so discussion forums work well for students to debate controversial current events. In addition, the use of movies and video clips is very effective in the course.

The Health Studies Practicum II course is a community-based healthcare practicum whereby students partner with healthcare facilities in their respective communities. Interactive work logs, project objective and site evaluation forms with digital signature capabilities provide students and practicum sites with a uniform instrument for logging activities.

Presenters Bios

Dr. Paula Griswold received both her B.S. in Medical Technology and her M.S. Life Sciences (Microbiology) from Louisiana Tech University. She obtained her Ph.D. in Toxicology from Northeast Louisiana University.

Dr. Annette Tommerdahl received both her Ph.D. in Counselor Education and Student Affairs Administration and her M.S. in Exercise Physiology from the University of Wyoming.

Dr. Jessica Dolecheck received her B.S. from Louisiana State University Medical Center, New Orleans, and M.A. from Texas Woman's University, both in Occupational Therapy. She obtained her PhD in Occupational Therapy from Nova Southeastern University.

Contact Information:
Paula L. Griswold, PhD
University of Louisiana at Monroe
700 University Ave.
Monroe, LA 71209
Phone: 318.342.3805
griswold@ulm.edu

Explore, Select, Apply: Advanced Learning Technologies Integration Tool

Dr. Nada Dabbagh
Associate Professor, Instructional Technology

Kevin Clark
Associate Professor, Instructional Technology
Director of the Center for Digital Media Innovation and Diversity

College of Education and Human Development
George Mason University

Summary

This demonstration will provide an overview of LATIST, or Learning Asset Technology Integration Support Tool, developed in 2009-2010 by a team of nine graduate students enrolled in the Instructional Technology Immersion Program at George Mason University (GMU) to support research on Advanced Learning Technologies (ALT) for the Defense Acquisition University (DAU). A performance analysis indicated a need for a framework that assists faculty in the selection and integration of ALT within DAU's learning assets in a pedagogically sound manner. Using a usage-centered design process, a content and task analysis confirmed user needs, identified user tasks, established content requirements, and ultimately determined that LATIST would be best utilized as an electronic performance support tool. The tool would be developed within a content management system with functionality and navigation to meet user needs. After two rounds of usability testing, the LATIST prototype was finalized for stakeholders (see http://cehd.gmu.edu/latist).

The goals of LATIST are to facilitate decision making among DAU faculty and staff by providing (a) a pedagogically driven decision support tool; (b) a repository of research on technology use in government, business, and education; and (c) access to information on how to integrate technology within learning assets. LATIST is also designed as a method to raise awareness of technology options and provide a tool for faculty and staff to refer to when making learning technology decisions. Specifically LATIST has three components: **(a) Explore Research** which allows users to explore what the research says about a specific ALT and examine its advantages, disadvantages, and best practices in teaching and learning contexts; **(b) Select Best Technology** which allows users to select instructional strategies and technologies based on course objectives and factors such as bandwidth and budget; and **(c) Apply Technology** which allows users to view real world examples of ALT use in educational and training settings as well as practice using a selected technology.

LATIST received the 2010 Sloan-C Effective Practice Award and is currently patent-pending. GMU's Office of Technology Transfer (OTT) submitted a patent application in fall 2010 with the U.S. patent office. Additionally, LATIST has been adopted by GMU's Office of Distance Education and is currently being customized and contextualized to GMU's distance learning needs in an effort to raise awareness of technology options and provide a tool for faculty and staff to refer to when making learning technology decisions (see http://latist.gmu.edu).

LATIST was designed to be adaptive, scalable, extensible, and interoperable. Therefore, it provides a flexible and customizable platform for any learning organization that uses technology to support online and distance learning. These learning organizations can build-out LATIST based on their specific pedagogical, technological, and institutional needs. LATIST could have significant impact on the selection and integration of technology into online course design. However, it should be noted that such a tool must be maintained by its users to ensure currency and relevance. As research and resources on ALT are constantly growing and evolving, LATIST should be designed to encourage user interaction by

embedding capabilities such as tagging, saving, sharing, and uploading within the tool to create a personal learning environment or PLE.

For more information about the origins of LATIST visit: http://immersion09.onmason.com/

Nada Dabbagh, PhD, is associate professor of Instructional Technology in the College of Education and Human Development at George Mason University. She teaches courses in learning theory, instructional design, and e-Learning design and pedagogy. Her research explores the cognitive consequences of technology-mediated learning tasks with the goal of understanding the cognitive and design characteristics of task structuring as the basis for effective learning designs. Dr. Dabbagh has an extensive presentation and publication record. For more information about Dr. Dabbagh's academic achievements, visit her homepage at: http://mason.gmu.edu/~ndabbagh/

Kevin Clark, Ph.D. is an associate professor in the Instructional Technology program, and Director of the Center for Digital Media Innovation and Diversity in the College of Education and Human Development at George Mason University. Dr. Clark's research interests focus on the design and development of online learning environments, the role of gaming and media in formal and non-formal learning, and the use of technology in learning with underserved populations. For more information about Dr. Clark's academic achievements, visit: http://cehd.gmu.edu/people/faculty/kclark6/

Contact Information:
Dr. Nada Dabbagh
Associate Professor
George Mason University
MSN 5D6 Commerce II, Room 107C
4087 University Drive
Fairfax, Virginia 22030
Phone: 703.993.4439
ndabbagh@gmu.edu

Consistency in Online Course Development

Katy Little
Assistant Curriculum Manager and WDL Librarian

Melissa Meltzer
Assistant Faculty Manager

Curriculum and Instruction Departments
Weston Distance Learning, Inc.

Summary

Learning management systems offer endless options for customizing online courses. While all of these options are noteworthy, if you don't have some standards in place for online course development, chances are your students will find themselves wandering through each course to locate the material they need. Put yourself in the student's shoes: Wouldn't it be nice if courses shared a similar layout or consistent setup? Then, students could spend more time learning the material than navigating the templates!
So, how do you go about implementing standards for online course development? And, how do you do this while still allowing instructor autonomy?

In this demo, explore steps to consistent online course creation and editing, such as:

- standard online course templates,
- required online course elements,
- course creation training sessions and
- course editing checklists

We'll discuss the many advantages to consistent online course development and how your school can overcome obstacles to this type of course design. In addition, we'll determine ways for instructors to customize their courses without losing students in a variety of fonts, images, and content locations. Study examples of consistent online course templates throughout this demo.

Presenter Bios

Katy Little, B.S., M.L.I.S, serves as the Assistant Curriculum Manager and Librarian for Weston Distance Learning, Inc. She has written and edited courses and textbooks on subjects that include office administration, fitness and nutrition, health information management, psychology, and English.

Melissa Meltzer, B.S., has 21 years' experience in education, 11 of which have been in distance education, teaching courses in both correspondence and online venues. She currently serves as the Assistant Faculty Manager for Weston Distance Learning's degree programs, where she recruits, trains, and supervises faculty.

Contact Information:
Katy Little
Assistant Curriculum Manager and Librarian
Weston Distance Learning, Inc.
2001 Lowe Street, Fort Collins, CO 80525
970.207.4520
katyl@westondistancelearning.com

Second Life as an Educational Tool

Don Bickley, B.S.
Information Technology & Immersive Education Designer

Julie A. Fronzuto, Ph.D.
Assistant Professor of Biology

Prince William Sound Community College

Summary

Prince William Sound Community College (PWSCC) serves an area of Alaskan Bush equivalent to the size of the state of Ohio. Our rural outreach sites, some of which are only accessible by plane or boat, provide opportunities to address the challenges we face as a distance education institution. A valuable aspect of higher education revolves around the interpersonal and professional connections our students make with their instructor, each other, and the world around them. This philosophy guided our institution in exploring and developing an accessible and persistent interactive lab environment.

As an Alaska Native Serving Institution (ANSI), PWSCC was awarded a Title III grant and applied a portion of the monies to develop and maintain a virtual science lab in Second Life. Standardized methods for conducting unrelated labs help students navigate the virtual environment; students are able to master the technology and spend more time on observing and analyzing data. There are many ways to experience a virtual world: objects interacting with objects, students interacting with objects, and students interacting with time. From the implementation of camera presets to the meaningful deployment of iconography and animation, our demonstration will show some of the educational and technical methodologies and tools that shape a virtual space into an interactive course.

Presenter Bios

Don Bickley, B.S., is the Immersive Education Designer for Prince William Sound Community College in Valdez, Alaska. He develops, promotes, and maintains all aspects of the college's immersive education initiative to ensure that the online classroom meets the needs of a diverse student population in accordance with the college's standards for academic excellence and integrity.

Dr. Julie Fronzuto, Assistant Professor at Prince William Sound Community College, has over 10 years of experience in higher ed. Since arriving in rural Alaska five years ago, she has taken on the challenge of providing quality, real-time, instructor-led laboratories to student populations in the Alaskan bush.

Contact Information:
Prince William Sound Community College
303 Lowe St.
Valdez, AK 99686

Don Bickley
Phone: 907.834.1646
dbickley@pwscc.edu

Dr. Julie Fronzuto
Assistant Professor of Biology
Phone: 907.834.1644
jafronzuto@pwscc.edu

e-Journaling within a Course Management System

Daniel J. Keefer, Ph.D.
Associate Professor
Department of Wellness and Sport Sciences
Millersville University

Summary

Journaling can be used as a reflective and/or behavioral analysis tool for learning in all types of educational environments. Even though timely expression of ideas associated with journaling exists in various electronic forms (e.g. private or public blogs), an e-journal can be created within a standard course management system (such as Blackboard or D2L). There are three main benefits of creating an e-Journal within a course management system. The first of these is that an instructor can set the level of privacy for the e-Journal area. This is important for students to understand that no one else outside of the student and the instructor can view anything that the student is writing. Second, a time/date stamp can be viewed for each e-Journal entry. This is also important when grading the journaling assignment and preventing students from creating a journal in one night to turn in for an assignment when they should have been "updating" the journal on a regular basis. And finally, students and the faculty member would not have to familiarize themselves with another type of technology. The more varied online technology students have to utilize in a course, the more likely they will become lost.

The benefits of using journaling within a course setting are many. For example, e-Journaling can be used as a reflective tool for learning in all types of educational environments. Within the area of Health/Wellness, we use journaling as a behavioral analysis tool. That is, a journal can be used to record/track information about a specific behavior for future analysis. Another example is that e-Journaling can be used as a way for an instructor to develop an online presence with students by providing that personal contact with students that is often missing in an online environment.

Presenter Bio

Daniel J. Keefer, Ph.D., is an Associate Professor in the Department of Wellness and Sport Sciences at Millersville University. He has taught numerous workshops and undergraduate- and graduate-level courses in hybrid, blended, and completely online formats. He has also conducted research in the area of teaching and learning with technology and has presented his findings at 12 regional and national conferences.

Contact Information:
Daniel J. Keefer, Ph.D.
Millersville University
113 Pucillo Gymnasium
Millersville, PA 17551
Phone: 717.871.2182
dkeefer@millersville.edu

Using Photovoice in Distance Education to Creatively Accomplish Course Objectives

Damian Hanft
Program Director, Hotel, Restaurant and Tourism Management
Assistant Professor of Hospitality & Tourism

Edward Harris
Internship Coordinator, Hotel, Restaurant and Tourism Management
Associate Professor of Hospitality & Tourism

School of Hospitality Leadership
University of Wisconsin–Stout

Summary

Photovoice was developed in the early 1990's as a tool primarily used in working with marginalized groups to answer a particular or resolve a specific issue through photographic images. This technique has developed into a powerful learning technique that can be applied across disciplines. Through the use of this technique, students take photographic images related to a particular staged question connected to specific course objectives. This process creates a unique opportunity for the learner to gain new perspectives on a particular aspect of the curriculum.

During the past few years Hanft and Harris have conducted research on how this technique can be effectively used in an applied environment in an asynchronous online distance orientated environment. Past research has revealed techniques that enable students to master course objectives, while bridging the sense of community with distance learners. Additionally, this technique has been utilized in corporate training environments as part of the associate development process.

Presenter Bios

Damian S. Hanft, is an Assistant Professor in the College of Management at UW–Stout. Hanft was a University of Wisconsin System Teaching Fellow where he refined his research around the use of Photovoice as an applied learning technique. Since his initial research, he has transitioned from using this technique in the classroom to the distance education environment.

Edward Harris, is an Associate Professor in the College of Management at UW–Stout. Harris is actively involved in teaching and learning through the Nakatani Teaching and Learning Center on campus. Harris began a faculty learning community several years ago centered on how faculty teach in both an on ground and distance orientated environment.

Contact Information:
Damian S. Hanft/Edward B. Harris
University of Wisconsin–Stout
415 10th Avenue
Menomonie, WI 54751
hanftd@uwstout.edu
harrise@uwstout.edu

Visual Rhetoric, Comic Art, and Voicethread

Dr. Kathleen Dunley, Ph.D.
Faculty Chair
English, Creative Writing, Reading, and ESL
Rio Salado College

Summary

This presentation tackles two challenges: 1) delivering meaningful engagement with images to teach comic art and visual rhetoric in an online context and 2) creating discussions for classes with multiple start dates engaging in a single web forum.

Voicethread was selected as a tool to overcome these challenges. Voicethread enables the instructor to load visual content and annotate it, both through typed or spoken discussion, and tools to mark, highlight, and otherwise direct attention across a given image. The best results in both “fixed” and “flex” start classes came from directing discussion around the images presented, and inviting students to take control, annotating and marking up the images to show what caught their attention, call attention to difficult moments, and ask questions with direct reference to the visual object.

Additionally, the Voicethread tool was used to deliver project-based content, including "webinar" styled teaching moments where students could choose a topic and present it to their peers, effectively co-leading discussion with the instructor for a class period. These webinars were made public, allowing external parties to comment and engage with the information. Having a public presence in the class heightened the quality of the student work, and additionally, made them more aware of how they presented the materials.

The presentation will show a brief demonstration of how to use the tool, but will primarily focus on the lessons that worked, including tips for integrating the content across subject matter, and the value of the technology in terms of breaking down the "distance" barrier to create a sense of community among learners, even in nontraditional online settings.

Presenter Bio

Dr. Kathleen Dunley is the present Faculty Chair for English, Creative Writing, Reading, and ESL at Rio Salado College in Tempe, AZ. Her research interests have focused on her joint passion for online teaching and learning, as well as her passion for finding ways to teach visual rhetoric and comic art in distance modes and working to find new ways to foster external learning and peer-to-peer engagement in distance learning environments.

Contact Information:
Dr. Kathleen Dunley
Rio Salado College
2323 West 14th Street
Tempe, AZ 85281
Phone: 480.517.8409
kathleen.dunley@riosalado.edu

CollegeAnywhere: Streaming media, content resources, and management

John Kahler
Director of Communications and Manager, Media Center/Instructional Design
The Lutheran Theological Seminary at Philadelphia (for College Anywhere Consortium)

Summary

CollegeAnywhere (www.collegeanywhere.org) is a non-profit consortium formed by a number of academic institutions interested in utilizing content provided by national media producers as well as content developed by institutions and individual faculty members. CollegeAnywhere has two main services it provides to its members and users. This presentation will demonstrate the different components of the CollegeAnywhere service and technology:

1. Streaming media content resource libraries from such producers as Annenberg Learner, PBS, Chilmark Programs, and Governors State University, among others. These media are available as full streams or with a bookmark tool that allows instructors to create bookmarks from portions of content which can be used as teachable moments or as part of instructor or institutional developed learning modules. Bookmarked content can be used to create self-assessment modules that can be presented to students for review and self-assessment. Content is searchable within and across libraries, is closed captioned for ADA compliance, and can also play on iOS and Android devices.

2. Institutional/Instructor created media content tool - allows instructors and institutions to upload their own created or licensed content that is available for high quality streaming or bookmarking, as with producer library content.

3. The CollegeAnywhere Content Tool allows Institutions and Instructors to upload PowerPoint, PDF, Word and other file content that is converted into streamable content for playback on user desktops. CollegeAnywhere's tools and content give instructors access to high quality content designed for ease of use and flexibility in application using the CollegeAnywhere online tools, without dependance on a Content Management System while allowing institutions different levels of access control and flexible licensing. Developed and managed by a non-profit consortium of institutions, tool development and future producer and technology partnerships are driven by the needs of the consortium's members.

Presenter Bio

John Kahler serves as the seminary representative and chair of the executive board of collegeanywhere.org, a consortium of higher education institutions bringing new media content and management to the academic community, and is a member of the steering committee of the Technology in Theological Education Group (TTEG) of the Association of Theological Schools (ATS). John has been working in academic media and communications for more than 25 years, 15 of them at the University of Pennsylvania, followed by two years at public broadcaster WHYY where he managed the Home College Service online effort, before coming to LTSP in 2001.

Contact Info:
John Kahler
Director of Communications and Manager, Media Center/Instructional Design
The Lutheran Theological Seminary at Philadelphia (for College Anywhere Consortium)
7301 Germantown Avenue
Philadelphia, PA 19119
Phone: 215.248.6397
jkahler@ltsp.edu

Using Jing to add video feedback in your online courses

Joseph F. Zisk, Ed. D
Professor/MAT Coordinator
California University of Pennsylvania

Summary

Providing audio and visual feedback is an effective way to communicate with students. Audio/video comments can be used to introduce assignments, give feedback on assignments, and make general statements to the class. Using free audio/video software, instructors can develop video flash files that address various learning styles.

During the session presentation, procedures and development of flash video comments will be demonstrated. Strategies on how to use the Jing software and how to share these audio/video files with students will be explained. Examples of adding audio/video comments to students' works will be demonstrated.

Research has indicated that incorporating audio comments can play an important part in the development of effective student feedback. The use of video flash in your course will help improve student communication and understanding. Students learn in many ways, and incorporating video/audio into a course will help students who learn best in a visual or audio environment. It was found that audio/video comments are preferred over written comments. Using free software such as Jing, audio/video files can easily be made. Using Jing software, video flash files of lesson comments are made, FTP to a web server, and inserted as embedded HTML code in the learning management system (i.e. Blackboard, D2L, Moodle) for easy playback by the student.

Presenter Bio

Joseph F. Zisk, Ed. D, has been an educator for more than 25 years. He is actively involved in conducting faculty professional development workshops on online instruction and is the coordinator of an on-campus and online Master of Arts Teaching program. The course being demonstrated has received the Quality Matters (QM) seal of recognition.

Contact Information:

Joseph F. Zisk, Ed. D
Professor/MAT Coordinator
California University of Pennsylvania
Secondary Education, Box 75
250 University Ave
California, PA 15419
zisk@calu.edu
http://www.teacheronline.us/jingpres

Can lecture capture make you a better professor?

Diane Zorn, PhD
Course Director, Modes of Reasoning, Humanities
Course Coordinator, Schulich School of Business
York University

Summary

During this demonstration, the presenter will cover:

- Tips to overcome barriers to faculty adoption and evangelism
- Ways to address the comfort level of faculty in adopting lecture capture for both blended and online courses
- How to embrace in-room video cameras for course instruction, including real-time notation of formulas and calculations
- Why it is still easy to use student engagement levels, either in class, during office hours or online, to gauge how they will perform
- How to address the needs of today's learners using online, rich media technology
- How to debunk common excuses for not teaching online
- How rich media can be used as a tool to drive students to higher learning

Presenter Bio

Diane Zorn, PhD, designs, implements and teaches fully online, rich media courses using Mediasite technology and audio and video podcasting. She was the second university instructor in Canada to offer video podcasts of her lectures. Her student-centered, radically interactive course design is based on her theory of Enactive Education. Her approach to online education allows students to customize their learning and "learn on the go" in reciprocally evolving and adaptive learning environments. Her publications include: Diane Zorn and Kelly Parke, (April 2011) *Using video streaming in an online, rich-media course to promote deep learning while educating for social change* in Streaming Media Delivery in Higher Education: Methods and Outcomes, IGI Global.

Contact Information:
Diane Zorn, PhD
Course Director, Modes of Reasoning, Humanities
Course Coordinator, Schulich School of Business
Department of Humanities
Faculty of Liberal Arts and Professional Studies
Room 262, Vanier College
York University
4700 Keele Street
Toronto, ON M3J 1P3
CANADA
Phone: 647.880.1237
zorn@yorku.ca

Treks Transform: Professional Development Model for Hybrid Course Development

David Ernst, Ph.D.
Director, Academic and Information Technology

Caroline Hilk
Instructional Technology Fellow

Additional Faculty: Orkideh Anderson, Tani Bialek, Linda Buturian, Jennifer Cherry, Peter Dimock, Irene Duranczyk, Michelle Everson, Lori Helman, Jeanne L Higbee , LeAnne Johnson, Megan Morrissey, Anna R. Paulson, Shari Peterson, Ronald Rooney, Catherine A. Solheim, Jill K. Trites

College of Education and Human Development
University of Minnesota

Summary

Because of the inherent complexities of teaching and learning, technology, and faculty development, a program to help faculty successfully develop hybrid online courses must balance many dynamics, including focus on good teaching and learning vs. focus on technology, general interest content vs. instructor-specific content, build community support mechanisms vs. provide professional support services, intrinsic motivation vs. extrinsic motivation, self exploration vs. guided exploration, divergent ideas (what's possible) vs. convergent ideas (what's doable), social interactions vs. professional interactions, focused time to plan (summer) vs. extended time to complete project (academic year). In the summer of 2010, fifteen faculty were accepted into the Treks Transform program and set off to explore the development of hybrid online courses. This presentation will describe the design of the program and some of the projects that were completed by the participants.

Presenter Bios

David Ernst, Ph.D., is the Director of Academic and Information Technology in the College of Education and Human Development (CEHD) at the University of Minnesota.

Caroline Hilk, doctoral candidate, is an Instructional Technology Fellow in the CEHD at the University of Minnesota.

16 co-presenters are faculty in the CEHD at the University of Minnesota (see names above).

Contact Information:
David Ernst, Ph.D.
178 Pillsbury Dr. S.E.
Minneapolis, MN 55455
dernst@umn.edu

Self-Paced Faculty Training Course: Learning a New LMS

Emily Stone, M.A.
Senior Instructional Technology Consultant
Faculty Instructional Technology Services
DePaul University

Summary

In 2010-2011, DePaul University migrated from BlackBoard to Desire2Learn for its learning management system. To supplement face-to-face trainings, the FITS department created a self-paced online training course that faculty can enroll in at any time. Each participant also receives a "sandbox" course to practice working in the new system. Faculty are enrolled in the training course as students so that they can experience the new system from the student perspective.

Interactive features, including submitting a file, posting to a discussion board, and taking an example quiz, help answer the question, "What does a course look like for students?" While the primary focus of the training course is using the new LMS, there is also content that addresses pedagogy and course design best practices.

The self-paced course has the potential to evolve into a solution for training new faculty, especially as the number of online course offerings and faculty living far from campus increases. Participant feedback and lessons learned by the designers will be used to revamp and repurpose the course.

Presenter Bio

Emily Stone, M.A., is a Senior Instructional Technology Consultant at DePaul University in Chicago. She trained and supported hundreds of faculty during an LMS migration, and her current role is a combination of training, support, and online course development. Emily is also an online instructor of Educational Technology courses for Michigan State University.

Contact Information:
Emily Stone
Senior Instructional Technology Consultant
DePaul University
2350 N Kenmore
Chicago, IL 60614
Phone: 312.362.6026
estone12@depaul.edu
www.fits.depaul.edu

Outreach to Your Students with Innovative (and Free) Technology!

Penny Lorenzo
Assistant Dean of Faculty
School of Legal Studies
Kaplan University

Summary

In this session, we will discuss briefly why outreach is so important to student success. As we all know, providing the materials and expecting students to automatically embrace learning does not always happen. It often requires that the instructor become an advocate to and for the student, in many cases, for the student to be successful in the classroom. This is especially true in the online environment where it is oh so easy for the student to "walk away" and not dig into the materials. Success does not mean the "A" but rather that the student will take-away some additional knowledge or experience from the class that can be put into practical and relevant use.

We will spend the main portion of the session exploring some unique ways to energize students about upcoming topical materials, engage them with instruction for current assignments, or effectively provide outreach, building a rapport with students. There will be a demonstration of how these innovative tools are created and how they can be implemented easily (and on the cheap) into the classroom.

Presenter Bio

Penny Lorenzo is the Assistant Dean of Faculty in the School of Legal Studies at Kaplan University. She obtained her J.D. from South Texas College of Law and holds an M.A. in English from Northern Arizona University and a B.A. in English from University of South Florida. Ms. Lorenzo has been a faculty member and in administration of post-secondary education and legal studies for the past 12 years. Her hobbies include creative writing and hiking with her family and beloved dogs Bogart and Cooper.

Contact Information:
Penny Lorenzo
Assistant Dean of Faculty
Kaplan University
29424 N 51st Street
Cave Creek, Arizona 85331
Phone: 480.244.2441
plorenzo@kaplan.edu

Designing Mobile Learning Experiences Using ARIS

David J. Gagnon
Instructional Designer

John Martin
Instructional Consultant

University of Wisconsin–Madison

Summary

Mobile devices provide more than a small screen to repackage existing forms of the dreaded "eLearning module." They allow us to create new kinds of locative educational experiences that use physical contexts to illuminate systemic concepts. In this session we will demonstrate ARIS, an open source tool for creating mobile games, tours, and interactive stories that are played on the Apple iOS family of devices.

ARIS began as a rapid mobile game prototyping tool for students in the Games, Learning, and Society research community at the University of Wisconsin–Madison and now has a worldwide community which has produced hundreds of designs. To access the tool, follow the “Make Games” link at http://arisgames.org

Documentation is provided as a set of training video tutorials and short documents available at the above link. The community forms are hosted by Google groups and are available from the ARIS website as well as http://groups.google.com/group/arisgames

The free client can be downloaded by searching for ARIS at the Apple App Store.

Presenter Bios

David Gagnon is an instructional designer with the ENGAGE program at UW–Madison where he consults with faculty about innovative teaching practices that leverage emerging media. He is a member of the Games, Learning, and Society Research community where he directs the mobile learning team and ARIS Project. David has a BS in computer science, an MS in curriculum and instruction, and has managed dozens of educational media projects over the last six years, specializing in computer simulation, gaming and mobile media.

John Martin is an Instructional Consultant with Academic Technology at the Division of Information Technology. His heart is in expeditionary learning, and his doctoral research, as part of the Games, Learning, and Society group, considered the use of mobile devices to connect people to the land and to each other at a deep woods camp in Maine. He develops tools (like ARIS) and processes (like Digital Storytelling) to support informal and formal learning environments and communities. He thinks people learn more by doing things than by studying them and is excited that modern mobile devices have become Swiss Army Tools for learning and research.

Contact Information:
David Gagnon
Phone: 608.890.1089
djgagnon@wisc.edu

Developing Technologies for Learning Objects on Mobile Platforms

Moses Wolfenstein, Ph.D.
Associate Director of Research

Joe Nelson
Senior Developer

Academic ADL Co-Lab
University of Wisconsin–Extension

Summary

The Academic Advanced Distributed Learning Co-Lab (Academic Co-Lab) is currently in the process of developing a system that allows for the easy assembly and publication of content for mobile platforms including the iOS and Android operating systems. The Academic Co-Lab has two aims in developing the Mobile Access to Supplementary Learning Objects (MASLO) system: 1) Creating a usable piece of technology that enables even the less technologically adept to create mobile learning experiences. 2) Developing an open source research platform that allows educational technology researchers to explore questions about the design and use of digital learning resources, especially on mobile devices. Within the purview of our current R&D process, the Academic Co-Lab is particularly concerned with asking questions about how to effectively create middleware that enables the production of better digital media for learning, and how mobile devices can be used as vehicles for supplemental learning materials.

In work on MASLO thus far, the Academic Co-Lab has developed and tested a desktop tool for the design and publication of content packs for mobile devices through a user centered research and development method. The process began with needs analysis around the instructional design tasks the tool seeks to enable, and the development of wireframes and an array of other conceptual and design documents. The Academic Co-Lab then utilized an iterative paper prototype development process in which a rough version of the possible states of the interface was sketched out and tested with users. Upon achieving consistent response from users, the R&D team began development of the prototype software demonstrated at this conference. Development of both a local and cloud database solution are also currently underway, as is the initial development of the user interface for the mobile content player. A fully functioning prototype system will be completed by early in 2012, at which time both the alpha software and the source code for each element will be available for download at the Co-Lab's website www.academiccolab.org

Presenter Bios

Moses Wolfenstein, Associate Director of Research, has been conducting research on digital learning technologies at the Academic ADL Co-Lab since Fall 2010. He holds a doctoral degree in Educational Leadership & Policy Analysis from the UW-Madison where he worked extensively on topics including e-learning and game-based learning.

Joe Nelson, Senior Developer, has been working with the Academic ADL Co-Lab since June 2006 as a developer and SCORM auditor. His areas of expertise include software architecture, database structures, web interface design, and pure mathematics.

Contact Information:
Moses Wolfenstein
Phone: 608.263.9199
moses.wolfenstein@uwex.edu

Satellite-enabled, Mobile Instructional Software and its Impact on Synchronous Learning

Phil Peters
Associate Professor

Alex Katsaros
Research Associate; Doctoral Candidate

University of Central Florida

Summary

Researchers in our interactive media lab have developed an integrated synchronous online media delivery solution designed for enabling remote experts to facilitate high-impact, field-based skills training for online learners worldwide. In order to make field research more accessible to place-bound students (who cannot travel to remote locations), our network provides real-time, remote, mobile, interactive software applications and custom hardware configurations.

Presenter Bios

Phil Peters is an Associate Professor in the School of Visual Arts and Design at the University of Central Florida. His professional career as a film production designer and computer game producer/designer spans over twenty five years. His designs include the Emmy-winning series Northern Exposure, X-Files, and numerous other film and television projects in the United States, Asia, and Australia. His interactive projects include producing and designing for Microsoft, Fox Interactive, Warner Interactive, MovieBeam for Disney, iBlast and Secure Computing. Professor Peters' international research into remote distance learning includes programs and consultancies in India, Bermuda, and Africa.
(BA, Humbolt State University; MFA, University of Montana)

Alex J Katsaros is a PhD candidate in Texts & Technology at the University of Central Florida. His research interests include developing collaborative learning objects for many-to-many online mediated environments, location-based (or geocentric) multimedia learning, and human cognition research synthesis. Before joining the Interactive Expeditions research team as Director of Education, his past productions included developing location-based multimedia components about "Orlando Cultural Byways" for display on the Transit-TV system aboard the public bus system. Alex also helped produce an online virtual tour of Orlando's Leu Gardens, based on first-hand interviews with historians and botanical experts.

Contact Information:
Phil Peters
Associate Professor
University of Central Florida
Department of Digital Media
4000 Central Florida Blvd. P.O. Box 163121
Orlando, Florida 32816-3121
Phone: 407.599.0027
ppeters@mail.ucf.edu

Author Discussions

Living On the Future Edge: Windows on Tomorrow

Lee Crockett
Managing Partner
The 21st Century Fluency Project

Summary

Does it ever feel like our society is always in fast-forward? Are you frustrated by the experience of technologies becoming obsolete almost immediately after they're introduced? Do you struggle just to grasp how quickly and relentlessly things are changing? There's no doubt our world is on the move. The exponential changes and advances in electronics and online culture that we have witnessed in recent years have been staggering, to be sure. It's sometimes difficult to grasp the very nature of change, since it all seems to be happening so rapidly. More than ever it is a state of being that we struggle to keep up with as we live our everyday lives.

Change is the law of life, and it's absolutely necessary to our survival, especially since we are advancing so fast. Without change, without progress, we cease to exist. Our world today is in a constant state of flux, transforming and ever-evolving. "Living On The Future Edge" is a glimpse into an astounding technological landscape that awaits us all, providing a pragmatic look at the powerful and pervasive impact rapid digital evolution has on our way of life. This book and DVD cover 6 exciting exponential trends that are affecting our world and shaping our future, and clearing a path to tomorrow where the changes we are facing now can truly and benefit us all.

In "Living on the Future Edge" we see a fascinating time already in the making. It puts us directly into the expanse of an astonishing digital future that is coming at us at light speed.

Presenter Bio

Lee Crockett is a national award winning designer, artist, author and international keynote speaker. He is co-author of *Understanding the Digital Generation, The Digital Diet, Living on the Future Edge*, and *Literacy is not Enough*. Lee is a "just in time learner" first and foremost, constantly adapting to the new programs, languages, and technologies associated with today's communications and marketing media. Understanding the need for balance in our increasingly digital lives, Lee has lived in Kyoto, Japan where he studied Aikido and Tea Ceremony as well as Florence, Italy, where he studied painting.

Contact Information:
Jordan Oliver
Phone: 778-938-2100
jordan@fluency21.com

Quality in Online Learning: A New Comprehensive Approach to Quality Assessment and Assurance

Michael A. Mariasingam
Independent Consultant
Quality Learning Global Consultancy

Thomas W Smith
Director, Telecommunications Programming
Department of Engineering Professional Development
University of Wisconsin-Madison

Why This Book on Quality?

Several organizations have proposed new guidelines for assessing the quality of distance education programs but the resulting frameworks are inadequate and incomplete. They do not incorporate criteria critical to establishing quality and do not offer benchmarks for their measurement. There is also a need for a new approach to quality assessment and quality assurance in general. The need:

1. The current approach to quality focuses on the perspectives of only internal constituencies — students, faculty, and appropriate administrative personnel—and does not stress including external stakeholders, such as employers, licensing and accrediting agencies, and others. The emerging global environment demands that what students learn would meet the needs of *all* stakeholders.

2. Quality, to be meaningful, effective, and precise, should be measured at multiple levels - the institutional level, the program level, and the course level. Many countries, like Australia and the UK, particularly the UK, have started implementing this new comprehensive approach to quality assurance processes and requirements. A good example is the quality framework of the Quality Assurance Agency (QAA) of the UK. This new comprehensive approach to quality needs to be communicated to all involved in quality assessment and assurance.

3. There is a lack of tools—quality frameworks—for assessment and assurance of the quality of online programs based on the new approach. The quality frameworks currently available are only guidelines not benchmarks (standards against which an item is to be compared for quality).

4. Most people involved in online learning—program administrators, faculty, instructional designers, and professionals in key program support areas—are not familiar with the new comprehensive approach and the available quality assessment tools that might be used to implement that approach.

5. There is a need for educating people involved in online learning on a systematic comprehensive approach to quality assessment and assurance of online programs. There are a few books that deal with quality in online learning in very broad and general terms. But, there is no book that covers adequately the current status and the emerging new approach in quality assessment and assurance and the quality assurance tools in online learning as the proposed book would. These conditions have created the need for a book on quality in online learning like this book.

How Would This Book Meet the Need Discussed Above?

This book would:

- Present a systematic approach to designing, developing, and delivering high quality online programs.
- Provide an extensive overview of the current status of quality assurance - the current processes, tools, and their inadequacies - and the need for a more comprehensive approach to quality assurance.
- Provide an in-depth discussion on the new comprehensive approach to quality and the quality assurance processes and tools based on the new approach.
- Present a detailed discussion on quality assessment tools currently available for assessment and assurance of quality at multiple levels.
- Present the industry oriented Six Sigma and related techniques applied to distance learning.
- Discuss quality assurance issues and initiatives at international level.
- Present, in addition, case studies, from around the world [16 case studies from over 10 countries] as illustrative examples of the implementation of the above quality assessment and assurance concepts, processes and tools in designing, developing and delivering high quality online programs.

Essentially, it would fulfill the need that currently exists to educate people involved in online learning on the new quality assurance concepts, processes, and tools, and on a systematic approach to designing, developing, and delivering high quality online programs.

Structure of the Book

The book will have 12 chapters that would cover quality concepts and principles**;** current approaches to quality assurance; a new comprehensive approach to quality assurance; quality assurance process; quality frameworks for quality assessment and assurance; quality assurance at international level; and Six Sigma and related techniques applied to distance learning.

Contents
Dedication, Contents, Foreword, Acknowledgements, Preface

Chapter 1: Introduction
Michael. A. Mariasingam, Thomas W. Smith

This chapter makes briefly a case for why the book is needed. It introduces the rationale for the content and the way the content is organized. This chapter will also cover the challenges to quality specific to distance education. The challenge to quality in distance education is that institutions are now reaching students who do not fit the normal admittance profile and institutions are expanding their services without a commensurate increase in budget. Specific challenges like student preparation, student environment and native support, cost, and unrealistic expectations as to learning effort and time requirements etc. are addressed.

Chapter 2: Quality—The Concept and Issues
Michael. A. Mariasingam

As quality could mean different things to different people there is a need to define quality as it is intended and used in the book. Albeit many possible definitions of quality, it is argued, there are some common features of quality in general. Those features are discussed and a usable definition is presented. The multiple ways in which quality can be

conceptualized leads to some issues, dilemmas and fallacies. Some of these issues, dilemmas and fallacies in quality are discussed.

Chapter 3: Quality Assessment and Assurance in Online Learning—The Current Status
Michael. A. Mariasingam

Currently quality assessment and assurance are envisioned and performed mainly in comparison with face-to-face education and with parameters, which are mainly focused on internal constituencies - students, faculty, and institution - and do not stress including the perspectives of other important external stakeholders, such as employers, licensing and accrediting agencies, and others. Also, quality assurance in general is perceived only at the program level. Most of the currently available guidelines for assessment and assurance of the quality of online programs issued by various quality assurance agencies have this limitation. This current status of quality assessment and assurance and the limitations are discussed in detail.

Chapter 4: New Comprehensive Approach to Quality
Michael. A. Mariasingam

The current approach to quality assessment and assurance that focuses on the perspectives of only a few internal stakeholders and does not stress including external stakeholders is not sufficient to evaluate the quality of online programs precisely. The emerging global environment demands that what students learn would meet the needs of *all* stakeholders. Also, quality assurance in general is perceived only at the program level. An important element of a precise approach to quality assurance in online programs is the recognition that quality can and should be conceptualized and measured at multiple levels—the institutional level, the program level, and the course level. A comprehensive approach to quality assurance that meets these essential requirements is discussed in this chapter.

Chapter 5: Benchmarks and Measurements for Quality in Online Learning
Michael. A. Mariasingam

Currently, the problem in quality assurance is that there are no defined benchmarks against which the quality should be measured. There are some guidelines, which are arbitrarily called guidelines or benchmarks. Benchmarks should clearly prescribe the standard against which quality should be measured. What are now called benchmarks do not meet this definition and hence are really guidelines rather than mandatory benchmarks. This chapter discusses quality benchmarks or standards and discusses how quality frameworks could and should be designed in terms of benchmarks.

Chapter 6: Quality Assurance Process
Michael. A. Mariasingam

Quality assurance is a systematic process that starts with the plan for designing, developing and delivering a high quality program. There are three very important features to the process. First the objective: it is not a process of just *quality* assessment—a process that is to be done at the end after the program has been developed and delivered to verify if the program is of goof quality. The objective is *quality assurance*—to ensure that a program to be offered is designed, developed, and delivered as a program of high quality. Second the timing of the process. It starts on the day program planning starts. Third, quality assurance is a very systematic process that starts with a set of procedures derived from and designed to meet a comprehensive quality standard. These features of the

systematic quality assurance process are discussed in this chapter.

Chapter 7: Quality Assurance at Institutional Level
Michael. A. Mariasingam

As mentioned in chapter 4, quality should be conceptualized and measured at multiple levels - at institutional level, program level and course level. Although the quality issues and considerations at these three levels are interrelated and there will be some overlap of them among the three levels, the breadth and depth at which the performance measures will be evaluated would be quite different. For instance, an institutional level quality framework would include typically performance measures such as *Organizational Commitment, Organizational Environment for Distance Education, Course Development and Delivery, Cross Border Issues* etc. In this chapter the discussion is on the features of a quality framework for assessment of quality at institutional level. The main purpose of such a framework would be to evaluate and assure that the institution has the mission, vision, capacity, and resources to develop and deliver high quality online programs. The features of two quality frameworks designed for quality assurance at institutional level are discussed in this chapter.

Chapter 8: Quality Assurance at Program Level
Michael. A. Mariasingam

For a framework for quality assurance at program level—to measure the quality of the online programs—the performance measures that would be included in the framework would be different from those for the institutional level. The program level framework would have performance measures like *Institutional Requirements, Learner Requirements, Faculty Requirements, Employer Requirements* etc. The features of a specific quality framework for quality assurance at program level - the quality framework of Mariasingam (2005) - and the considerations in developing the framework are discussed in this chapter.

Chapter 9: Quality Assurance at Course Level
Michael. A. Mariasingam
This chapter presents a discussion on the features of frameworks for quality assurance at course level. The performance measures of a course level quality framework will be different from those of the frameworks for institutional level and program level. Two quality frameworks widely used for quality assurance at course level are discussed in this chapter.

Chapter 10: Quality Assessment and Assurance Models and Tools
Michael. A. Mariasingam
A few excellent models for quality assurance process and quality assessment tools are available. A brief description of these models and frameworks and a comparative discussion are the focus of this chapter.

Chapter 11: Quality Assurance at International Level
Ari-Matti Auvinen
Michael. A. Mariasingam

Increasingly distance education is being offered internationally beyond the national borders of the country of origin of the program. Quality assurance of such cross-border programs is becoming an issue of great importance as the principles of good practice and

quality assurance regulatory mechanisms vary in different countries. A discussion of the issues and the efforts to develop quality assurance mechanisms for cross border programs is the topic of this chapter.

Chapter 12: Six Sigma and Related Techniques Applied to Distance Learning
Thomas W. Smith
Lean tools look at information and materials flows from concept to customer and provide a systematic way to analyze waste, quality, and decision points, supply chain and other issues. They are particularly useful tool in the design of an online education program, because they capture a number of steps that are often overlooked or underappreciated. This is especially true on the customer side. The tools employed in Lean Manufacturing are well suited to service delivery problems, of which education is an example. This chapter discusses the application of these tools.

Bibliography, Index, About the Authors

About the Presenters

Dr. Michael Mariasingam is an independent consultant in quality assurance with Quality Learning Global Consultancy (www.qualitylearningglobal.com). He has developed a comprehensive set of quality standards in terms of rigorous measurable benchmarks for assessment and assurance of the quality of online programs. He has published a book and papers on quality in online programs and on systematic guidelines and procedures for developing and delivering high quality online programs. Currently he is writing two books on Quality Assurance in Online Learning. Dr. Mariasingam has organized and facilitated several interactive hands-on workshops on designing, developing, and delivering high quality online programs and on quality assessment and assurance of online programs.

Address: Quality Learning Global Consultancy
E-mail: michaelmariasingam@yahoo.com
Tel: 1-216-965-7035
URL: www.qualitylearningglobal.com

Mr. Thomas W. Smith MS, Program Director in the Department of Engineering Professional Development, University of Wisconsin–Madison, USA, is the architect and founder of the university's first online master's degree program, the Master of Engineering in Professional Practice. This program has won major national awards from the University Continuing Education Association, The U.S. Distance Learning Association and the Sloan Foundation. A pioneer in the use of Web-conferencing in engineering education, Mr. Smith has written extensively on this subject and has been instrumental in the development of the university's Web conferencing, teleconferencing and satellite communications capabilities. He also directs a series of short courses in telecommunications technology and applications. His consulting work in this area includes corporate clients in the Fortune 100 as well as other universities and government agencies. Mr. Smith has written more than 40 papers and articles on telecommunications and distance education planning and budgeting and is a frequent speaker on these topics in the United States and Europe.

Address: Department of Engineering Professional Development
University of Wisconsin-Madison
432 North Lake Street
Madison, WI 53706-1498
Tel: 608-263-7426
Fax: 608 263-3160
Email: TWSmith@wisc.edu

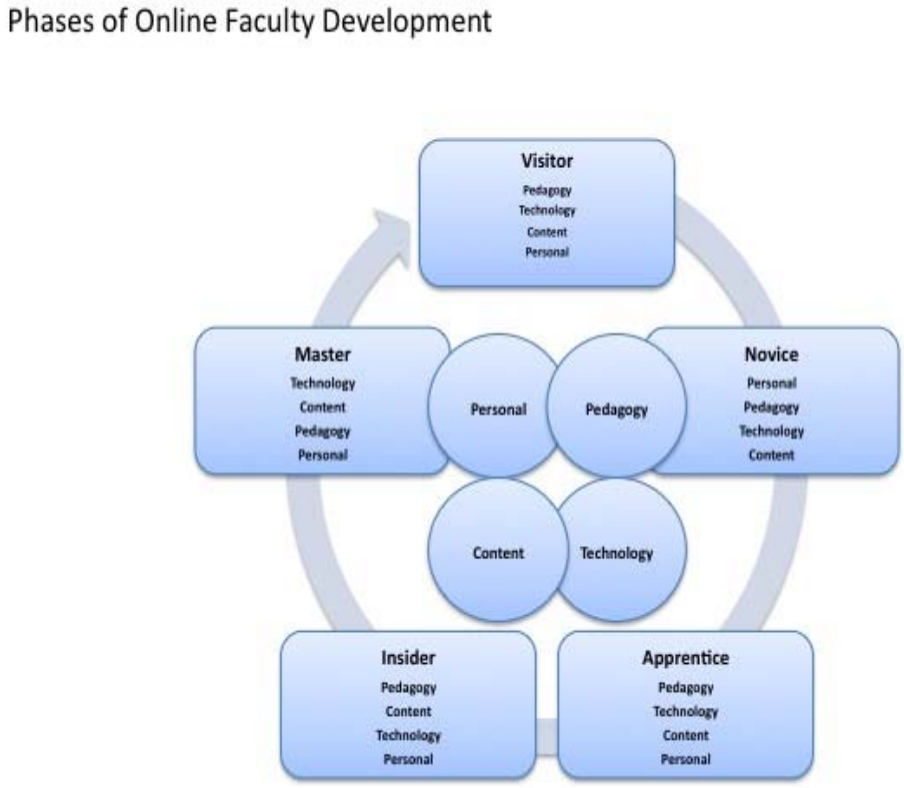
The Excellent Online Instructor

Rena M. Palloff, PhD, LCSW
Fielding Graduate University and Crossroads Consulting Group

Keith Pratt, PhD
Walden University and Crossroads Consulting Group

Summary

Excellent online instructors don't emerge right "out of the box," but need development. The following shows the phases online instructors go through in their progression to excellence:



Concerns and areas of emphasis differ in the various phases of development as well. Novice instructors are often fearful of what they will encounter in the online environment and how they might transfer their skills from the face-to-face classroom to the online classroom, while master instructors are more concerned with learning and using the technical tools to help them do what they already do well online even better. Training and faculty development helps move instructors along the continuum. However, training should be adapted to the phase instructors find themselves in. One size does not fit all when it comes to good faculty training and development.

The focus should be on creating a "Best System" for faculty development that includes faculty development training at the institutional level, self-development, and a high degree of institutional

support. The desired outcomes of this system include the formation of a faculty community of practice wherein the masters can assist the novices as they enter online teaching. The focus should also be on developing excellence and on continuous quality improvement of all course offerings in order to increase student satisfaction and performance.

Reference:

Palloff, R.M. & Pratt, K. (2011), *The excellent online instructor: Strategies for professional development.* San Francisco: Jossey-Bass.

Presenter Bios

Rena Palloff and **Keith Pratt** are the managing partners of Crossroads Consulting Group. Rena and Keith are program directors and faculty in the Teaching in the Virtual Classroom program at Fielding Graduate University, which trains instructors to teach online. They are the authors of the 1999 Frandson Award winning book *Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom* (Jossey-Bass, 1999), *Lessons from the Cyberspace Classroom* (Jossey-Bass, 2001), *The Virtual Student* (Jossey-Bass, 2003), *Collaborating Online: Learning Together in Community* (Jossey-Bass, 2005), and *Assessing the Online Learner* (2009). The second edition of *Building Learning Communities in Cyberspace*, now titled, *Building Virtual Learning Communities* was published in July 2007. *The Excellent Online Instructor* (Jossey-Bass, 2011) is forthcoming. The books are comprehensive guides to the development of an online environment that helps promote successful learning outcomes while fostering collaboration and building a sense of community among the learners. Drs. Palloff and Pratt have been presenting this work across the United States and internationally since 1994 as well as consulting to academic institutions regarding the development of effective distance learning programs. They have presented at the Distance Learning Conference annually since 1999.

Contact Information:
Rena M Palloff, PhD
rpalloff@mindspring.com

Keith Pratt, PhD
drkpratt@mindspring.com

Engaging the Online Learner

Rita-Marie Conrad, Ph.D.
Online Educator, Author and Consultant
RMC eDesign

J. Ana Donaldson, Ed.D.
Contributing Faculty
Walden University
AECT President-Elect

Summary

Engaging the Online Learner provides practitioners with ideas to enhance their online instruction, including a framework to consider when designing and implementing online interaction. The proposed framework helps instructors guide learners in the development of skills needed to engage with the content and with one another online without the instructor being the primary initiator of knowledge generation and interaction. The book was originally published in 2004. An updated version of the book was released in May, 2011.

Presenter Bios

Rita-Marie Conrad, Ph.D., is an online faculty member for Fielding Graduate Institute and Walden University, as well as Senior Consultant for the Learning Resources Network (LERN). She has designed and taught online courses for over a decade and has consulted on the design and implementation of online learning courses, evaluated online programs, and provided educational technology consulting and training to K-12 teachers and higher education faculty.

J. Ana Donaldson, Ed.D., is currently teaching part-time for Walden University in their online Ph.D. Educational Technology program. She has over two decades of experience in creating technology-supported learning environments and recently retired as an Associate Professor of Instructional Technology from the University of Northern Iowa. Ana is the AECT (Association for Educational Communications and Technology) president for 2011-2012.

Contact Information:
Rita-Marie Conrad, Ph.D.
Online Educator, Author, and Consultant
Phone: 919.370.0665
rconrad@nc.rr.com

J. Ana Donaldson, Ed.D.
Contributing Faculty
Walden University
Phone: 319.415.1920
Ana.Donaldson@cfu.net

The Online Teaching Survival Guide: Simple & Practical Pedagogical Tips

Judith V. Boettcher, Ph.D.
Author, Consultant
Designing for Learning

Rita-Marie Conrad, Ph.D.
Online Educator, Author and Consultant
RMC eDesign

Summary

The Online Teaching Survival Guide: Simple & Practical Pedagogical Tips is a practical hands-on guide to theory-based strategies for teaching online, blended or hybrid courses. The first set of chapters provide a straightforward design framework to guide the design of any course followed by a set of ten core learning principles —that provide a effective summary of pedagogy—and ten best practices for teaching online. The next set of chapters provide over 50 tips, mapped to a four-phase course timeline, that guide instructors on what to do at each stage of a course. This book captures the many questions—and the resulting tips — that faculty have as they take on the challenges of teaching and learning experiences in the online environment. More tips are added regularly to the web site at www.designingforlearning.info

Presenter Bios

Judith Boettcher is a free-lance author and consultant in online and distance learning and a lecturer with the University of Florida. Judith's career has focused on the intersection of technology, instructional design and online learning. Much of her career has focused on supporting faculty development in the use of technology at Penn State University, University of Florida, Florida State and Duquesne University. Judith is the lead author of the two editions of *A Faculty Guide for Moving Teaching and Learning to the Web*, editor of many books and author of numerous columns and articles. She has a Ph.D. in education and cognitive psychology from the University of Minnesota. Website: www.designingforlearning.info

Rita-Marie Conrad, Ph.D. is an online faculty member for Fielding Graduate Institute and Walden University as well as Senior Consultant for the Learning Resources Network (LERN). She has designed and taught online courses for over a decade and has consulted on the design and implementation of online learning courses, evaluated online programs, and provided educational technology consulting and training to K-12 teachers and higher education faculty.

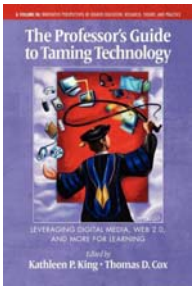
Contact Information:
Judith V. Boettcher
Phone: 703.587.8892
jboettcher@comcast.net
judith@designingforlearning.org

Rita-Marie Conrad, Ph.D.
Online Educator, Author and Consultant
Phone: 919.370.0665
rconrad@nc.rr.com

The Professor's Guide to Taming Technology: Leveraging Digital Media, Web 2.0

Kathleen King
Professor of Higher Education
University of South Florida

Summary



Looking for a way to capture the interest of your faculty in using technology online or on campus? *The Professor's Guide to Taming Technology: Leveraging Digital Media, Web 2.0* is an exciting and relevant volume that provides encouragement and a guide and handbook for faculty to introduce digital media in language they relate to and understand. Much different than a theoretical book, instead it provides strategies and activities for swift assimilation of the learning into instructional design and teaching practice.

The editors (King & Cox) have been fortunate to bring together faculty experts across different disciplines to specifically speak about how and why to use digital media in higher education settings for this edited treasure trove. Moreover, the grounding orientation is adult learning. This book answers the question of how to use technology to address the needs and desires of adult learners in higher education. This book responds to the needs of our changing world and students by revealing innovative technology applications and how faculty are and can use digital media in teaching in higher education because faculty make the quickest changes and learn how to do it best. It is a valuable resource *for* faculty *from* faculty, because it allows the sharing of successful teaching experiences with digital media with our worldwide colleagues so they may modify it, extend it, and improve it.

In asking faculty to think about teaching with new ideas and strategies, we try to illustrate them with many practical examples. These different approaches include clear descriptions of what the activities look like, why to develop and implement them, and how to do so for faculty's specific needs. We are excited that more people will be able to benefit from the powerful help and guidance contained in this book. In addition, we anticipate further developments as each professor, instructor, and TA discovers applications and new directions we could never anticipate, and look forward to their innovations using the material discovered here.

Presenter Bio

Kathleen P. King, EdD, is a professor at the University of South Florida and president of Transformation Education, LLC. Dr. King is a specialist in how adults learn, change, and grow, and her major areas of research include distance learning, digital media, transformative learning, professional development, and instructional technology. She is the author of 19 books and over 165 published articles and research papers. Universities around the world use her books and web-based audio materials as course materials. Dr. King received her Ed.D. and M.Ed. in Higher and Adult Education from Widener University, Chester, Pennsylvania. She also has a M.A. from Columbia International, Columbia, SC, and a B.A. from Brown University, Providence, RI.

Contact Information:
Dr. Kathleen P King
4202 East Fowler Ave, EDU 105
Tampa FL 33620-5650
Phone: 813.974.0030
kathleenking@usf.edu

Conquering the Content: A Step by Step Guide to Online Course Design

Robin M. Smith, Ph.D.
Coordinator of eLearning
University of Arkansas for Medical Sciences

Summary

Conquering the Content: A Step by Step Guide to Online Course Design is a practical resource for faculty who tackle overwhelming amounts of course content that must be tailored for eLearning. This important guide offers step-by-step instructions for creating online learning experiences that are manageable, effective, and of the highest quality. This book is filled with templates, learning guides and sample files. In this session the author will highlight several of the time-saving advantages readers of *Conquering the Content* have found most valuable. Attend this session to learn ways to design your online course so that it is easily updateable, highly effective, and pedagogically sound.

Presenter Bio

Robin M. Smith, Ph.D., Coordinator of eLearning at University of Arkansas for Medical Sciences, has designed thousands of online courses, served as instructional design consultant on numerous federal grants and contracts, and serves as a consultant for development and implementation of eLearning Programs. Her passion is providing faculty with simple and efficient methods for developing online courses so that students may experience the many benefits of eLearning. She is the author of *Conquering the Content: A Step-by-Step Guide to Online Course Design.*

Contact Information:

Robin M. Smith, Ph.D.
Coordinator of eLearning, OED
University of Arkansas for Medical Sciences
4301 W. Markham St. #595
Little Rock, AR 72205
Phone: 501.686.7052
smithrobinm@uams.edu

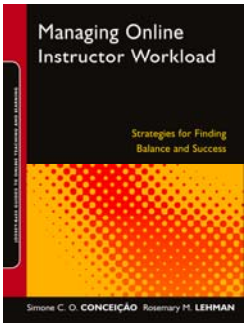
Managing Online Instructor Workload: Strategies for Finding Balance & Success

Simone C. O. Conceição
Associate Professor
University of Wisconsin–Milwaukee

Rosemary M. Lehman
Consultant and Author
eInterface

Summary

Learn how to manage your workload when teaching online. Hear the stories of successful instructors based on surveys and interviews. Discover workload strategies for maintaining quality of life. Take away a template for managing tasks and prioritizing time.



Our book is based on surveys and interviews with successful online instructors. It is filled with timely and comprehensive insight that is essential for online instructors, instructional designers, faculty developers, and anyone who wants to succeed in online teaching.

During this session, we will explain the focus of our book, how the book can benefit you, how the book is organized, and how you can balance your workload and maintain quality of life. To order go to: www.josseybass.com

Presenter Bios

Simone C. O. Conceicao, Ph.D., is an associate professor of Adult and Continuing Education at UW–Milwaukee and teaches courses in the areas of distance education, use of technology with adult learners, instructional design, and principles and foundations of adult learning. She received her doctorate in Adult and Distance Education from the UW–Madison and her master's in Adult and Continuing Leadership Education from the UW–Milwaukee. Dr. Conceicao co-authored the book *147 Practical Tips for Teaching Online Groups: Essentials for Web-Based Education* (2000) and edited *Teaching Strategies in the Online Environment* (2007);

Rosemary M. Lehman, Ph.D. is a partner, author, and consultant in eInterface, working with partners in teaching and learning to expand thinking, connect with others, and embrace change. Dr. Lehman received her doctorate in Distance Education and Adult Learning and her master's in Television and Media Critique from the UW–Madison. She is the author of *The Essential Videoconferencing Guide: 7 Keys to Success* (2001); editor of *Using Distance Education Technology: Effective Practices* (2002); and co-author of *147 Practical Tips for Synchronous and Blended Technology Teaching and Learning* (2007).

Drs. Conceicao and Lehman co-authored the books *Creating a Sense of Presence in Online Teaching: How to "Be There" for Distance Learners* (2010) and *Managing Online Instructor Workload: Strategies for Finding Balance and Success* (2011).

Contact Information:
Simone C. O. Conceição
Rosemary M. Lehman
einterface@me.com
www.einterface.me

Designing mLearning: Tapping Into the Mobile Revolution for Organizational Performance

Clark Quinn, Ph.D.
Executive Director
Quinnovation

Summary

The increase in mobile devices has been dramatic. For example, mobile subscriptions have reached saturation point in the developed world, and that's just the phones. In short, the devices are out there. However, mobile learning is more than just courses on a phone. To truly take advantage of mobile, you need to think differently. You need to get a handle on the 4C's of mobile – *content*, *capture*, *compute*, and *communicate* – and more, and map those capabilities to learning needs.
In this session, Dr. Quinn will discuss the context that makes mobile relevant, cover how to think about mobile devices, and reflect on various models that help users take advantage of mobile. He will answer audience questions, address issues, and address pragmatics as they arise.

Presenter Bio

Clark Quinn, Ph.D., has been innovating in strategic learning technologies for over three decades. Clark combines a deep background in the learning sciences with broad experience in technology applications, which he applies to the corporate, government, education, and not-for-profit sectors. He's the author of *Engaging Learning: Designing e-Learning Simulation Games* and *Designing mLearning: Tapping Into the Mobile Revolution for Organizational Performance*. He supports learning experience design through Quinnovation, and organizational learning strategy as a principal in the Internet Time Alliance.

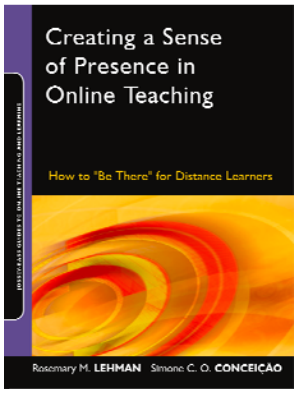
Contact Information:
Clark Quinn
Executive Director
Quinnovation
60 Cuesta Way
Walnut Creek CA 94597
Phone: 925.200.0881
clark@quinnovation.com
http://www.quinnovation.com
http://blog.learnlets.com
http://www.engaginglearning.com
http://www.designingmlearning.com
http://www.internettimealliance.com

Creating a Sense of Presence in Online Teaching: How to "Be There" for Distance Learners

Simone C. O. Conceição
Associate Professor
University of Wisconsin–Milwaukee

Rosemary M. Lehman
Consultant and Author
eInterface

Summary



Hear about topics on presence from our book. Find out why creating presence is important. Discover the role of presence in the online environment. Hear about activities that create a sense of presence. Take away a copy of our framework for designing presence.

You may also be curious about the focus of our book. How the book can benefit you. How the book is organized. Why it is important to understand presence. How we define presence. How presence is different from engagement. What presence looks and feels like. How presence is created. How presence can be experienced online. What strategies you can use to create presence online. And much more… To order go to: www.josseybass.com

Presenter Bios

Simone C. O. Conceicao, Ph.D., is an associate professor of Adult and Continuing Education at UW–Milwaukee and teaches courses in the areas of distance education, use of technology with adult learners, instructional design, and principles and foundations of adult learning. She received her doctorate in Adult and Distance Education from the UW–Madison and her master's in Adult and Continuing Leadership Education from the UW–Milwaukee. Dr. Conceicao co-authored the book *147 Practical Tips for Teaching Online Groups: Essentials for Web-Based Education* (2000) and edited *Teaching Strategies in the Online Environment* (2007);

Rosemary M. Lehman, Ph.D. is a partner, author, and consultant in eInterface, working with partners in teaching and learning to expand thinking, connect with others, and embrace change. Dr. Lehman received her doctorate in Distance Education and Adult Learning and her master's in Television and Media Critique from the UW–Madison. She is the author of *The Essential Videoconferencing Guide: 7 Keys to Success* (2001); editor of *Using Distance Education Technology: Effective Practices* (2002); and co-author of *147 Practical Tips for Synchronous and Blended Technology Teaching and Learning* (2007).

Drs. Conceicao and Lehman co-authored the books *Creating a Sense of Presence in Online Teaching: How to "Be There" for Distance Learners* (2010) and *Managing Online Instructor Workload: Strategies for Finding Balance and Success* (2011).

Contact Information:
Simone C. O. Conceição
Rosemary M. Lehman
einterface@me.com
www.einterface.me

Cases on Quality Assessment and Assurance in Online Learning: Global Approaches and Experiences

Michael A. Mariasingam
Independent Consultant
Quality Learning Global Consultancy

Thomas W Smith
Director, Telecommunications Programming
Department of Engineering Professional Development
University of Wisconsin-Madison

Structure of the Book

This Case Book will be an edited book. It will have 16 case studies from 20 contributors from 10 countries and two chapters—an introductory chapter and a concluding chapter - by the Editors. The case studies will present illustrative examples of how the quality assessment and assurance concepts, processes and frameworks discussed in the Authored Book [Book 1] have been implemented in institutions, programs, and courses around the world to develop and deliver high quality online programs.

Contents

Dedication, Contents, Foreword, Acknowledgements, Preface

Chapter 1: Introduction

Michael. A. Mariasingam, Thomas W. Smith.

This chapter will give an introduction to the two-book format, describe the purpose of each book, and make briefly a case for why the two books are needed. It will introduce the rationale for the content and the way the content is organized in the books. It will point out that each case study is related to a specific chapter in the authored companion book and illustrates the implementation of the theoretical principles discussed in the chapter. This chapter will also explain that for better, fuller, and comprehensive understanding of the quality concepts, quality assurance tools, and practices related to the case studies readers should refer to the authored companion.

Chapter 2: Quality Assurance in Higher Education in the UK – A 20-year Perspective

Mr. Graham Sykes, Research and Innovation Services, University of Sheffield, UK.
Dr. Gill Clarke, Education Support Unit, University of Bristol, UK.

This chapter examines the introduction and development of quality assurance processes in the UK during the last two decades and analyses the impact these have had on institutional policies, academic practice and the student experience. It includes a brief history of how quality assurance was introduced, how it was received and how universities implemented their own processes at institution and subject levels. The chapter also looks in more detail at collaborative arrangements between universities and the quality assurance implications associated with those, using as a case study an example from the Worldwide Universities Network (WUN) a UK-based international network of 18 research-led universities from Asia, Australasia, Europe and North America.

Chapter 3: Quality Assurance at Institutional Level: Australia.

Professor Alistair Inglis, Deputy Pro Vice-Chancellor, Curtin University, Sarawak Malaysia.

Australia has been leading in flexible learning and has developed very good institutional level frameworks that are widely used in Australia and in other countries for quality assurance and benchmarking in open and distance learning. The author, who was involved in the development of

one of the frameworks, presents in this case study an account of how this framework might be applied at institutional level in Australia.

Chapter 4: Quality Assurance at Program Level: University of Wisconsin, Madison, U.S.A.

Mr. Thomas W Smith, Department of Engineering Professional Development, University of Wisconsin–Madison, U.S.A.

The Master of Engineering in Professional Practice [MEPP] program offered by the University of Wisconsin – Madison is an excellent example for quality assurance at *program* level. The author discusses the critical steps taken to implement the program quality criteria to assure the high quality of the program. This case study provides an excellent illustration of the implementation of the program level quality assurance principles discussed in Chapter 8 in the Authored Book.

Chapter 5: Quality Assurance at Course level: A USA Community College Example

Dr. Chère Campbell Gibson, Professor Emerita, University of Wisconsin–Madison, U.S.A.
Mr. Barry Dahl, Vice President of Technology and the Virtual Campus, Lake Superior College, USA.

Lake Superior College has adopted the Quality Matters Rubric Standards as a tool for quality assurance for its e-campus. The Quality Matters rubric was adapted for the unique needs of this community college environment. The resultant modification has provided a holistic framework to guide not only course development and evaluation but also assessment of faculty teaching and student learning in the online environment. This chapter presents the details of this case.

Chapter 6: Quality Assurance at Course level: The Open University of Hong Kong (OUHK), Hong Kong

Dr. Eva Tsang, Senior Course Designer, the Open University of Hong Kong (OUHK), Hong Kong.

For quality assurance at course level several good quality frameworks are available. The two frameworks discussed in Chapter 9 in the Authored Book are good examples. How the Open University of Hong Kong has developed high quality online courses using such standards is discussed in this case study.

Chapter 7: Quality Assurance at Course level: The University of the South Pacific (USP), Fiji.

Dr Sereana Kubuabola, Senior Quality Assurance Coordinator, The University of the South Pacific (USP), Fiji.

For quality assurance at course level systematic procedures are to be used. Several good quality frameworks are available for quality assurance at course level. The two frameworks that are widely used in the US for quality assurance at course level are discussed in Chapter 9 in the Authored Book are good examples. Such frameworks could be used for quality assurance in course development. How USP has developed high quality online courses is discussed in this case study.

Chapter 8: Innovative Approaches to Effective Student Support: Indira Gandhi National Open University (IGNOU), India

Professor Santosh Panda, Indira Gandhi National Open University (IGNOU), India.
Dr Venugopal Reddy, Indira Gandhi National Open University (IGNOU), India.

Learner support services, in general, are of two broad types: the first is academic support that supports learners in cognitive development and the second is non-academic support that deals with all other needs of the learners in their learning process. A point to keep in mind in designing student support services is that the support needs of learners in both kinds of support vary globally due to varying cultural traits. India being a country of diverse cultural traits and IGNOU serving 1.5 million students in India and 35 countries abroad has an enormous task of providing an effective student support. This case study illustrates how the student support system in IGNOU is organized and its essential features work.

Chapter 9: Quality Assurance in the Regional Context: The University of the South Pacific (USP), Fiji.

Mr. Deepak Prasad, Centre for Flexible & Distance Learning, The University of the South Pacific, Fiji.
Professor Santosh Panda, Former Director**,** Centre for Flexible & Distance Learning, The University of the South Pacific, Fiji.
Mr. Dhiraj Bhartu, Centre for Flexible & Distance Learning, The University of the South Pacific, Fiji.
There are several features of the USP that make it a unique institution. USP contributes to education not only in Fiji but also in a host of countries in the Pacific region. It attempts to make its programs relevant to regional needs while maintaining international standards and the University tries to blend best international practices with Pacific cultural mores that have many practices that have quality dimensions and directly relate to quality approaches. This case study presents the unique institutional approach at the USP to ensure quality in distance learning.

Chapter 10: Quality and Culture—An African ODL Perspective: University of South Africa (Unisa), South Africa.

Prof Louie Swanepoel, Acting Director, Quality Assurance and Promotion, University of South Africa (Unisa), South Africa.
Mr. Tony Mays, President, National Association of Distance Education and Open Learning in South Africa (NADEOSA), South Africa.
With over 250 000 students, of whom over 50 000 from the many different countries in Africa, and collaboration with over 115 international collaborators in 36 countries around the world, the University of South Africa (Unisa) embraces a wide range of perspectives and cultures. African philosophical and social traditions emphasise connectedness and an oral tradition. Unisa has needed to redefine its distance learning role and curriculum practices to build on and respond to the cultural heritage of Africa. This case study summarises a two-year exploration of quality assurance of curriculum processes at Unisa, an attempt to address its Africa-oriented vision and to cope with the increasing diversity of its student body.

Chapter 11: European Quality Scene in eLearning

Mr. Ari-Matti Auvinen, HCI Productions Oy, Helsinki, Finland.
In this case study the author, Mr. Ari-Matti Auvinen, who has worked extensively in Europe in various roles in the area of quality in eLearning, explores the European quality scene in eLearning by describing both European-wide projects and initiatives as well as the policies and actions in key European countries. The article discusses the work and the results of various key European projects in the area, and also the various quality marks and awards on the European level (e.g. CEL by EFMD, UNIQUe by EFQUEL etc.). The article also covers the various quality marks and awards in selected European countries (e.g. United Kingdom, Finland, France and Germany).

Chapter 12: Quality of Peer Production in eLearning

Mr. Ari-Matti Auvinen, HCI Productions Oy, Helsinki, Finland.
The author, Mr. Ari-Matti Auvinen, discusses in this article the quality mechanism and quality policies of peer-produced eLearning content. Peer-produced content is increasing in importance in many eLearning programs—the forms of peer-produced content include e.g. wikis, shared podcasts, shared project work etc. The quality of peer-produced eLearning content is the result of the continuous interplay of peer created content and peer reviewed content. The article is based on the European-wide project of "Quality Management of Peer Production - QMPP."

Chapter 13: Quality Assurance Regulatory Mechanisms in Australia, UK, Canada and US

Dr Nancy K. Parker, Director, Institutional Studies, Athabasca University. Canada.

The quality assurance regulatory mechanisms currently in operation in the four countries have differences and some common thematic approaches. They are also under constant review in response to the emerging feeling of the need for an internationally accepted regulatory mechanism that will provide both a common framework and sufficient flexibility for country specific needs. This case study covers a discussion on this.

Chapter 14: Continuous Quality Improvement in Course Design and Development for Accredited Professional Education

Professor Alistair Inglis, Deputy Pro Vice-Chancellor, Curtin University, Sarawak Malaysia.
Mr. Warren Nageswaran, Team Leader, Program and Course Development, School of Science, Engineering and Health, RMIT University, Australia.

Traditionally, university teachers have enjoyed a high degree of autonomy in their teaching, but implementation of continuous quality improvement in course design and development requires that they work more collaboratively. This case study examines the types of processes and structures put in place to support a Faculty-wide initiative to support quality improvement in a major redesign of engineering programs in a large technological university.

Chapter 15: EPQM Model for Self-Assessment and Continuous Improvement of Professional Education

Professor Wim Van Petegem, Head of the Centre for Audio-visual and New Educational Technologies, K.U.Leuven, Belgium.
Professor John Klus, Engineering Professional Development, University of Wisconsin–Madison, U.S.A.

The author presents in this article a brief description of the European Foundation for Quality Management [EFQM] and the EPQM Model for assessment and continuous improvement. A brief description of the DAETE project and the adapted version of the EFQM Model for CPE, the outcomes of using the CPE Model in institutions, planned further development work on the CPE Model and the applicability of the Model for other disciplines and forms of education are also covered.

Chapter 16: Quality assurance in Industrial Training Programs – The General Electric Company Experience

Mr. Rick Huber, Formerly General Electric Company. U.S.A.

Chapter 17: Quality Assurance Practices in Online Education at U21Global, Singapore.

Dr Amy Wong, Associate Dean, Faculty Affairs, Universitas 21 Global, Singapore.
Dr. Kanishka Bedi, Vice-president (executive education) Universitas 21 Global, Singapore.

U21 Global Graduate School, Singapore is a pre-eminent online business school created in 1997 by the Universitas 21 consortium of several world-class universities including the University of Virginia, the University of Melbourne, the University of Birmingham, and the University of Nottingham. This case study highlights the quality assurance (QA) system established by the consortium at the time of inception of U21Global and how over the years, the school has extended its QA to the frameworks of EFMD CEL and AACSB accreditation standards. U21Global successfully secured the EFMD CEL accreditation, while it is a candidate for accreditation with AACSB. While dwelling upon the QA framework of U21Global, the case study provides insights on the challenges faced and ways in which they were overcome in the journey of the school to establish itself as a premier online academic institution.

Chapter 18: Concluding Chapter

Michael. A. Mariasingam, Thomas W. Smith.

In this chapter, the authors (editors) will comment on the case studies comparing and contrasting the approaches used and drawing out some common themes and principles running through the various approaches in the case studies. They will also point out the need for a good understanding of the theoretical concepts and quality tools for successful implementation of quality assurance approaches in online learning.

Bibliography, Index, About the Authors

About the Presenters

Dr. Michael Mariasingam is an independent consultant in quality assurance with Quality Learning Global Consultancy (www.qualitylearningglobal.com). He has developed a comprehensive set of quality standards in terms of rigorous measurable benchmarks for assessment and assurance of the quality of online programs. He has published a book and papers on quality in online programs and on systematic guidelines and procedures for developing and delivering high quality online programs. Currently he is writing two books on Quality Assurance in Online Learning. Dr. Mariasingam has organized and facilitated several interactive hands-on workshops on designing, developing, and delivering high quality online programs and on quality assessment and assurance of online programs.

Address: Quality Learning Global Consultancy
E-mail: michaelmariasingam@yahoo.com
Phone: 216-965-7035
URL: www.qualitylearningglobal.com

Mr. Thomas W. Smith MS, Program Director in the Department of Engineering Professional Development, University of Wisconsin–Madison, is the architect and founder of the university's first online master's degree program, the Master of Engineering in Professional Practice. This program has won major national awards from the University Continuing Education Association, U.S. Distance Learning Association, and the Sloan Foundation. A pioneer in the use of Web-conferencing in engineering education, Mr. Smith has written extensively on this subject and has been instrumental in the development of the university's Web conferencing, teleconferencing, and satellite communications capabilities. His consulting work in this area includes corporate clients in the Fortune 100 as well as other universities and government agencies. Mr. Smith has written more than 40 papers and articles on telecommunications and distance education planning and budgeting and is a frequent speaker on these topics in the United States and Europe.

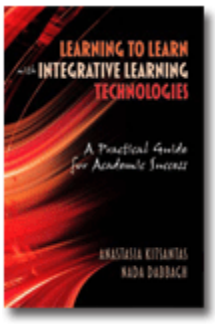
Address: Department of Engineering Professional Development
University of Wisconsin-Madison
Madison, WI 53706-1498
Phone: 608-263-7426
Email: TWSmith@wisc.edu

Learning to Learn with Integrative Learning Technologies (ILT): A Practical Guide for Academic Success

Nada Dabbagh
Associate Professor
George Mason University

Summary

After more than a decade of researching how to support student self-regulation with technology in online and distributed learning contexts, *Learning to Learn with Integrative Learning Technologies: A Practical Guide for Success (2010, Information Age Publishing),* was written by Nada Dabbagh and Anastasia Kitsantas to facilitate college students' academic success by fostering self-regulated learning or "learning to learn" through the use of Integrative Learning Technologies (ILT).



In this book we define ILT as a dynamic collection or aggregation of Web tools, software applications, and mobile technologies that integrate technological and pedagogical features and affordances of the Internet and the World Wide Web to facilitate the design, development, delivery, and management of online and distributed learning. The prevalence of course- and learning-management systems in higher education warranted a careful analysis of the influence of such systems on student learning based on theory, research, and practice.

This book provides an overview of the theory of self-regulation from a social cognitive perspective and describes how the principles and processes of this theory can be applied through the design of engaging instructional and learning activities using ILT. The process of interrelating technology and self-regulated learning, which is the focus of this book, enables the college instructor, online instructor, instructional developer, or educator to envision, plan for, and implement customized instructional designs that foster learning to learn and motivate students to take ownership of their own learning.

This book as a practical guide also provides explicit strategies and subject-matter-specific examples of how college faculty and instructors can draw on the pedagogical and technological features of ILT to promote or foster self-regulated learning and motivation, particularly in online and blended college freshman courses in which students need the most support in order to succeed (e.g., large introductory courses and remedial mathematics or English courses). In addition, this book can be used in introductory college courses that address study skills development for freshmen. College instructors will be able to use this book to design learning tasks and assignments that foster study skills using ILT. Specifically, instructors will be able to use ILT to design learning activities that support and promote the following self-regulatory processes: goal setting, task strategies, self-monitoring and self-evaluation, time management, help seeking, and motivation and affect.

This book differs from other books related to study skills in several distinct ways. First, it has been written by experts in two distinct fields, Educational Psychology and Instructional Technology. This unique collaboration combines the relevant knowledge related to self-regulated learning and that related to instructional technology, bridging the gap between theory and practice. Second, it allows for a broader approach to the enhancement of learning by informing instructors how to use self-regulatory processes to help students maximize their academic potential and learn how to become independent learners. Finally, the book targets primarily undergraduate students enrolled in remedial or large introductory courses that need the most support to succeed.

Given the emphasis on retention of freshmen as a measure of institutional effectiveness, the focus on student success and the increasing use of ILT in higher-education, this book fulfills a dire need in the literature on the integration of technology and self-regulated learning, or learning to learn.

Presenter Bio

Nada Dabbagh, PhD, is associate professor of Instructional Technology in the College of Education and Human Development at George Mason University. She teaches courses in learning theory, instructional design, and e-Learning design and pedagogy. Her research explores the cognitive consequences of technology mediated learning tasks with the goal of understanding the cognitive and design characteristics of task structuring as the basis for effective learning designs. Dr. Dabbagh has an extensive presentation and publication record. For more information about Dr. Dabbagh's academic achievements, visit her homepage at: http://mason.gmu.edu/~ndabbagh/

Contact Information:
Nada Dabbagh
Associate Professor
George Mason University
MSN 5D6 Commerce II, Room 107C
4087 University Drive
Fairfax, Virginia 22030
Phone: 703.993.4439
ndabbagh@gmu.edu

First Things Fast: A Handbook for Performance Analysis

Allison Rossett
Professor Emerita of Educational Technology
San Diego State University

Summary

Performance analysis is critical because it is the process that enables us to provide data-driven advice about performance. Wasted efforts, scrap, according to Robert Brinkerhoff, must be minimized.

It is time for learning professionals to turn from their habitually favored interventions, like classes, yes even online classes, to solutions that match the work, worker and workplace, even if it is not what was originally requested. Performance analysis is the study done to define that solution in ways that go beyond the automatic to create fresh, data-driven approaches for our students and employees.

That's what IBM did when they recreated training for 38,000 global sales people. To rethink past efforts, they used analysis to transform their young, mobile workforce to become more like their most savvy sales veterans.

On April 7, 2008, in a keynote presentation at ISPI in New York City, IBM's Brenda Sugrue and Nancy Lewis described how they did it. What Sugrue and Lewis intended was to clone their top performing sales people. They did this by asking the top people about their thoughts, smarts, tools, and resources. Through intense interviewing, the IBM team attempted to find out what sales stars knew, did and relied upon to accelerate sales.

That's IBM. Why not you?

Today we serve colleagues who work far from headquarters, even across the globe. We serve students from all over the world, sometimes in the same room with us, often in whatever room is most convenient from them. The location of the expert and the instructor is not top of mind.

How do we meet these learning and support needs? How do we help mobile, diverse employees? How do we educate and engage students who might be the first generation in their families to attend university? How do we provide support for the challenges that matter to them and the next career step that they can't quite imagine. What we must do, sometimes in person and often via technology, is to understand the situation today and tomorrow in order to add value to the effort. We do all this through performance analysis. Performance analysis (PA), in brief: *PA is partnering with clients and customers to help them define and achieve their goals. PA involves reaching out for several perspectives on a problem or opportunity, determining any and all drivers toward or barriers to successful performance, and proposing a solution system based on what is discovered, not on what is typically done.*

Let's talk about how, why and to what you can turn to analyze swiftly and well.

Reference

Rossett, A. (2009). *First Things Fast: A Handbook for Performance Analysis*, 2nd edition. San Francisco: Pfeiffer/Wiley.

Contact Information:

arossett@mail.sdsu.edu
Twitter: @rossett

Effective Online Teaching: Foundations and Strategies for Student Success

Tina Stavredes, PhD
Chair, Psychology, School of Undergraduate Studies
Capella University

Summary

Many colleges and universities are joining the ranks of institutions who offer online learning opportunities. The question that many of these institutions are facing is how to prepare faculty to teach in the online environment and address the motivations, needs, learning styles, and constraints of online learners while achieving the same learning outcomes as traditional, on-ground campuses. A major role for instructors is helping learners overcome constraints and persist in achieving their learning goals. Because the growth of online education has been rapid, the quality of trained online instructors is inconsistent. Comprehensive training of online instructors is important so instructors understand the variables that have an impact on teaching in the online environment. With the combination of the book, *Effective Online Teaching: Foundations and Strategies for Student Success,* and training manual I hope to support the delivery of training to online instructors and staff so they gain an understanding of the needs of the online learner and how these needs affect learners' ability to persist and learn online.

The book is organized around five parts and includes 18 chapters. Part 1 develops a profile of online learners, including who they are, how they prefer to learn, and why they choose the online environment in which to learn. Part 2 presents the foundations of cognition and learning. Teaching is effective when instructional strategies are grounded in an understanding of how learning occurs. Part 3 of the book describes four types of scaffolding strategies that can be used to support learning: procedural, metacognitive, conceptual, and strategic. Part 4 considers the development of a community of inquiry in the online class by fostering cognitive, social, and teaching presence that is mediated through appropriate communication tools. This book would not be complete if it did not address strategies to manage an online course, which are outlined in Part 5, and include strategies to manage your teaching activities, behavior issues you may encounter, and ethical considerations.

Throughout the book, you will have examined the profile of the online learning population, the impact that a computer-mediated environment has on thinking and learning, the issue of developing presence online, and the challenges of managing your online course. In the final chapter, Chapter 18, I invite you to revisit your philosophy of teaching and develop a new philosophy of online teaching. This philosophy will provide you with a strong foundation for applying the concepts and ideas from this book as you teach in the online environment and support learners in achieving their educational goals.

Presenter Bio

Tina Stavredes is chair of the psychology program in the School of Undergraduate Studies at Capella University. In 2010 she received the Harold Abel Distinguished Faculty Award. Previously, she was Director of Curriculum Development at Capella. Dr. Stavredes holds a PhD in Educational Psychology with an instructional technology emphasis from the University of Minnesota and has numerous publications and presentations to her credit. Her recent book, titled *Effective Online Teaching: Foundations and Strategies for Student Success,* will be published by Jossey-Bass in August 2011.

Contact Information:
Tina Stavredes
Phone: 612.977.5341
tina.stavredes@capella.edu

Teaching Online: A Practical Guide (Third Edition)

Susan Ko
Author

Summary

The author will provide a short introduction to the book for those who have not yet been exposed to this or earlier editions, and will highlight chapters that are new or revised for this 2010 edition such as those addressing instructional designers and faculty creating courses as part of a team effort, and issues related to open educational resources and the use of Web 2.0 tools. Readers are encouraged to bring their questions as well as problems encountered in their teaching. This book has been widely adopted by diverse institutions to help prepare faculty to teach online and hybrid courses but also has much to recommend it to experienced online instructors.

Presenter Bio

Susan S. Ko is co-author, along with the late Steve Rossen, of three editions of *Teaching Online: A Practical Guide* and was a pioneering leader in faculty development for online teaching in both the non-profit and for-profit education sectors from 1997-2003. She later served as Executive Director of the Center for Teaching and Learning at the University of Maryland, University College from 2003-2011, also teaching online in their Asian Studies and Master of Distance and E-learning programs.

Contact Information:
Susan Ko
authorofteachingonline@gmail.com

What Works in K-12 Online Learning

Cathy Cavanaugh, Ph.D.
Associate Professor, Educational Technology
School of Teaching and Learning, College of Education
University of Florida

Robert Blomeyer, Ph.D.
Educational Consultant, and Co-Owner
Online Teaching Associates Ltd.

What Works in K–12 Online Learning provides an overview of online teaching and learning practices. Based on extensive experience and research, chapters cover a spectrum of topics including virtual course development, online learning in elementary classrooms, instructional assessment and differentiating online instruction, professional development for teachers of virtual courses, and the challenges that virtual schools will face.

Objectives and Description

This book discussion will center on practices in K-12 online learning that are supported by practitioner experience and by research over the past 15 years. Topics include the current landscape of K-12 online learning and how we know it is effective, what works in online elementary school classrooms, course design, language literacy learning, mathematics learning, social science learning, related arts learning, teaching exceptional learners, discussion, and professional development of teachers.

This book brings together the voices of many educators and researchers who share their knowledge of what has worked in K-12 online learning. They provide examples of approaches that have been effective in a wide range of educational contexts, from blended classrooms to online schools of all kinds, and with many different learner groups.

The stories and strategies included are intended to assist anyone working in a K-12 online program in choosing proven approaches. This book also offers ideas for classroom teachers looking for ways to bring their students further into the online world. The chapters were conceived from a variety of practical, curricular and even “disciplinary” perspectives. Topics addressed in some of the chapters include course development, online learning in elementary classrooms, literacy and language, mathematics, social studies, physical education, using online teaching and learning with exceptional learners, online discussions, teacher professional development and a final reflection on success and sustainability.

Throughout the book, the authors address a core of about five common issues. Their shared concern is supporting and improving online teaching and learning policy and practice and improving the quality of online teaching and learning for students online in the wide variety of fully online and supplementary online teaching and learning programs operating in the U.S. today.

Issues include:

1. A shared concern that all online teachers be both “highly qualified” and in addition should all receive the special preparation required for online teaching,
2. that online learning leadership should also receive specialized preparation; possibly following the outline provided by the ISTE/TSSA NETS*A Standards for Technology Leadership,

3. that all K-12 online instruction is instructionally sound employing highly interactive and cognitively sophisticated designs, standards based content, state-of-the art curricular assessment, robust student information management and reporting systems and online courses in our public and private schools should minimally be peer reviewed and optimally be "certified" by an independent quality review process like those followed by "Consumer Reports" or "Underwriter's Laboratory,"
4. that enrollments in online courses maintain "pupil teacher ratios" maintaining parity with enrollments and class sized in traditional classrooms and schools,
5. that public and private online teaching and learning programs need the support and benefits provided by ongoing formative program assessment for the purpose of supporting continuous program improvement.

We have included two types of chapters: (a) overviews of general topics that are important to the online learning community, and (b) specific examinations of effective practice for several content areas, age levels, and student types. All chapters reflect the unique viewpoints of experienced virtual school educators and researchers who have extensively studied virtual school programs.

About the Presenters:

Dr. Cathy Cavanaugh is Associate Professor of Educational Technology in the School of Teaching and Learning at the University of Florida in Gainesville. Her work focuses on identifying applications of information and communication technology that enhance teaching and learning. Dr. Cavanaugh has worked with virtual schools, school districts, and education agencies in several states and countries. She has taught educators and leaders at the University of North Florida, University of South Florida, Rollins College and Furman University. She served as co-director of the Northeast Florida Science, Technology and Mathematics Center, as Assistant Director of the Florida Center for Instructional Technology and as a classroom teacher in Florida and the Caribbean. She has a B.A. in education from the University of the Virgin Islands, a M.Ed. from the University of Central Florida and a Ph.D. in curriculum and instruction from the University of South Florida specializing in distance education.

Cathy has presented over 50 scholarly papers and 100 conference presentations at meetings around the world, including the American Educational Research Association, E-Learn, and the Association for Educational Communications and Technology.

Address: PO Box 117048
Gainesville, FL 32611
Phone: 352-273-4176
Email: cathycavanaugh@coe.ufl.edu

Dr. Robert Blomeyer is an educational technology researcher, teacher educator and nationally recognized expert on online teaching and learning policy and practice. Dr. Blomeyer currently works as a free-lance educational consultant and program evaluation consultant at Blomeyer & Clemente Consulting Services in Lisle, IL and is managing the start-up of a new online professional development business named Online Teaching Associates Ltd.

Between 2001 & 2007, Dr. Blomeyer was a Technology Researcher and Senior Associate at the North Central Regional Educational Laboratory (NCREL). At NCREL he managed and contributed to research and development projects and program evaluations examining the integration of technology in education programs. His R&D projects included meta-analyses examining "effects" from school and classroom technology use on students' academic performance, online course development projects, and to new research examining online learning in mid-level and high school programs in public and private schools.

Bob is currently applying the research on "what works" in online teaching and learning into professional development for online teachers at Online Teaching Associates Ltd. Along with his business partner Dr. Greg Kearsley. He has presented over 50 publications and 80 conference presentations at meetings in North America and Europe, including AERA, SITE, NECC, DISTEL, the North American Case Research Association (NACRA), and the World Association of Case Research and Application (WACRA).

Address: Online Teaching Associates Ltd.
5622 Primrose Avenue
Phone: 630-769-5178

Roundtable Discussions

Health Science Clinical Faculty Attitudes toward Online and Blended Education

Cathy Cavanaugh
Associate Professor, College of Education

Erik Black
Assistant Professor, College of Medicine

Randy Graff
Assistant Director of Education, Health Science Center
University of Florida

Don Jordan
Instructional Designer, Center for Teaching and Learning
University of the Pacific

Summary

Clinical faculty are rarely prepared for teaching roles. A solution was a program for clinical faculty development for the ultimate improvement of the preparation of medical practitioners. A first step in crafting a program to directly address the specific needs and abilities of participating faculty was a survey of participants that gauged their attitudes toward online and blended education.

Presently the majority of academic appointments in both public and private academic medical institutions are non-tenure track (clinical) appointments (Cataldi, Fahimi, Bradburn, & Zimbler, 2004). These clinical faculty typically focus their time and efforts on taking care of patients and teaching physicians in training in clinical settings. Online Medical Education Degree (OnMED) is an innovative collaboration of the University of Florida Colleges of Education and Medicine. OnMED is an online graduate degree program designed for clinical health science educators seeking to develop their skills as 21st century educators. OnMED's aim is to improve the educational practices of clinical health science educators through a program that focuses specifically on the incorporation of technology in the teaching practice. The program results in a Master of Education (M.Ed.) degree for practicing health science educators delivered through online and blended instruction. The ultimate goal of the program is improved medical education in medical schools and other professional schools including pharmacy, nursing, dentistry and veterinary medicine. OnMED addresses contemporary topics related to the design and evaluation of face-to-face, blended, and online instructional materials, instructional practices in face-to-face, blended and online education; the development of a research agenda related to teaching and learning, and the incorporation of technology in teaching practices.

A survey, the Faculty Attitudes Toward Blended and Online Learning (FABOL), was used to gather general information concerning knowledge and attitudes toward blended and online learning in the following general categories:

- Attitudes towards technology in education
- Attitudes towards the efficacy of online programs
- Attitudes towards the efficacy of blended learning methods
- Knowledge of various technological tools

This survey was adapted from the Knezek et al. (1999) FAIT (Faculty Attitudes Toward Information Technology) survey that was adapted and rewritten by Tinnerman (2007) and adapted by Jordan. We also included two items adapted from Christensen and Russell to assess faculty stages of adoption of technology and their phase of technology integration. Finally, we included items that associate OnMED

program courses and experiences with the Accreditation Council for Medical Education Common Program Requirements General Competencies, the ACGME's characteristics of competency-based This survey gave us baseline from which to develop our program and to gauge change among participants.

Dr. Cathy Cavanaugh is Associate Professor of Educational Technology in the School of Teaching and Learning at the University of Florida in Gainesville. Her work focuses primarily on studies of learning environments. Dr. Cavanaugh has worked with virtual schools, school districts, and education agencies in several states and countries. She has a B.A. in education from the University of the Virgin Islands, a M.Ed. from the University of Central Florida, and a Ph.D. in curriculum and instruction from the University of South Florida specializing in distance education.

Dr. Erik Black is an Assistant Professor of Pediatrics and Educational Technology in the College of Medicine and School of Teaching and Learning at the University of Florida in Gainesville. He has a B.S. in marketing from Virginia Tech, an M.A. in human services from The College of New Jersey, and a Ph.D. in curriculum and instruction from the University of Florida. Dr. Black's interests include the integration of technology and technological teaching methods into contemporary health science education.

Contact Information:
Cathy Cavanaugh
University of Florida School of Teaching and Learning
PO Box 117048
Gainesville, FL 32611
cathycavanaugh@coe.ufl.edu
OnMED program: http://etc.usf.edu/onmed/

From an Evaluator's Point of View: A Case Study

Camille Dickson-Deane, PhD Candidate

Joi L. Moore, PhD., Associate Professor

School of Information Science and Learning Technologies
University of Missouri-Columbia

Summary

An e-learning usability evaluation research group at a mid-western University conducted a research study to investigate the quality dimensions that should be included in a heuristic evaluation instrument. The quality dimensions, once produced through some individual, peer and group analysis, should, when combined highlight the level of quality of a product. Each member of the group reviewed a course using another heuristic evaluation instrument as a guide. Once the team of usability evaluators completed the evaluation, each team member then contributed to a discussion on the different [instrument] dimensions used. The evaluation process was completed as expected, but the discussion led to a number of disagreements with the use of terminology, the dimension meanings and the interpretation of all. The differences of opinion seem to originate from different learning perspectives as well as varying levels of expertise of the team member, thus changing the focus of the analysis of the investigation. Knowing that the process of conducting usability evaluations can sometimes be unclear, identifying details associated with the protocol (i.e. characteristics of the usability evaluators and the environment) can assist. This assistance goes beyond the ease with which the usability evaluation can be conducted and actually can contribute to the reliability and validity of usability studies.

Presenter Bios

Camille Dickson-Deane has experience in three different countries in the fields of Banking, Legal Publishing, Web Technologies, Education, Project Management, and Learning technologies. She has her BSc Computer Science from the University of the West Indies, St. Augustine, Trinidad, MSc Software Development and Management from Rochester Institute of Technology, NY, USA, and at present is a PhD candidate in the School of Information Science & Learning Technologies at the University of Missouri. Her interests include the evaluation and cultural impact of e-learning, and professional development using e-learning models (i.e. workplace e-learning).

Joi L. Moore is an Associate Professor in the School of Information Science & Learning Technologies at the University of Missouri where she manages and teaches courses in the Digital Media Curriculum. Dr Moore's current research interests include: constructing knowledge in online learning environments; analyzing information architecture in Electronic Performance Support Systems and Interactive Learning Environments; and designing web applications based on Human Computer Interaction and Human Information Behavior theories and principles.

Contact Information:
University of Missouri-Columbia SISLT
111 London Hall, Columbia, MO, 65211
Camille Dickson-Deane, PhD Candidate
Phone: 573.882.1653
cdickson-deane@mail.missouri.edu
Joi L. Moore, PhD., Associate Professor
Phone: 573.884.2797
moorejoi@missouri.edu

A Support System for Retention: The Key to Student Success

Robert Harper, Ed.D.
Assistant Academic Director

Ann Millacci, Ed.D.
Associate Professor, Program Director

Educational Leadership Program
University of Cincinnati

Summary

For many students, entering an online program is their first experience with distance learning. Many feel unprepared, isolated, and unsure of the expectations of online coursework. Programs need to have strategies in place to address these issues and support student success. The purpose of this session is to identify practices that support student retention, determine what practices may be effective and learn ways to create best practices focused on retention.

The Educational Leadership Distance Learning Program at the University of Cincinnati is in its eighth year of offering a rigorous high-quality, online master's degree. The program has a high retention rate and attributes this, in part, to the practices, services, and resources that are in place to support students, from admittance to the program though completion of their degree. Support provided by the faculty and staff is paramount to student retention. The program director and assistant director communicate regularly with students in a variety of ways providing ongoing support throughout their time in the program. Faculty, with assistance from online facilitators, engage with students in coursework providing multiple layers of support. Because the program uses a cohort model, student peers provide a network of support and a community of learners. A comprehensive evaluation plan is in place that includes course evaluations for each course in the program. Data are analyzed and student feedback is used for program improvement. Additional resources such as an online orientation site and an online advisement and information center also support the retention of students.

Presenter Bios

Robert Harper, Ed.D. is the Assistant Academic Director of the Educational Leadership Distance Learning Program at the University of Cincinnati. His research interests include online professional development, technology leadership and change.

Ann M. Millacci, Ed.D. is an Associate Professor and Director of the Educational Leadership Distance Learning Program at the University of Cincinnati. She has over 23 years experience in higher education administration having worked in the areas of admissions, research administration, assessment, leadership, and online learning.

Contact Information:
Dr. Robert Harper
Educational Leadership Program
University of Cincinnati
P.O.Box 210049
Cincinnati, OH 45221-0049
Phone: 513.556.3615
robert.harper@uc.edu

Online Learning: Fostering Presence & Participation

Joanne Gozawa, PhD
Assistant Professor
California Institute of Integral Studies

Summary

Presence, engaged participation, and deep learning particularly in online venues, continue to be a challenge for many educators. As a small online graduate program with limited resources, our 16-year old department has relied on pedagogy and course design, rather than ever-changing technologies, to foster quality presence and participation among students. In this roundtable, I intend to facilitate a discussion for those who want to compare their experiences and practices with other online educators for whom presence and deep and engaged learning are primary considerations. Perhaps, some dimensions to consider are: quality teaching (Fenstermacher & Richardson, 2005), depth of learning (Weigel, 2002;), and object of presence (Garrison, 2005; Gozawa, 2011).

In my program, thoughts about online learning have transformed over the years. Like many educators we began by comparing online learning to face-to-face learning and thinking the former as being limited. However, our present realization is that we rely on the asynchronous venue for the kind of reflective thinking and integral learning (Bronson, 2005; Bronson, 2006) our program promotes.

I suspect that others, regardless of subject matter, have gone through a similar transformation in thinking, in part because of the advancement in ease-of-use, reliability, and power of technology and because recent student cohorts are more familiar and at ease with the online venue. That said, I am interested in discussing with those who have some history with online learning, what they have discovered along the way about fostering quality presence in online learning, especially in those courses that engage critical and complex life and world challenges and that require critical self-awareness.

For my part I offer thoughts on awakening the learning environment, so that it compels engagement even in the face of significant diversity amongst students. My contribution can speak to ways of design and facilitation that evokes a learning environment that deepens thought.

Key questions for this discussion session: What are our practices to foster presence? What do we mean by presence? Present to what? How is presence related to depth in learning? Is presence considered in assessment and evaluation?

References

Bronson, M. (Ed.). (2005). Revisioning Higher Education, Part 1. *Revision* (2005).
Bronson, M. (Ed.). (2006). Revisioning higher education, Part 2. *Revision* (2006).
Fernstermacher, G.D. & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers College Record*, 107(*1*), 186-213.
Garrison, D.R. (2007). Online community of inquiry review: Social, cognitive and teaching presence issues. *Journal of Asynchronous Learning Networks*, *11*(1), 61-72.
Gozawa, J. (In press). Contemplative pedagogy and compassionate presence. To be published in O. Gunnlaugson (Ed.), *Contemplative approaches to learning and inquiry across disciplines.* New York: SUNY Press.
Weigel, V.B. (2002). *Deep learning for a digital age*. San Francisco: Jossey-Bass.

Presenter Bio

Joanne Gozawa is a core faculty member in the Transformative Inquiry Department at the California Institute of Integral Studies. She is practiced at convening learning spaces, both face-to-face and online, that encourage students to reflect on personal, social and existential dimensions of topics under inquiry. She has been a regular presenter at the Transformative Learning Conferences initiated by Columbia Teachers College and has reviewed and written articles for the Journal of Transformative Education. In her current scholarly work on transformative learning she includes ideas from Jungian psychology, myth, consciousness studies and Shin Buddhism. She teaches a graduate-level class on diversity and has developed electives on existential dimensions of good and evil and of culture, myth and transformative change.

Contact Information:
Joanne Gozawa
Assistant Professor
California Institute of Integral Studies
3189 Morris Dr.
Palo Alto, CA 94303
Phone: 650.493.6419
jgozawa@ciis.edu

Managing Cognitive Load in a Synchronous Instructional Encounter

Thomas A. Birk, PhD
Senior Educational Designer
University of Nebraska Medical Center

Summary

The discussion will focus on the principles of managing extraneous cognitive load when dealing with a synchronous online learning environment. After framing the discussion with a brief summary of the latest research on managing cognitive load, the facilitator will elicit examples from the collective experience of the participants regarding synchronous online encounters. Then the facilitator will conduct a collaborative design exercise often used by architects known as a charrette session to illustrate these principles.

Objectives:
By attending this session, participants will be able to:

1. Apply the principles of managing cognitive load to an online design problem.
2. Recognize key research and researchers dealing with managing extraneous cognitive load.
3. Apply the collaborative planning activity of a charrette to design an online learning environment.

Discussion points:

- Participants' frequency of use of synchronous online instructional events as well as an estimate of the degree of success of these interventions
- When designing synchronous online instructional events, do you attempt to screen for extraneous cognitive load?
- How would you use the multimedia, contiguity, or modality principles to design a synchronous online activity?

Presenter Bio

Dr. Thomas Birk is the Senior Educational Designer for Learning Environment and Internet Services, a division of Information Technology Services at the University of Nebraska Medical Center in Omaha. In his role, he assists faculty in planning and managing implementation of the use of educational technology in the classroom and at a distance. He regularly presents in the areas of educational technology, organizational and mass communication.

Note: Author would like to acknowledge the input of Dr. John Burk at Arizona State University in the preparation of this presentation.

Contact Information:
Thomas A. Birk
Senior Educational Designer
University of Nebraska Medical Center
985030 Nebraska Medical Center
Omaha, NE 68198-5030
Phone: 402.559.2105
tbirk@unmc.edu

Computer Self-Efficacy and Adult Online Distance Education

Andrea Gregg
Senior Instructional Designer
World Campus
Pennsylvania State University

Summary

It has been well established that learners' beliefs about their abilities and competencies in a specific subject area can influence many things related to their engagement with that subject area. Articulated by Albert Bandura in 1977, this phenomenon is typically described as *self-efficacy*. Self-efficacy has been examined in a number of different subject domains, including mathematics, writing, and computers and can influence whether or not learners attempt certain tasks, courses, and careers. Self-efficacy can also influence persistence when learners are faced with challenging learning situations. Those with lower self-efficacy are less likely to perceive the benefit of extended effort whereas those with higher self-efficacy are more likely to believe that greater effort will lead to greater results.

For a number of reasons, adult online distance education is an interesting area in which to examine self-efficacy, specifically *computer self-efficacy*. Adults make up the largest percentage of online education students. Regardless of which subject area online learners pursue, they access their course content, participate in activities, communicate with professors and classmates, and submit assignments through the computer. As researcher C.K. Lim argues in her 2001 *American Journal of Distance Education* article "learners in a Web-based course are required to use computers, regardless of their degree of computer skill. This requirement can be a source of anxiety for some adult learners."

Considering adult learners in this context is also compelling given that they are a group often regarded as less technologically savvy and competent than their traditional-aged counterparts. Consider M. Prensky's distinction of adults as "digital immigrants" struggling to learn the language of technology in contrast to the younger "digital natives" already at home in the environment. In this discussion we will specifically focus on the topic of computer self-efficacy and the various ways in which it potentially affects the adult online learner. We will start with a brief overview of key research related to computer self-efficacy and online distance learners, including a short examination of some key computer self-efficacy scales. We will then discuss topics of interest to the group.

Presenter Bio

Andrea Gregg is a Senior Instructional Designer with the Penn State World Campus where she leads and supervises an 8-person team of Instructional Designers and Instructional Production Specialists to design, develop, maintain, and support over 125 online undergraduate and graduate courses. She is part of the unit management team and is involved closely with strategic initiatives related to content repositories, reusable learning objects, enhanced media in course design, design flexibility, quality, and scalability.

Contact Information:
Andrea Gregg
Senior Instructional Designer
Penn State World Campus
225 Outreach Bldg.
University Park, PA 16802
Phone: 814.867.1968
axg251@psu.edu

Designing Online Learning for Success: Reducing Student Attrition

David S. Magill, Ph.D.
Program Manager
College of Distance Education
Naval War College

Summary

The issue of keeping students engaged in educational programs and ensuring that learning objectives and outcomes are achieved has been rigorously studied and debated for many years. This is true at all levels from K-12 to higher education, both in brick and mortar classrooms and in the world of distance learning. However, a substantial body of research suggests that the problem of student attrition in online learning is significantly higher than it is in the face-to-face classroom. This roundtable discussion will seek to examine the causes of student attrition in the online learning environment and how they can be counteracted by careful course design and perceptive teaching techniques.

Among the data to be presented are:
- a brief review of relevant literature, including validated attrition models
- most common and significant factors affecting student attrition in online courses
- suggested strategies to improve student retention in online courses.

The most important takeaway of this session should be the sharing of facts, information, resources, and success stories among practitioners of the art of distance learning.

Presenter Bio

David Magill is the Program Manager for the CD ROM-based Distance Learning Program at the College of Distance Education of the United States Naval War College in Newport, Rhode Island. He is also a Professor of National Security Affairs at the College. He has taught graduate classroom seminars on the resident faculty of the College and since 1999, has taught both classroom and online courses for the College of Distance Education. Professor Magill holds a Master of Arts in National Security and Strategic Studies from the Naval War College and a Ph.D. from Salve Regina University.

Contact Information:
David S. Magill, Ph.D.
Professor/Program Manager
Naval War College
686 Cushing Road
Newport, RI 02841
Phone: 401.841.6524
magilld@usnwc.edu

How to Teach Online/Distance Education Courses Successfully

Sunah Cho

Instructional Designer/Project Manager & Instructor
Centre for Teaching, Learning and Technology
University of British Columbia

Introduction

Researchers and educators have emphasized the significant role that an instructor plays in the success of online courses (In this paper, online learning is defined as distance education). However, much of this expertise arises from what Tony Bates (2005) refered to as a *Lone Ranger* approach, which focuses on the development of an instructor's individual work and a set of generic skills or techniques to be mastered for teaching online courses, often overlooking synergistic relationships with partners in teaching and learning. In particular, pairing experienced and novice online instructors as partners has great promise for providing an environment where best practices can be "passed on" and major pitfalls can be avoided.

In this paper, I present practical guidelines for teaching online courses as an "integral partnership", aligned with a constructivist paradigm as the conceptual foundation. Seven guidelines are suggested for instructors who teach online courses for the first time. The guidelines have emerged from my experience as a novice online instructor for a graduate course for students in geographically diverse locations. These suggestions have added richness of my experience as an instructional designer/project manager, which involves helping instructors become comfortable with online teaching. Taken together, these experiences and reflections represent a possible path for new online instructors to follow.

Course Description and Contextualization

The course ETEC 510, *The Design of Technology Supported Learning Environments*, is the focus of this paper. It is a core graduate course in the Master of Educational Technology program (MET) at the University of British Columbia (UBC). The MET program was the first fully online program in Canada and offers three program options including a Master's Degree and two specialized graduate certificates. The MET program started as a joint graduate program of UBC and Tec de Monterrey University (Tec) in Mexico and its structure and design of MET courses models "a contextually responsive, constructivist approach to learning using high quality course materials and innovative learning technologies" (Gaskell & Miller, 2007). The program has attracted students from more than 30 countries (for details, see http://met.ubc.ca). The Master's program requires four core courses and six elective courses for completion.

ETEC 510, *The Design of Technology Supported Learning Environments*, explores constructivist and sociocultural theories of mind, learning and instruction, and their significance for the design of educational technologies and environments. The course asks students to work in groups to design a technology-supported learning environment by applying the learning theories and models they learn from the course readings and from various interactions with peers and instructor. Threaded discussion forums were used for weekly discussion and group work and Design Projects and Wiki Design were provided for collaborative or individual project publication.

In January 2010, we decided to combine two sections of the course for the efficiency of course management and the opportunity to increase the richness of sharing resources. I was teaching this course for the first time; thus, merging the two sections and sharing the same course shell with an experienced teacher provided me with learning opportunities and provided students with additional opportunities to

share their experiences and build knowledge. By making comparisons and contrast between the two sections, we discussed and shared strategies through frequent communication channels. It is necessary to note that collaboration and cooperation is required not only for students but also for instructors. This collegial partnership between an experienced and new instructor had a positive effect on the quality of teaching and helped to reduce wasteful trial-and-error.

Seven Guidelines

Guideline One: **Build a Partnership** with both your colleagues who have online teaching experience *and* an instructional designer who puts all resources together and eventually helps free you from the burden of technology. In the context of the distance education at UBC, the role of the instructional designer is multi-faced, ranging from leading a project to understanding teaching epistemologies and to helping faculty to select technologies as a partner in teaching and learning. This partnership provides powerful benefits. The collegial practices and fair partnership help both parties to devote resources necessary for ongoing professional development and teaching improvement.

Even though collegial support and pedagogical discussions are important in the educator's profession, collaboration among teachers is not always emphasized due to different personalities, backgrounds and pedagogical beliefs. However, a collaboration and collegiality between experienced and new instructors will ultimately leverage student learning and course quality. The new instructor even gains psychological support from the experienced instructor (Stansbury & Zimmerman, 2000). The collaborative process and relationship help the experienced instructor to get rewarded and inspired by confirming his pedagogical principles and ongoing development of his teaching skills.

According to Oblinger and Hawins (2010), a partnership between faculty members and instructional designers brings high quality and flexible education experiences. No one denies that you are the content expert, but you don't have to be a master of the various technology tools. It is certainly beneficial if you are good at the technology but you don't have to be a *Lone Ranger*. A cooperative relationship with the instructional designer will help you to share responsibility for achieving the goals you want to achieve from your course.

Guideline Two: Send out a **Welcome Message** through students' emails before the course starts. Welcome messages before the course starts will help you to check in with the students and get students prepared for the course. Communicating through an outside course shell can sometimes help to gain students' attention easily for fast communication. There are no specific rules on how the welcome message needs to look like. Here is an example included for my teaching.

- Information about the course instructor
- Information about the course access: You should include login instructions to access the course.
- General information about the course and main activities
- Expectations on the first module/lesson: You don't need to explain the objectives of all the modules, but introduction of the first module/lesson will help students gear up for this course.
- Tips for successful student learning: Your ultimate goal is to help student learning, so some advice on how to succeed in the course will be useful.
- Information about communication policy: Communication between instructor and students is essential, in particular, in a distance-learning environment. Thus, communication policies such as how to communicate with the instruction and how soon a reply from instructor can be expected should be included.
- Reply to confirm the welcome message to be received: This can confirm that the instructor uses the correct email address and provides an opportunity to interact with students for the first time in the course.

- Once the confirmation emails are received, make an email list in your email account so that you can email them whenever you want to make any urgent or consistent communication whenever in need.

Guideline Three: Convey Specific Timeframes for discussion and reflection. The assessment of student participation in a discussion forum is a cornerstone for successful learning community development. Whether the discussion forum is open for the duration of the course for continuous and on-going input or it is conditionally released for weekly discussions is dependent on what you expect from students. Personally I prefer time-released discussion since it helped me to keep all the students on the same page, so the students could maintain a certain level of focus on the active topics.

My colleague (experienced instructor) and I set up the conditional release discussion forum as shown in Figure 1 but allowed students to lead their discussions. Each module consisted of General Discussion, which was open throughout the course, and specific topics related with each module opened only when the module was active. We took a role as facilitators in the discussion rather than sages on the stage. In the course, students were required to answer weekly-based topic questions related to the module objectives. By answering the questions, students shared their ideas and experiences and expanded their knowledge through the course. It is often seen that participation in discussion is mandatory in graduate context and it weighs about 10-20% of students' final grade. This conditional release option improved students' quality discussion at the right time within the proper pace. However, unlike the discussion forum, it is recommended that the course content should be released at the beginning to optimize the autonomy of individual student learning.

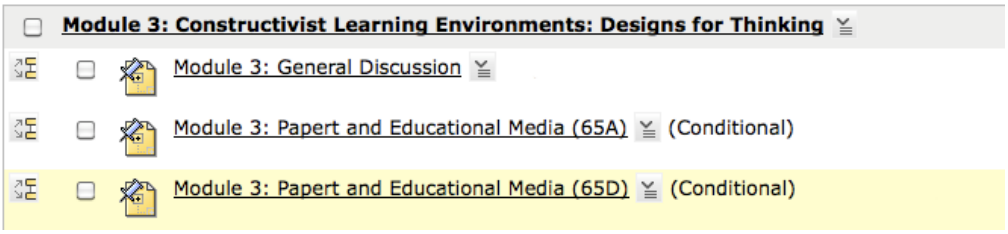


Figure 1. *Discussion Forum*

Guideline Four: Maximize your Presence. The instructor's presence facilitates quality student discussion and helps students feel they are being supported. The Instructor's presence is presented through instructor's participation in online interaction with students, course design, facilitation, direction and feedback that encourage the cognitive and social processes for learning (Garrison & Anderson, 2003). Stein and Wanstreet (2003) suggested instructors may want to compensate for their lack of physical presence by increasing their electronic presence through email or discussion postings that acknowledge the group's input. For example, regular reminders and course management help students to manage their workloads and predict the instructor's expectations. This regular, timely and consistent contact will optimize your presence. Another way for the enhancement of your presence is to convey a tone through paralinguistic cues or emoticons that can help make plain text humorous and relaxing when you interact with students. These small additions enable you to easily infuse your personalities into the course and your presence can be optimized in the text environment.

Guideline Five: Manage your Time and Teaching Load systematically and effectively. Do not be overwhelmed by the online teaching load. Instead, be flexible with your working time for various tasks. The teaching load is closely related with the speed and depth of feedback you provide. Regardless of the types of feedback, information or acknowledgement (Graham et al., 2003), prompt and timely feedback is crucial for student learning progress. However, overloaded time management and overloaded teaching load may thwart you from providing feedback or help in a timely fashion. This is one of the pitfalls of

distance education for learners and instructors. Many instructors report that their preparation and instruction time for online courses takes two to three times longer than face-to-face instruction (Berge, 2001). However, sharing resources and developing teaching strategies through collaboration with the experienced instructors will certainly help the new instructor to avoid any unnecessary mistakes and to prepare and teach the course more effectively. You might need to set up your time frames on when to check your course, to respond to your students during the day and to provide your feedback. You might want to prioritize your response depending on the urgency of matters. For instance, checking email was the first thing in the morning I did since most urgent and individual issues were usually delivered to my personal email rather than being posted on the course website. Any issues posted on the course website were sometimes supported and resolved by peers even before I read them.

Creating small group work and fostering group dynamics can encourage students to interact and learn from each other. Even certain technical and administrative issues can be resolved by peers who have already experienced the same issues before. If the group work and student interaction is properly designed, it will reduce your participation and intervention effectively. Ragan and Terheggen (2003) provides extensive strategies of effective workload management for the online environment. Most importantly, setting deadlines for learning activities is crucial for students online but how and when you respond to students' activities is the very issue you need to plan ahead.

Guideline Six: Make Evaluation an Integral Part of students' learning experience. Assessment is an important part of the learning process because it reflects the learning goals through various activities and media. One of the course assignment activities in the course was Design Wiki, where students engaged in collaborative knowledge building with their group members. The key assessment criteria for this activity was to encourage students to engage in collaborative knowledge building with their peers. Another assignment was Design Project, which was situated and authentic, so students felt that they were being evaluated for work that was meaningful to them in their professional context.

Guideline Seven: Continuous Maintenance drives course quality and helps you teach the course successfully. Any dead links or suggestions recommended by students during the course should be updated and taken into account for the next course offering. Most updated course contents convey accuracy and caring for student learning. Students are also your partners who contribute to the course quality and course management. They also help you enhance your learning as the course instructor. During the course I taught, a lot of the primary material was created by students, in the discussions, their sharing of resources, the Design Wiki and the Design Projects. The course was never the sum of its static parts: the dynamic presence of the students and their work/dialogue drove the learning and built the community in the course.

Discussion and Conclusion

A large body of principles and guidelines for teaching online courses provides a practical and effective lens of best practice for new instructors. Graham at al (2001) provides seven lessons for online instruction corresponding to the popular framework of Chickering and Gamson's "Seven Principles for Good Practice in Undergraduate Education" to evaluate their own online courses. The seven guidelines I introduced are not based upon a large group interview nor survey but a rather anecdotal experience gained from my teaching experience where I learned that online teaching can be successful when an integral partnership plays with colleagues who have taught online courses already, the course instructional designer and students. This partnership is a win-win approach between a new instructor and an experienced instructor and these partnership practices and activities are well aligned with the constructivist paradigm.

When you teach an online course for the first time, the first step you can take is to identify the resources you have in your department or in your institute and find a way to connect yourself with the resources. At this early stage, it is imperative that you spend time talking about learning instead of technology with your

colleagues who have already taught online courses. While the technology will play a vital role when you *teach* the course, you want to ensure that you select the technologies to support what you want students to learn. An instructional designer plays a role in leading the instructor to articulate the goals of the course and helping to establish the technologies that will be used. In some sense, the instructional designer serves to relieve your concerns over technical burdens in order to allow them to focus on student learning.

References

Bates, A. (2005). *Technology, e-learning and distance education*, London/New York, NY: Routledge.

Berge, Z.L. (Ed.). (2001). *Sustaining distance training: Integrating learning technologies into the fabric of the enterprise.* San Francisco, CA: Josey-Bass.

Garrison, D. & Anderson, T. (2003). *E-Learning in the 21st Century*. London: Routledge Falmer.

Gaskell, J., & Miller, J. (2007). Constructivist approaches to developing diverse communities of learners online: Examples from the MET Program. The Fourth Pan Commonwealth Forum on Open Learning. Retrieved from http://pcf4.dec.uwi.edu/viewpaper.php?id=448

Graham, C., Cagiltay, K., Craner, J., Lim, B., & Duffy, T. M. (2001, March/April). Seven principles of effective teaching: A practical lens for evaluating online courses. *The Technology Source*,. Retrieved from http://technologysource.org/article/seven_principles_of_effective_teaching/

Lazarus, B. D. (2003). Teaching courses online: How much time does it take? *Journal of Asynchronous Learning Networks, 7*(3), 47-54.

Oblinger, D., & Hawkins, B. (2006). The myth about online course development. *EDUCAUSE Review*, *41*(1). Retrieved from http://www.educause.edu/ir/library/pdf/erm0617.pdf

Ragan, L. C., & Terheggen, S. L. (2003). Effective workload management strategies for the online environment. Retrieved from http://www.worldcampus.psu.edu/pdf/fac/workload_strat.pdf

Stansbury, K., & Zimmerman, J. (2000). *Lifelines to the classroom: Designing support for beginning teachers.* A WestEd Knowledge Brief. San Francisco, CA: WestEd.

Stein, D. S., & Wanstreet, C. E. (2003). Role of social presence, choice of online or face-to-face group format, and satisfaction with perceived knowledge gained in a distance learning environment. *Midwest Research to Practice Conference in Adult Continuing and Community Education* (pp. 193-198). The Ohio State University.

About the Presenter

Dr. Sunah Cho is an Instructional Designer/Project Manager for the Centre for Teaching, Learning and Technology at the University of British Columbia (UBC). She is also an online instructor for the Masters of Educational Technology at UBC. She provides leadership in the application of educational technology and research to the design and development of distance- and blended-learning courses. Of particular interest is developing effective interactive learning environments and extending partnership, as an instructional designer, in teaching and learning.

Address: 1170-2329 West Mall
UBC
Vancouver BC Canada V6T 1Z4
Phone: 604-822-8964
Email: sunah.cho@ubc.ca

Teacher bullying: Prevention and Coping Strategies for Online Instructors

Cynthia Grant, PhD, LCSW
Assistant Professor of Research
Department of Foundations, Social Policy and Research
Concordia University Chicago

Summary

Little research to date has explored the phenomenon of online bullying of instructors in higher education distance learning programs. As higher education becomes more widely accessible to a diverse range of learners, online faculty may be at a greater risk of student intimidation and "subordinate style bullying" (McKay, Arnold, Fratzl, Thomas, 2008) than what has previously been found in face to face classroom relationships between the instructor and student. There is a need to increase faculty knowledge of how to identify, intervene, prevent, and cope with online bullying of teachers by students.

Online instructors may experience psychological stress when students pressure faculty for a higher grade, are aggressive in their demand for quicker response times via email, or when students are disrespectful towards their instructor in online discussion forums. Bullying behaviors may be more prevalent among students who are struggling with class content, who want to impress others or who have existing psychological problems. Student entitlement has also been identified as a potential contributing factor for this behavior (Clift, 2011). Pedagogically appropriate clinical suggestions for how to prevent, cope and intervene when the behavior occurs include the use of clear expectations for online netiquette, a phone call to the student to alter the interpersonal dynamic, documentation of specific instances of inappropriate behavior, and private confrontation of the student's disruptive behavior using problem solving rather than a punitive approach. Improving online student-teacher relationships may help prevent teacher bullying and enhance the competency and coping strategies of distance faculty in regard to this challenging situation.

References:

Clift, E. (2011). From students, a misplaced sense of entitlement. *The Chronicle of Higher Education,* Retrieved from: http://chronicle.com/article/Students-Should-Check-Their/126890/

McKay,R., Arnold, D., Fratzl, J., & Thomas, R. (2008). Workplace bullying in academia: A Canadian study. *Employee Responsibilities and Rights Journal, 20*, 77-100.

Presenter Bio

Cynthia Grant, PhD, LCSW, is a licensed clinical social worker in private practice in Chicago and an Assistant Professor of Research at Concordia University Chicago. She is a faculty member and the program coordinator for online research courses in the College of Graduate and Innovative Programs, where she has been involved with mentoring new online faculty. In addition, she provides character education instruction to a Title I middle school to address bullying prevention and intervention.

Contact Information:

Cynthia Grant, PhD, LCSW
Assistant Professor of Research
Concordia University Chicago
7400 Augusta St.
River Forest, IL 60305
Phone: 708.209.3554
cynthia.grant@cuchicago.edu

Diverse faculty teaching a diverse student body: Managing the program

Dr. Brian Blodgett
Director, Undergraduate History, Military Studies
Western & World History Programs
American Public University System

Summary

This roundtable discussion will focus on practices used by directors to manage adjunct and fulltime faculty with an objective of providing various methods that have been successful, as well as those that were not successful. Directors who manage instructors who teach for an online university, that do not have a requirement for faculty members to teach at the physical university, face many challenges compared to traditional "brick and mortar" universities when communicating with their faculty members, providing assistance in instructional development, and assessing/evaluating their instructional performance in the electronic classroom. This communication assists in ensuring that the needs of the students is taken into account when decisions are made concerning changes to the curriculum, instructor assignments, and the development of program-wide rubrics and requirements. Simply implementing rules is not sufficient, students and faculty must understand the need for some standardization while still allowing academic freedom in the classes.

As online enrollments continue to grow, the requirement to have an increasing number of full-time and adjunct instructors increases and places additional burdens on directors who need to monitor an increasing number of instructors. Barriers to effective communication may be caused by many factors. Some of these factors include a dependence on communication by e-mail, the inability to conduct telephonic conversations during "normal" school hours due various reasons, and conference calls that have limited participation. Other factors include instructors not understanding the intricacies and complexities of a degree program beyond their class. Directors need to assimilate the "needs, wants, and desires" of their instructors who may feel isolated from their colleagues and thus not "true" members of the University. Additionally, there remains a need to ensure that instructors retain academic freedom and that what is taught to the students is in the best interested of the students and the program, not just that of the students or the faculty desire.

Directors also have a responsibility to students who have declared their major in the program and with all other students taking courses within the program. Directors who oversee General Education courses have an even larger undertaking since some of the students do not have a high level of interest in the course. Issues related to student learning is paramount their communication with the faculty.

As more technologically savvy students enter online classes, an expectation exists for more from their instructors then just presentations, readings, lectures and discussion boards. They expect their instructors to be technologically proficient in providing classrooms that take full advantage of not only existing technology but to be familiar with pending breakthroughs in new technology. This is not always easy for instructors who have to stay current in their topic, and now find themselves having to learn a new way to communicate to the student that makes it exciting and interesting while still ensuring that the basic material is not ignored in favor of new gizmos. Yet, many instructors are not technologically current and do not know what they can bring into the classroom that will increase student interest and interaction. We will briefly focus on how to provide faculty with insight and the ability to increase their technological communication skills.

Directors should not simply resort to using "cookie-cutter" solutions and we will discuss the importance of communication between administrators and their faculty and students, how to the needs / expectation

of the students affect the management of a program, and why faculty need to grow in their understanding of new technology to keep pace with the students.

Presenter Bio

Brian Blodgett, Ph.D., is the Director of the Undergraduate History, Military Studies, Western & World History Programs for American Public University System (APUS). Professor Blodgett has been with APUS as an instructor since 2000 and has taught numerous courses in both the history and the military studies programs. He administers the development, evaluation, and revision of over 70 courses, to include nine general education courses. He oversees four degrees at APUS, an Associate of Arts and a Bachelor of Arts in History and an Associate of Arts and a Bachelor of Arts in Military History. He is directly responsible for the hiring, mentoring, and evaluating of all of the instructors, both full-time and adjunct, who teach within his programs.

Contact Information:
Dr. Brian D. Blodgett
American Public University System
111 W. Congress Street
Charles Town, WV 25414
Phone: 703.967.3916
bblodgett@apus.edu

Intercultural Learning Online: Challenges, Opportunities and Design Strategies

Erin McCloskey, Ed.D.
Director of Curriculum & Instructor
Distance Education Professional Development
University of Wisconsin–Madison

Summary

While global understanding and intercultural competence have been framed as increasingly important for economic, social and civic participation in the 21st century, such competencies are rarely addressed explicitly in training or professional development for educators, leaving instructors ill-equipped to help learners develop their capacity to engage productively with the world. Since our interactions are increasingly mediated by technologies and distributed globally, it is imperative to develop citizens who are both inter-culturally competent and capable of applying that competence both on- and offline.

This presentation discusses a qualitative study of teacher professional development (TPD) that involved a group of K-12 English-as-a-Foreign-Language (EFL) teachers from sixteen different countries in a nine-week course delivered entirely online. The course's primary objective was to promote the teachers' ability to organize and facilitate international, intercultural collaborative projects with other classrooms from around the globe. The study revealed interesting findings with implications for the design of online learning opportunities that include culturally diverse audiences or intercultural learning objectives. For example, while the EFL teachers asserted strong beliefs in the value of intercultural and technological learning opportunities for their students and for themselves, they exhibited little engagement with, or reflection about, the intercultural dimension of their online TPD course.

The findings from this research confirm the difficulty of engaging and promoting intercultural competence and communication; offer insight into the dynamics of an intercultural, online environment; and point to strategies for addressing these outcomes explicitly.

Presenter Bio

Erin McCloskey, Ed.D., is the Director of Curriculum and an Instructor within the Distance Education Professional Development group at UW–Madison. In this capacity, Erin ensures that the content, technologies and formats of DEPD programs reflect current knowledge, emerging research, and best practices in online learning and distance education. Erin earned Master and Doctoral degrees in education from Harvard University, where she researched professional development, online & adult learning, and intercultural communication.

Contact Information:
Erin McCloskey, Ed.D.
Distance Education Professional Development
UW–Madison, Division of Continuing Studies
21 North Park Street, 7th Floor
Madison, WI 53715
Phone: 608.263.4709
emccloskey@dsc.wisc.edu

Online Capstone Course with Industry-Sponsored Projects: Two Case Studies

Rana Khan, Director, Biotechnology Program
Richard Conroy, Adjunct Faculty
University of Maryland University College (UMUC)

Summary

The Professional Science Master's (PSM) program in Biotechnology, at UMUC, is a 36 credit, semester-based online program, divided into 15 credits of core coursework and 21 credits from a selected specialization including 3 credits from the capstone course. Currently, there are three specializations in this program: biotechnology management, biodefense and biosecurity, and bioinformatics.

The capstone course is either the penultimate or final class taken by students. The core of the course is a group project aimed at giving students a real-world intern experience and the opportunity to complete a mutually beneficial project with a small biotechnology company or institution over a 12-week semester. Capstone courses provide an excellent opportunity for innovative teaching methods such as student-led and team-led discussions, cross-disciplinary collaborations, and technology integration. In designing a capstone course it is important to keep class sizes small, build a flexible, integrative syllabus based on the objectives of the entire program and allow students to explore their own strengths and diverse viewpoints to reach beyond traditional perspectives. A challenge is to provide students in different specializations with the same experience.

We compared and contrasted projects from the Fall 2009 and Spring 2010 semesters, conducted by students in the bioinformatics specialization and by students in the biotechnology management specialization. Factors looked at included, team composition, team members' background, and the team's approach to addressing the research question. Finally, we looked at the end product from each team and their overall performance and evaluation from the company/organization. Our results indicate that even with different student backgrounds, team composition, and team dynamics, it is possible to conduct track specific capstone projects as part of the same course and provide students with a worldly hands-on experience that prepares them for the workforce.

Presenter Bios

Rana Khan is a professor in and Director of the Biotechnology Program at the University of Maryland University College. Her research interests include developing strategies to enhance the synergy between industry and academia and to increase graduate degree attainment among minorities.

Richard Conroy is an adjunct assistant professor with the biotechnology program at the University of Maryland University College since 2006, teaching face-to-face and online classes regularly. He is particularly interested in how entrepreneurship and translational research can be encouraged in the classroom.

Contact Information:
Rana Khan
3501 University Blvd East
Adelphi, MD 20783
Phone: 240.684.430
rkhan@umuc.edu

Creating Online Graduate Programs in a College Education

Carolyn Awalt, Ph.D.
Online Program Advisor
University of Texas at El Paso

Summary

Building online programs requires more than ambition and enthusiasm, it requires planning, money, and perseverance. This discussion describes the University of Texas at El Paso College of Education's journey to build three online master's level programs over five years. Challenges and problems are described as well as solutions and ongoing stumbling blocks.

The goals were to:

- Increase access to higher education
- Increase number of qualified teachers in rural areas
- Reach out to those who needed an online program, because a) they did not live near a college or university, and or b) needed to work full time before changing careers.

I will describe the leadership involved, the administrative trials, the technical support, and the faculty development needed.

Presenter Bio

Carolyn Awalt, Ph.D., has worked for 8 years in the Teacher Education Department of the College of Education at the University of Texas at El Paso. During that time, she has helped develop three online graduate programs. At present she is the Online Masters Program Advisor. She holds a Ph.D. in Instructional Technology from the University of Texas at Austin.

Contact Information:
Carolyn Awalt, Ph.D.
Online Program Advisor
University of Texas at El Paso, College of Education
College of Education, Room 601
500 University Avenue
El Paso, TX 79968
Phone: 915.747.7674
carolyn@utep.edu

Improving Online Communication

Emily Honchar McWorthy
Instructional Designer/Instructor

Alan Peterka
Instructional Designer/Department Coordinator

Distance Learning
Kirkwood Community College

Summary

In an effort to increase student success at Kirkwood, we found communication to be a contributing factor. We decided to examine the specific areas of communication that needed improvement in our courses. Content analysis of our online course evaluation comments was performed to categorize the data. The following sub-categories emerged: Content, Instructor-Student Interaction, Discussions, Instructor Feedback (including grades), Student-Student interaction, and Other. Our next step was to provide tips, tricks, methods, and suggestions to faculty within these areas. We attempted to share this information with faculty and integrated this into our faculty training curriculum. Communication is always an ongoing challenge, and new tools become available everyday, and what works for one instructor/class may not work for others.

The ways instructors and students choose to be present in their online courses, we believe, stem from their philosophies of teaching and learning. We invite others to discuss our philosophies and approaches to communication and presence.

Presenter Bios

Emily McWorthy has been at Kirkwood since 2008. She earned her M.A. in Communication from Northern Illinois University. Her research interest is improving online communication and she has presented on this topic at other conferences.

Alan Peterka has been at Kirkwood Distance Learning since 2005. He earned his MA in Chinese Pedagogy from The Ohio State University.

Contact Information:
Emily McWorthy
Kirkwood Community College
Phone: 319.398.4486
Emily.McWorthy@kirkwood.edu

Distance Education and International and/or Minority Students: Key Behavioral Patterns

Kaninika Bhatnagar, Ph. D.
Assistant Professor, School of Technology,
Eastern Illinois University

Summary

Distance education strategies need to be reassessed in the specific context of international, and/or minority students. Behavioral issues in online classes are reviewed, specifically those resulting from the absence of visual and auditory cues in various eLearning situations.

A semester long intervention with teaching highly diverse graduate seminar class is the focus of this research. The classes were not taught fully online, however, precisely for this reason the role of the online component of the course became even more significant. There was a significant increase in international and minority students' participation in class discussions when they were allowed to 'speak up' in writing. Observations and interventions carried out over the course of the term in the classroom are discussed. The addition of online component to an existing traditional classroom format, and its impact on students' performance is examined for possible positives and/or issues in the context of higher education.

The session outlines current research, highlights experiences with international, women and minority students, and examines ways in which distance education may be beneficial for greater student engagement and participation. Potential advantages of online instruction are outlined in a variety of behavioral contexts including participation, initiative, risk-taking, teamwork, and leadership. The potential of distance education is illustrated in ways that go beyond the conventional issues of logistics, and flex-time for a returning professional. Connections are made with some fundamental issues in minority mentoring, specifically in the context of women students.

Presenter Bio

Kaninika Bhatnagar, Ph.D., is an Assistant Professor in the School of Technology, and Women's Studies faculty at Eastern Illinois University. She earned her Ph.D. in technology with a focus on gender issues in technology education, from Eastern Michigan University. Kaninika has been published, among others, in the Journal of Engineering Technology (JET), and the Proceedings for the American Society of Engineering Education (ASEE).

Contact information:
Kaninika Bhatnagar, Ph.D.
Eastern Illinois University
1680 University Dr., #7
Charleston IL 61920
Phone: 734.717.3910
kbhatnagar@eiu.edu

Online Learning for All:
Accessibility for Students with Disabilities

Yolyndra Green, Ph.D., BC-HSP
Online Faculty & Dissertation Chair
University of Phoenix

Summary

As access to online learning increases, learners are tapping into this experience more frequently. Online classes are beneficial for the adult learner who has family and works days or nights. The benefit of online learning has proven valuable for students with disabilities as well. Learners with disabilities, learning, visual and/or hearing impairments, are beginning to access classes online. These students recognize the ease in obtaining and acquiring knowledge via the online environment.

Faculty who teach online must begin to understand the needs of students in their classes with disabilities. Syllabi and other course materials should be accessible. For instance, PowerPoints or lecture notes should be created in a manner that allows all students to access materials in order to participate in class discussions and assignments.

Presenter Bio

Yolyndra Green, Ph.D., BC-HSP, teaches online for the University of Phoenix, Axia College, and for the School of Advance Studies. She is a graduate of an online institution, Capella University, earning her PhD in Human Services.

Contact Info:
Yolyndra Green, Ph.D.
Online Faculty
University of Phoenix, Online
Phone: 704.568.6085
greenys@email.phoenix.edu

Lightning Sessions

What's the big idea?
Turn information into stories

Mary Bertun
E-learning Program Director
Wisconsin Department of Corrections

Summary

Why turn information into stories? Social and technology change rates are at an all-time high. Organizations are in the middle of constant churn and your learners are at knowledge capacity overload. When you transform information into stories, suddenly that information is easy to remember.

In this lightening session you will see how to create the anecdote. You must grab one big idea, one message learners will place in their own pocket. The steps are easy. But to craft your story's beginning, you will start at the end.

Presenter Bio

Mary Bertun is the E-learning Program Director for online training at the Wisconsin Department of Corrections. She develops and evaluates online curriculum for correctional officers and probation & parole agents, and administers an employee learning management system. Mary is passionate about storytelling for leadership and learning.

Contact Information:
Mary Bertun
E-learning Program Director
Wisconsin Department of Corrections
3099 E. Washington Avenue
Madison, WI 53707
Phone: 608.240.5555
mary.bertun@wi.gov

Another Way to Watch: Video-Based Student Teacher Supervision

Erica R. Hamilton
Doctoral Student
Curriculum, Teaching, and Educational Policy
Michigan State University

Summary

As the world embraces globalization, video technology is used more and more to connect individuals and groups. Thus, in order to enhance the future of education and create global communities of learners, teacher educators and teacher preparation institutions must readily engage with and study video technologies. Within pre-service teacher supervision, specifically, the use of video technology offers an additional lens from which to view, study, and supervise teaching and learning. However, the implementation of video-based field supervision as an expansion of on-site, real-time observations is a relatively new and somewhat innovative practice.

This study's participants include three university field supervisors (two secondary; one elementary) and five secondary student teachers. All participants were located within one university-based teacher education program and used video within a traditional, on-site model of student teaching. As a result of studying and analyzing participants' uses of video, this study's results offer a "vision" of tangible ways video technology may be used to augment a traditional, on-site model of student teacher supervision.

Presenter Bio

Erica R. Hamilton is a doctoral student in Curriculum, Teaching, and Educational Policy at Michigan State University, where she focuses on teacher professional development and pre-service teacher education, with a specific interest in the uses of video technologies. A former high school English instructor with eleven years of teaching experience, she holds a master's degree in curriculum and teaching and a bachelor's degree in English, both from Michigan State University.

Contact Information:
Erica R. Hamilton
Doctoral Student
Michigan State University
300 Erickson Hall
East Lansing, MI 48824
Phone: 616.589.4838
ehamilto@msu.edu

Tech Tools to Enhance Online Presence & Learning

Sheila Berg
Health & Physical Education Instructor
Specialist Department Head, iAchieve Advisor
Insight School of Minnesota

Summary

The Merriam-Webster Online Dictionary defines *presence* as: "the fact or condition of being present" or "something…felt or believed to be present." As online instructors, it is important to connect with our students; to ensure they feel connected to us and our class. By using technology tools to enhance teacher presence, the student-teacher interaction can be improved and the sense of community felt by the class may be increased.

Technology tools can also be used to appeal to the different learning styles of students in an online setting through unique announcements, course content presentations, and communications. They can also be introduced to students as a means to complete assignments in a way that best fits their learning styles. There are a multitude of technology tools that are available on the Internet and the uses for these tools are vast. Free tools for creating recordings, screen-casts, avatars, screen captures, cartoons, and slide presentations will be shared along with ways to use the tools to enhance both teacher presence and student learning in online courses.

The challenge is to think outside the box to find ways to use free technology tools to connect to students and to appeal to the different learning styles in an online learning setting.

Resources:

"Presence." Merriam-Webster Online Dictionary. 2010. Merriam-Webster Online. 12 August 2010 http://www.merriam-webster.com/dictionary/presence

Presenter Bio

Sheila Berg is an online high school Health & Physical Education Teacher with Insight School of Minnesota and was the schools' 2009-2010 Teacher of the Year. She serves as the Specialists Department Head, and is also the Photography Club and Student Council Advisor. As ISMN's unofficial "tech tools guru", Sheila has delivered tech tools presentations at the Minnesota K-12 Online Learning Alliance conference, to the Insight Schools National Department Leads, and to ISMN faculty at both online and at face-to-face meetings. As an avid learner, Sheila is pursuing her Masters in Health Education through Bemidji State University-online of course!

Contact Information:

Sheila Berg
Health & Physical Education Instructor
Insight School of Minnesota
6870 Shingle Creek Parkway, Suite B112
Brooklyn Center, MN 55430
Phone: 800.711.5944, x1225188
sberg@insightfaculty.net

Supervising Dissertation Research in Emerging Online Professional Doctorate Programs and the Role of Partner Organizations

Amanda M. Maddocks, Ph.D.
Associate Professor
Concordia University Chicago

Introduction

The university under examination in this paper has a history of engaging in the delivery of the professional doctorate in education (EdD) to school district leaders and early childhood educators. As a result of rapid institutional growth and innovation, the university is now involved in significant partnerships with several professional organizations. These partnerships have also allowed the university to expand its online offerings. Coursework, exams, and dissertation supervision now are done wholly online for some students. This new delivery model has caused the institution to examine how partners can be best used to supervise the work of students as they engage in the research (dissertation) portion of their programs.

Theoretical Framework

The use of partner organizations has been stressed in the best practice literature in the field of professional doctoral program administration (Maxwell, 2003; USCGS, 2007). Partnerships that serve to support academic programing and advance the professional field are more clinical, engaged and practical than traditional Doctor of Philosophy (PhD) programs.

In the case of this university, these new partnerships create relationships between professional organizations and a private university. One such partnership has resulted in the creation of a new professional doctorate program in teacher leadership. This partnership is between a state professional school administrators' organization and the university. Students come to the university through their membership and participation in the state organization. Students are seeking doctoral degrees that will lead to improved classroom practice and school leadership. The formal partnership allows the organization and the university to share the responsibility for the development and delivery of instruction during the program. Curriculum delivery is a joint responsibility and is almost exclusively online. It also creates a system whereby students are selected and enrolled in the program largely based on the marketing efforts of the partner organization.

As the U.S. Council of Graduate Schools (USCGS; 2007) has highlighted, the relationship between universities and industries (the profession) is often just at the surface level. As a result of the university's strategic planning and efforts toward innovation, a deliberate focus has been placed on deepening these new partnerships. As the university has reconceptualized its own EdD programs, it has actively sought to make them more clinical, engaged, and applied, reflecting recommendations in the literature (USCGS, 2007). In accordance with these efforts, the new teacher leadership program emphasizes the advanced leadership skills needed for teacher practitioners, and program development has integrated this intention into students' research-preparation coursework and dissertation experience, as discussed in this paper.

Maxwell (2003) wrote about the implicit partnerships between EdD programs and education employers. The university is really only now explicitly engaging in such a relationship. During the initial EdD program development, advisory boards with individuals from the workplace were used, but this was not a true partnership. These individuals and groups gave input on and reacted to the proposed curriculum, but their role in the program ended there. The university sees that the overlaps between research, the classroom, and the workplace cannot be ignored; in fact, the university recognizes that such overlaps

should be stressed in program development (Maxwell, 2003; Scott, Brown, Lunt, & Thorne, 2009). As Scott et al. have pointed out, research, the classroom, and the workplace are "three independent sites of knowledge-construction" (p. 146). This university hopes that formal partnerships will allow the purposeful integration and overlap of these three areas, and that this overlap manifests itself during the development and delivery of the online program components.

Case Example

The case example explored in this paper is that of the Teacher Leadership program with a state professional administrators' association. The emphasis of the teacher leadership program on the advanced leadership skills needed for teacher practitioners has resulted in an examination of the research curriculum used to support the programs of all students seeking professional doctorates at the university (Brennan, 1995; Caboni & Proper, 2009; Perry & Imig, 2008). Additional courses that stress action research and classroom-based inquiry have been developed. The university recognizes that if its programs are about "entering a community of practice" (Berliner, 2006, p. 275), it must provide the curriculum and instruction to support such goals.

Further compounding these curricular changes is the shift of instruction to a distance delivery model. How this newly shaped and very practice based research methods curriculum is best delivered online is a major focus of the program evaluation efforts discussed later in this paper.

The university has grappled with issues related to the supervision of practitioner research and its role in ensuring the protection of research participants. What is the role of the university? The supervisor? The partner organization? If workplace supervisors, individuals affiliated with the partner organization, and traditional university faculty will be used during a student's research process, how should these individuals be prepared? How do they need to be prepared differently? How do nontraditional faculty and/or supervisors become "qualified" for very real academic work and relationships with students during their dissertation research (USCGS, 2007), and how is this done online? Blackboard ™, discussion boards and Adobe Connect ™ will be discussed as examples.

Blackboard ™ Course Shells

Blackboard ™ is the course delivery software used by this university. Both faculty training and student courses are delivered using this product. Online courses are developed and delivered in this environment. The university thus found that conducting trainings using this same software was a good fit. Online teaching certification courses have been developed to ensure that faculty meet a minimum level of competence before they engage with students in online courses. Nontraditional faculty, workplace supervisors, and dissertation supervisors are also provided access to trainings in this environment before they engage with students during the dissertation process.

A course room with discussion boards has been developed for the dissertation process as discussed in the next section of this paper.

Discussion Boards

Within the Blackboard environment students and faculty make use of discussion boards. In the case of dissertation work, students and faculty make use of these boards in three ways. First, a student is placed in a discussion group with his/her committee members. The student and committee can use this discussion area to post drafts, give comments and provide advice during the dissertation process. Second, faculty engaged in dissertation supervision have a discussion area to engage in dialog about the dissertation process, how to best support students, and to share ideas. Third, each committee chair has access to a discussion area with just his/her mentees. This allows the students sharing a chair to operate as a cohort.

This cohort structure provides many supports to students as they engage in the dissertation process (Burnett, 1999).

Adobe Connect ™

Adobe Connect ™ is the software used to conduct oral defenses of the dissertation at both the proposal and final stages. This product allows remote faculty, members from the partner organization, local faculty and students to meet virtually. Student presentations typically using PowerPoint can be shared and both audio and visual communication components are included. This software also has been used to conduct interactive trainings for faculty and partners new to the dissertation supervision process.

Reflections and Future Research

After three years of engaging in online programming, the university recognizes the key role that formal partnerships with outside organizations has on the success and efficacy of its programs. Curriculum development and delivery were made both possible and of high quality in large part because of the efforts and experience of the partner organization.

Remaining work centers on issues of maintaining quality as programs grow. Over the course of the next three to five years, formal program evaluations will continue primarily through the engagement of the graduate college's Quality Assurance Committee.

Quality Assurance Committee

The College Quality Assurance Committee (QAC) was established by an academic department within the Graduate College in 2006. It has grown to become a college wide body with key responsibilities related to evaluation and planning. This committee, in cooperation with the Office of the Executive Director of Doctoral Programs and with the Office of the Dean of the Graduate College, is now engaging in a new initiative related to supervisor development. This initiative involves an examination of the pedagogy of supervision (Pearson & Brew, 2002). Recognizing that supervision of research is a relationship-building, academic, and professional experience, this group is evaluating the training and professional development needed by faculty, partners, and workplace cosupervisors (Maxwell, 2003). In doing so, the group is also striving to strike an academically sound balance between the very real expectations of the partner organization and those of the university faculty (Pearson & Brew, 2002).

Recommendations

It is recommended that those institutions wishing to make use of partnerships enter into these relationships thinking holistically. This university could have made use of the partner organization solely as a source of students for the program. Instead, it took an approach that engaged the partner in the development of the program, its delivery and now in its evaluation and improvement. This deep relationship creates an incentive for both the partner and university to ensure the success of the program overall.

References

Berliner, D. C. (2006). Toward a future as rich as our past. In C. M. Golde & G. E. Walker (Eds.), *Envisioning the future of doctoral education* (pp. 268–289). San Francisco, CA: Jossey-Bass.

Brennan, M. (1995). Education doctorates: Reconstructing professional partnerships around research? *Australian Universities' Review, 2,* 20–22.

Burnett, P. C. (1999). The supervision of doctoral dissertations using a collaborative cohort model. *Counselor Education & Supervision, 39,* 1, 46-52.

Caboni, T. C., & Proper, E. (2009). Re-envisioning the professional doctorate for educational leadership and higher education leadership: Vanderbilt University's Peabody College Ed.D. Program. *Peabody Journal of Education, 84,* 61–68.

Maxwell, T. (2003). From first- to second-generation professional doctorate. *Studies in Higher Education, 28,* 279–291.

Pearson, M., & Brew, A. (2002). Research training and supervision development. *Studies in Higher Education, 27*, 135–150.

Perry, J. A., & Imig, D. G. (2008, November–December). A stewardship of practice in education. *Change,* pp. 42–48.

Scott, D., Brown, A., Lunt, I., & Thorne, L. (2009). Specialised knowledge in UK professions. In D. Boud & A. Lee (Eds.), *Changing practices of doctoral education* (pp. 143–156). London: Routledge.U.S. Council of Graduate Schools. (2007). *Report of the CGS Task Force on the professional doctorate.* Washington, DC: Author.

About the Presenter

Amanda M. Maddocks is an associate professor at Concordia University Chicago. She is also Executive Director of Doctoral Programs in the College of Graduate and Innovative Programs. In her role as director of doctoral programs, she oversees the administration of all programs both on campus and online. She has developed and taught five different advanced research methods courses online including statistics. Her research interests include the assessment of quality in online education environments.

Address: Concordia University Chicago
7400 Augusta St.
River Forest, IL 60305
Email: Amanda.Maddocks@CUChicago.edu
Phone: 708-209-3159
Fax: 708-209-3246

Influencing Attitude Change in Online Training

Brian Tencza
Lead Health Educator
Centers for Disease Control and Prevention

Summary

The session features:

- Balancing objectives geared toward knowledge and skill development with objectives that focus on attitude change
- Sample instruction that helps to influence attitudinal change.
- Quick discussion on how to choose the best media to influence attitude change
- Quick overview of the types of online instruction high level learners prefer.

Effective attitude change in instruction is a difficult task especially when that change involves the learner performing a personal interaction under stressful conditions. In our online training we are trying training clinicians to convince their terminally ill patients to join an online registry. This registry will not benefit current patients but will potentially benefit later victims of the disease.

We were given the task of developing training about the treatment and management of Amyotrophic Lateral Sclerosis (ALS) and to incorporate strategies that encouraged those suffering from (ALS) to register with a disease registry. ALS is a rapidly progressive neuro-degenerative disease and is characterized by the gradual degeneration and death of motor neurons.

Strategies discussed in this presentation can be incorporated in online instruction covering a variety of topics. Participants will receive a job aid for developing instruction that influences attitude change.

Presenter Bio

Brian Tencza is a Team Lead for the Environmental Medicine Educational Services Branch in the Division of Toxicology and Environmental Medicine in the Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta, Georgia. Brian's team develops educational materials for clinicians and communication materials for the general public regarding environmental health. At ATSDR Brian leads projects including videotaped instruction, satellite instruction, e-learning, and interactive software tutorials. Before his work at ATSDR, Brian worked at the Centers for Disease Control and Prevention developing projects such as a website dedicated to teaching future public health practitioners the basics of sexually transmitted diseases and a series of three broadcasts dealing with SARS. Brian has over 20 years of experience as a manager and instructional designer in industries ranging from social services to nuclear energy.

Contact Information:
Brian Tencza
Lead Health Educator
Centers for Disease Control and Prevention
180 Park Creek Drive
Alpharetta, Georgia 30005
Phone: 770.488.3495
bht1@cdc.gov

Student Experiences with Immersive Learning

Julie A. Fronzuto, Ph.D.
Assistant Professor of Biology
Prince William Sound Community College

Summary

With a service area in excess of 44,000 square miles, Prince William Sound Community College (PWSCC) relies on innovative technology to reach students in the Alaska Bush. Most of the communities served lack facilities to conduct the traditional "wet" lab of the typical science course. In addition, rural students connect to the campus via video conferencing but are often the only student from their location enrolled in a given class. This hinders teamwork and collaboration. Science lab software exists—online and on DVDs—but there is no interaction nor is the lab instructor led. In essence the student conducts the lab in a vacuum and the instructor only receives notice that the student completed the lab. Faculty at PWSCC are adamant that students at all locations receive the same educational experiences, led by an instructor, that allows teamwork and collaboration.

As an Alaska Native Serving Institution (ANSI), PWSCC was awarded a Title III grant and applied a portion of the monies to develop and maintain an immersive virtual science lab. Virtual laboratories have been (and continue to be) developed based on labs that the Biology Professor has used in traditional face-to-face, wet labs. These instructor led synchronous labs are used by students regardless of their location. Working with students during the labs allows us to observe problems or potential problems and remedy them. It also provides information on the experience from the students' point of view. While students range from technophobe to expert gamer, the only difference we observed was the length of time it takes to complete a lab. Their ability to achieve the outcomes of the lab was not affected. A 3-hour orientation helps students learn the basic skills they need to navigate and conduct the labs successfully. Additionally, we found that how the student relates to their avatar is important. Since the deployment of our first immersive lab, we have conducted usability surveys at the end of each course. The results guide the development of future labs as well as refinement of deployed labs. We have found that taking the time to orient students ourselves significantly decreases the learning curve, and improves their self-confidence and success in conducting the labs. A sense of community develops between students regardless of their location when all students are in the same "place" conducting the same laboratory.

Presenter Bio

Julie Fronzuto, Ph.D., is the science lead and only full time science faculty at Prince William Sound Community College in Valdez, Alaska. After struggling to find ways to provide quality laboratories to her students regardless of their physical location, she was introduced to Second Life and a light bulb went off in her head. With the Deans approval she researched immersive learning and developed the idea of using a virtual world for biology labs. To provide her students with a quality educational experience, Dr. Fronzuto works closely with PWSCC's Immersive Education Designer to ensure that the customized environment meets students' needs.

Contact Information:
Julie Fronzuto, Ph.D.
Assistant Professor of Biology
Prince William Sound Community College
303 Lowe St.
Valdez, AK 99686
Phone: 907.834.1633
jafronzuto@pwscc.edu

Academic Honesty: A Proactive Online Assignment

Kathryn Ley, PhD
Associate Professor
University of Houston–Clear Lake

Summary

Academic honesty is a serious problem that has captured even researcher's attention; over 60 articles in peer-reviewed education journals address plagiarism. Students often claim they did not know what plagiarism is and, therefore did not know they were plagiarizing. Evidence suggests it is best to establish a culture of academic honesty at an institution in which all faculty reinforce academic honesty standards. An instructor can proactively set the tone for academic honesty in an online course with a minimal amount of instructor time and effort. The simplest way to promote academic honesty is to publish the institution's academic honesty policy in the course syllabus and state what the instructor expects from students and what the students can expect from the instructor with respect to honesty. The third method, and the most important one for enforcing honesty, is a simple assignment in which students complete a free, online, authoritative, academic honesty tutorial. The tutorial educates students in what constitutes plagiarism and how to avoid plagiarism. The assignment enables faculty to have irrefutable evidence that the student did know what plagiarism is. The assignment can be a for-credit assignment or a requirement to enter the course. The VAIL tutorial assignment requires little effort yet sets the online standard for academic honesty.

Sample Vail Academic Honesty Tutorial Assignment with FAQs
Part of being a member of the academy is adhering to a scholarly code of ethics. In this course you receive credit for learning how to complete assignments academically honestly.

1) What should I do to prove I completed the academic honesty tutorial? Complete all four modules at http://www-apps.umuc.edu/vailtutor/ until you earn 100% and save the PDF "Certificate of Successful Completion" that includes your name, 100% score, and the date completed.
2) What should I name the file I attach to the message? Your last name and first initial with the appropriate extension (pdf). Example for Fran Zither's file: zitherf.
3) What are the specifications for the message? (a) Post a message with your tutorial score in the subject line. (b) Attach the pdf file (c) In the body of the message type the COMPLETE syllabus section entitled Academic Honesty Policy. (d) Submit where & by deadline as per assignment table.

Presenter Bio

Kathryn Ley holds a PhD in instructional design and has published over 30 articles including research on online learning and self-regulation. She has presented at over 57 at national/international professional conferences during twenty years of graduate teaching including a decade of online distance education courses.

Contact Information:
Kathryn Ley, PhD
18036 Bal Harbour Dr.
Houston TX 77058-4308
Office Phone: 281.283.3585
Home Office Phone: 281.335.5201
ley@uhcl.edu

Not Lost in Translation: Addressing and Embracing Learners' Cultural Diversity

Afsaneh Sharif, MET
Project Manager/Instructional Designer
Centre for Teaching, Learning and Technology
University of British Columbia

Summary

Online learning is in high demand as educators take another step toward optimizing accessibility and globalization of education. Online courses offer flexibility and cost effectiveness that traditional classrooms do not have room for. Students can be registered in online classrooms from different regions, countries and cultures, as long as they have Internet access and can communicate in the language of the classroom. This gives more learners from different parts of the world the opportunity to advance their education. While cultural diversity of learners brings a valuable learning resource to online learning communities and everyone's educational experience; it also has the potential to create conflict, anxiety, misunderstanding, and missed opportunities. Cultural diversity of learners is one of the topics that has been closely watched and addressed by online course designers and developers in the recent years to improve accessibility of online courses and remove the above barriers. The question is how to make the best out of this diversity and translate it to a valuable resource in our educational world? Is this a problem to solve or an opportunity to explore?

Presenter Bio

Afsaneh Sharif is interested in the application and integration of technology into the learning environment in a way that both enhances learning and makes it easy for instructors and students to use. She likes to explore diversity and cultural challenges in an online environment, and how the visual representation of information and game-based approach aid learning. Particular interests for her include accessibility, cultural diversity, community of learning, open education, educational tools and techniques of tomorrow, and instructional/learning design.

Contact Information:
Afsaneh Sharif, MET
The University of British Columbia
1170-2329 West Mall
Vancouver, BC
Canada V6T 1Z4
Phone: 604.822.8411
afsaneh.sharif@ubc.ca

Physical Avatars in Education

Michael Clark
Adjunct Professor
Carnegie Mellon University

Summary

A physical avatar is a mobile platform that represents its human operator so that he/she can see, hear, speak, and move; its design empowers the operator to interact with people from a distance.

We describe several variations of immersing a tele-operated mobile platform on campus and in a distance course. Locations were across several university departments and settings to explore its capabilities and social acceptance. The mobile platform's popularity quickly provided us a diverse population of over a hundred participants; from professors and university staff to middle and high school students. From our study of 16 weeks, we collected surveys from 15 operators along with local surveys from students. The physical avatar attended classrooms with on-campus students studying contextual software design methods.

We will share survey results, videos of the avatar, and where these devices will likely be seen in 2011. Our case-study provides optimism for educational avatars, especially as their underlying core technologies in streaming video, voice, mobile bandwidth, and software architecture improve. These issues are addressed throughout the presentation along with insights on technology limitations.

Highlights of the talk:

- Tele-operated robots are common in Medicine, Industry, and DoD; not in Education
- Humans will accept robots within reason: the "Uncanny Valley" principle.
- Physical Avatars and autonomy levels; "Must work out of the box"
- Leading signs that show educational avatar acceptance
- If you can learn from afar, the demographics of education change

Presenter Bio

Mike Clark (goes by Clark) has been an adjunct faculty member at CMU's Institute for Software Research since 2004. He currently teaches distance graduate courses in Contextual Design Methods, Real Time Systems, and Software. He has an MS in Software Engineering from Carnegie Mellon University, an MS in Technical Management from Embry-Riddle Aeronautical University, and a BS in Ocean Engineering from FIT. He also has Marine Electronics certification from National Radio Institute and UNIX certification from the University of South Florida.

Contact Information:
Michael Clark
Adjunct Professor
Carnegie Mellon University, Institute for Software Research
300 S. Craig Street, 2nd floor- ISR, CMU
Pittsburgh, PA 15213
Phone: 321.543.7370
clarkmn@cmu.edu

The Technology of the Question

Brad Hokanson, Professor
College of Design
University of Minnesota

"A good question is greater than the most brilliant answer." (Kahn, 1960)

Introduction

Within education, the term "technology" has generally been considered to address issues of electronic, network, and computer use; the field of educational technology deals almost exclusively with those narrow aspects of the definition. However, defining technology more broadly as "any systematized practical knowledge" (Gendron, 1977, p. 23) can lead us to examine other aspects of instruction and learning at the "chip" level, aspects of which are essential and elemental parts of the educational process. This writing explores the idea that questions are a technology in and of themselves, while examining some of the research on the use of questions in education that benefit both traditional instruction and the use of electronic media.

A Broader Definition of Technology

The field of instructional technology continues to focus on the use of technology more than 10 years after Richard Clark's call for a concentration on instructional methods instead of instructional media (1994). Nevertheless, the world view of many in the field of instructional design has remained centered on the physical artifacts of technology such as computers, networks, and mobile devices and not on the procedures of instruction (cf. Ertmer, 1999).

A more inclusive definition of technology would also include genetic engineering, organizational structures such as insurance companies, and at the micro level, questions. "Technology means the systematic application of scientific or other organized knowledge to practical tasks" (Galbraith, 1971, p. 12). Technologies vary in scale and complexity; some are very complex, while others are smaller and comparatively simpler. Society has a number of knowledge technologies in common use, such as alphabetization or Lineaus' organization of species; both calculus and statistics are codified methods for understanding numerical abstractions, and can be considered technologies.

> If the term "technology" is to be completely understood, in either ancient or modern terms, it should be seen as a system of practical knowledge not necessarily reflected in things or hardware. In the past, many technological innovations have emerged that involved little or no changes in tools or machines. For example, in the three-field system of crop rotation, often called "the greatest agricultural novelty of the Middle Ages in Western Europe," no tools or machines were involved. (Saettler, 1991, p. 3)

The goal of this exploration of questions as a technology is to encourage their use in education in a research based and systematic manner, and to help us make more effective use of the other (perhaps more electronic) technologies that are present.

As with any technology, one of the prime concerns is how the technology is used. The use of questions in instruction will determine their value and the value of the questioning methodology. Educators must understand how they are used, their impacts, and the possibilities for improvement or extended use.

The Nature of Questions in Education

In everyday speech, questions are used in many ways; as requests for information, as exclamations of surprise, and as logical tactics of an argument. Most often, they are not a request for information, but rather a part of the educational interaction of the classroom, one that has a power to compel an answer. "Every question, by its very structure, poses a demand for response. …Thus, the primary function of every question … is to elicit a response" (Sigel & Saunders, 1977, 9).

This spark of a question engages the engine of thought, which, is a complex, interdependent machine: "To answer a teacher's question, a series of complex cognitive actions occur in the learner; attention to and decoding of the question by the learner; developing a 'covert' or private response, answering through an 'overt' response, and revising one's response due to other answers or stimuli" (Gall, 1984, 42). This cognitive effort builds schema or knowledge structures within the brain, i.e. learning. "Currently, advocacy of question-asking as an instructional strategy rests on pragmatic sources—namely, question-asking promotes thinking" (Sigel & Saunders, 1977, 1-2).

Questions are used by teachers in classroom settings for a variety of reasons including classroom management, verifying student preparation and progress, and information distribution. Of principal interest here is the use of questions as a method of engaging students in the content material; that is, as part of the pedagogical structure of education.

Historically and conventionally, questions have been the backbone of instruction; research has been completed on the use of questions in education for almost 100 years (See, for example, Stevens, 1912; Yamada, 1913; Floyd, 1960; Gall & Aschner, 1963). In general, teachers ask a large number of questions over the course of typical class sessions. This is an observation which is consistent over time and within divergent cultures. (Dillon, 1982, 1987). Stevens (1912) estimated 80% of classroom time was devoted to questions, and that the average school day included 395 questions per teacher.

Research has found questions were being posed by teachers at a rapid rate with little time allowed for student reflection or student response. Research has also shown that retention can by improved by increasing the intervening time or after posing a question and after receiving a response.

In practice, most posed questions deal with factual recall of information. "The majority of questions entail the recall and recitation of actual information previously taught or studied; some few questions bear on speculative, evaluative, and other cognitive manipulation of information; and the remainder are conversational and managerial" (Dillon, 1985, 103).

In general, the use of questions does improve retention. Research by Gall et. al. (1987) indicated question-based recitations increase content learning when compared to individual review of educational materials without questions.

> Factual teacher questions do seem to help student learn factual information, as measured by their answers to factual test questions that in effect repeat the factual teacher questions previously asked and answered during classroom lessons. Yet tested achievement of factual information is only one specific of the class, learning. (1988, p. 110)

Deep thinking is not sought through challenging questions in most classrooms in spite of the fact that use by teachers of higher order questions does appear to increase learning. Few deeper, more substantial questions are posed by teachers; "Only about 4% of the questions asked by teachers are deep questions" (Sigel & Saunders, 1977, p. 3).

How individual learners respond to higher order questions varies as to the context and the skills of the learners; variation is also apparent and on an individual basis. Lower performing students respond better to fact based questions, while more skilled students benefit more from higher order questions (Carlsen, 1991; Gall, 1984). In addition, students often base their mental efforts on their anticipation of testing format gleaned from questions posed by teachers. Given a goal of more than simple learning, teacher questions should include multiple formats, using fact oriented questions and the higher order questions within the same context; both addressing a range of student skill levels and continuing to develop the deeper thinking skills among all students.

Learner Initiated Questions

Essential to the development of a knowledgeable, good thinker is their own ability to generate questions to understand experience and to develop new knowledge and skills. The cognitive value of student-initiated questions has been seen; questions generated *by* the learner are most likely to generate knowledge *in* the learner (Dillon, 1985). Unfortunately, teacher initiated questions fill most of the time in many classrooms, which is ironic as this is holding back a basic technology from learners. “Classrooms are full of questions but empty of inquiry” (Dillon, 1988, p. 115).

Students tend to not ask questions in classroom settings: “The extremely low likelihood of question asking under self-induced conditions suggests that questions do not surface when it is physically effortful or socially awkward to ask them” (Graesser & Olde, 2003, p. 526).

Through media and previous schooling, students have been inadvertently trained to be passive receivers of information, un-responsible for their own learning. And as would be expected, students are often unskilled in monitoring their own understanding: “The truth is the vast majority of learners have trouble identifying their own knowledge deficits and ask very few questions” (Graesser & Olde, 2003, p. 526).

When students do ask questions they tend to ask the type and quantity of questions which have been modeled by teachers. As most classroom teachers pose fact-based simple questions, most student questions are also fact based. However, when instructors ask higher order questions students are prone to ask more higher order questions as well. (Dillon, 1982) And training in question generation and asking does prove to be successful in developing questioning skills and behavior in learners (Wong, 1985).

The authorship of questions is part of complete development as a learner in any domain (Davey & McBride, 1986; Rosenshine et. al. 1996,). The generation of questions by students within learning tasks also helps develop their questioning skills for transfer to other contexts. As meta-cognition and “learning to learn” are often shared goals of instruction and of instructional design, the ability to author questions is an important learner based skill. Developing skill in the authorship of questions leads to an independent ability to learn. “… toward a continual, ongoing search for better opinions, decisions, or judgments” (Browne & Keeley, 2004, **p.** 2). Indeed, evaluation based on answers may eventually be supplanted by a better understanding of learners through an evaluation of their questions (Arand-Goranson & Oberg, 2003; Graesser & Olde, 1993).

Implications for Education and Instructional Design

Much as the field of instructional technology continues to develop a methodology regarding the use of computing for learning, educators should develop an organizing structure of the intentional use of questions in instruction, i.e. a methodology of question use. As directed by research, this methodology should include posing questions within instruction to *challenge* learners to think rather than solely as a means of checking learners' memory (or homework); to pose questions that need *new* answers as well as

known answers; and to seek answers that are complex (e.g., analysis, synthesis, judgment, creation) as opposed to simple.

Curricula should also seek to build skills in the technology of questions. In other words, specific attention should be paid to training in the posing of questions by learners, and in the development of an understanding of the value of questions. Modeling questioning, and at a higher order, inquiry through questions is valuable for any educational endeavor. Specifically, the goal must be to develop an understanding, or more accurately, a "literacy" in the use of questions by learners. These advances in the use of questions, from simple to complex, and from teacher developed to student generated could change the instructional paradigm of education (Arand-Goranson & Oberg, 2003; Dillon, 1982;).

Translating these concepts to the design of instructional materials (whether on paper or on line) may be more achievable than in the dynamic classroom. With instructional materials, pacing and structuring of questions (which is critical to success) can be developed in a more considered and planned environment than in the live classroom. In an electronic environment, questioning by learners may be more accessible, an area which needs further research. Evaluation, however, may be more difficult than previous electronic instruction as answers become more divergent (Arand-Goranson & Oberg, 2001; Dillon, 1982; Graesser & Olde, 2003).

Conclusion

The presence of questioning in the classroom and in education is clear and dominant. As questions are the principle form of discourse within the classroom, question content, ordering, structuring and the purposeful use of questions are challenges for every teacher and in every educational venue.

Questions assist learning through mental challenge and engagement; more challenging, better used, and higher order questions are more effective at improving learning. Improvement within education will come from encouraging learners to ask their own questions, and in their developing their own knowledge structures. These are valuable directions for the field of instructional design to support; the field has recognized the need to move the technology to the learners; here, in this writing, the technology is the question itself.

References

Arand-Dahlgren, M. & Öberg, G. (2001). Questioning to learn and learning to question: Structure and function of problem-based learning scenarios in environmental science education. *Higher Education, 42,* 263-282.

Bean, T. W. (1985). Classroom questioning strategies: Directions for applied research, in A. Graesser & J. Black, (Eds.), *The psychology of questions*. Hillsdale: Lawrence Erlbaum.

Browne, M. N., & Keeley, S.M. (2004). *Asking the right questions: A guide to critical thinking*. Upper Saddle River, NJ: Pearson Prentice Hall.

Carlsen, W. S. (1991). Questioning in classrooms: A sociolinguistic perspective. *Review of Educational Research, 61(*2), 157-178.

Clark, R. E., (1994). Media will never influence learning, *Educational Technology Research and Development*, . *42*(2), 21-29.

Davey, B. & McBride, S. (1986). Effects of question generation training on reading comprehension. *Journal of Educational Psychology, 78*(4), 256-262.

Dillon, J. (1982). The multidisciplinary study of questioning. *Journal of Educational Psychology*, *74(*2), 147-165.

Dillon, J. T. (1985). Questioning in education. In M. Meyer (Ed.), *Questions and questioning*, New York,NY: Walter de Gruyter.

Dillon, J. (1987). The multidisciplinary world of questioning. In W. Wilen (Ed.), *Questions, questioning techniques, and effective teaching*. Washington, DC: National Education Association.

Ertmer, P. A. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology Research and Development 47*(4), 47-61.

Floyd, W. D., (1960). An analysis of the oral questioning activity in selected Colorado primary classrooms. Unpublished doctoral dissertation. Colorado State University.

Gall, M., Ward, B., Berliner, D., Cahen, L., Winne, P., Elashoff, J., & Stanton, G. (1978). Effects of questioning techniques and recitation on student learning. *American Educational Research Journal. 15*(2), 175-199.

Gall, M. (1984, November). Synthesis of research on teachers' questioning. *Educational Leadership*, 40-47.

Gall, M. D., & Rhody, T. (1987). Review of research on questioning techniques. In W. Wilen (Ed.. *Questions, questioning techniques, and effective teaching*. Washington, DC: National Education Association.

Gall, M., & Aschner,M.J. (1963). A preliminary report on analyses of classroom interaction. *Meill-Palmer Quarterly*, 9, 183-94.

Galbraith, J. (1971). *The new industrial state*, Boston, MA: Houghton Mifflin.

Gendron, B. (1977). *Technology and the human condition.* New York, NY: St. Martins Press.

Glass, G. V. (1978) Integrating findings: The meta-analysis of research. *Review of Research in Education,* 5.

Graesser, A., & Olde, B. (2003). How does one know whether a person understands a device? The quality of the questions the person asks when the device breaks down. *Journal of Educational Psychology, 95(*3), 524-536.

Kahn, L. I., & Twombly, R. (2006). Louis Kahn: *Essential texts*. New York, NY: W. W. Norton.

Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research, 66(*2), 181-221.

Saettler, P. (1991). *The evolution of American educational technology*. Englewood, CO: Libraries Unlimited**.**

Sigel, I .E., Saunders, R. (1977). An inquiry into inquiry: Question-asking as an instructional model. ERIC 158871

Stevens, R. (1912). The question as a measure of efficiency in instruction: A critical study of classroom practice. *Teachers College Contributions to Education,. 48*. New York: Teachers College.

Wong, B.Y.L. (1985). Self-questioning instructional research: A review. *Review of Educational Research, 55*(2), 227-268.

Yamada, S. (1913). A study of questioning. *Pedagogical Seminary, 20*, 129-186.

About the Presenter

Dr. Brad Hokanson is a professor in the College of Design at the University of Minnesota and serves as Associate Dean for Research and Outreach. His research focuses on creativity and the use of technology to aid cognition. He also teaches in the areas of interactive media, critical thinking, and creative problem solving. He has a diverse academic record, including degrees in art, architecture, urban design, and received his Ph.D. in Instructional Technology.

Address: 240 McNeal Hall
1985 Buford Avenue
St. Paul, Minnesota, 55108
Email: brad@umn.edu
Phone: 612.624.4918

Creating an International Joint Certificate in IT Administration

Peter Wolcott, Ph.D.
Associate Professor
Department of Information Systems and Quantitative Analysis
College of Information Science & Technology
University of Nebraska at Omaha

Summary

The University of Nebraska at Omaha (UNO) and the University of Agder (UiA), Norway, are collaborating on the creation of an undergraduate certificate in Information Technology Administration. The certificate is designed for students who are interested in managing the complex technical infrastructure of today's organizations. The certificate will consist of approximately 15 credit hours of hands-on courses, covering such areas as systems administration, network administration, database administration, security administration, and distributed systems. All courses will be offered online, using a variety of collaboration tools and teaching techniques that reflect the best of current practice. Students will take courses taught by both UNO and UiA instructors and will have the opportunity to work with students residing in a country other than their own.

The program is currently under development at both universities. Market research indicated that there is high current and future demand for the skill-set offered by the IT administration certificate. However, neither UNO nor UiA has the resources or capabilities of offering the full certificate on its own. By combining their resources, the institutions are able to expand their offerings not only to their own student population, but to those in other countries as well. By being a completely online offering, the certificate is available to students in multiple countries in delivery modes that are flexible and accessible.

The online international collaboration behind this certificate will offer many opportunities for pedagogical research, blending teaching and research to create a learning environment in which students both learn from and participate in teaching and research processes. The courses are intensely technical, requiring hands-on access, often by teams of students, to sophisticated systems. Enabling the access and the real-time staff support that accompanies it is a challenge that must be met. Contemporary technologies of cloud computing, virtualization, and remote collaboration offer opportunities for creative solutions. Administratively, the two institutions have worked through issues of reconciling differences in credit production (student credit hours vs. European Credit Transfer System), course payment, semester schedule reconciliation, time zones, and teacher workloads.

Presenter Bio

Peter Wolcott, Ph.D., is an Associate Professor of Management Information Systems at the University of Nebraska at Omaha. He has long-standing research interests in the international dimensions of information technologies, and has taught database courses in both English and Norwegian at UNO and at the University of Agder. His current research projects are in the areas of IT for development.

Contact Information:
Peter Wolcott, Ph.D.
Associate Professor of Management Information Systems
University of Nebraska at Omaha
1110 S. 67th St.
Omaha, NE 68182
Phone: 402.554.3158
pwolcott@unomaha.edu

Build Engaging Interactive Content

Jeannine Burgess
Coordinator of Instructional Technology
Palm Beach State College

Summary

Today's students expect an engaging interactive learning experience, where students work in groups, research, gather data, and evaluate their results. But then what? How do students apply their findings? Many articles point to students wanting to be engaged and wanting to be an active participant in real-world learning experiences. This is the basis of the David Kolb's "experiential learning" model which is best described as an experiential learning circle that involves concrete experience followed by observation and experience, forming abstract concepts and testing in new situations. (Smith, 2001)

While this session does not allow enough time to cover all four stages in Kolb's model; the session will introduce educational tools which demonstrate a direct practical experience or as in Kolb's terms "apprehension," and those which students have indicated were helpful and applicable within my courses. Besides teaching, I have been involved in discovering new educational technology tools and resources, introducing faculty to available technology that is compatible with their comfort level and yet provides opportunities for them to engage their students with a 21st Century learning experience.

As we all have discovered there is not just one approach that will work for every student and all disciplines. Every set of learners requires searching for a tool or technique that supports the different disciplines and the learning process. This is what makes teaching exciting and creates the need for innovation. Finding the optimal combination of the right tool that helps students learn by addressing their challenges and yet provides the real-life experience needed to engage them. Students can be inspired and encouraged to learn more beyond the dimensions of the course.

After attending this session you may feel comfortable enough to step outside the "box" and incorporate a few of my approaches into your own instruction. You will see tools which I use to design online engagement and learning activities and that provide students with opportunities to experience real-life activities while interacting with their peers.

Reference:

Smith, M. K. "David A. Kolb on experiential learning." 2001. the encyclopedia of informal education. Retrieved May 2011 www.infed.org/b-explrn.htm

Presenter Bio

Jeannine Burgess is employed by Palm Beach State College as Coordinator of Instructional Technology. She currently holds a Master of Science in Computer Systems with a Web Development emphasis and a Bachelor of Science in Business Administration from the University of Wisconsin–Madison.

Contact Information:

Jeannine Burgess
Coordinator of Instructional Technology
Palm Beach State College
4200 Congress Ave.
Lake Worth, FL 33461
Phone: 561.868.3257
burgessj@palmbeachstate.edu

Collaborating with Content Experts: Lessons from Successful and Less-Successful Ventures

Eileen Horn, B.A.
Web Course Developer
School of Veterinary Medicine
University of Wisconsin–Madison

Summary

Working effectively and efficiently with content experts to deliver learning materials in a timely manner can be a real challenge. Like all design team members, content experts or subject matter experts (SMEs) need to have a clear understanding of the project's goals, timeline, and process as well as their expected contributions. Without a doubt, planning and project management help set a design team up for success. During the actual design process it's helpful if an instructional designer can use a variety of tools and techniques to manage the content acquisition and design process. For teams that are working in distributed locations, it is especially important to have effective communications.

While developing over 60 learning objects and numerous online courses and programs, Technology for Learning Center (TLC) writers and designers had to hone the way they collaborated with content experts. This lightening session summarizes the lessons learned by the TLC design team while working on these projects with content experts. The team created planning worksheets and process/timeline documentation to help get the process off to a solid start. Also recognizing that all content experts have different work habits, levels of commitment to the project, and technical skills, the TLC staff came up with some creative ways to acquire content and engage the expert. The tips and tricks in these lessons will help you work more efficiently with content experts and help keep collaborative projects moving.

Presenter Bio

Eileen Horn is the instructional designer for the Technology for Learning Center at UW–Madison's School of Veterinary Medicine. Eileen is particularly fond of her job because she gets to work with (and learn from) content experts in many disciplines. She enjoys problem solving with them and the other design team members to produce high-quality, engaging activities that support teaching and learning. Eileen earned her Certificate in Distance Education from UW–Madison School of Education. Her experiences as a non-traditional, adult learner solidified her belief in learner-centered approaches to design and commitment to producing high-quality, engaging activities that support teaching and learning.

Contact Information:

Eileen Horn, B.A.
Web Course Developer
University of Wisconsin–Madison
School of Veterinary Medicine
1656 Linden Dr, 108 AHABS
Madison, WI 53706
Phone: 608.262.8755
eahorn@wisc.edu

What teachers can learn from Rock Band, Facebook and Angry Birds

David J. Gagnon
Instructional Designer
University of Wisconsin–Madison

Summary

Inspired by the work of James Gee in "What video games have to teach us about learning and literacy," I find new inspiration for educational design by observing what works in contemporary media. Beginning with video games moving through social media and concluding with mobile media, principles of expert instructional techniques are witnessed in popular culture. These observations are not directly dependent on a particular technology but could be used in educational settings of many sorts.

The Rock Band franchise is a fascinating example of what video games have to offer education:

- Imparts the identity of an expert practitioner, including vocabulary, values, and experience, not just the "content"
- Amplifies player input, allowing novices to perform with expert results
- Provides real-time, multi-modal formative, as well as summative feedback in terms of the domain being practiced, in this case music.

Facebook, the current leader in social media has a few attributes that classrooms could adapt as well:

- Rapid ad-hoc organization is supported with simple collaborative communication tools and the ability for all users to be organizers
- Creates an authentic audience of peers for user-produced content, not just the readership of a single authority
- Indexes and curates information in social terms as opposed to topically or keyword-based

Angry Birds leapfrogs many of the ways educators are thinking about mobile learning by designing with the unique affordances of mobile in mind:

- Rewards even small investments of time with measurable progress
- Relates to or provides a lens of intelligibility for the user's physical surroundings
- Provides low-latency answers to questions in context of use

The ways in which we find knowledge, relate with one another, receive feedback for performance, and frame our identity is being influenced by new media as much as the "content" they contain. These popular applications act as signposts to the aware educator, providing a hint as to what is working in the rest of our lives after 'class' has ended. As educational designers, our role is to learn from the successes of these enterprises and design new forms of learning experiences that leverage their reality and creativity.

Presenter Bio

David Gagnon is an instructional designer with the ENGAGE program at UW–Madison where he consults with faculty about innovative teaching practices that leverage emerging media. He is a member of the Games, Learning, and Society Research community where he directs the mobile learning team and ARIS Project. David has a BS in computer science, an MS in curriculum and instruction, and has managed dozens of educational media projects over the last six years, specializing in computer simulation, gaming and mobile media.

Contact Information:
David Gagnon
djgagnon@wisc.edu

Why online students withdraw at MCC: Comparing 2010 to 2001

Leo Hirner
Director, Distance Education
Metropolitan Community College-Kansas City

Summary

The early days of online courses at Metropolitan Community College – Kansas City (MCC) provided a number of challenges. MCC began offering online courses during the Fall 1999 semester, and by 2002 the high withdrawal/drop rate seen in nearly all online classes required investigation. Unfortunately, the institution had stopped collecting this data, so the new Distance Education team developed and delivered the college's first such survey of online students. While some of the results were not surprising, other results did point the team to some previously unidentified training and support needs. In late 2009, the Distance Education unit identified the need for a follow-up study in an effort to both confirm the success of earlier interventions and to see if there were any new concerns not currently being recognized.

The original survey was developed using the original MCC withdrawal survey (since discontinued) and added some new questions regarding factors identified in the literature. After completing a validations study, the survey was delivered to students during the Fall 2003 semester. The original survey was mailed to students over the first five weeks of semester (response forms were coded to identify any possible patterns by week).

A new effort to update MCC's understanding about online student withdrawals was initiated in Spring 2010 with a pilot of a new instrument delivered via an online survey services. The 2010 version of the survey started with the original 2002/2003 instruments questions, and included additional questions regarding the previous experience of students, their satisfaction with online services, and whether they would take online courses in the future. This new survey included an additional section that asked students to rate the importance of each withdrawal factor.

Table of Factors and Frequency

Factors	2003 N = 168	2010 N = 185
Course required too much time	68%	54%
Course required too much work	63%	45%
Lack of Student-Student Interaction	48%	16%
Course schedule is not flexible	37%	28%
Technical Problems	33%	2%
Do not have access to necessary software	30%	2%
Lack of timely communication with instructor	24%	25%

The third most frequent indicator in the 2003 survey (lack of student-student interaction) was a surprise to the Distance Education team. Follow-up interviews with individual students indicated that some courses were designed more along the lines of a correspondence course. Further research in the literature found that interaction was a new and critical factor many other institutions and researchers were beginning to identify. This led to a redesign of the faculty training required for MCC's online faculty, and a new pedagogy built upon student-student and student-faculty interaction became the institutional standard.

The 2010 survey results tended to support the anecdotal evidence that online courses were too hard, required too much time, and were not flexible to individual schedules. There are some indications that not all faculty are following the recommended pedagogy as both lack of timely communication and the

absence of interaction still rate significant frequencies. The open-ended responses did indicate that MCC needed to provide additional information about courses before the start of term, especially the syllabus and course schedule. Plans are in development for a syllabus and calendar pilot by the Spring 2012 term, and the withdrawal survey is now being delivered every semester.

Presenter Bio

Leo Hirner has been leading MCC's Distance Education program since 2000. In that time period MCC has seen enrollment grow from about 200 students to more than 6000 each semester. Before moving to administration, Leo spent ten years as a Physics and Engineering faculty at MCC's Longview campus, where he helped pioneer the teaching and development of TV, online, and hybrid courses. Dr. Hirner received his Ph.D. in Educational Technology at the University of Missouri in 2008, and his research focused on the Quality Measures used to assess online programs in community colleges.

Contact Information:
Leo Hirner
Director, Distance Education
Metropolitan Community College-Kansas City
3201 Southwest Trafficway
Kansas City, MO 64111
Phone: 816.604.4501
leo.hirner@mcckc.edu

Free Online Tools and Applications to Improve Teaching and Learning

Zoaib Mirza
Director of Adler Online
Adler School of Professional Psychology

Introduction

Online technologies have helped individuals with different learning styles to easily learn, engage, and collaborate. That is why, Bloom's Taxonomy (Bloom, 1956) has been revised by a team of cognitive psychologist to reflect relevance to 21st-century work (Anderson & Krathwohl, 2001)—Figure 1 below.

Bloom's Traditional Taxonomy Bloom's Revised Taxonomy

(Source: http://www.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm)

Figure1: Comparison of the Revised Taxonomy With Bloom's Traditional Version

To apply revised taxonomies, it is important that the technologies used in educational settings have the pedagogical framework integrated to produce optimal experience in teaching and learning. Also, keeping in mind how our traditional student population has changed.

". . . 75% of students are nontraditional—they meet one of these criteria: they are older, they work, they are care-givers, they work off-campus, and they are financially on their own" (Josh Jarrett, 2011). Therefore it is important to provide flexible modes of teaching to students.

With the current economy, 44 states anticipate budget shortfalls (McNichol, Oliff, & Johnson, 2011). Therefore, it is evident that not all schools, colleges, and universities can afford to buy online tools and applications. As educators, it is important to be aware of FREE online applications, which can be successfully used in on-campus, blended, and online settings, to improve learning and teaching for faculty and students, and increase productivity in administrative settings.

Vyew

Vyew (http://vyew.com) is a Web-based platform for real-time, rich-media collaboration and meetings. Not many Webinar Websites would claim "Our free version is free forever" (Vyew, 2008). Web conferencing service is available to a maximum of 10 users to share desktops, show slides, collaborate, chat, talk, and broadcast via Webcam. It is browser compatible; has the capability to create 20 meeting rooms; and to use teleconferencing.

Pedagogical Use
Faculty can create Webinar activities to conduct online discussions, promote online student participation, provide remote tutoring sessions to students, provide virtual office hours, and archive explanations of commonly asked questions to allow students to view it at their convenience.

Help Desk and Instructional Design department can use Vyem to provide support to faculty, staff, and students. Troubleshoot a technical problem, attend a group meeting, or work with a course author. Use remote desktop sharing feature, instead of supporting personnel over the phone, to be able to provide better support and training.

PBworks

PBworks (http://pbworks.com/) formally called PBwiki, allows the creation and editing of any number of interlinked web pages via a web browser using a WYSIWYG text editor. It is an exciting way for multiple users to collaborate on documents and ideas. Though there are 100 + wiki tools and resources (Chapman, 2008), PBworks is the largest provider of business wiki (White & Pauxtis, 2010). Educators' free account gives 1 workspace, 100 users, and 2 GB storage.

Pedagogical Use
At the Adler School of Professional Psychology, Moodle is used as a cost effective solution to provide blended and online courses. Wikis within Moodle were found not to be intuitive; therefore after comparing various free wiki products, PBworks was the only wiki, which was user-friendly and easy to use. Apart from the obvious benefits for faculty and students (i.e., using it as an added component to online and blended activities), it was successfully used by the administration to conduct Adler Online strategic planning with 23 members from both Chicago and Vancouver campus.

Although the discussion feature is used to allow participants to work in collaboration to add comments, the managing and sorting of threads can be viewed as a limitation. With easy add-in multimedia capability, it allows students to be more creative in completing their group projects.

Schools without learning management systems can also use PBWorks free course design templates to teach online courses.

Google Sites

Google Sites (http://sites.google.com/) is a drag-and-drop Web development tool to create online information. The Websites created exist within assigned Google Apps domain, which can be public or private, assign permissions to add, change, and contribute information from the main account. A built-in search engine allows the end user to easily locate information. Beyond simply being a WYSIWYG Web editor, Sites makes it easy to integrate data from other Google Apps like Docs, Calendar, Map, Photo, Presentation, Spreadsheet, and Video.

Pedagogical Use
Create your personal Website to store your personal and professional information. For professional impact, you can purchase a domain from a provider and redirect it to your Google Sites, for example www.zoaibmirza.com.

Similarly, institutes can purchase a domain name, and redirect it to the Google Sites, for example Promote Education www.promoteeducation.com. This solution is not completely free, but very cost effective.

Adler School of Professional Psychology recently launched its new Website; it is still a work in progress.

Different departments like Adler Online, Library, Center for Learning and Teaching and Information Technology wanted an immediate solution to upload resources and registration form for faculty and students. A Google Sites account was created and all departments were given access to a designated section within the site to create and upload their content. Information Technology created a domain resources.adler.edu and it was redirect to the Google Sites. To make the site accessible, the reference to the page was made on the Adler home page and menus within Moodle.

Google Analytic option was activated to track information on how the website was used, and how they get there.

Prezi

Prezi (http://prezi.com/) is a web-based presentation application and storytelling tool that uses a single canvas instead of traditional slides with 100 MB of online storage. Create presentation online and download finished Prezis and present offline.

Pedagogical Use
"For PowerPoint haters, Prezi surely offers hope" (Leberecht, 2009). This is surely true for those who want to be more creative, and prefer a non-linear approach in their presentation. Media rich content (videos, graphics, and images) can easily be integrated and presented in Prezi. It can be successfully used as a teaching tool (Hill, 2010) to improve teaching and learning.

MindMesiter

MindMesiter (http://www.mindmeister.com/) is an online mind mapping software. It allows real-time brainstorming, ease of use, ability to work offline, and create up to three mind maps. With the history feature, any changes can be reverted back to the preferred preference. It is also available to Google Apps users for a fee, which shows that it is the most popular mind mapping software that Google thought of using. (Dan, 2010)

Pedagogical Use
Faculty, who plan to create a new course, can use MindMesiter to create a course blue print. Each node could be a module/week/unit and further broken down into sub-nodes to explain activities and assessment.

Students can use it to for individual or group activities to plan for the assignments or manage a project.

Book or chapter summaries can be conducted. Each heading can be a node, and any sub-node would be an idea or summary within it.

Vimeo

Vimeo (http://vimeo.com/) is a video-sharing Website on which users can create (password protected), upload (500MB per week), share, and view videos.

Pedagogical Use
Faculty can create their course orientation and welcome messages, and post it within the learning management system, or send the video link directly to students. They can create mini lectures and post

them for students to be viewed at any time. Create video explanation and tutorials of topics specific to the course to add value especially for visual learners to increase teaching and learning.

Administration can create How-To and FAQ video on various services and archive meetings.

Students can create and post their own reflective videos to allow students a creative outlet and the ability to reflect on their learning and observations. It can encourage critical analysis and evaluation for a deeper and more insightful learning experience.

Microsoft Live@edu

Microsoft Live@edu is an email, communication, and collaboration service that include space of 10 GB mailboxes on the Outlook Live e-mail experience across the desktop, web and mobile devices, 25 GB of free file storage on SkyDrive, document sharing & editing through Office Web Apps, instant messaging, video chat, and with single sign-on.

Pedagogical Use

Adler School of Professional Psychology used MS Office products and to align with the mission to be consistent in our technology solutions, the school's technology strategic plan is to move from Google to Microsoft solutions by 2012. Not only it will help on-campus members, but our online course offering through Moodle will improve because Microsoft developed plug-in for Moodle (Golden, 2009). The Information Technology Department at the Adler School is very excited with this merger because it will help the school reduce cost and provide more services to our faculty and students.

Conclusion

Free online products have limited features and there is no guarantee that it will be free forever. DimDim was recently bought by T-Force, and they have stopped providing free account to users (Borzo, 2011). However, Vyem has clearly specified on their website that their free version will be free forever (Vyem, 2008). With budgets cuts in 44 states (McNichol, Oliff, & Johnson, 2011), it is evident that technology budgets within academics will be affected. Therefore, it is important for educators to continuously look-out for free Web-based solution, which can improve teaching and learning. Many online technologies continue to offer free accounts with limited features for end-users, and for educators, either it is free or discounted.

To effectively use free applications, it is imperative to back-up all electronic content created and saved online – document, spreadsheet, presentation, image or video, to a local drive to avoid any loss of virtual data, especially when a technology solution company is closed or stop any free service.

References

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of educational objectives: Complete edition.* New York, NY: Longman.

Bloom, B. S. (1956). *Taxonomy of educational objectives: Cognitive domain (Vol. 1).* New York, NY: Longman.

Borzo, J. (2011, January 6). *UPDATE: Salesforce.com acquires Dimdim for $31 million*. Retrieved from *The Wall Street Journal*: http://online.wsj.com/article/BT-CO-20110106-14513.html

Dan. (2010, March 10). *MindMeister now available at the new Google Apps Marketplace*. Retrieved from MindMeister Journal: http://www.mindmeister.com/blog/2010/03/10/mindmeister-now-available-at-the-new-google-apps-marketplace/

Chapman, C. (2008, December 31). *100+ more wiki tools and resources*. Retrieved from Mashable: http://mashable.com/2008/12/31/wiki-resources/

Golden, L. M. (2009, July 21). *Microsoft on the issues*. Retrieved from Microsoft Develops Plug-in for Moodle to Aid Teachers, Students: http://blogs.technet.com/b/microsoft_on_the_issues/archive/2009/07/21/microsoft-develops-plug-in-for-moodle-to-aid-teachers-students.aspx

Hill, P. (2010, May 24). *Thoughts on using Prezi as a teaching tool*. Retrieved from Prezi:http://prezi.com/rfsnedhqmhqa/thoughts-on-using-prezi-as-a-teaching-tool/

Josh Jarrett. (2011). *Blended future: Trends reshaping higher education and role of blended learning.* Chicago: SLOAN-C.

Leberecht, T. (2009, August 23). *Power to Prezi!* Retrieved from CNET News: http://news.cnet.com/8301-13641_3-10315737-44.html?tag=mncol;1n

McNichol, E., Oliff, P., & Johnson, N. (2011, March 9). *States continue to feel recession's impact*. Retrieved from Center on Budget and Policy Priorities: http://www.cbpp.org/cms/?fa=view&id=711

Silverman, M. (2010, March 19). *The small business guide to Google apps*. Retrieved from Mashable : http://mashable.com/2010/03/19/small-business-google-apps/

Vyem. (2008). *Vyem*. Retrieved from Vyem: http://vyew.com/s/

White, B. A., & Pauxtis, A. (2010). *Web 2.0 for business: Learning the new tools.* Hoboken: John Wiley & Sons.

About the Presenter

Zoaib Mirza is the Director of Online at Adler School of Professional Psychology, Chicago, Illinois. Apart from being a philanthropist, he has worked in various technology and training positions; authored a variety of technology and management courses taught in K-12, undergraduate and graduate schools, both online and on-campus. He won SLOAN-C Best Practices 2011 award on "Faculty and Support System for Blended Courses". He completed his MA in Applied Professionals Studies, MS in Applied Technologies, and MS in Information Systems from DePaul University, Chicago, Illinois; and Bachelors of Science, Computing, with Honors from Staffordshire University, Stafford, United Kingdom.

Address: Adler School of Professional Psychology
17 North Dearborn,
Chicago, IL 60602
Phone: 312-662-4000
E-mail: zmirza@adler.edu
URL: www.adler.edu

Building Oral Communication Skills across the Curriculum

Stefanie Forster
Faculty Development Coordinator
Academic Affairs
York County Community College

Summary

The ability to communicate clearly in diverse situations is a necessary skill for college graduates and has become an Institutional Learning Outcome for many colleges and Universities. Creating projects that build these skills can be challenging in the online environment where most communication is asynchronous and written. However, as more and more communication takes place on the web, it is important for students to develop skills that will allow them to communicate effectively in an online environment. As online instructors, how can we help students to build oral communication skills for a 21st century working environment?

While some instructors are apprehensive about assigning tasks that appear to require advanced technology skills, an oral-based assignment such as a podcast is a straightforward project that students can create with a voice recorder, cell phone or web cam. These projects can then be posted to the discussion board where others can listen to and comment on the presentation. Students who have created podcasts for a class assignment report that they record their presentation several times until the presentation sounds clear and professional. These students also mention that the podcasts are enjoyable because they could see how this type of presentation would be relevant to the current technological landscape. Because podcasts are versatile, instructors across a range of disciplines can adapt these oral-based assignments for their online courses.

Presenter Bio

Stefanie Forster is the Faculty Development Coordinator at York County Community College and has been teaching English and Communication courses online for the past five years. She runs teaching and learning workshops for classroom and online instructors, provides coaching in online instruction, and assists instructors in learning how to design online courses and web-based learning components for classroom courses.

Contact Information:
Stefanie Forster
Faculty Development Coordinator, Academic Affairs
York County Community College
112 College Drive
Wells, ME 04090
Phone: 207.216.4321
sforster@yccc.edu

Electronic Me: Digital Identity in the Online Classroom

Kurt Hochenauer, Ph.D.
Professor of English
University of Central Oklahoma

Summary

Today's college students and faculty members have their own web-based infospheres, personal tapestries of information they choose to absorb and project. We need to open a conversation aimed at helping college students and faculty members understand the personal, social, and philosophical implications of their constructed infospheres, whether private or public.

That conversation can begin with the philosophical tension expressed publicly between two well-known technologists, Mark Zuckerberg of Facebook and Julian Assange of Wikileaks.

Zuckerberg obviously believes in claiming identity on the Internet while Assange has called Facebook the "most appalling spying machine ever invented." Can these two positions be reconciled or mediated, and how can arguments about the dichotomy help students and faculty understand digital identity and prepare for new technologies?

In *Datacloud: Toward a New Theory of Online Work*, Johndan Johnson-Eilola argues, "There is no core, dispassionate self, but only a network of social and technical forces constructing the I as an ongoing, contingent process, a useful fiction."

Another scholar describes digital identity as "play." In *The Virtual Self: A Contemporary Sociology*, Ben Agger writes, ". . . One of the characteristics of post-modernity...is the sense that identity is in play, permitting selves many daily opportunities to remake themselves in the images they acquire through their electronic involvements."

If the electronic me is a contingent process or in play, as Johnson-Eilola and Agger argue, then how does that help us construct useful private and public spheres of social and professional engagement? Is "play" a way to mediate the Zuckerberg and Assange debate? Where will the next playgrounds of digital identity get constructed?

Presenter Bio

Kurt Hochenauer, Ph.D., is an English professor at the University of Central Oklahoma and the author of the Okie Funk blog. He teaches online courses and has given three presentations and a workshop related to distance learning education at MERLOT conferences.

Contact Information:
Kurt Hochenauer, Ph.D.
Professor of English
University of Central Oklahoma
English Department/Box 184
100 N. University Drive
Edmond, OK 73034-5209
khochenauer@uco.edu

Advantages of Inviting Embedded Librarians into Distance Education Classes

Jim Frutchey
Research Librarian
Learning Resource Center
Marywood University

Summary

As the popularity of distance education continues to grow, it is vital to obtain the assistance of a knowledgeable librarian in order to enhance the virtual classroom experience. Realizing the potential benefits of enlisting the semester-long assistance of an embedded librarian stands to greatly improve the educational experience of all involved.

An embedded librarian is a fully engaged participant in a distance education course. He or she is therefore privy to all of the course contents including the syllabus, lesson material, and discussion threads. Therefore, a savvy librarian will be able to anticipate research needs for upcoming projects and knowledgeably and quickly respond to student inquiries. In assisting the students, the embedded librarian can offer electronic pathfinders to needed research material, and depending on the needs of the class and the areas of expertise of the librarian, the librarian may also provide enhanced class content from the collections of the home library and from the Internet. These audio and visual enhancements can be made readily available from the site of the virtual classroom by the librarian. A synergistic relationship between students, classroom faculty, and librarians is a distinct possibility when embedded librarians are utilized in distance education classes.

Presenter Bio

Jim Frutchey has been a research librarian at Marywood University in Scranton, Pennsylvania since 2007 and an academic librarian since 2003. Jim assists library patrons with their research needs on a daily basis in a variety of formats including in-person, email, and chat, and he utilizes input from the professors of the classes he works with to enhance the academic experience of on-campus and distance learners in a variety of ways.

Contact Information:
Jim Frutchey
Marywood University
2300 Adams Ave.
Scranton, PA 18509
Phone: 570.348.6211, x2172
frutchey@maryu.marywood.edu

Bloom's Taxonomy in the Digital Age: An Instructional Planning Tool

Emily Hixon, Ph.D.
Assistant Professor of Education
Faculty Instructional Design Consultant
Purdue University Calumet

Summary

The key to effective instructional uses of technology is to ensure that the use of technology is aligned with learning objectives and assessment strategies. Instructional planning then should begin with the identification of instructional learning objectives, not the discovery of a cool new technology. Identifying the level of thought required for a learning objective can help instructors develop appropriate learning activities and assessment strategies, thereby ensuring instructional alignment. In this regard, Bloom's taxonomy offers a viable blueprint for planning multi-dimensional instructional activities.

In this session, the presenter will show how Bloom's taxonomy can be used as a framework for realizing and articulating the educational potential of emerging technologies. The presenter will share a simple and colorful visual aid which aligns the levels of Bloom's taxonomy with action verbs, student products, and technology tools. A key use for this tool has been sharing it with faculty who are developing online or hybrid courses. Faculty appreciate the simplicity of the tool and find that it sparks instructional ideas and helps ensure they are using appropriate and effective technology tools to accomplish their instructional goals.

Presenter Bio

Emily Hixon, Ph.D. is an Assistant Professor of Educational Psychology and Instructional Technology and the Faculty Instructional Design Consultant at Purdue University Calumet. Through her work in the field of faculty development and enhancement, she has worked to help faculty effectively integrate technology into their teaching and develop high-quality distance education courses. Her research interests focus on effective technology integration in both K-12 and higher education environments, as well as exploring the unique challenges and opportunities that "traditional" faculty face when they enter the world of online education.

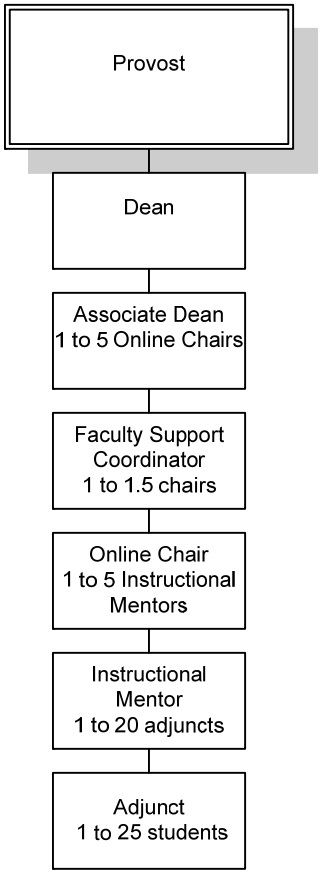
Contact Information:
Emily Hixon, Ph.D.
Purdue University Calumet
School of Education
2200 169th St.
Hammond, IN 46323
Phone: 219.989.2150
hixone@purduecal.edu

Online Faculty Staffing Model

Dr. David Nemitz
Director, Center for the Advancement of Faculty Excellence
Liberty University

Summary

Meaningful engagement and retention of adjunct faculty for online programs is an essential element to the overall success. Designing an oversight model that is lean and yet effective is crucial for any university. Each university has standards of accountability for the adjunct faculty serving in their online programs. One understands that it is not what is expected but what is inspected that really gets done. How does a university provide reasonable oversight for its online adjuncts? The presentation will convey an administrative staffing model that helps provide reasonable and effective trigger points for online programs and that helps define an administrative structure to provide efficient oversight of online adjunct faculty.



- Structure provides encouragement and accountability. Adjuncts understand they are being reviewed for procedural aspects of the online course setup, communication, and depth of feedback to students.
- Structure is enhanced by centralized communication centers where collaboration can occur between groups of Online Faculty, Instructional Mentors, Online Chairs, Faculty Support Coordinators and Associate Deans
- Structure also allows for clear paths for grade appeals from students
- Structure provides connections for University wide assessment collection in several areas including curricular, student achievement and faculty performance

Contact Information:
David Nemitz
Director, Center for the Advancement of Faculty Excellence
Liberty University-North Campus
1971 University Blvd., Suite 2725
Lynchburg, VA 24502
Phone: 434.592.7069
ddnemitz@liberty.edu

Cloud-Computing to Support Your Professional Online Life

Kathryn Ley, PhD
Associate Professor
University of Houston–Clear Lake

Summary

How can an online instructor or developer retrieve important course and other professional information from most any location – without stopping to find it or download it? The short answer is cloud computing, a solution to the mobile and multi-hardware/software platform user's perennial problem – retrieving information from a one device while one is working on another. Each work-around for this persistent and intractable problem has its own problems. If one chooses to transfer files on a flash drive, one has to download files to the drive, remember to take the drive, and then import the files on the second machine. A far more efficient system is to use a cloud-based information and media storage and management system with a web portal and apps for almost every OS platform. Evernote exemplifies the best in a cloud-based, storage system that allows a user Internet access from any smart phone, iPad, or computer. Best of all, entry level 60MB storage and 25MB note limit is free.

Evernote cloud storage is an online instructor's efficiency office. Evernote enables one to capture all or part of screen or a browser window, record an audio note, take a picture and store each in a tagged note in one convenient cloud location easily accessible from the user's smartphone, desktop laptop, or ipad. With Evernote and the internet an instructor can quickly access information with almost any internet-enabled device. The same information can be copied, pasted, and edited with a few clicks to any other application – email, document, or web browse. An instructor can store text template with common student communications responses or feedback for courses; enrollments, assignment lists, etc.

Evernote enables a professional to easily and efficiently coordinate a professional's conferences & meeting information. With a couple of clicks, the busy professional can record, tag, file, store, retrieve, print or email hotel reservations, plane itinerary, car rental reservations, even vehicle mileage from her laptop, smartphone, desktop, or any web browser. For example Evernote has one click screen capture for the busy professional to clip and save an online plane, hotel, or car rental reservation. It takes as few as four screen taps on a smart phone to record and store a picture (e.g., valet parking receipt) in an Evernote record in a folder named for the conference. One can record a brief audio note about the conference if typing not possible or feasible. Any Evernote, can be emailed to any email address with a click – from your default email client. This is a professional's Swiss army knife of electronic productivity apps – the author has saved countless hours searching, downloading, and accessing information to support her teaching, service, and research.

Presenter Bio

Kathryn Ley holds a PhD in instructional design and has published over 30 articles including research on online learning and self-regulation. She has presented at more than 57 national/international professional conferences during 20 years of graduate teaching including a decade of online distance education courses.

Contact Information:
Kathryn Ley, PhD
18036 Bal Harbour Dr.
Houston TX 77058-4308
Office Phone: 281.283.3585
Home Office Phone: 281.335.5201
ley@uhcl.edu

Videoshare Sessions

Putting the student in SOLE charge of their learning

Simon Paul Atkinson
Educational Developer
London School of Economics and Political Science, UK

Summary

This VideoShare session profiles a learning design model and associated toolkit that fulfils the need for learner centeredness, here defined as student-owned, and a holistic approach to learning with the stress of engagement. The Student-Owned Learning-Engagement (SOLE) model embeds and embodies contemporary learning theories in a practical visual representation. It is a model that implicitly requires academic staff to design learning that takes account of best practice in student-centred learning.

Learning that is designed with the student at its centre develops appropriate pedagogy, follows an appropriate process, and adopts an appropriate model of education that makes maximum use of students' motivations and engagement. Each course design, each member of faculty, needs the skills to profile, identify, empathise with each subsequent cohort. Each course must be responsive, appropriate, and supportive of cohorts' emerging and evolving modes of learning.

The danger of adopting a technology focused redesign of learning is that teacher focused practices are simply remodelled through technology without the necessary shift towards a learner centred epistemology. Existing frameworks for learning design (see related Information Session) suggest that learning content and process should be transparent to the learner, and that learning is distributed between the individual and the tools at their disposal. The SOLE model's stated aims therefore are to;

- embed pedagogical guidance and learning theory within an accessible and transparent model shared by students and teachers;
- embody best practices regarding constructive alignment (after Biggs & Tang)inside a learning design model easily accessible to, and shared by, staff and students;
- produce a practical model that 'captured' the lessons to be learnt from Laurillard's representations of conversational learning processes, (after Laurillard) whilst taking an inclusive approach to alternative conceptualisations of learning;
- enable the development of a practical toolkit that would make patterns of learning design shareable and transparent to students and colleagues.

The model is accompanied by an Excel toolkit that provides further opportunities for professional development supporting the individual teacher, and ultimately the student, to work 'within' a learning design. The student can identify expected learning-engagements, feeding back to faculty who can adjust the balance of engagement through the development process, describing (as an advanced organiser) what the learning might look like.

Presenter Biography

Simon Paul Atkinson has served in continuing education roles with Exeter University (UK) and Victoria University (New Zealand), in faculty development for distance education roles with the Open University (UK) and Massey University (New Zealand) and in Learning Development leadership roles such as with the University of Hull. He writes, teaches and presents on learning design for emerging digitally enabled university contexts and is currently the module leader at the LSE for their 'Course Development and Design' accredited faculty programme.

Contact Information:
Simon Paul Atkinson
Educational Developer
London School of Economics and Political Science
London, WC2A 2AE, United Kingdom
spa@sijen.com
http://www.solemodel.org

Video objects: Providing connectedness in an online course

Suguna Chundur
Assistant Professor
University of Cincinnati-Clermont College

Summary

A key element in an online environment is building a community of learners. This is best achieved by fostering a sense of connectedness, collaboration, and interaction between participants. Technology makes it possible for us to bridge the physical gap between participants. This presentation covers a simple video tool used to provide connectedness in an online class.

The distance learning format has come to stay due to various reasons, most importantly access, cost, and flexibility. In this scenario, it is incumbent on educators to engage in the pedagogical issues surrounding online education in order to provide the best possible learning experience for students. The Community of Inquiry Model (Garrison et al., 2000) stresses not just teaching but social and cognitive presence to help instructors and students build a learning community based on "epistemic engagement." Building on the CoI Model, Bidjerano, T., & Shea, P. (2008) include a framework that incorporates epistemic engagement and "cognitive presence" in fostering learning and engaging participants. These form the basis to include multimedia in engaging ways in my classes by building a social presence in the online environment.

The explosion of online education is mainly due to technological advances in the information age. Multimedia tools such as podcasting, vodcasting, and other Web 2.0 tools that create a more interactive online environment, go a long way in providing a more engaging environment for the online learner. I will demonstrate my use of an online video tool called "eyejot" in order to provide connectedness and a social and cognitive touch in my communications with students in an online course. I will also draw a comparison between a course taught using audio objects and the same course using "eyejot." Though "eyejot" is only one of many tools available on the web, I will demonstrate how to create and send videos using this tool and share student perceptions of how these tools contributed to their learning experience.

References

Garrison et al., (2000) Critical inquiry in a text-based environment: Computer conferencing in higher education, *The Internet and Higher Education* **2**(2000), pp. 1–19.

Bidjerano, T., & Shea, P. (2008). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers & Education, 52*(3), 543-553. doi:10.1016/j.compedu.2008.10.007

Presenter Bio

Suguna Chundur has over eight years of teaching experience in technology, programming, databases, and software engineering courses. She has been very active in online and distance education for the past four years. Her main interests are in digital literacy, the pedagogy of online teaching and learning, use of Web 2.0, multimedia, podcasting, and video learning objects.

Contact Information:

Suguna Chundur
Assistant Professor
University of Cincinnati-Clermont College
4200 Clermont College Drive, McDonough Hall
Batavia, Ohio 45103
Phone: 513.558.7401
suguna.chundur@uc.edu

MyWritingLab: Accelerating Remediation for Adult Learners

Michael R. Mendenhall
Assistant Director, Special Projects
School of Liberal Arts
Indiana Wesleyan University

Summary

When adult learners begin or return to college, many quickly discover a significant gap in basic writing skills. This gap is exacerbated with accelerated online and on-site delivery modes for many adult degree programs. As students balance the existing demands of family responsibilities and career goals with the new addition of school requirements, the ability to produce college level written communication is problematic within the brief context of 5-week English courses. Within the elements of the writing process, the most challenging element is the mastery of basic grammar skills. The challenge before curriculum writers and course designers is providing remediation resources for students that facilitate progressive improvement in writing skills over a short period of time.

MyWritingLab, developed by Pearson Education, is an online learning system that provides better writing practice through diagnostic assessment and progressive exercises to move students from literal comprehension to critical thinking and writing. The utilization of MyWritingLab in conjunction with Blackboard, the primary learning management system used at Indiana Wesleyan University, allows students to experience progressive writing skill development without the stigma of remediation. Faculty members are able to focus on providing essay writing feedback without the time intensive instruction and grading inherent to grammar. Initial assessment data reveal student grammar skills improve, on average, by 19-20 points when compared against diagnostic pre-test scores.

Presenter Bio

Michael R. Mendenhall, MSM, is the Assistant Director, Special Projects, in the College of Adult and Professional Studies, School of Liberal Arts, at Indiana Wesleyan University. He administers the development of remediation resources for online and on-site platforms, trains faculty and students on the use of Blackboard, develops curriculum in the fields of English and Communication, and collaboratively designs web content, social media sites, video, and print material for an annual regional scholarship conference.

Contact Information:
Michael R. Mendenhall, MSM
Indiana Wesleyan University
1900 W. 50th Street
Marion, IN 46953
Phone: 317.374.8886
mike.mendenhall@indwes.edu

Performing a Virtual Science Lab

Don Bickley, B.S.
Information Technology & Immersive Education Designer
Prince William Sound Community College

Summary

Prince William Sound Community College (PWSCC) serves an area of Alaskan Bush equivalent to the size of the state of Ohio. Our rural outreach sites, some of which are only accessible by plane or boat, provide opportunities to address the challenges we face as a distance education institution. Advances in technology have allowed more and more people to take classes online and PWSCC utilizes E-live and video conferencing on a daily basis. Reproducing the kinetic, tactile learning of a hands-on lab environment, however, is a fundamental challenge for measuring the ultimate potential of immersive education. Virtualized science lab software exists, but many of these programs are individual installations that provide a progress report to the instructor once a lab is completed at the student's own pace and time. As a community college, PWSCC believes that one of the most valuable aspects of education revolves around the interpersonal and professional connections our students make with their instructor, each other, and the world around them. This philosophy guided our institution in exploring and developing an accessible and persistent interactive lab environment.

As an Alaska Native Serving Institution (ANSI), PWSCC was awarded a Title III grant and applied a portion of the monies to develop and maintain a virtual science lab. The potential of Second Life as a sandbox platform enabled the college to create a realistic lab environment where forces such as time and chemical reactions are manipulated with the click of a mouse. Labs that could take 24 hours or more, such as gel electrophoresis, can be done in a two hour sitting; wait times can be creatively enforced only to the degree in which they help convey the idea that, in the real world, science takes time, while allowing the student to maintain their interest and focus in what they are observing. Being a simulated environment, each touch can be tracked to analyze the usability of a method or item per individual. Local control of the lab environment enables the college to implement features and deploy updates as needed.

Presenter Bio

Don Bickley, B.S., is the Immersive Education Designer for Prince William Sound Community College in Valdez, Alaska. He develops, promotes, and maintains all aspects of the college's immersive education initiative to ensure that the online classroom meets the needs of a diverse student population in accordance with the college's standards for academic excellence and integrity.

Contact Information:
Don Bickley
Prince William Sound Community College
303 Lowe St.
Valdez, AK 99686
907-834-1646
dbickley@pwscc.edu

Increasing Engagement through Narrative and Choice in an Online Course

Jon Friskics, Instructor of Digital Media

Robb Lindgren, Assistant Professor of Digital Media

Rudy McDaniel, Associate Professor of Digital Media

School of Visual Arts and Design
University of Central Florida

Summary

In this presentation we describe a new online course platform that uses narrative and student choice to build students' skills using and creating emerging media technologies. The "Adventures in Emerging Media" (AEM) course structure allows students to take a personalized, non-linear path through the learning content. It is a strategy that has been implemented previously in industry training, but has had little application in undergraduate education. The course also employs a pervasive storyline—pursuing one's dream job with the eccentric billionaire CEO of a fictional conglomerate—designed to motivate students to build their competencies toward a desired career path.

We will present a video that will show the audience several aspects of our project including story animations, sample video content from the learning modules, and interviews with course designers and students who took the course in the Fall 2010 semester.

The remainder of the presentation will focus on data that was collected on the effectiveness of our platform for increasing student learning and engagement. The evaluation included an extensive 3-part survey that was administered to the approximately 100 students who took the AEM course and a modified version of the survey administered to 3 other large online courses taught in different departments during the same semester. AEM Students reported higher confidence in 15 of 17 skill areas (e.g., using social media, designing with new media platforms such as mobile and VR technologies, etc.) at the end of the course relative to the beginning. Compared to the other courses surveyed, AEM students reported a stronger belief that the course affected their career goals. AEM students also reported that the course involved less memorization and more analysis and application than the comparison courses. Additional analysis will be presented on student learning artifacts, such as a comparison of pre and post digital media creations that students made for the course. Finally, excerpts of student feedback from course evaluations and a brief summary of a post-course focus group will be included.

Presenter Bios

Jon Friskics is an instructor with expertise in mobile application development and sound design.

Robb Lindgren is a researcher interested in the design of learning technologies, immersive environments allowing for embodied interaction, and new methods of assessing instructional technologies.

Rudy McDaniel is a researcher interested in interactive narrative, video games, and Internet technologies. He is co-author of *The Rhetorical Nature of XML* (Routledge, 2009).

Contact Information:
Jon Friskics
University of Central Florida
12461 Research Parkway Suite 500, Orlando, FL 32826-3121
Phone: 407.823.0092
jon@ucf.edu

Educational Authoring: A Conceptual Framework

John M. Muehl
Associate Professor School of Education
Argosy University

Introduction

The digital age is in full swing: 93% of American teens age 12-17 are online (Pew Internet & American Life Project, 2010). Facebook has over 500 million Active Users (Facebook, 2011). Google is number 117 on the Fortune 500 list and it gives away most of its services for free (Fortune, 2009). Today there are 130,957,338 registered domain names (Domain Tools, 2011). "YouTube exceeds 2 billion views a day" (YouTube, 2010). Businesses are investing in E-Commerce full utilizing digital services to bring in new and continued customers. Media outlets are selling their wares online. An end user can get television shows, commercials, movies, books, magazines, and newspapers at the swipe of a finger or click of a mouse. Full color imagery, full motion high definition video, and interactive games are ubiquitous. This level of participation in the digital world means that more than ever, good content is in demand.

The world of education has made inroads into this digital age. "Over 4.6 million students were taking at least one online course during the fall 2008 term" (Allen & Seaman, 2010, p. 1). The advent of online education has taken the world by storm. Colleges and Universities have elaborate web sites and portals for the faculty, staff, and students. Students can log in, select classes, register, and pay their tuition online. They can get grades and order transcripts. Yet, if you walk through the education department at a traditional campus, most classrooms still have traditional seating. The instructor may have a computer and a projector with a power point presentation. Some students may have a laptop in front of them, but it is usually a personal computer. Students are still using these computers to turn in the traditional double spaced black and white style guide perfection papers of ages past. Learning is still based heavily on textual information.

Publish or Perish

As shown in Figure 1, the traditional educational publishing framework, learning is grounded in curriculum, faculty, and information. Faculty lead students to literacy through interaction with information and the curriculum. The concentric circles represent the institution. Traditionally, learning is constructed around access to information. Until recently, the brick and mortar library was the center of information access and text was the main source of literacy. Literacy was and still is defined as the "ability to read and write." When one becomes educated or literate, the world of publishing and public discourse opens up to the individual through the process of peer review. Peer review self regulates the assurance of scholarship, fluency, and ethics. However, the world of academic publishing is on the edge of public discourse with access still external to the institution of education. Educational publishing is discourse for the academic elite.

Many traditionalists may argue that this is still the best way to learn. That writing in this style forces the student to stay focused on the critical thinking demanded by the writing process. Being forced to work within specific guidelines is getting them ready for the working world they will live in when school is over. One cannot deny the importance of traditional reading and writing. One should be educated to participate meaningfully in public discourse. At the same time, if we don't teach our students how to "author" in the digital age, they won't be ready for the world. In education, we are backing into a digital age that is rapidly moving forward.

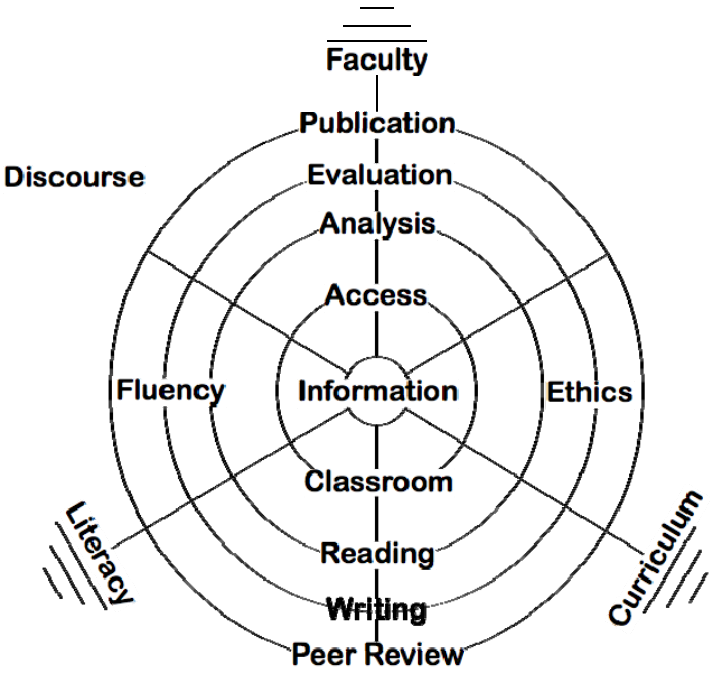


Figure 1: Traditional Framework of Educational Publishing

Author or Expire

The traditional learning model needs restructuring. The Internet has made information readily available to the masses. One does not have to have any education at all to access, read, and publish material to the Internet as shown in Figure 2 or the Access, Analysis, Creation, Evaluation (AACE) framework. While learning is still grounded in the curriculum, faculty, and literacy, educators need to change focus from a text based to a media based publishing framework. So much of the desired information on the web is presented in formats other than text. Consumer level cameras, microphones, computers, software, and a little time are all it takes to self publish to the Internet.

Access to information, public discourse and publishing are external to the institution yet still connected as represented by the nodes coming from within the institution as seen in Figure 2. Publishing to the Internet does not require peer review. As a result, scholarship, fluency, and ethics are often absent in web media. Anybody, educated or not, can post content on the web in the form of hypertext, graphics, audio, video, and simulations. This creates some serious questions for educators and society as a whole.

- What are the true definitions of literacy and fluency?
- When should we come to terms with the fact that we are no longer a text-based society?
- Why does one need an education at all if it's not required to publish globally?
- How can education significantly and positively impact the world of self-publishing?

The answer still lies in the tradition of education: curriculum, faculty, and literacy. The answer is a change in thought from literacy as "reading and writing" to literacy as "exploration and media authoring."

The digital age is screaming for new, relevant, useful, and entertaining content. "We so rely on media to keep us informed and entertained that it only makes sense to use media to enhance instruction, create interactivity, and build community among learners" (Chapman, 2009). At the same time, useful and

relevant information is a small portion of web content. “Viewing and visually representing literature are important vehicles for sharing information today, and people need to extend their ways of communicating through technology by learning how to visually construct meaning, to join a global society” (Seo, Pellegrino, & Templeton, 2008, p. 260).

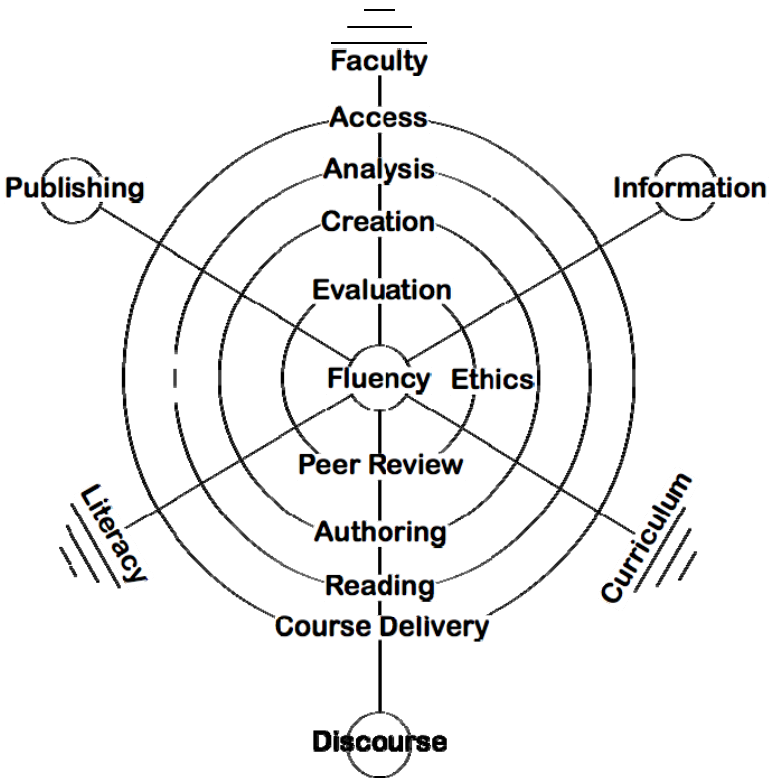


Figure 2: AACE Framework of Educational Publishing

Instead of writing for education journals with small circulation and concentrated subject matter, we should be training our students to publish useful content on the Web and how to provide and participate in open peer review. “The point is that while the need for wise people to discuss, define, compare, and evaluate perspectives is not changing, the means by which they do so and the quality of their efforts are growing more sophisticated because of digital technology” (Prensky, 2009). A powerful approach to make this happen is multimedia-assisted, project-based learning (Seo, Pellegrino, & Templeton, 2008, p. 260).

Authoring is critical literacy. Authoring is not about changing what we teach; it’s about how we teach. Every student should have an up to speed digital authoring and publishing tool kit. This consists of a laptop computer, a smart phone, a digital video/still camera, video and photo editing software, graphics software, Internet authoring software, backup storage device, and sufficient web space to publish content. The website becomes a portal and portfolio of knowledge for each individual student. The instructor visits the website to gauge and assess student progress. In the process of learning, the student becomes an elite relevant, fluent, and ethical media author and self-publisher who positively contributes to the public discourse.

References

Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009.*Babson Survey Research Group. Babson Survey Research Group.

Chapman, C. (2009, Fall). Faculty can design media-rich online courses: User-friendly authoring tools and online resources can help. *Community College Week*, 14-14.

Domain Tools. (2011). *Domain counts & Internet statistics.* Retrieved from domaintools.com: http://www.domaintools.com/internet-statistics/

Facebook. (2011). *Pressroom.* Retrieved from Facebook: http://www.facebook.com/press/info.php?statistics

Fortune. (2009, May 4). *Our annual ranking of America's largest corporations.* Retrieved from CNNMoney.com: http://money.cnn.com/magazines/fortune/fortune500/2009/snapshots/11207.html

Pew Internet & American Life Project. (2010, September 10). *Updated: Change in Internet access by age group, 2000-2010* . Retrieved from Pew Research Center's Internet & American Life Project : http://www.pewinternet.org/Infographics/2010/Internet-acess-by-agegroup-over-time-Update.aspx

Prensky, M. (2009). H. sapiens digital: From digital immigrants and digital natives to digital wisdom. *Innovate , 5*(3). The Fischler School of Education and Human Services at Nova Southeastern University. Retrieved, from http://www.innovateonline.info/index.php?view=article&id=705.

Seo, K. K., Pellegrino, D., & Templeton, R. C. (2008, Summer). Creating a ripple effect: Incorporating multimedia-assisted project-based learning in teacher education. *Theory Into Practice , 47*(3), 259-265.

YouTube. (2010, May 10). *Timeline.* Retrieved from YouTube: http://www.youtube.com/t/press_timeline

About the Presenter

Dr. John Muehl is a Navy veteran who has sailed the seven seas, visited many countries around the world, and developed a true respect for diverse cultures. Dr. Muehl has been working in distance education since 1989 starting out as a producer director for the televised delivery of higher education courses. He has worked for public and private colleges teaching Educational Leadership, Instructional Technology, Digital Filmmaking, Media Arts and Animation and Game Art and Design in on-ground, blended, and online formats. He has developed curriculum for all delivery formats. His research passion is the integration of media arts into the classroom.

Address: School of Education
Argosy University
1403 N. Howard Ave.
Tampa, FL 33607
Email: jmuehl@argosy.edu
Phone: 813-463-7196

How Do I Easily Create a Graphic Syllabus?

Robin M. Smith, Ph.D.
Coordinator of eLearning
University of Arkansas for Medical Sciences

Summary

One of the major differences between novices and experts is that novices do not understand the scaffolding of content in a subject. Therefore novices neither are able to easily store and retrieve these new concepts nor easily relate them to their current knowledge. As experts, faculty can help expedite student ability to comprehend and make use of new information by providing an overview of the topic. Shapes and images are processed more efficiently than words, therefore providing this overview in a graphic format can allow for comprehension of the subject as a whole even prior to the knowledge of details. Use of a Graphic Syllabus is an efficient means of accommodating these needs. This VideoShare session will demonstrate an easy method of creating a Graphic Syllabus with tools you already use (MSWord or PPT). Attend to learn how to incorporate this low investment/high yield resource for your courses.

Presenter Bio

Robin M. Smith, Ph.D., Coordinator of eLearning at University of Arkansas for Medical Sciences, has designed thousands of online courses, served as instructional design consultant on numerous federal grants and contracts, and serves as a consultant for development and implementation of eLearning Programs. Her passion is providing faculty with simple and efficient methods for developing online courses so that students may experience the many benefits of eLearning. She is the author of *Conquering the Content: A Step-by-Step Guide to Online Course Design.*

Contact Information:
Robin M. Smith, Ph.D.
Coordinator of eLearning, OED
University of Arkansas for Medical Sciences
4301 W. Markham St. #595
Little Rock, AR 72205
Phone: 501.686.7052
smithrobinm@uams.edu

Developing High-Quality Online Courses: A Model that Works!

Emily Hixon, Ph.D.
Assistant Professor of Education
Faculty Instructional Design Consultant
Purdue University Calumet

Summary

It is generally accepted that teaching online is a different experience than teaching face-to-face, requiring new skills and techniques. Research suggests that faculty may struggle with learning the necessary technology skills, adapting their pedagogic strategies for the online environment, adjusting to the more learner-centered focus inherent in online courses, conceptualizing their course for the new environment, and finding the increased time required to develop their online course. To address these unique challenges related to teaching in the online environment, many institutions have developed programs to support and assist faculty during the course development process.

A video describes the Digital Learning Faculty Certificate program and explains how it is being used at one institution to ensure the academic integrity of online, hybrid, and technology-enhanced courses. The program's use of the Quality Matters rubric and highly qualified mentors is also discussed. The video includes testimonials from program participants that provide a glimpse into the faculty experience and the impact the program has on participants. The video also highlights some of the research projects that have evolved from the program, including studies investigating factors responsible for the model's success and the broader impact of participation on faculty members' pedagogical beliefs.

Presenter Bio

Emily Hixon, Ph.D. is an Assistant Professor of Educational Psychology and Instructional Technology and the Faculty Instructional Design Consultant at Purdue University Calumet. Through her work in the field of faculty development and enhancement, she has worked to help faculty effectively integrate technology into their teaching and develop high-quality distance education courses. Her research interests focus on effective technology integration in both K-12 and higher education environments, as well as exploring the unique challenges and opportunities that "traditional" faculty face when they enter the world of online education.

Contact Information:
Emily Hixon, Ph.D.
Purdue University Calumet
2200 169th St.
Hammond, IN 46323
Phone: 219.989.2150
hixone@purduecal.edu

Creating Instructor Presence in an Online Course

Sharon Stoerger
Instructional Design Consultant
University of Wisconsin–Milwaukee

Introduction

In online courses, teaching and learning can happen anytime and anywhere. This may create greater learning independence, but the technology itself is not a replacement for the teacher. In an online course, the primary mode of communication is often asynchronous and text-based. The lack of physical cues associated with lean communication media (e.g., Daft & Lengel, 1986) used in many online environments can lead to misunderstandings and feelings of isolation. Feeling comfortable communicating in an online environment and perceiving members of the class as "real" are other factors that may impact participation in an online learning community (Kear, 2010).

Garrison, Anderson, and Archer (2000) are examples of education scholars who emphasize the importance of teaching presence and its role in designing effective learning environments. For online courses, there is typically no opportunity for face-to-face interaction among the students and the instructor. While this design is convenient for the students and offers opportunities for reflection, it can pose challenges in developing effective teacher presence. This work investigates an instructor's use of rich media, in particular video content, to create a sense of presence in a fully online course.

Presence and Online Instruction

The research suggests that social presence is an important concept in online learning (e.g., Gunawardena & Zittle, 1996). While scholars claim that a sense of social presence is key for instructional effectiveness (Tu, 2002), a single commonly accepted definition of this complex concept is lacking (Kehrwald, 2008). Nonetheless, the work by Short, Williams, and Christie (1976) is frequently cited in discussions related to social presence. According to the work of these authors, the lack of cues may impact a communicator's awareness of an interaction partner. Stated another way, Short et al. believed that the media was an important influence on social presence.

In today's technology-rich environment, many media compete for our attention. Because the theory developed by Short et al. (1976) was constructed prior to the wide-spread adoption of the Internet, involves a complex set of variables, and is not rooted in the context of online learning, some educational scholars argue that it fails clarify the concept of social presence (Tu, 2002). Further, the research on presence came out of a diverse set of disciplines (e.g., cognitive science, communication, computer science, engineering, philosophy, psychology), which serves to further fragment its importance (Lombard & Ditton, 1997). Some scholars also suggest that the fewer number of media choices, the closer the communicators may feel toward one another (Korzenny, 1978). However, empirical studies have failed to support this idea (Korzenny & Bauer, 1981).

While individuals are exposed to an almost constant stream of media, Goffman (1974) recognized that attention impacts the ability to perceive an experience as "real." One aspect that is emphasized in many definitions of social presence conveyed via computer-mediated communication (CMC) tools is the notion that the user's perception of the mediated experience is in fact not mediated; rather, users are provided with the illusion that the experience is "natural, immediate, direct, and real" (Lombard & Ditton, 1997, n.p.). Stated another way, the technology becomes transparent to the point that the users no longer perceive the medium and its existence in the learning process. Or as Lee (2004) suggested, a sense of presence is established when the virtual nature of the experience is no longer recognized. Rourke et al.

(2001) added to these definitions by noting that with an increased sense of presence, learners are able to project their personal characteristics into the community of inquiry, thereby presenting themselves as "real people" (see also Garrison, Anderson, & Archer, 2003).

Based on Fontaine's (2002) assessment of the research, both individual and group learning and performance improve when there is a greater sense of presence (see also Garrison, Anderson, and Archer, 2000). Picciano (2002) agrees and contends that there is "a definite, consistent and strong relationship among student perceptions of interaction, social presence, and learning" (p. 30). In addition to transactional distance, social equality, small group activities, group facilitation, teaching style and learning stage, and community size, social presence has been identified as a factor that contributes to sense of community (Rovai, 2002). Because of the complexity of the presence concept, as well as the lack of consensus on its definition, more research is needed to understand the importance of presence, particularly in online and blended courses.

This Study

Kehrwald (2008), who conducted studies of social presence in online courses, noted that research on social presence beyond solely text-based media was important. In his study, the respondents indicated that information such as personal histories, personalities, and current circumstances contributed to social presence. The combination of these variables enabled the instructor to become real and present in these discussions. This idea served to guide the design and use of video described in this paper.

For the purpose of this study, video content was created for a fully online course. The majority of the students in this course were at the graduate level. Four types of videos were created by the instructor: (a) a personal introduction; (b) modular introductions; (c) video check-ins; and (d) modular "cool tools" introductions. The personal introduction was designed to set the tone for the course and to help students connect with the instructor. In this course, there were seven modules that were introduced via videos, as well. The purpose of these videos was to introduce the readings to the students, highlight key concepts, and present questions for the students to think about as the class moved into the discussions. Another type of video created for this course was a video check-in. While the focus of these videos was less on the content of the module, they provided the instructor the opportunity to clarify misunderstandings, address questions that surfaced during the week, and present related materials that could supplement students' understanding. The function of the video check-ins was to enable the instructor to maintain a connection with students as they moved through the multi-week modules.

One of the assignments associated with each module involved a "cool tools" presentation. For each of the module topics, students were instructed to select a cool tool to virtually present to their peers. These presentations, which investigated the positives, negatives, and pedagogical practices of the selected tools, took place in the course management system (i.e., D2L) discussion forum. Videos created to introduce this portion of the course activities were shorter and more "playful" than the other types created for this course and emphasized creativity over content. At the end of the semester, the students were surveyed to assess the effectiveness and to determine ways to improve this type of content.

In the initial stages of this study, the intent was to use a Flip digital camcorder to record the videos for this course. This device was used to create videos used during the first weeks of the course. Throughout the semester, rich media alternatives (e.g., Jing and Animoto) were investigated as the instructor became more comfortable with the video creation process. The announcement in April 2011 by Cisco to discontinue its production of the Flip camcorder, which will be discussed in greater detail in the next section, further encouraged this investigation.

Video Production

Digital Camcorders

Current digital camcorders such as Cisco's Flip are small, versatile, and typically inexpensive. Flip, for one, has a USB plug that enables the user to transfer the content with minimal effort to social media sites such as YouTube or Facebook. Because of these reasons, a Flip camcorder was used to create videos that were used in an instructional technologies course. These videos (typically 5-7 minutes in length) were locally created - they were not produced and edited by a professional team. However, the unpolished appearance of the video content gave it an authentic quality that conveyed the presence of the teacher. While the recorded video was typically posted in its entirety, there were times when video clips were captured and integrated into other video check-in productions.

On April 12, 2011, Cisco announced that it planned to discontinue the production of the Flip camcorder (Grobart & Rusli, 2011). Because of the ephemeral nature of devices such as the Flip, alternative video production options were investigated. The screencasting site, Jing (http://www.techsmith.com/jing/), and the video slideshow maker, Animoto (http://animoto.com/), are examples of these sites. With Jing Pro, full-motion videos that captured information presented on a computer screen, sound, and voice could be quickly created. Animoto transformed pictures, video clips, and music into videos.

Through these videos, students were introduced to the course content but were also able to hear and sometimes see their instructor. In other words, the instructor not only conveyed course content but produced it, as well. Further, the consumption and creation of video content was aligned with the concept of digital literacy.

Video Publishing

The videos produced using the Flip digital camcorder, Jing, and/or Animoto can be easily uploaded to YouTube. To organize the videos and house them in a central location, a YouTube Channel (http://www.youtube.com/sois670) was established for this course. Students could access these videos in three ways: 1) The YouTube Channel for the course; 2) Links to the videos that were posted to the Announcements and Content sections of the D2L course management system (CMS); and/or 3) The embedded version of the video in D2L. To be accessible to all students, a transcript of the material included in the video was made available to all students in the course via D2L, as well.

Lessons Learned

Presence in online learning does not happen automatically; instead, it is something that is created (Lehman & Conceicao, 2010). While it is challenging for instructors to create a sense of presence in an online course, students watching these videos see, hear, and participate in a shared experience with their instructor. Video is a richer medium than text (Daft & Lengel, 1986), which gives students the opportunity to see their instructor's body language and hear her tone and humor, which can add authenticity to the material. While creating these videos took minimal effort on the part of the instructor, their impact on the students' perceptions of this course were positive in terms of managing instruction, building understanding, and directing instruction. It also gave students an opportunity to get to know the instructor as a real person.

Technological changes are occurring rapidly. Within the duration of this semester-long study, the Flip video camcorder went from a "hot" device to obsolete (Grobart & Rusli, 2011). The purpose of the videos was to convey a feeling of "being there" for a geographically dispersed group of students. For the most part, asynchronous, text-based media were used to support communication among the students and the instructor. The use of video to supplement the class communication enabled the students to get to know the instructor, feel comfortable approaching her with questions, and to view her as a "real person." While

the technology used to create these videos changed during the course of the semester, the intent did not. The actual technology used to construct a sense of presence remained intentionally in the background. In the end, the focus of the video creation and publication process remained on the students rather than on the technology.

References

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science, 32,* 554-571.

Fontaine, G. (2002). Presence in Teleland. In K. E. Rudestam & J. Schoenholtz-Read (Eds.), *Handbook of online learning: Innovations in higher education and corporate training* (pp. 21-52). Thousand Oaks, CA: Sage.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical thinking in text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2* (2), 87-105.

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience.* New York, NY: Harper & Row.

Grobart, S., & Rusli,E. M. (2011). For Flip video camera, four years from hot start-up to obsolete. *New York Times.* Retrieved from http://www.nytimes.com/2011/04/13/technology/13flip.html

Gunawardena, C. N., & Zittle, R. (1996). An examination of teaching and learning processes in distance education and implications for designing instruction. In M. F. Beaudoin (Ed.), *Distance Education Symposium 3: Instruction* (Vol. 12, pp. 51-63). Pennsylvania State University College of Education, American Center for the Study of Distance Education.

Kear, K. (2010). Social presence in online learning communities. *Proceedings of the 7th international Conference on Networked Learning.* Retrieved from http://www.lancs.ac.uk/fss/organisations/netlc/past/nlc2010/abstracts/PDFs/Kear.pdf

Kehrwald, B. (2008). Understanding social presence in text-based online learning environments. *Distance Education, 29*(1), 89-106.

Korzenny, F. (1978). A theory of electronic propinquity: Mediated communication in organizations. *Communication Research, 6*(4), 3-24.

Korzenny, F., & Bauer, C. (1981). Testing the theory of electronic propinquity. *Communication Research*, *8*(4), 479-498.

Lee, K. M. (2004). Presence, explicated. *Communication Theory, 14*, 27-50. Retrieved from http://www.fineminddesign.com/site/media/Readings/Week%2010/Lee(2004)_Presence%20Explicated_CT.pdf

Lehman, R. M., & Conceicao, S. C. O. (2010). *Creating a sense of presence in online teaching: How to "be there" for distance learners*. San Francisco, CA: Jossey-Bass.

Lombard, M., & Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of Computer-mediated Communication, 3*(2). Retrieved from http://jcmc.indiana.edu/vol3/issue2/lombard.html

Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning Networks 6*(1), 21-40.

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous, text-based computer conferencing. *Journal of Distance Education, 14(3),* 51-70.

Rovai, A.P. (2002) Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education, 5*(4), 319-332.

Short, J. ,Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London, England: John Wiley & Sons.

Tu, C-H. (2002). The measurement of social presence in an online learning environment. *International Journal on E-Learning, 1*(2), 34-45.

About the Presenter

Sharon Stoerger is an instructional design consultant in the Learning Technology Center at the University of Wisconsin-Milwaukee (UWM). She teaches online and face-to-face courses related to instructional technologies and professional writing at UWM and Mount Mary College. Sharon has presented her work on educational uses of technology at a number of different conferences including the Association for Library and Information Science Education (ALISE), EDUCAUSE, and the Plymouth eLearning Conference (UK). Sharon has also written articles and book chapters that have appeared in publications such as *IRRODL*, and *The Handbook of Research on Practices and Outcomes in Virtual Worlds and Environments*.

Address: Learning Technology Center, Golda Meir E-175
2311 East Hartford Avenue
Milwaukee, WI 53201
Email: stoerger@uwm.edu
URL: http://www.uwm.edu/Dept/LTC/
Phone: 414-229-4319
Fax: 414-229-6758

Workshops

Lights, Camera, Teamwork!
Beginner Video Production for Distance Teaching

Richard A. Harrison
Production/Program Manager
Integrated Technology Services
San Diego County Office of Education

Summary

Emmy award-winning producer/director Richard Harrison will lead this animated, hands-on workshop – a perennial conference favorite – for first-time directors, on-screen faculty presenters, and producers. You will learn the essential elements of video production for both Internet and television delivery, such as studio set-up, camera work, lighting, on-camera talent, storyboarding, learning styles and collaboration. You will also experience the power of teamwork by co-designing and producing an instructional video segment suitable for diverse learning styles. Previous experience with video production is welcomed but not necessary for participation.

Presenter Bio

Richard Harrison holds a M.F.A. from Yale University and has been awarded three Emmys (13 nominations) for producing and directing instructional television. He is the Producer/Director of the largest ITFS/Cable System in the United States (over 500 schools as well as cable access to one million homes in San Diego County).

Mr. Harrison had presented workshops for Faculty Training at Cal State San Marcos and consults at University San Diego on Television Production. He serves as a part-time Professor at California State University-Palm Desert where he has taught "Creative Dramatics for the Classroom Teacher," "Children's Theater," and "Mass Communication." He has worked with National University in developing their *Media Communication Curriculum*. Mr. Harrison serves as a consultant, trainer, and presents extensive full day workshops on skill development for producers and/or presenters.

Contact Information:
Richard A. Harrison
San Diego County Office of Education
6401 Linda Vista Road, Room 205
San Diego CA 92111
Phone: 858.292.3726
rahar@sdcoe.net

Quality Assessment and Quality Assurance in Online Programs

Michael A. Mariasingam
Independent Consultant
Quality Learning Global Consultancy (USA)

Eva Tsang, PhD.
Open University of Hong Kong

Current Status: Quality Assurance Process

Focus on Inputs

Current approaches to assessing quality have focused primarily on evaluating inputs, institutional inventory such as facilities, volumes in the library, quality of the faculty, and quality of incoming students. They do not evaluate learning outcomes, the actual student learning.

No Significant Difference Notion

Quality assurance process in distance education is treated generally as similar to on-campus education. Eaton (2002) noted "… currently configured, regional accreditation standards and the regional distance learning guidelines tend to focus on the similarities between site-based education and electronically-based education, paying less attention to the differences between the two approaches to teaching and learning."

Focus on Stakeholders

The current approach to quality is based on a quality concept that focuses on the perspectives and requirements of only internal stakeholders—learners, faculty and the institution—and does not stress including external stakeholders, like employers, accreditation agencies, professional associations, society, and government.

Assessment Levels

Quality, to be meaningful, and precise, should be measured at multiple levels. Quality can be conceptualized and measured at different levels - the institutional level, the program level, and the course level. But, currently quality assessment and assurance strategies focus mostly on only one level – the program level or course level - or sometimes two of these levels. Therefore, the quality assurance strategy and outcome are incomplete and do not enable a precise assessment of the quality of the programs.

Lack of Awareness Among QA Practitioners

People involved in online learning - program administrators, faculty, instructional designers, and others – are not aware of the inadequacies of the current quality assurance process in online learning and the new comprehensive approach to quality and the available quality assessment tools to implement that new approach. The following report that appears in the ASEE First Bell October 22, 2009 confirms this: "Inside Higher Ed (10/22, Kolowich) reports, 'Many colleges still know precious little about how best to organize online programs, … and how they compare to face-to-face instruction in terms of quality,' according to a recent report." This is also the impression received from more than 250 participants in several quality workshops the authors have facilitated.

Currently Used Quality Frameworks

The quality frameworks that are currently used for quality assessment and quality assurance in distance education have the following dominant features:

Guidelines Not Benchmarks
The quality frameworks, with few exceptions [like "Quality Criteria and Benchmarks for Online Degree Programs" (Mariasingam, 2006)] are just guidelines, not benchmarks or standards against which quality should be measured, although they are often arbitrarily called benchmarks.

Limited Perspectives
The guidelines in the frameworks have the functional perspectives of only the internal stakeholders – learning effectiveness, student support, technology support etc. They are not from the perspectives of all stakeholders.

Assessment Levels
Guidelines, with a few exceptions, are defined to assess and assure quality mostly at one level – program level or course level

Structure of the Frameworks
Frameworks are two-level frameworks with functional categories, like learning effectiveness, at the first level as quality assessment categories, and the guidelines at the second level as the criteria for assessment under the quality assessment category.

Criteria Set Not Comprehensive
The assessment criteria set of the frameworks is not comprehensive and does not include criteria critical to establishing quality.

A New Comprehensive Approach to Quality

Need for an Alternative Accreditation Model
Schweiger (1996) said, "Traditional quality measures are inappropriate if applied categorically in the same manner to distance education and open learning environments as to traditional teaching environments." According to Marginson (2002), "Distance learning is an educational process that has elements in common with other processes of learning, and also distinctive elements" and hence, "Quality assurance in distance learning should be sensitive to both learning principles common to all forms of higher education and aspects of learning that are distance specific." As the 1998 CHEA study noted, "The requirements of distance learning suggest that an alternative model …" is required. The alternative accreditation model in distance learning needs to have a comprehensive quality assessment and assurance approach.

Alternative Quality Concept—Customer Focused Industry Oriented Approach
A changing landscape in education - globalization of education, increasing costs, stiff competition due to the proliferation of educational institutions etc.—have made education a global economic commodity [The Australian Higher Education Quality Education Framework]. "Quality assurance in the 21st century, then, may very likely have more of a business orientation than a traditional educational one—not because 'business is better' but because market forces may dictate how educational 'products' are delivered and evaluated" (Pond, 2002). Knowledge, as an economic commodity to be sold, must meet the requirements of all stakeholders and must have a quality assurance approach that has a business orientation—a customer focused industry oriented approach. Countries like Australia and the UK have started implementing a new comprehensive business-oriented approach to quality.

Wider Role for Education
In the UNI-QM project document it is stated: "… universities' traditional and exclusive role as fountains of high level education and research is expanding into a wider role definition. The universities … should, for instance, have rich cooperation with the working life, foster innovations, act as tools of technology transfer, promote third mission" [UNI-QM European University Quality Management Tools for Lifelong

Learning]. Therefore, any new approach to quality assurance must use quality frameworks designed to include criteria and standards to evaluate this role of education.

Multiple Dimensions of Quality

Quality can be conceptualized with three different dimensions (cf. Ehlers 2002a, 2002b, 2003a): *different meanings of quality, different quality perspectives and different levels of the educational process* to which quality can apply as shown in Fig. below (Ehlers, 2004).

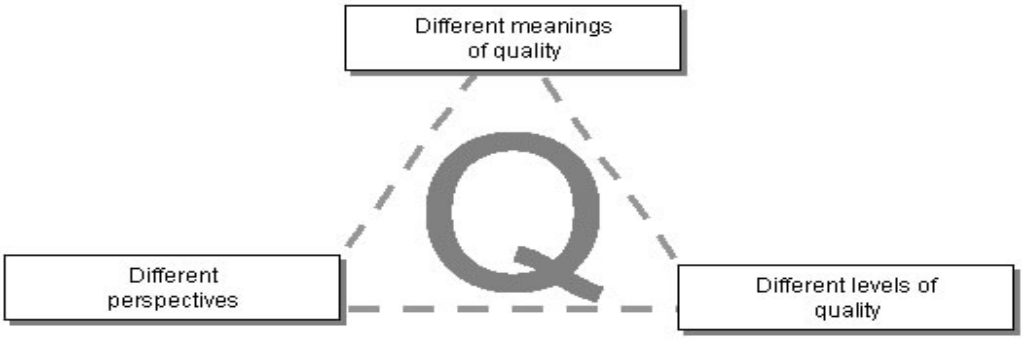


Figure 1. *Multiple Perspectives of Quality*

Multiple Perspectives of Quality

Quality, like beauty, is in the eye of the beholder (the stakeholder). "The achievement of quality can be managed and quality itself be credibly measured only when it is clear … whose quality interests are to be served" (Schweiger, 1996). In addition to the internal stakeholders there are many external stakeholders in education - like employers, accreditation agencies, professional associations, society, and government - who are also major constituents and future benefactors of learners. If education is to be of high quality, the needs and expectations of these external stakeholders also should be considered and met. The Quality assessment approach designed to assure quality must serve the interests of ***all*** stakeholders.

Multiple Levels of Quality

To be precise and meaningful quality assessment and assurance should be conducted at the appropriate level at which quality is desired. In the case of the educational process there are three different levels at which quality can be defined and measured—institutional level, program level and course level. The quality frameworks for the three different levels will have quality assessment categories and performance measures that are different within these categories. It is, therefore, important to first define the level at which quality is conceptualized and is to be measured.

Criterion-Based Approach to Quality Assessment

In criterion referenced concept of quality, "excellence can be recognized or defined independently of the performance of others" (Baumgart and Kaluge, 1987). Quality is measured by indicators of the performance of individual institutions or of the worth of the products on their own rather than in comparison with others. This approach assumes that "near-absolute academic standards can be identified and these standards should form the basis of a common academic currency" (Scott 1994).

Negotiated Approach to Quality Assessment

The quality assessment process should include not only quantifiable measures but also qualitative intrinsic values [negotiated approach]. Very often it is taken for granted that quantifiable performance indicators alone could yield objective assessment. But, as George (1982) pointed out, "No matter how much numerical data may be part of a program review process, the conclusions always must be derived through the exercise of judgment." Too much reliance on quantifiable parameters of quality neglects other

equally or even more important quality indicators. Therefore, negotiated approach that includes intrinsic values should be part of quality assessment process.

Outcomes-Based Approach

The American Council on Education (1996) stated, "Existing standards and criteria often focusing on learning inputs, fail to acknowledge the many forms that effective learning can take; therefore, the focus needs to be learning outcomes." In outcomes-based approach, learning outcomes that are measured should include learning outcomes like learning skills at Kirkpatrick's "behavior" level and lifelong learning skills. Education should create experimental learning environments to provide learners the ability to transfer knowledge to real life situations (Meyer 2002).

Benchmarks and Measurements for Quality Assessment and Assurance

As mentioned earlier, most quality frameworks that are often called benchmarks are not truly benchmarks, they are just guidelines. By definition benchmark means a standard to reach, "a criterion against which something can be measured", or "a reference point against which similar 'things' can be referenced" (Jackson, Parks, Harrison, & Stebbings, 2000). For instance, the Quality Assurance Agency for Higher Education of the UK defined the transferable skills students should acquire as part of a course and QAA goes further to specify the levels of attainment [benchmarks] in these skills (QAA, 2000).

Quality Assurance Case Study

Quality assurance is a systematic process that starts on the day program planning starts and it involves a set of procedures derived from and designed to meet a comprehensive quality standard. The case shown below is from the Open University of Hong Kong (OUHK) established in 1989 by the Hong Kong Government. The OUHK has been offering distance learning programs in Hong Kong since its inception. The quality assurance systems in the OUHK cover three major aspects: careful evaluation of all programs and courses at the planning and development stage; continuous monitoring and evaluation of program and course delivery, and outcome standards; and constant review of all provision.

As the OUHK entered a new phase in e-learning, it was faced with the challenge of devising a new framework for the development of courses specifically tailored to the online context. This case study describes the framework for developing e-learning courses adopted by the OUHK, with particular regard to quality assurance. As Caplan (2004) put it, "Quality courseware production requires a highly organized, concerted effort from many players" (p. 186). The OUHK takes a course team approach to the development of materials.

Once a Course Team (academic staff, course developers and instructional designer) has been formed, the course development process passes through four distinct phases: (a) preparation of a Blueprint, which includes a detailed course syllabus, a set of learning outcomes, course plan and assessment strategy, along with a timetable for development; (b) preparation of a Course Guide and a prototype study unit, typically Unit 1; (c) preparation of the study units and other materials to students (accessible online to students at the time the course commences); and (d) preparation of the remainder of the study units, a specimen examination, and any other materials contracted for (sample assignments, marking guidelines, manuals for tutors, etc.).

Gunawardena (2001) is of the view that the process of course development is an important variable for evaluating an online learning environment. Such a process includes information about how the course is designed, what tools are used, how learning is supported, how needs are assessed, and what kinds of interactions are planned to occur. Meyer (2002) indicated that hallmarks of a quality online course are the

ample opportunities for interaction between and among faculty, students and the course materials. At the OUHK, three levels of quality assurance measures are built in the course development process.

Level I All course team members are involved in the discussion and finalizing of the instructional plan for each study unit, which includes setting learning outcomes for each unit or module, detailing online learning materials, video presentations, readings, learning activities, real-time tutorials, and so forth.
Level II All internal staff members involved in the production process are required to review and check the developed materials. These people include editors, web designers, programmers, technicians, and instructional designers. The instructional designers oversee all the development issues and ensure the quality of the work.
Level III Peer review on the developed materials is conducted. Another instructional designer and others are assigned to check the overall organization and multimedia arrangement. Finally, the course team members are required to go through the complete online version of the course to check the content, organization and presentation of text and multimedia components of the course. The OUHK thus implements as what Kidney et al (2007) have suggested: ensuring quality assurance of e-learning course development through various groups of people involved in the development process.

Besides the course development process, the learner support is also the crucial to ensure the quality of teaching and learning. The tutor is a key element of the OUHK's distance learner support system. Tutors are the human interface between the University and its learners. All tutors are trained to act as moderators of discussion boards through an online training course. After the completion of each academic semester, the OUHK reviews the presentation of courses. This review process is intended to encourage the critical, continuous review of courses and course presentations with a view to their further improvement. It also aims at ensuring that feedback from students, tutors and others on a course's presentation is taken into account.

In sum, the OUHK uses comprehensive quality assurance processes to ensure that the courses and programs offered are of very high quality. These processes and mechanisms are kept under constant review and are updated as appropriate.

References

American Council on Education. (1996). *Guiding principles for distance learning in a learning society*. Washington, DC: American Council on Education.

Baumgart, N., & Kaluge, L. (1987). Quality in higher education: Inputs. In N. Baumgart (Ed.), *Equity, quality and cost in higher education: Research study on Australia* (pp.66-75). Bangkok: UNESCO Principal Regional Office for Asia and the Pacific.

Caplan, D. (2004).The development of online courses. In T. Anderson & F. Elloumi (Eds.), *Theory and Practice of Online Learning*, Athabasca: Athabasca University.

Council for Higher Education Accreditation (CHEA). (1998). *Assuring quality in distance learning*. Washington, DC.

Eaton, J. S. (2002). Core academic values, quality, and regional accreditation: The challenge of distance learning from http://www.chea.org/Research/core-values.cfm

Ehlers, Ulf-D. (2004). *Quality in e-learning from a learner's perspective.* Retrieved from http://www.eurodl.org./materials/contrib/2004/Online_Master_COPs.html

George, M.D. (1982). Assessing program quality. In B. Wilson (Ed.), *Designing academic program reviews: Research in Higher Education*. *New Directions for Higher Education, 37* (pp. 45-54). San Francisco, CA: Jossey-Bass.

Gunawardena, C. N. (2001). Reflections on evaluating online learning and teaching. In E. J. Burge & M. Haughey (Eds.), *Using learning technologies: International perspectives on practice* (pp. 115-124). London: Routledge Falmer.

Jackson, N., Parks, G., Harrison, M., & Stebbings, C. (2000). Making the benchmarks explicit through program specification. *Quality Assurance in Education. 8*(4). 190-202.

Kidney, G., Leslie, C., & Boehm, A. (2007). Toward a quality assurance approach to e-learning courses. *International Journal on E-Learning*, *6*(1), 17.

Marginson, S. (2002). Quality assurance for distance learning: Issues for international discussion and action. In *International quality review: Values opportunities, and issues*, 18-36. Washington, DC: Council for Higher Education Accreditation (CHEA).

Mariasingam, M. (2006) *Quality criteria and benchmarks for online degree programs* (Paperback). Ann Arbor, MI: ProQuest / UMI.

Meyer, K.A. (2002). *Quality in distance education: Focus on online learning*. San Francisco, CA: Jossey-Bass.

Pond, W. K. (2002). Distributed education in the 21st Century: Implications for quality assurance. *Online Journal of Distance Learning Administration, 5*(2). Retrieved from http://www.westga.edu/~distance/ojdla/summer52/pond52.html

Schwinger, H. (1996). *Quality in distance education and open learning: An identification of criteria and standards and an attempt at structuring a quality assurance process for distance education and open learning in the Minnesota context*. St. Paul, MN: Minnesota Higher Education Services Office. Retrieved from http://www.mheso.state.mn.us/pdf/5-96a.pdf

Scott, P. (1994). Recent developments in quality assessment in Britain. In D. F. Westerheijden, J. Brennan, & P. A. M. Maassen (Eds.), *Changing contexts of quality assessment: Recent trends in Western European higher education,* 51-74. Utrect: Uitgeverij.

The Quality Assurance Agency for Higher Education. (2000). Subject benchmark statements: Education studies. Retrieved from http://www.qaa.ac.uk/crntwork/benchmark/education%20studies.html

About the Presenters

Dr. Mariasingam is an independent consultant in quality assurance with Quality Learning Global Consultancy <www.qualitylearningglobal.com> Dr. Mariasingam has developed a comprehensive set of quality standards in terms of rigorous measurable benchmarks for assessment and assurance of the quality of online programs. He has published a book and papers on quality in online programs and on systematic guidelines and procedures for developing and delivering high quality online programs. Currently he is writing two books on Quality Assurance in Online Learning. Dr. Mariasingam has organized and facilitated several interactive hands-on workshops on designing, developing and delivering high quality online programs and on quality assessment and assurance of online programs.

Address: Quality Learning Global Consultancy
E-mail: michaelmariasingam@yahoo.com
Phone: 1-216-965-7035
URL: www.qualitylearningglobal.com

Dr Eva Tsang is Senior Course Designer in the Educational Technology and Publishing Unit of the Open University of Hong Kong She is in charge of overall administration of OUHK's Online Learning Environment. Her expertise lies in the development and delivery of ODL courses, and in quality assurance for distance learning materials. Her recent work is on the provision of a total online learning environment at OUHK and innovative use of technology in education. She has been in charge of development of online learning platforms and mobile learning. Concurrently, she has been appointed as the Project Director of the University's Centre for Innovation.

Address: Open University of Hong Kong
Hong Kong
Email: etsang@ouhk.edu.hk
Phone: (852) 2768 6412

Sustaining Students in an Online Program

Ray Schroeder
Professor Emeritus and Director

Emily Boles
Lead Instructional Developer

Center for Online Learning, Research and Service
University of Illinois Springfield

Summary

The combined challenges of distance, available student time, multiple competing adult student commitments, and cultivating institutional change from professor-centered to online student-centered have resulted in lower student retention and course completion rates at many colleges and universities. These challenges require policy, practice, and practical changes to best support and sustain the distant online student for success. The University of Illinois Springfield has identified a number of helpful approaches set within an effective pedagogical context that have helped it to achieve course completion and "successful course completion" (B or better at the graduate level; C or better at the undergraduate level) that consistently is within two percent of the on campus rate.

The approaches identified include faculty orientation to student-centered approaches; designation of academic professional staff as program coordinators who focus on student support; and selection of student peer online mentors who work closely online with students to promote success. This three-prong approach which includes engaging faculty members, staff members and students in the process of sustaining the distant online students have resulted in superior student satisfaction and high degree completion rates. The team of professionals of the Center for Online Learning, Research and Service Center innovate, coordinate and encourage this integrated approach.

Presenter Bios

Ray Schroeder is the founding director of the Center for Online Learning, Research and Service at the University of Illinois Springfield. He publishes a number of very popular blogs and twitter feeds, including the Online Learning Update and Educational Technology blogs.

Emily A. Boles is lead instructional developer in the Center for Online Learning, Research and Service at the University of Illinois at Springfield. She offers faculty development workshops on technology and pedagogy for online learning and works with faculty to develop online courses.

Contact Information:
Ray Schroeder /Emily Boles
Center for Online Learning, Research and Service
University of Illinois Springfield
One University Plaza
Springfield, IL 62703
Phone: 217.206.7317
rschr1@uis.edu
ewelc05s@uis.edu

Designing Online Teaching with a Sense of Presence

Rosemary M. Lehman
Author, Distance Learning Consultant
Partner in eInterface

Simone C. O. Conceição
Associate Professor, School of Education
University of Wisconsin–Milwaukee

Summary

We are social by nature and today the Internet is one of our important social spaces. Because of the differences between the physical space of the concrete world and the elusive space of the virtual world, our sense of presence is designed for, felt, and experienced in different and distinctive ways. We believe that a perceptual systems approach is central to this distance learning design process, that the learner is at the center of the learning experience, and that awareness of presence is key.

Join us for "getting to know you ice-breakers," in-depth mini presentations about our "Being There" for the Online Learner model and our Framework for Designing Online Courses with a Sense of Presence. Explore the various aspects of the model (the dimensions of the learner, types of experience, modes of presence, and the interface with the online environment). Discover ways in which the framework's determinants of presence (type and focus of the content, format of the learning experience, interactive strategies implemented, role played by the instructor, type of technology used in the course, and kinds of support provided) may be used as tools for creating presence in the online environment. Then, work in small groups using provided case studies with specific characteristics to identify and create missing framework elements in each given case. Next, share your group work with all of the workshop participants. The workshop will help you understand the framework and the activities will help you apply it through practical examples. Finally, share ideas for implications for practice.

Presenter Bios

Rosemary M. Lehman, Ph.D., is an author, distance learning consultant, and partner in eInterface, working with individuals and organizations to explore emerging technologies, discover how to select appropriate technologies, adapt and design effective teaching and learning materials for these contexts, and create a "sense of presence." She received her doctorate in Distance Education and Adult Learning and her master's in Television and Media Critique from the UW–Madison.

Simone C.O. Conceição, Ph.D., is an Associate Professor at the UW–Milwaukee School of Education and teaches courses in the areas of distance education, use of technology with adult learners, instructional design, and principles and foundations of adult learning. She received her doctorate in Adult and Distance Education from the UW–Madison and her master's in Adult and Continuing Leadership Education from the UW–Milwaukee.

Contact Information:
Rosemary M. Lehman and Simone C. O. Conceição
Partners in eInterface
einterface@me.com
http://www.einterface.me

Description of a Competency Modeling Workshop for Educational Professionals

Carl S. Vieth
Thomas W. Smith
Department of Engineering Professional Development
University of Wisconsin–Madison

Suzanne Sherry
Johnson Controls Incorporated

Introduction

Competency modeling is making something of a comeback in the U.S. as a foundation for professional development. It fits nicely within the "Talent Management" paradigm that has been adopted by many organizations. It also fits well with the structured and measured approach that we see in many certificate programs, both online and face-to-face. Faculty members in Engineering Professional Development have been working with several major corporations to develop competency models and gap analyses for their engineering work-force. Colleagues from other universities, particularly in Europe, are working on the integration of competency models into Learning Management Systems. Competency models can also provide a basis for the design of electronic performance support systems. Topics covered during the workshop:

- Overview of Competency Modeling
- Trends in Competency Modeling
- Applications in Practice
- Modeling Within an Organization
- Guided Discussion—Participants experience with competency models
- Industry Case Study
- Guided Activity—Participants developing a competency model for their program
- Concluding Discussion

Presenter Bio

Thomas W. Smith, MS, is a Program Director in the Department of Engineering Professional Development, University of Wisconsin–Madison. He currently manages the University's Engineering Executives Forum as well as a series of courses related to tools and techniques for effective virtual engineering. He is the founder of the University's award winning Master of Engineering in Professional Practice degree. Prior to that, he was instrumental in the development of the university's audiographic teleconferencing and satellite communications capabilities. For this work he received the UW–Extension Award for Excellence and national awards from Telecom and ASEE. He has written more than 40 papers and articles on telecommunications and distance education and is a frequent speaker on this topic. He received his BS degree from Dartmouth College and MS degree from the University of Wisconsin–Madison.

Contact Information:
Thomas Smith
Program Director, Department of Engineering Professional Development
UW–Madison
432 North Lake Street, Madison, WI 53706
Phone: 608-263-7426
Email: twsmith@wisc.edu

A Hunting We Will Go! Frolicking with Online Scavenger Hunts

Ellen Smyth
Instructor
Mathematics Department

Marcy Dickson
CMS Manager
Center for Extended and Distance Education

Austin Peay State University

Summary

Join us as we seek design ideas from three different online scavenger hunts: a fun-for-all, intellectual hunt with an elusive story arc composed by a prize-winning author; a university-wide hunt riddled with rhymes and celebrating e-learning; and a delightful course-orientation hunt. Breaking into groups, we will race each other in solving clues!

As part of the workshop, participants will be designing outlines for their own hunts. We will discuss ways to cater hunts to audiences, the importance of purpose, benefits of themes and beginning with the end in mind, and the variety of online venues available. Participants will begin to map out their own hunts in terms of audience, purpose, themes, and general clue destinations.

Presenter Bios

Formerly a Course Management Systems (CMS) administrator and currently a mathematics instructor, **Ellen Smyth** is Austin Peay State University's 2010 Innovative Professor. Ellen has written two articles for Faculty Focus and presented at a variety of mathematics and teaching and learning conferences including The Teaching Professor Conference in May 2011 and the 26th Annual Conference on Distance Teaching & Learning.

A Desire2Learn expert, **Danielle (Marcy) Dickson** is the CMS Manager in the Center for Extended and Distance Education at Austin Peay State University, supporting faculty and students in their Desire2Learn needs. Marcy has presented at the 26th Annual Conference on Distance Teaching and Learning and the 2009 Innovative Professor Conference.

Contact Information:
Ellen Smyth
Austin Peay State University
Department of Mathematics and Statistics
PO Box 4626
Clarksville, TN 37044
smythe@apsu.edu
http://www.apsu.edu/smythe/presentations.htm

Reaching All Distance Learners with Universal Design

Alice Anderson
Technology Accessibility Program, University of Wisconsin–Madison

Kathleen King
Professor, University of South Florida

Neal Ewers
Musician, Consultant and Application Developer

Todd Schwanke
Adaptive Technology Specialist, University of Wisconsin–Madison

Summary

Discover universal design principles and how to put them into practice immediately. Together we will explore how to reach a broader audience, by creating a learning environment that meets the needs of all learners. We will explore strategies, impacts, and benefits of universal design for aging generations, people with disabilities, workforce diversity and more. This interactive workshop will focus on accessible content design. We will illustrate how accessibility improves learning for all. You will also take home examples of successful teaching strategies using digital media across disciplines.

Background

"Professors are looking for ways to engage students. Students are seeking education that is relevant to their lives." [i] This is just one of the challenges that face educators both in the classroom and at a distance. While technology holds the promise of addressing this challenge, it is likely to add additional layers of tension for educators, students, and institutions. Peeling back the layers we can see multiple questions emerging:

- Can technology support or enhance a learner-centered environment?
- What are examples of instructional design, development, and teaching practices?
- Technology is constantly changing – how do I stay current?
- What do I need to know about legal compliance, and functional accessibility?
- What are the costs?
- How do I get started?

Teaching and learning is about creating knowledge, engaging and connecting students and ideally, enjoying the journey. Several technology and media options as effective tools are available. A few include:

- MP3/Podcasting – Creating knowledge, encouraging critical thinking, and popular culture exercises with an eye toward inclusive teaching and learning.
- List Recorder[ii] – An iPhone app that combines making lists with an easy to use, yet powerful audio recorder.
- Video – Digital Media as lecture, interview, student presentation, current events, office hours at a distance, or virtual field trips.
- Social media sites that are commonly used in higher education: blog sites, iTunes podcasts, Facebook, Twitter, LinkedIn, Delicious, YouTube, Flickr, and many, many more.
- Course/Learning Management Systems – a comparison of Blackboard, Desire2Learn, Moodle, SAKAI, and the tools (Discussions, Quizzes, Chat, or Wiki). What is the presence or absence of certain key usability/accessibility features that can significantly impact users' experience?[iii]

These dynamic times of new and ever changing digital services and devices – for content creation, distribution, and consumption – require a basic understanding or solid foundation to build on. *Universal Design of Instruction*[iv] addresses potential variation in individual skills, learning styles and preferences, age, gender, culture, abilities and disabilities. UDI principles and techniques and the design of accessible instructional materials increase the number of learning options for students, and benefits all. Successful strategies for delivery of instruction – course activities and

resources to maximize the learning of all students – are the key to success in all education environments. Included in this discussion is:

- The importance of and methods for retaining electronic, original, and accessible copies of materials.
- Types of captioning options for live and post-production video and multimedia materials
- Strategies and examples for including captioning in distance education courses and
- Trends in e-books and accessibility

Instructors, IT developers, and support staff can no longer assume that a student is using a traditional desktop computer to access content. Laptops and mobile devices are rapidly becoming the preferred choice. Access issues will likely arise if instructors, developers, technology support do not consider the broad range of characteristics of potential students and the technology they use. An understanding of legal mandates, technology access challenges, and approaches for ensuring that technology-rich learning environments are inclusive of everyone. Making learning interactive, exploring different ways to access information and express skills and engaging all students is the bottom line.

[i] King, Kathleen P. *The Professor's Guide to Taming Technology: Leveraging Digital Media, Web 2.0 and More for Learning, 2011,* page 33
[ii] List Recorder http://www.sixthmode.com/
[iii] Rangin Hadi. *A Comparison of Learning Management System Accessibility*, 2011 http://devserv.dres.uiuc.edu/ita/hadi/citaweb/presentations/2011-03-17-csun/
[iv] Burgstahler, Sheryl *Equal Access: Universal Design of Instruction: A Checklist for Inclusive Teaching,* 2011, http://www.washington.edu/doit/Brochures/Academics/equal_access_udi.html

Presenter Bios

Alice Anderson is the Technology Accessibility Program Coordinator at UW–Madison, Division of Information Technology, where she plays a significant role in strategic planning, policy and resource development in areas of technology accessibility. Alice also coordinates a variety of programs, events, and advisory committees addressing accessibility for UW–Madison postsecondary education and the Big Ten Campuses.

Dr. Kathleen P. King is a senior professor of education in the doctoral program of higher education at University of South Florida (www.usf.edu). Dr. King has extensive experience designing distance learning, multi-partner projects, and educational technology integration plans across grades and content levels k-12, adult education, training, higher education, and corporate organizations and settings. (More about Kathleen at http://www.educause.edu/Community/MemDir/Profiles/KathleenPKing/51465).

Neal Ewers has been totally blind since birth. Since graduating from college, he has worked at the Library of Congress, been a concert pianist, directed a telephone crisis intervention service, and ran a non-profit organization called Inner-Vision, which worked to help sighted people learn to use their non-visual senses. (More about Neal at http://ravenswood.org/index.html).

Todd Schwanke is the accommodation specialist at UW-Madisonfor students with visual impairments. He consults with students regarding adaptive technology, manages the adaptive technology lab, and supervises the Document Conversion Service. Additionally, he works with various campus partners on a variety of disability and accessibility related projects.

Contact Information:
Alice Anderson
1210 W Dayton St., 3124 Computer Sciences & Statistics
Madison, WI 53706
alice.anderson@doit.wisc.edu

Digital Storytelling

John Orlando
eLearning Director
National Life Group

LeeAnn Orlando
Teacher Leader
Burlington School District

Summary

Storytelling is the oldest form of education. From the cave dwellers to the ancient Greeks, children first learned their most important lessons about morality and life through stories told by elders.

Storytelling is also one of the most powerful forms of learning. Stories reach us on an emotional level, capturing our imagination and leading to long-lasting retention. Our minds are fundamentally tuned to recording imagery and the meaning that it carries. Thus, memory experts learn long stings of random numbers by creating a story around them. Embedding knowledge into a story is the secret to retention.

Unfortunately, education has gotten away from storytelling in favor of straightforward transmission of information to students, who are expected to remember it directly. This method flies in the face of everything we know about learning.

Digital storytelling returns us to the roots of education. Students develop stories around their learning using easy-to-learn software. Reflecting on what they learned, students engage in higher order thinking processes such as synthesis, analysis, and evaluation and then translate their understanding into a lasting format for themselves and others.

We will examine how educators are using digital storytelling in a variety of subject areas. Attendees will get a model that students can use to develop their stories, as well as instruction in how to use Windows MovieMaker and Audacity to create the digital story.

Prepare to add an exciting new tool to your teaching repertoire. You will also gain experience putting together your own digital story, and will learn what other teachers have done to harness the power of storytelling in their classes.

Contact Information:
John Orlando
eLearning Director
National Life Group
1 National Life Drive
Montpelier, VT 05604
Phone: 802.229.7468
jorlando@nationallife.com

Facebook, Twitter, and YouTube: Social Media for Educators

Tanya Joosten
Associate Director, Learning Technology Center

Sharon Stoerger
Learning Technology Consultant
University of Wisconsin–Milwaukee

Summary

Social media tools, such as Twitter, Facebook, and YouTube, are changing the way that people across the globe communicate, share ideas, and build networks. Earlier this year, Google lost its position as the most visited site on the web to the social media phenomenon, Facebook (see Wall Street Journal, March 14th, 2010). The interest in social media is quickly increasing, and as with many other technologies, the educational community is looking to harness the potential of these technologies to overcome challenges in the classroom and on campus. In fact, mobile technologies and their facilitation of social media were highlighted in the Horizon Report (2010) as an up and coming technology to impact higher education within the next year. Social media is popular, and educators need to better understand how to use them to increase student learning.

Social media can meet various pedagogical needs through content delivery, broadcasts, and announcements, as well as through backchannel communication and feedback. Social media can also facilitate experiential learning activities, such as role playing and simulations. Although educators are beginning to integrate social media into the curricula, sound pedagogical best practices and research supporting effective uses of social media is lacking. Overall, we will fill this gap by illustrating the ways in which social media will improve learning in the classroom.

By exploiting the power and popularity of social media, we can provide students an enhanced learning experience. We will detail those methods of strategic use and best practices to increase the effectiveness of teaching and learning.

Presenter Bios

Tanya Joosten is the Associate Director (Interim) at the University of Wisconsin–Milwaukee Learning Technology Center and teaches human communication, technology, and organizational communication in the Department of Communication. She manages emerging technology projects like virtual worlds (http://UWMSecondLife.wikispaces.com) and social media (www.UWMSocialMedia.wikispaces.com), is the campus liaison for online programming (http://online.uwm.edu), and leads the recognized faculty development team for online and blended (http://ltc.uwm.edu).

Sharon Stoerger is a learning technology consultant and teaches courses in instructional technology and teaching with technology in the School of Information Studies at the University of Wisconsin–Milwaukee. Sharon is an avid social media user and uses social media in her courses. She assists in coordinating UW-Milwaukee's Social Media project, Mobile Learning project, the Virtual Worlds project, the Faculty Development program for online and blended, and the Certificate program for online and blended.

Contact Information:
Tanya Joosten
Phone: 414.229.4319
tjoosten@uwm.edu

The visual connection

Bobbe Baggio
Director, Instructional Technologies Management Masters Degree Program
La Salle University

Summary

Visuals can help learners take information in by affecting their attention, perception, visualization and imagination. You have a much better chance of helping people to learn something if you are able to gain their attention. Experts in the field of training and learning from Robert Gagne to John Keller have indicated that attention affects instructional efficiency and learner motivation. Attention is really nothing more than concentrated or focused consciousness. Your perception is your judgment on that consciousness. Your perception is unique to you. It is your awareness and understanding of what you are taking in.

Perception can be based on a variety of stimuli including past events, culture, current environment, and emotions. Your perception is your unique interpretation and can be stimulated by visual images. Visualization is your own mental picturing of an event or outcome. By creating a mental image of something it is possible to internalize it. Many famous studies have been done supporting the outcomes of visualization on everything from sports performance to acquiring wealth. Visualization is your mental image. Imagination is also stimulated by visualization. In imagination you construct mental images without the input of your senses. In imagination you can construct pictures, feelings, and sensations. Imagination is important to learning because it is how you determine meaning and understanding. It is how you make sense of the world and is paramount to the learning process.

Presenter Bio

Dr. Bobbe Baggio is an accomplished author, speaker, and educator. Her specific expertise is in how people learn and how to use technologies to help them learn. Her company Advantage Learning Technologies, Inc. (ALT) has provided ID services and implemented projects for clients in finance, healthcare, gasses and chemicals, manufacturing, distribution, construction, government, and higher education. She is currently the Director of the Graduate Program in Instructional Technology Management at La Salle University and speaks regularly to organizations and companies around the globe. Her education includes a BA from Waynesburg College, MA from West Virginia University, MS from Lehigh University, and PhD from Capella University.

Contact Information:
Bobbe Baggio
Director, Instructional Technologies Management Masters Degree Program
La Salle University
1900 W Olney Ave
Philadelphia, PA 19141
Phone: 215.500.3166
baggio@lasalle.edu

Collaboratve Group Work Using Mobile Devices

George Engel
State University at Albany and Clarkstown High School South

Rena Palloff
Fielding Graduate University and Crossroads Consulting Group

Keith Pratt
Walden University and Crossroads Consulting Group

Summary

Today's youth are growing up as digital natives, being exposed to computer and mobile technology from a young age. Students are connected in ways that transcend the understanding of many adults, including educators. Young people are immersed in social networking, online gaming, and in the use of mobile technology for texting, talking, and web browsing. (Prensky, 2010). They have both a local and global sense of community, spending as much time in virtual environments as in environments that are reality based, developing friendships from all parts of the world (Turkle, 1995). As educators look to the future of teaching, current practices need to meet the needs of these learners.

This is a difficult question to answer. The 21st century student no longer learns according to the industrial models of education that are so prevalent in American society. New teaching methods or pedagogies need to be adapted that foster skills of critical thinking, collaboration, problem solving, and self-reflection -- skills demanded of the 21st century graduate. These skills are critical to the online classroom. It is the intent of this workshop to demonstrate activities, using mobile technology, that can foster collaboration and build social presence in both a face to face and an online classroom.

At the heart of the collaborative classroom is the fundamental belief that "we cannot 'teach,' but only facilitate the acquisition of knowledge" (Palloff and Pratt, 2005, p. 1). In order to facilitate the self-regulated, mobile learner, educators need to understand the basic characteristics that are required to be fostered in each learner. In the collaborative classroom, students need to be flexible in order to deal with issues as they arise. Students also need to be honest with themselves, their collaborative teams, and their instructor. This allows for greater discourse among the groups and allows for more productive self-assessment. Additionally, learners need to be willing collaborators among their learning communities. As collaborators, the learners need to be able to take responsibility for their roles and contributions to their learning community, whether it is in small collaborative groups, the classroom as a whole, or as part of a distance community (Palloff and Pratt, 2005).

This workshop integrates the use of mobile technology and wikis to foster collaborative growth amongst participants. Additionally, it offers hands-on practice with mobile-based wiki-creation. Using the World Café approach and mobile devices, participants will collaboratively explore the issues and trends emerging in online education. They will move between small groups, discussing different topics related to online education, brainstorming ideas and harvesting insights. Participants will then use their mobile phones to post these ideas to a wiki, to which they will have access during and after the workshop. Join us to experience the flexibility of mobile learning, the collective knowledge-building capacity of wikis, and the power of combining the two.

References

Palloff, R. & Pratt, K. (2005). The role and responsibility of the learner in the online classroom. Paper presented at the 19th Annual Conference on Distance Teaching and Learning.

Prensky, M. (2010). *Teaching digital natives, partnering for real learning.* Los Angeles, California: Corwin
Turkle, S. (1995). *Life on the screen.* New York, NY: Simon and Schuster

Contact Information:

George Engel
engel.george.b@gmail.com
Keith Pratt
drkpratt@mindspring.com
Rena Palloff
rpalloff@mindspring.com

Designing mLearning: Tapping into the 'Magic' of Mobile

Clark Quinn, Ph.D.
Executive Director
Quinnovation

Summary

The increase in mobile devices has been dramatic. For example, mobile subscriptions have reached saturation point in the developed world, and that's just the phones. In short, the devices are out there. However, mobile learning is more than just courses on a phone. To truly take advantage of mobile, you need to think differently. You need to get a handle on the 4C's of mobile – *content*, *capture*, *compute*, and *communicate* – and more, and map those capabilities to learning needs.

In this workshop, we couple the concepts behind mobile learning with exercises to comprehend the opportunities that mobile provides. We set the stage by exploring the scope of mobile trends. From there, we review the devices, extracting a common model. Examples are explored that help represent the space of possible solutions, and abstract the underlying principles. We use these principles to explore the role of mobile in learning and performance, and then to look ahead at what could be possible. Mobile presents us with some new possibilities that may spark transformative change in education.

Presenter Bio

Clark Quinn, Ph.D., has been innovating in strategic learning technologies for over three decades. Clark combines a deep background in the learning sciences with broad experience in technology applications, which he applies to the corporate, government, education, and not-for-profit sectors. He's the author of *Engaging Learning: Designing e-Learning Simulation Games* and *Designing mLearning: Tapping Into the Mobile Revolution for Organizational Performance*. He supports learning experience design through Quinnovation, and organizational learning strategy as a principal in the Internet Time Alliance.

Contact Information:
Clark Quinn
Executive Director
Quinnovation
60 Cuesta Way
Walnut Creek CA 94597
Phone: 925.200.0881
clark@quinnovation.com
http://www.quinnovation.com
http://blog.learnlets.com
http://www.engaginglearning.com
http://www.designingmlearning.com
http://www.internettimealliance.com

Introduction to Analytics for Online Learning

Phil Ice, Ed.D.
VP, Research and Development
American Public University System

Summary

Online Learning provides a dynamic means of providing learning opportunities anytime / anywhere, however, measuring success is dependent on relating initiatives to outcomes. Data often resides in a variety of formats and is not readily accessible to create actionable intelligence across the institution. This workshop will present participants with methodologies for establishing robust systems for using learning analytics to evaluate the efficacy of e-learning solutions, instructional design, faculty effectiveness, pedagogical strategies and emerging technologies. Participants will be introduced to concepts related to data federation, analytical measurement and intuitive reporting techniques that are easy to understand, adopt and use. Methodologies presented have been recognized by several e-learning organizations as effective practices and vetted by peer review, including the Sloan-C's Gomory Award for Data Driven Decision Making for Continuous Quality Improvement, three Sloan-C Effective Practice Awards and Adobe's Education Leader's Impact Award.

Session Objectives

1: Assess readiness to engage in data-driven decision-making at the program, department, or institutional level.
2: Create replicable frameworks for automating data analysis.
3: Interpret analytics to affect changes in instructional design and pedagogical strategies.
4: Use learning outcome data to make decisions related to student retention.
5: Produce intuitive dashboards that can inform decision makers, faculty and instructional designers on an ongoing basis.
6: Federate data from multiple sources into repositories for rapid data analysis.
7: Utilize end of course survey data for continuous improvement.
8: Using data to create benchmarks with other institutions and programs.

Presenter Bio

Phil Ice holds an Education Doctorate in Curriculum and Instruction with minor concentrations in Instructional Technology and Science Education. Currently Dr. Ice is the Associate Vice President of Research and Development at American Public University System (APUS) and Vice President of Research & Development for Sage Road Analytics, LLC. His research is focused on the impact of new and emerging technologies on cognition in online learning environments. Work in this area has brought him international recognition in the form of three Sloan-C Effective Practice of the Year Awards (2007, 2009 and 2010).

Contact Information:

Phil Ice
Associate VP of Research and Development
American Public University System
111 West Congress
Charles Town, WV 25414
Phone: 304.439.0676
pice@apus.edu

Improving the Instructional Design Process through Micro-Collaboration

Jon Aleckson
CEO, Web Courseworks

Penny Ralston-Berg
Instructional Designer, Penn State World Campus

Summary

Online learning is undergoing a change – toward the inclusion of immersive and highly interactive learning objects (ILOs). These ILOs provide an opportunity to *learn by doing* through experiences that are similar to real life. Teams consisting of a domain expert, project manager, instructional designer, graphic artist, and web programmers use sophisticated technology to create this interactivity. To achieve educational outcomes, teams must perform a complex balancing act, or *micro-collaboration*, in which their members simultaneously teach and learn from one another. The success or failure of micro-collaboration is influenced by five factors: politics, structure, culture, performance, and momentum.

- *Politics: Flattening Power Relationships.* Our communication / professional development strategies help level the playing field within a team. Cultural factors and strategies also facilitate micro-collaboration at the project and program levels.
- *Structure: Project Management and the Development Process.* Project management strategies ensure time, personnel, and money are used as efficiently as possible.
- *Culture: Creating a Shared Language for Micro-Collaborative Communication.* Documents, exercises, and references create a shared language and team members feel free to communicate their perspectives to one another.
- *Performance: Formative Evaluation*. Strategies for interpreting and integrating user feedback make it more likely that an ILO will achieve its educational goals.
- *Momentum: The Panoramic Factor.* Strategies for success in the other four factors will lead to positive momentum, but it is also important to be aware of momentum as a separate—if somewhat unusual—factor.

Presenter Bios

Jon Aleckson, Ph.D., has managed eMedia development for 30 years in private practice and conducted his doctoral research on increasing collaboration with experts to enhance online games and professional development programs. Jon is a frequent session speaker at training and development conferences, speaking on topics such as project managing eCourse development, quality standards, using collaboration tools and team sites during development, and producing engaging eLearning for adult learners.

Penny Ralston-Berg, M.S., has been designing online courses since 1997. She has also served as a technology trainer and design consultant for K-12, community college, higher education, and non-profit groups. Penny is currently a telecommuting instructional designer for the Penn State World Campus. Her primary research interests are games and simulations for education and how student perspectives of quality impact online course design.

Contact Information:
Jon Aleckson: jonaleckson@webcourseworks.com
Penny Ralston-Berg: plr15@psu.edu

Designing an Engaged Learning Course in an Online Environment

Rita-Marie Conrad, Ph.D.
Online Educator, Author, and Consultant
RMC eDesign

J. Ana Donaldson, Ed.D.
Contributing Faculty
Walden University
AECT President-Elect

Summary

The purpose of this workshop is to provide educational practitioners with a framework and step-by-step process for developing activities that promote engaged learning in an online learning environment. The presenters will begin with a discussion of the theoretical background necessary for development of effective activities. The remainder of the workshop will deal with the types of activities needed to be developed to promote engaged learning for each phase of learner engagement in an online learning environment. Examples of activities will be presented that can be adapted to fit a range of instructional situations and ages, so they will be appropriate for a variety of online learning situations and learner audiences. The workshop will also provide the opportunity for participants to develop activities that they can immediately incorporate into the online course they are designing.

Presenter Bios

Rita-Marie Conrad, Ph.D., is an online faculty member for Fielding Graduate Institute and Walden University, as well as Senior Consultant for the Learning Resources Network (LERN). She has designed and taught online courses for over a decade and has consulted on the design and implementation of online learning courses, evaluated online programs, and provided educational technology consulting and training to K-12 teachers and higher education faculty.

J. Ana Donaldson, Ed.D., is currently teaching part-time for Walden University in their online Ph.D. Educational Technology program. She has over two decades of experience in creating technology-supported learning environments and recently retired as an Associate Professor of Instructional Technology from the University of Northern Iowa. Ana is the AECT (Association for Educational Communications and Technology) president for 2011-2012.

Contact Information:
Rita-Marie Conrad, Ph.D.
Online Educator, Author, and Consultant
Phone: 919.370.0665
rconrad@nc.rr.com

J. Ana Donaldson, Ed.D.
Contributing Faculty
Walden University
Phone: 319.415.1920
Ana.Donaldson@cfu.net

Webinars: Interaction Strategies to Increase Social Presence

Michael Henry
University of Missouri Kansas City

Introduction

Web conferencing tools have been available to educators for just over a decade. Synchronous conferencing tools were designed originally for business communications, and they were technically complex and difficult to use. As these tools became more sophisticated, so did our desire to use them more effectively to educate despite technical challenges. Although Internet interruptions, software incompatibility, browser and plugin issues continue to make Web conferencing a challenge, the tools have begun to stabilize, providing an opportunity to explore questions related to best practices.

The best practices addressed in this discussion focus on questions related to using Social Presence as a strategic tool for engagement in the webinar environment. Beyond the novelty of web conferencing technology for teaching, educators are asking questions about student engagement and interactions to achieve learning objectives. Educators are asking to how to engage participants in a synchronous learning event. How can you tell when students are bored or tuned out? How do we know if students are multitasking or distracted from the learning experience? How can we use a somewhat cumbersome technology to encourage high level analysis, debate and discussion? This paper will discuss how Social Presence Theory (Short, 1976) may be applied to current web conferencing technologies for teaching and learning at a distance. The discussion will investigate three types of social presence webinar strategies, including Socratic engagement, participant presentation and Mis-en-scene.

Social Presence Webinar Strategies

The following examples of social presence webinar teaching and learning strategies were collected informally from the author's experiences in webinars for various academic and corporate training events between 1998 and 2011. Observations were made from the perspective of the webinar producer, participant and facilitator. The webinar events included a variety of subjects and audiences, although the primary audiences were adult learners, undergraduate and graduate university students.

Socratic Engagement

One of the simplest strategies to increase social presence in a webinar may be one of the oldest teaching and learning strategies. Socratic engagement is as simple as providing a developmentally appropriate question prompt and opportunity to respond. It's as simple as asking a quick question. Successful question response exchanges in a webinar are not quite that simple. Before an appropriate exchange can take place, the participants will need to be prepared for the technical process, as well as making them comfortable enough to respond in a live event.

Here is an example of a single event webinar for an academic class of young adult learners. Although students may be very comfortable chatting with their friends, they will resist typing chat messages that are seen by 30 to 50 other classmates. In this case, there were opening slides to provide instruction and prompts for simple and mildly personal responses. Often the question relates to the weather or other information related to their location.

Following this informal invitation to share thoughts and questions in the chat window, only a few individuals responded. But this was just the first suggestion and invitation. The next opportunity comes from the opening moments of the webinar. The facilitator says: "Welcome everyone! We want to encourage you to get involved in our conversation today regarding (Topic and Title). To help make sure

you are ready to begin, we would like you to answer this question in the chat window. It's our way of getting your to sign in and demonstrate that you are ready to learn." We then asked simple questions like "Who's your favorite leader?" Or "Name one component from the text."

By this time, many of the participants will begin to feel comfortable typing a short response in the chat window. The facilitator may read some of the responses, as well as recognize individuals by name. If academic credit is involved or if the facilitator is not getting a majority of responses by this time, the facilitator may encourage individuals to respond by name. You may hear: "Great. We are getting some great responses. If you haven't responded, please do. We would like to get each of you to sign in. We haven't heard from Becky or Jim. If you're having technical challenges, please call 888-555-1111 and they will make sure you are prepared and ready to participate." You can see from this exchange, that it is possible to get 100% participation from the start. This simple exchange provides both the technical ability and comfort level to respond to appropriate question prompts throughout the webinar. We also encourage questions and comments during the presentation, in addition to specific questions throughout.

As the webinar continues, specific periods of question and comment appear on the slide. These sections are facilitated, and questions prior to the segment are stored and sorted. When the discussion begins, the questions are posted on the screen and each question is read and discussed, if appropriate. The questions are addressed for each individual and follow up comments or questions are encouraged.

The chat record is saved and distributed to the presenters. Many live comments come so quickly, and it is at times difficult to respond to each comment. The presenters may follow up with the individual, and often there are very valuable and constructive suggestions provided by the participants. The Socratic engagement may continue offline following the live exchanges between presenter and participant.

Participant Presentation

Another social presence strategy involves participant presentations and is more commonly found in multiple event webinars or in a series of webinars. In this example, participants are invited to compose slides and join the webinar as one of the presenters. In his white paper, "How Workplace Learning Communities will Transform Business" (2008) Wilkins described the opportunity as:

> . . . an avenue for additional social networking and mentoring opportunities, and further empowers the workforce by providing opportunities for them to contribute, resulting in significant increases in the volume of content. This has the dual benefit of helping with both retention and productivity, while also moving the organization toward a deeper, more ingrained use of learning and knowledge. (Wilkins, p. 6)

Participants may be responsible for simple presentations, like an introduction, study questions for the group to answer or a report on a topic. In some cases more analytical presentations and case study discussions may be produced and delivered by participants. The process involves providing detailed instructions related to the scope and expectations for the presentations, as well as an example of what is to be done. It is helpful to segment the series of webinars. For example, in a professional development series for public relations professionals, there are three segments providing opportunities for participant presentations. The simplest is a review question developed by a participant. They introduce themselves to the group with one slide, and then provide a question for the group to answer. The participant reads the question and the presenters discuss the responses.

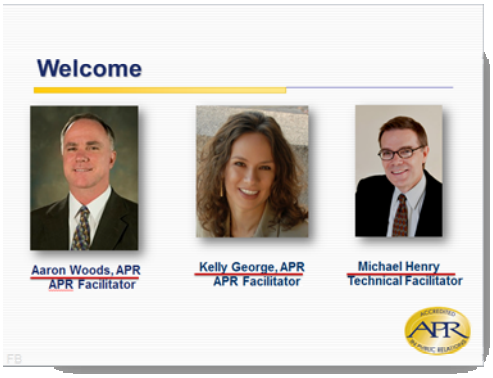
Another participant presentation involves sharing notes from a unit reading. The participant produces 8 to 12 slides with bullets for the main points covered in the reading. The participants are encouraged to provide photographs and to expand the bullets with personal illustrations and examples from their own

experience. They may simply read the slides or provide extemporaneous comments throughout the presentation, depending on their presentational skill.

The most challenging and complex participant presentation involves case problem responses. Sample case problems are included in the course materials or the participant may develop a personal or fictional case problem response. The participant writes a response to the case problem and submits it for review, prior to the webinar. Often these cases will be modified after they receive feedback; however, it is also helpful to work though feedback during a webinar. Other participants are invited to provide constructive criticism in the text chat, as the participant is presenting the case. Following this experience, participants have reported an extremely high level of involvement and a feeling of 'being' with the presenters.

Mise en scène

There is another crucial element to social presence strategies in a webinar that involve setting the scene or more aptly described as Mise en scène. Music, images, rhythm, vocal intonation, and even dramatic pauses have been shown to increase the sense of social presence in a webinar. During the opening period, when individuals are logging on to the webinar, we mute all microphones and play music. There are slides to instruct participants how to prepare mentally and technically for the webinar; however, there are no announcements. This sets the stage for an event, with a sense of anticipation. Music is also played during the last slide, as a closing to the event.



Figure

Figure1. *Presenter Photos in the Introduction*. Figure 2. *Presenter Introduction With Photo*.

A photograph of each presenter is another design element that has been shown to increase participant perception of social presence, (Fig1). As presenters are introduced, during the introduction to the discussion and at the conclusion of the webinar, photographs and titles are used to increase the feeling of identification with the presenter, (Fig.2). Often presenters themselves feel these photos are not necessary and will resist including them in the presentation. They may feel self-conscious about their image or they may simply be accustomed to face-to-face presentations that would not require a photograph, because they are physically available while presenting. But from the participant's perspective, photographs of each speaker are a vital connection to the perception of the speaker. Images and photographs in general are also very helpful to the sense of social being, but the speaker images are most important.

Conclusion

Our discussion has focused on the engaging qualities of social presence strategies for teaching and learning in a synchronous web communication event. Although webinar technologies have begun to stabilize as a web communication channel for teaching and learning, we are still investigating how to maximize these technologies for effective education.

These experiences are the result of informal satisfaction surveys, interviews with participants following webinar events, and solicited and unsolicited comments from webinar participants. In many cases, these strategies have been developed by simply thinking like the participant or observing participants during a webinar. If they presenter or webinar designer can imagine what it would be like to be a participant in the webinar event they are designing, it will be easier to creatively build social presence strategies into the event.

References

Daft, R. L,.& Lengel, R. H. (1984). Information richness: A new approach to managerial behavior and organizational design. *Research in Organizational Behavior 6*, 191-233.

eLearning Guild Research. (2009). 144 Tips on synchronous e-Learning strategy + research

Ellis, K. (2000). Perceived teacher confirmation. The development and validation of an instrument and two studies of the relationship to cognitive and affective learning *Human Communication Research, 26*(2), 264–291.

Gardner, H.. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.

Keil, M., & Johnson, R. (2001). Feedback channels: Using social presence theory to compare voice mail to e-mail. *Journal of Information Systems Education, 13*(4), 295.

Leveckis, A. (2009). *Cultural change and learning online: Online social networks enable individuals*. The eLearning Guild Learning Solutions.

Newberry, B. (2001). *Media richness, social presence and technology supported communication activities in education.*

Russo, T. C., Campbell, S., Henry, M. P., & Kosinar, P. (1999). An online graduate class in communication technology: Outcomes and lessons learned. *Electronic Journal of Communication, 9*. Retrieved from http://www.cios.org/www/ejc/v9n199.htm#Cours

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London, UK: John Willey & Sons.

Tuckman, B. W. (1965). Development sequence in small groups. *Psychological Bulletin, 63*, 384-399.

webinar. (2011). In *Merriam-Webster Online Dictionary*. Retrieved from http://www.merriam-webster.com/dictionary/webinar

Wilkins, D. (2008). *How workplace communities will transform your business*. White paper.

About the Presenter

Michael Henry is a lecturer and eMentor with the University of Missouri, Kansas City. He has been teaching online courses for over 15 years and is an eLearning Producer with Point-Productions, specializing in educational multimedia presentations for synchronous web conferencing and asynchronous webcourses. He created the webcourse development team for The University of Kansas Edwards Campus, while working as the Associate Director of Instructional Development at KU. With over 20 years experience in television production, he has taught television production, produced corporate training videos and Instructional Television Programming for PBS Television. His research interests focus on the role of media selection and social presence in mediated instruction.

Address: 1223 W. 63rd Street
Kansas City, MO 64113
E-mail: henrymp@umkc.edu
URL: http://h.web.umkc.edu/henrymp/
Phone: 816-678-3698

Modeling Uses of Google Apps for Education

Bonnie Thurber
Faculty Support Services Team

Brian Nielsen
Project Manager for Faculty Initiatives

Northwestern University

Summary

This workshop offers an overview of Google Docs, Calendar, Sites, and current/new tools that Google is developing for participants. Participants will receive hands-on experience in modeling Google Apps functions that can be applied to solve real educational problems. They will have the opportunity to share step-by-step designs for such functions as collaborative peer reviewing in student writing assignments, building group blogging models designed to help instructors promote particular learning objectives, and modeling common administrative tasks for both teachers and students that take advantage of cloud computing services. Models will be presented that come directly out of the experiences that workshop leaders have gained through working closely with faculty new to Google Apps and exploring new possibilities for instruction in the cloud environment. How schools and universities are beginning to integrate GAE into their learning management systems will be discussed and demonstrated.

Participants will have the ability to 1) identify core elements of Google Apps for Education; 2) execute major functions in Google Apps such as document creation and permission settings; 3) identify and use the latest Google Tools; and 4) develop practical models for Google Apps deployment that they can present to their faculty constituents.

Presenter Bios

Bonnie Thurber's interest in Online Collaborative Learning Environments started in 1990 with work in MUSHes and MOOs for Middle School students. Her focus shifted from K-12, (she was responsible for professional development at the NU Collaboratory Project) to higher education in 2008 when she joined the Faculty Support Services group at Northwestern University's Academic and Research Technologies (ART) where she has quickly became an integral part of the Blackboard support team. She is currently CEO of the iCollaboratory, , a Moodle-Google enviroment for K12 (http://www.icollaboratory.org).

Brian Nielsen is Project Manager for Faculty Initiatives in Academic & Research Technologies at Northwestern University. With a Ph.D. in librarianship from UNC-Chapel Hill, Brian has published and lectured extensively over a 30-year period on libraries, course management systems, learning technologies, and information policy.

Contact Information:
Bonnie Thurber
University Library 2 East Room 2650
1970 Campus Drive
Evanston, IL 60015
Phone: 847.467.6734
b-thurber@northwestern.edu

Digital Artifacts for Learner Engagement (DiAL-e) Framework: Optimizing Media for Engagement at a Distance

Kevin Burden
Director of Postgraduate Professional Development
Centre for Educational Studies, The University of Hull, UK,

Simon Paul Atkinson
Educational Developer
London School of Economics and Political Science, UK

Introduction

This paper describes the origins, development and applicability of a new tool called the Digital Artefacts for Learner Engagement framework (DiAL-e) for the optimal pedagogical exploitation of digital video and other media resources in tertiary education. It was developed originally to promote the use of a specific video archive collection for UK Higher Education, but wider user-testing and project development has demonstrated its value as a framework in many other educational contexts and a diverse range of digital artefacts. Based on a small scale project in 2006-2008, the DiAL-e has developed and matured into a practical and flexible framework for the consideration of pedagogical challenges of the use of digital media in a variety of contexts, including distance education. The DiAL-e framework is illustrated with a selection of video exemplars hosted in a bespoke YouTube channel and dedicated website (www.dial-e.net), launched in April 2011, that forms the basis for an ongoing community presence as the, already mature, DiAL-e framework enters the next phase of its development.

Considerable interest and excitement has been generated in recent years by the digitisation, and subsequent availability, of rich media resources previously inaccessible to the wider public or academic community. Despite this enormous increase in accessible digitized artefacts, the paradigm of learning and teaching which underpin their use by academics has remained essentially unchanged, fixed to a delivery or transmission model of education which values the artefact as a 'content resource', as an objectified external entity, as a container for subject information. The Digital Artefacts for Learner Engagement framework (DiAL-e) started in 2006 from a radically different premise, the subject content of the artefact was subordinate to the pedagogical purpose to which the object was put. Rather than approach an archive or digital repository searching for 'content', faculty should instead establish what their learners were to do with an artefact, its pedagogic intent, and then consider how this might be achieved. The original premise was that individual learners in different contexts, online at a distance or in a lecture theatre, might achieve very different educational outcomes in synthesising information, undertaking inquiry or developing empathy, with the very same clip.

The original DiAL-e framework models conceptualisation of learning as a process of 'meaning-making' in which the individual makes sense of the world in which s/he lives through the creation of user-generated contexts (Luckin, 2010). User-generated contexts combine notions of physical space and location, with cultural practices, habitus and individual agency to create unique and personal opportunities for learning (Pachler, Bachmair, & Cook, 2009). The DiAL-e framework shared this conceptualisation of learning as the starting point for the creation of rich and engaging learning opportunities which utilize many cultural resources including video archives, digital images, sound files, textual productions, technological devices and so on. It outlines the physical spaces or locations in which the learning opportunity might occur (e.g. an online or face-to-face location) and the activities or practices which might be used by learners in order to customise their own 'user-generated contexts'.

Background

The DiAL-e framework was originally developed in the United Kingdom as part of a small 'assisted take-up' project for the Joint Information Services Committee (JISC), supporting faculty working in tertiary education in their use of digitised resources. It was initiated to facilitate the wider adoption and use of newly available video resources such as the NewsFilm Online ITN archive. Like a number of similar archives, it was considered unlikely that academics would automatically identify this kind of archive as a central resource for teaching and learning at tertiary level, particularly outside of disciplines such as history and media studies which have some previous engagements with this type of material. Beyond this very practical and immediate objective, to encourage faculty to adopt a specific video resource, there were broader macro forces which shaped the direction we adopted. These include:

- the impetus to develop a digitally literate student population with a clear understanding of the power and influence of digital resources in contemporary communication (Martin, 2005)
- the desire to move academic engagement in teaching forwards towards the facilitation of learning in line with changing patterns of delivery and expectation, professionalism and econ omic pressures
- acknowledgement of the professed preferences of the 'NetGeneration' (Oblinger, 2005)

These factors played a major role in shaping our response to the problem we had encountered which was concerned to identify how to engage academics and educators in the use of digital media to support teaching and learning, in ways that were student centred rather than content driven.

The Solution

The literature and research on the use of video resources, and digital media more generally, highlighted content as the driving force behind academic selection and use of these resources in tertiary education. It was logical to develop a complementary framework, or template, for the particular video archive we had been commissioned to promote. However, we elected to abandon this orthodoxy and opted instead for a radical alternative that privileged student engagement and critical thinking over subject content. In brief, we sought to upset the status quo by promoting a framework that was not driven by subject ontologies or discipline epistemologies. We adopted a heuristic approach to the development of exemplars, which led to the creation of a framework tool for the use of video, and we believe other digital artefacts, grounded in what we regard as two complementary learning theories, namely constructivism and situated learning theory.

Duffy and Cunningham define constructivism as: '(a) learning that is seen as an active process of constructing rather than acquiring knowledge, (b) instruction which is a process of supporting that construction rather than communicating knowledge' (1996, p.171). A constructivist approach to the use of digital video is, therefore, fundamentally different from what we term the 'presentational paradigm'. Seen through this lens, the primary purpose of using digital video with students would be to transmit knowledge (i.e. a content driven paradigm). Seen through a constructivist lens video becomes an affordance, or tool, for a wide range of active learning strategies which engage the learner in the construction of their own knowledge.

This concept on the digital artefact as being an affordance relates importantly to situated learning theory, the notion that all learning is inextricably linked to the activity, context and culture in which it occurs (Lave, 1988). The DiAL-e framework seeks to overcome the rigidity of traditional classroom learning that imparts information as knowledge in an abstract and de-contextualised form. Brown, Collins & Duguid (1989) have advocated the concept of cognitive apprenticeship, suggesting that students should be enabled to 'acquire, develop and use cognitive tools in authentic domain activity' and have promoted the need for a new epistemology for learning, suggesting 'active perception' takes precedence over the exploration of concepts and representation. In our framework, we provide several learning designs to

support this process, situating tasks in authentic real-world contexts or simulations (problem solving, etc.), examining others' perceptions and emotive responses and encouraging active debate and dialogue.

The DiAL-e Framework

The DiAL-e framework is an online toolkit consisting of a matrix made up of two axes, each relating to the different decisions educators need to consider before they deploy digital resources, such as video. One axis consists of different physical spaces where learning might occur, ranging from large (e.g. lecture theatre) through to small (e.g. tutorial) and including virtual spaces (e.g. online), practical spaces (e.g., a workshop) independent spaces (e.g. the library), along with mobile learning spaces (e.g. handheld and mobile telephone devices). These are the spaces in which learners work with digital media when engaging with the learning activities or designs.

The other axis (*learning designs*) consists of ten discrete, though related, learning designs or learning activities. Each design has a specific focus and relates to a set of activities that will develop a particular skill or set of understandings and is transferable to other contexts. This means practitioners should be able to apply the learning design to other digital resources and other contexts. The 10 designs developed in the original framework in 2008 are illustrated in the diagram below (Figure 1).

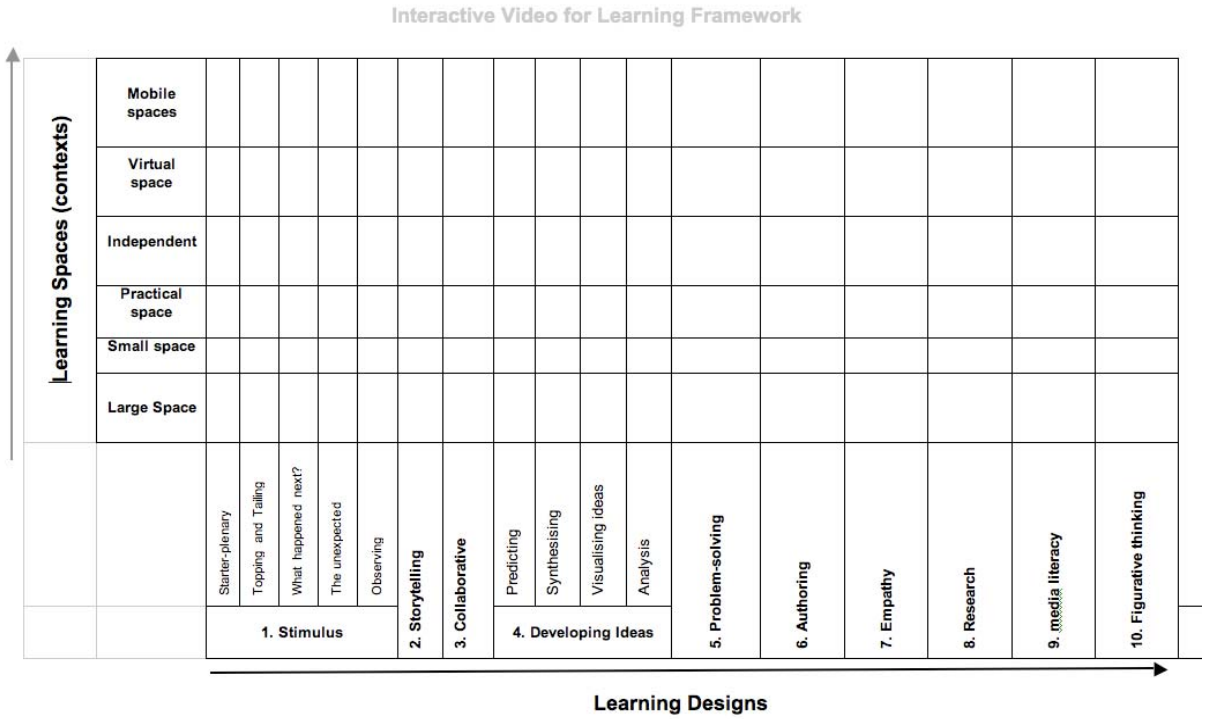


Figure 1. *The DiAL-e Framework in 2008*

Within the matrix the authors have created several exemplars or video screencasts that illustrate how the activity might unfold using a range of different media resources and in a variety of different spaces. These can be accessed by educators using a simple search tool and are designed to encourage the development of similar examples that are then shared within and between the communities. In the final version of the tool, we have developed a *YouTube* channel to support the uploading and tagging of exemplar videos (professional and user-generated) that illustrate the learning designs (http://www.youtube.com/DialeProject). It is anticipated that this dedicated YouTube channel will attract particular interest and attention from educators wishing to identify video resources on the basis of principled pedagogical purposes rather than for purely content reasons, as is usually the case.

Use and Applicability of the DiAL-e Framework

To date (May 2011), the project has worked with approximately 150 academics and educational developers from a range of academic communities including those in the UK, Hong Kong, Singapore, Australia, New Zealand USA and Europe. This has taken the form of full-day and half-day workshops in which participants have been given the opportunity to explore the framework tool in both practical and conceptual terms and to evaluate and create exemplars themselves. The overwhelming majority of participants have provided support and validation for the framework tool that we have developed, and present here. It was particularly interesting to monitor the level of discourse, both formal and informal, which took place during the workshops. Working in multi-disciplinary groups, practitioners shared ideas across the traditional subject boundaries and generally engaged in high-level explicit theory discussions rather than the implicit theories that so often characterise tacit knowledge.

Since the development of the DiAL-e framework in 2006-2008, the authors have worked on several national and international projects using the framework as a pedagogical tool for planning, design and evaluation purposes. These projects indicate the framework has considerable potential beyond the confines of the original project it was designed to underpin and suggest it can be used at different levels and with different constituents to support learner engagement.

In one example for the Quality Improvement Agency in the UK, the framework was used as a conceptual tool to encourage staff working in Further Education to design learning exemplars for their students based on critical thinking skills. This project drew upon a wide range of digitised resources including sound archives, digital newspapers and video archives. The project Website showcased a range of different approaches based on various learning designs from the framework, which are all student-focused rather than content driven. The workshops that accompanied the project generated considerable interest beyond the immediate participants and have encouraged the authors to develop a similar set of design-based workshops for several other projects.

More recently, the DiAL-e framework featured as the central pedagogical device for a major multilingual European online video clips library called EduTubePlus (http://www.edutubeplus.info/). This project brought together seventeen partner organisations from across Europe to develop a clip based online video library linked to specific curriculum ontologies in the host countries. However, the search facilities and underpinning exemplars were all based on the DiAL-e principles of learner engagement that have proven to be one of the most popular features of the new service.

Currently, the framework is also being used to support an international cultural collaboration project between schools and universities in the USA (Florida), Sweden and China (http://globalcrisisquest.wetpaint.com/). This project focuses on developing greater collaboration between students in the various countries through the examination of cultural sensitivities. The DiAL-e framework has been adapted and simplified for a school age audience. This has resulted in a reduced number of learning designs and a considerable emphasis on online learning spaces to facilitate both synchronous and asynchronous collaboration. Priority is given to collaboration between different schools in different countries using a variety of different Web 2.0 tools such as Voicethread, wikis, and Webspiration.

Conclusion

The examples above illustrate the flexibility and transferability of the initial framework. In 2011 the DiAL-e is being reviewed, and if appropriate updated, in response to engagement with communities such as The Annual Conference on Distance Teaching and Learning. The space axis is now of considerable interest to the authors who are exploring the concept of learner generated contexts at the interplay between physical space, learning activity and individual agency. The virtual and mobile contexts, being exploited in interesting and innovative ways by distance educators, are especially interesting in this

respect and will form the basis of our current workshops and training events. The authors are looking to engage a wider community of users by situating the original framework in a YouTube channel where educators can locate and upload their own exemplars to support their own community objectives, including optimizing media for engagement at a distance.

References

Brown, J.S., Collins, A. & Duguid, S. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

Duffy, T. M., & Cunningham, D. J. (1996). Constructivism: Implications for the design and delivery of instruction. In D. H. Jonassen (Ed*.), Handbook of research for educational communications and technology* (pp. 170-198). New York, NY: Simon Schuster Macmillan.

Lave, J. (1988). Cognition in practice: Mind, mathematics, and culture in everyday life. Cambridge, UK: Cambridge University Press.

Luckin, R. (2010). *Re-designing learning contexts*. London: Routledge.

Martin, A. (2005). DigEuLit – a European Framework for Digital Literacy: A progress report. *Journal of eLiteracy, 2*.

Oblinger, D., & Oblinger, J. (Eds). (2005). *Educating the net generation.* Educause

Pachler, N., Bachmair, B., & Cook, J. (2009). *Mobile learning: structures, agency, practices.* New York. NY: Springer.

About the Presenters

Kevin Burden is a lecturer in educational technology, responsible for technology-enhanced learning across the Faculty of Education. He has many technology projects for various organizations including BECTA, National College for School Leadership, the Department for Education (DfE), and more recently, work in the European Commission. He is currently researching mobile learning and augment reality, working closely with various international colleagues in countries including the USA, Australia and China.

Address: The Centre for Educational Studies
The University of Hull
United Kingdom
URL: http://hull.academia.edu/KevinBurden
Phone: (44) 1482 466731
Email: k.j.burden@hull.ac.uk

Simon Paul Atkinson has served in continuing education roles with Exeter University (UK) and Victoria University (New Zealand), in faculty development for distance education roles with the Open University (UK) and Massey University (New Zealand) and in Learning Development leadership roles such as with the University of Hull. He writes, teaches and presents on learning design for emerging digitally enabled university contexts and is currently the module leader at the LSE for their 'Course Development and Design' accredited faculty programme.

Address: London School of Economics and Political Science
London WC2A 2AE
United Kingdom
URL: http://www.sijen.com
Email: spa@sijen.com

The ABCs of ARGs

Koreen Olbrish
CEO
Tandem Learning

Summary

Alternate reality games (ARGs) are an engaging way to leverage game dynamics in a potentially lower cost, lower tech environment with an emphasis more on user experience and learning design to create an immersive learning experience. This session will allow attendees to learn about ARGs and have an opportunity to build their own ARG.

Presenter Bio

Koreen Olbrish, CEO, founded Tandem Learning to address an unmet need in the learning space. Applying her background in experiential learning and technology for education, Koreen advocates new ways of leveraging technology for enterprise learning with emphasis on performance improvement and behavioral change. She has strong ties to education, having received her MS in Curriculum and Instruction from Penn State University and helping start Freire Charter School in Philadelphia in 1999. The majority of her experience has been in the development of enterprise learning solutions, with particular expertise in simulations, serious games and the application of virtual worlds for learning.

Contact Information:
Koreen Olbrish
CEO
Tandem Learning
139 W Market St. Suite C
West Chester, PA 19380
Phone: 610.761.3555
koreen.olbrish@tandem-learning.com

Design and Assessment of Online Multimedia Coursework

Jim Yocom
Director, Instructional Media Services

Dr. Marianne C. Bishop
Director, Distance Learning

Indiana University South Bend

Summary

Digital media literacy is gaining importance as students are becoming more interested in multimedia-rich projects either as an option for student coursework or as an integral part of their learning experience through teacher-student engagement. Students are becoming more sophisticated in their ability to produce and share video, audio, and digital images online. This creates an unprecedented opportunity for faculty to assign, or permit the option of submitting, online multimedia projects as part of coursework submissions. However, multimedia coursework can be difficult to assess and classify according to traditional metrics. The goal of the workshop is to assist faculty in developing skills so that they can provide appropriate and meaningful assignment and assessment protocols for student engagement and optimal learning as students design and produce multimedia projects.

Because online multimedia projects typically include the use of emerging technology, faculty must be careful to develop realistic assessment guidelines based on available campus and online resources, and existing and evolving student skills. Moreover, multimedia is inherently subjective in its design, development, and assessment, so a well thought-out rubric intended for multimedia projects should include clear, specific, and measurable goals and objectives for the assignment. Rubrics may include criteria for the assessment of content development, message design, production values, application of copyright guidelines, team work principles, and other factors. Developing skills in the assessment of multimedia coursework will help faculty overcome anxiety which could open the door to creative and engaging student work. Giving students the option of submitting multimedia coursework supports their abilities to engage in projects which they are already interested in and scaffolds their acquisition of other knowledge and skills such as team work, creative project design and management, and critical thinking.

Presenter Bios

Jim Yocom is Director of Instructional Media Services at Indiana University South Bend, and is active in assisting faculty and students in the design of multimedia project work. Jim is a Certified Technology Specialist and an active member of the Consortium of College and University Media Centers.

Dr. Marianne C. Bishop is Director of Distance Learning, the Instructional Strategist at the University Center for Excellence in Teaching, and associate faculty in the School of Education, the Computer Science/Informatics Department, and the Psychology Department at Indiana University South Bend. She has a Certificate in Distance Education in Systems Planning and Management from IU Bloomington.

Contact Information:
Indiana University South Bend
1700 Mishawaka Ave.
South Bend, IN 46634
Jim Yocom; Phone: 574.520.4806; jyocom@iusb.edu
Dr. Marianne C. Bishop; Phone: 574.520.4543; cbishopm@iusb.edu

Alternates and Cancelled Sessions

Maximizing Learning Using Online Student Assessment

Patrice C. Boyles, Assistant Professor, Secondary Education
Professional Studies and Recreation
Chicago State University

Recent discussions have surfaced on higher education institutions offering more distance learning courses. In these deliberations, teacher education institutions have centered their focus on pedagogical format and accessibility. With the ongoing need to maintain accreditation, these establishments are now taking a pragmatic approach and refocusing their efforts to analyze student assessment and learning outcomes.

Theories on how to maximize instruction have been emphasized in predominately face-to-face environments. Educators are wavering in new territory and educational institutions are forced to adapt to an online environment and change curriculum to meet the needs of learners. However, there are concerns. Rother (2005) noted there is a gap between technology for teachers and technology for teaching (p. 34). Educators now have to begin to self-reflect, identify and begin their own technological transformation journey. This impact is significant especially for veteran educators who did not grow up with computer technology. Nevertheless, more faculties are being encouraged to become technology leaders and offer more online courses. As educators face the undying task of empowering learners for the information age, they discover they too must suspend judgment, discover new territories and redefine pedagogy to meet the needs of learners in a virtual environment. E-learning has taken on a new level with regards to teacher expectations. Instructors are expected to create cultural frameworks that include class, culture, and curriculum.

E-learning, is here, and has radically changed the way content is being delivered to students in and out of a classroom. The on-surge of e-learning has allowed many schools the opportunity to offer a more rigorous curriculum, reduce scheduling conflicts for students and reach a more diverse population. Today, students are reveling in the information age and are communicating via video conferencing, telnet courses and web courses. Online course delivery allows adult learners to increase motor skills, foster network communities, and develop collaborative interaction among peers.Many adult learners have active learning schedules, but some have misconceptions regarding online learning. They conceive online courses are easier when compared to face-to-face courses. The fact is, online courses are more difficult for most students. Online courses are or should be structured in a manner that engages and challenges the learners to become self-directed- lifelong learners. In general, many students withdraw or fail from online courses because they are too fast paced or poor teaching methods are used. Yet, many students do extremely well because instructors are using various instructional methods including experiential learning, cooperative learning and active learning exercises in their courses.

Recognizing every student who enrolls in an online course will not be self-directed; instructors need to learn how to captivate and assess their students in a virtual environment while at the same time adapt their instruction to meet the various learning styles. It has become critical for instructors to engage in online assessment to ascertain student learning outcomes. Online assessment can be in various forms including product and performance.

An exploratory study was conducted to examine the perceptions of pre-service teachers' attitudes towards online assessment. The study focused on student and instructor performance using Live text. Live text is a web-based management tool used to assist faculty with data collection and student assessment. his paper encapsulates significant components of the research literature review, methodology, and findings.

Maximizing Learning

A study by Beebee, Vonderwell and Boboc (2009) identified patterns in transferring assessment practices from face-to-face to online environments. There study emphasized the need of assessment *for* learning and *of* learning, in both face-to-face environments, as well as online environments. Furthermore, there is a need to construct e-pedagogy. In Pecheone and Chung's (2006) study on Performance Assessment, it was addressed that performance assessment correlates to teaching ability. Performance assessments can identify programs strengths and weaknesses, as well as use results to enhance and evaluate teaching practices. Evaluation of teaching performance is normally used as an instrument to evaluate instructors. Moore (2003) research sited assessment integrated with technology gives learners the opportunity to substantiate their competencies using various methods.

For the past several years, more attention has been made to the quality of online instruction. Some educators are indecisive in new e-territory because of new mandates to adapt to an online environment to meet the needs of learners. Pope's (2006) confirmed the soaring popularity of online education. Technology has dramatically changed the way we learn. It has forced educational institutions to revise delivery methods, reshape teaching methods and reevaluate learning environments. The complexity of teaching or taking an online course can be overwhelming for some and impossible for others. It can be difficult for instructors as well as students to adapt to an online environment and be continuously motivated. It is important for students to become aware of their personal learning habits and employ a self-questioning framework that includes determining their motives, goals, abilities, and strategies before embarking in an online course. Students must also be able to identify barriers prior to enrolling in an online course. One of the first barriers is that of technology itself. Many students enrolling in online courses do so without proper preparation. To add fuel to the fire, all instructors who are facilitating online courses, are not properly trained to teach in an online environment. The goal is to enhance the student experience. A students experience can be enhanced by promoting learning through discussion, giving students some self-direction, assigning collaborative work projects and implementing 'best practices' for online assessment. This can be challenging in a "stand-alone" technology course.

Educational institutions have been called to the planning table to develop a new paradigm to embrace online education. This was affirmed in Allen and Seaman (2010), report that stated; approximately 5.6 million students were enrolled in at least one online course in fall 2009. The transformation in delivery of instruction has consequently brought on the need to reassess how educational institutions are implementing online assessment and constructing new pedagogical formats. Transformational learning is about change. Before an instructor can ascertain the learning style of their students, they must first identify their personal learning style and how they prefer to learn. This step might seem minute but it is critical. Most instructors teach the way they were taught.

Methodology

This research expounds on an expository study conducted at an urban university whose teacher education students reflected a diverse background: gender, age, education and technical skills level. To better understand teacher candidate's perceptions of online assessment, a written survey was designed to collect data. Students were asked to reflect and respond to ten questions based on personal beliefs. All of the students were enrolled in a technology education class that used online assessment. The majority of the students have previously participated in classes where online assessment was implemented. The survey was distributed to thirty-eight students. Twenty-three students agreed to participate or 60%. Nineteen students were female and four identified themselves as males. In relations of grade level, 14 identified themselves as graduate students, 3 students were seniors, 2 were juniors, 1 was a sophomore and the remaining student identified themselves as freshman. Participants were encouraged to reflect on their overall experience with online assessment.

Findings

The findings from this survey can be divided into three discrete yet equally important outcomes associated with teaching and learning. The effects of these differing perceptions may explain why assessment and student learning outcomes go hand-in hand. Factors should be considered to include both the pre-service teachers' preference using online assessment and their perception of instructors using online assessment. Insight was gained into pre-service teacher perceptions on how online assessment is used and how it impacts teaching and learning.

This study showed that there is a definite correlation between graduate course work and online instruction. The majority of the students participating in the survey were graduate students that plan to implement online assessment into their instruction upon graduation. This sets a roadmap for educational institutions to aggressively prepare for online instruction and assessment that is both flexible and authentic.

The first outcome relates to pre-service teacher preference using online assessment. Responses clearly show that the majority of the students prefer online assessment. The findings show it has enhanced their learning experiences and it has improved their pre-service teaching performance. Furthermore, the implementation of online assessment has enhanced their learning experience.

The second outcome relates to instruction. While more educational institutions are developing new strategies to develop online curriculums and assessments, results show that the majority of the teachers use online assessment effectively; however, more training is needed for the instructor and students. These results indicate more faculty development is needed. Furthermore, students are acknowledging they need more training.

The third outcomes related to allowing the pre-service teachers to have a voice in the online process. The majority of the participants indicated online assessment is an effective teaching tool and should be used in all classes. One respondent said, "All teachers at this university need training on how to use Live Text." .A different respondent said, "Chicago Public Schools has started an on-line assessment called (Scantron)." The responses from these students clearly indicated they are aware of movement towards online assessment

Recommendations

It is common knowledge that more learners are embracing the e-learning environment. The demand for 'just in time' learning and training has caused educational institutions to reevaluate their methodologies when it comes to teaching online. Maximizing instruction in a virtual environment requires creativity, cooperation, participation and patience. Instructors are challenged to develop new philosophical views to ensure the conception of content and reassess their curriculum to be conducive in a virtual environment. Overall, there is no one static method, or theory that can be imposed on learners in virtual environment

When educational institutions elect to implement online learning, it is important to recognize the impact of online assessment. This study suggested that graduate students, particularly prefer online assessment. It also suggested pre-service teachers who are exposed to online assessment plan to implement it in their future classrooms. The need to prepare tomorrow's teacher to use technology has predefined how educational institutions should prepare teachers. A broader version of this study would include colleges and universities who offer online assessment exclusively for the graduate programs.

References

Allen, I. E., & Seaman, J. (2008) *Online nation: Five years of Growth in Online Learning*. Needham, MA: Sloan Consortium.

Allen, E. I., & Seaman, J. (2010) Class Differences: Online education in the United States, 2010, *Report from the Sloan Consortium.* Retrieved from http://sloanconsortium.org/publications/survey/pdf/class_differences.pdf

Beebe, R, Vonderwell, S., & Boboc, M. (2010). Emerging patterns in transferring assessment practices from f2f to online environments. *Electronic Journal of e-Learning*, 8(1), 1-12.

Moore, W. (2003). Facts and assumptions of assessment: Technology, the missing link. *T.H.E. Journal*, 30(6), 26.

Pecheone, R. L., & Chung, R.R. (2006). Evidence in teacher education: the performance assessment for California Teachers (PACT). *Journal of Teacher Education*, 57(1), 22-32.

Pope, J. (2006, November 9). Number of students taking online courses rise. *USA Today*.

Quellmalz, E. Schank, P. Hinojosa T., & Padilla C. (1999). Performance assessment links in science b (PALS), *Practical Assessment, Research & Evaluation*, Retrieved from http://PAREonline.net/getvn.asp?v=6&n=10.

Rother, Chris. (2005). Is technology changing how you teach? *The Journal*, *33*(3).

About the Presenter

Dr. Patrice C. Boyles is an Assistant Professor at Chicago State University in the Technology and Education program.

Address: Chicago State University
9501 So. King Drive
Chicago, IL 60628-1598
Email: pboyles@gmail.com
Phone: 773 995 2271

A Randomized Experimental Design for Evaluating Online Learning

Jihye Kam
Ph.D. Student, Teachers College
Columbia University

Summary

This presentation describes in detail a randomized experimental design for accurately evaluating web courses as compared to classroom. Furthermore, assuming existence of data obtained from the randomized experiment, this study shows how to apply that data to the econometric model for assessing the effect of distance learning versus in-person class learning and identifying the most efficient model of online learning.

Everyone has likely experienced a painful lack of data. A common method for evaluating online learning compares the outcomes of nonparticipants and participants based on skewed and small sample surveys or test score data for pupils in specific courses that researchers taught. The outcomes for nonparticipants may differ systematically from what the outcomes for participants would have been without the online learning, but this method can produce selection bias in estimated impacts. We can escape a potential endogeneity problem using various statistical methodologies such as an instrumental variable and regression discontinuity. However, the study can be easily criticized if the original sample has a serious selection bias or treatment groups are not similar. Those factors contradict the assumption of homoskedasity in error terms and finally result in wrong interpretations. To solve this problem, a randomized experiment recently becomes popular. Because individuals are randomly assigned to a treatment group in this experimental design, homogeneous treatment groups can be created without potential biases.

There are compulsory courses for every student in secondary school or university. This project targets students enrolled in this compulsory course. It should be an experiment in which some students are randomly assigned to an in-person class, a web course designed without interactions, or a web course with interactions among students and with a professor. Others are also randomly assigned to the same class groups which require a compulsory participation for a good grade. Because we need a large number of students faced with the same conditions, this project should be conducted in a state university having many same-level campuses like the University of California's nine campuses. To reduce the time selection bias problem, this project should be repeated over at least three years.

The analysis would be based on the cross-sectional approach by controlling students' original ability (captured by SAT, IQ test, average of previous GPAs, etc), family backgrounds, major, race/ethnicity, age, gender, term-time employment and credential type. Regressors might be highly correlated within the campus, so we should control for campus by clustering. We apply this data to regression using ordinary least squares to find the mean effect of online learning while the results of a quantile regression with this data shows at which quantile students receive the largest benefit from online learning. Likewise, assuming the existence of data obtained from a randomized experiment that this study suggests, I will present econometric models to assess the effect of distance education future that researchers can apply to data.

Contact Information:
Jihye Kam
Ph.D. Student
Teachers College, Columbia University
601 West 113rd Street, Apt. 5B
New York, New York 10025
Phone: 608.515.3016
jk3283@columbia.edu

Instructor Self-disclosure in Online Education

Eldon Strickland
Associate Director, Office of Distance Education
Boston University

Summary

Self-disclosure is important in general because it is used to define the self. Collins & Miller (1994) and others (Higgins, 1987; Joinson, 2001; Ellison, Heino & Gibbs, 2006) view self-disclosure as actions that are central to the development of close personal relationships. In addition, it maintains one's psychological well-being. Pioneering work on self-disclosure has been the focus of theoretical discussions and research inquiry in a number of disciplines, including psychology, communication, and sociology. The literature on self-disclosure is extensive with most of the empirical work being done in the field of psychology. A number of studies have confirmed that we disclose more to those whom we initially like and that we tend to like those who disclose personal information to us (Collins & Miller, 1994). Thus, we can see that levels of self-disclosure are used to build relationships.

Self-disclosure is important in my proposed research because it is used to create and monitor a form of online identity. My research proposal investigates high, medium, and low forms of self-disclosure. The form of self-disclosure that I propose to use is the "self-presentation" form because it is a representation of the outward facing “self,” which is evaluated by social networks (Ellison, Heino & Gibbs, 2006). When the self-presentation is accessed through computer-mediated communication, it then becomes the online identity. Therefore, starting with a clear understanding of self and self-disclosure enables us to take a critical look at how types and levels of self-disclosure can and will affect online identity.

In the online classroom context, an instructor will establish personal relationships with his or her students and manage the self-disclosure of private information. The decision of what to disclose is based on a variety of criteria such as the classroom environment, student and instructor motivation, individual differences, the type of situation, and gender of the student to name a few. Instructors may intentionally or unintentionally use these criteria to decide whether or not to disclose certain information in the online classroom. Aided by new technology, an instructor can purposefully limit the amount and type of personal information disclosed to learners.

In this study, I proposed to manage, similar to face-to-face instruction, the way that an instructor is “seen” by his or her students. In the online classroom, instructors must balance the private information they share with students to enhance the learning environment and manage the boundaries between instructor and student. In the online environment, instructors can decide what information they want to reveal to their students in an effort to create a comfortable teaching situation that fosters learning. At the same time, instructors must also determine what information to conceal from their students to avoid a negative reaction from them as well as protect their creditability as an instructor. In my study, I propose to explore instructor self-disclosure via personal websites, video discussion blogs, and live video classrooms.

Contact Information:
Eldon Strickland, Associate Director
Boston University
1010 Commonwealth Ave, 2nd Floor
Boston, MA 02215
Phone: 617-353-1973
ems363@bu.edu

Inspiring Innovation: T4LT Video Podcast for Faculty Development

Alan Peterka
Instructional Designer/Department Coordinator

Emily Honchar McWorthy
Instructional Designer/Instructor

Distance Learning
Kirkwood Community College

Summary

New web-based tools are released daily. Faculty and designers are challenged to maintain their knowledge of how such tools can be leveraged for teaching and learning. Sometimes, it takes a minute or two with a clear, efficient example from other educators; A nudge in the direction of application. This is the goal of Kirkwood Community College, Distance Learning's T4LT video podcast series.

A representative episode selection from Technology for Learners and Teachers (T4LT) will set the direction and tone for discussion (http://t4lt.blogspot.com). The series is produced in collaboration with the Media Services department and a variety of online tools (Google Docs, Jing, Blip.tv). The production process will be explained and discussed. Additional setups and potential workflow will be discussed for those who want to create their own similar video podcasts for courses or faculty development.

Presenter Bios

Alan Peterka has been at Kirkwood, Distance Learning since 2005. He earned his MA in Chinese Pedagogy from The Ohio State University.

Emily McWorthy has been at Kirkwood since 2008. She earned her M.A. in Communication from Northern Illinois University.

Contact Information:
Alan Peterka
Instructional Designer/Department Coordinator
Kirkwood Community College
Linn Hall 210
Phone: 319.398.1248
alan.peterka@kirkwood.edu

Experiential Learning: Faculty as On-line Students

By Dr. Judy A. Serwatka
Professor of MIS

Introduction

Questions often arise when distance education courses are introduced to an institution concerning faculty training in this form of education. One attitude among faculty is that distance education courses are 'easy' and that faculty that teach them don't work as hard as others. Another attitude assumes that students that take such classes are not doing the same level of work as their on-campus counterparts. In order to debunk these attitudes, this paper will point out the fallacies in these statements and provide methods to allow faculty to be introduced to on-line education with a first-hand experience.

Where We Have Been

The field of Distance Education is not necessarily a new one. Correspondence schools have been in existence for decades. While higher education did not routinely embrace that form of education, the need to provide flexible educational opportunities has allowed innovators in the field to expand the idea of correspondence schooling into Web-based training. Early forms of on-line courses were not always created in the best format. Early adopters may have simply put a syllabus with readings and providing e-mail, and considered that to be an on-line course. Some even resorted to creating a video of their lecture and then posting that to a Web site. Have you ever sat through a Webinar or tried to stay awake through a 1-hour online presentation? It's pretty boring, sorry to say. Today's environment requires much more work to create a course on-line that these early courses.

Training the early adopters of this technology has been minimal. Those who were willing to put their courses on-line may have sought out courses that already existed on-line as examples, may have taken a workshop or two on how to create an on-line course, or may have enrolled in a University program to train on-line instructors. Unfortunately, many inadequate on-line courses may have been created, with the students suffering from the lack of faculty training in these courses. Some online training courses require that the 'students' (read 'faculty') set up sample courses and they are required to include things that may be required or optional by their particular university. Unfortunately, some of the instructors of these online courses don't really have credentials to teach them, and leave the 'students' pretty much on their own. One of the primary tenants of online learning is to COMMUNICATE, COMMUNICATE, COMMUNICATE! If the instructor who is trying to teach faculty to create online courses fails to do so, the faculty may think that this is the correct way to run a class. It is NOT!

The problem stems from one that is quite prevalent in higher education. We have many faculty who are brilliant in their respective fields, but have been given no training in how to develop or conduct an effective classroom experience. We don't train college faculty to be good teachers, unless they have a degree in teaching. Likewise, on-line education has been left to those who were willing to explore and put many hours into the creation of the courses, but little or no training in these methods were provided.

The question arises, if training for on-line faculty is needed, how is this accomplished? Most faculty don't have time to sit through many workshop in using new pedagogy related to on-line courses and many barely have time to attend workshops on using course management software. But, such training is essential if a faculty member is to be effective as an on-line instructor.

Where We Are Going

Since on-line education using the Internet is a fairly new educational development, we should not rely on the traditional methods of training faculty. Sitting through training sessions does not really prepare a faculty member who will experience a new way to teach on the Internet. Why not use experiential learning to help the faculty understand the methodology and problems that may occur in on-line courses? If this is the preferred method of training, then how do we accomplish this?

A trend at some universities today is to require theirs students to have "experiential" learning before they graduate. They are required to do some community service or training in a particular field before they earn their degree. It seems logical to introduce faculty to online learning in same manner.

One way to allow faculty to experience an on-line course as a student is for the faculty member to enroll in a course that is already offered by their own institution or another institution. The danger in this is that the course may not be designed by someone who was trained in on-line education methods. There is a significantly different mindset for those who create on-line courses as opposed to creating an on-campus course. The point of educating faculty in the pedagogy and methodology of on-line education is to change many ingrained ideas, and create an environment where the faculty member can experiment and come up with new and effective ways to teach on-line.

Experiential Learning

After many years of teaching on-line, I decided that I wanted to get a some formal instruction. I enrolled in the Distance Education Certificate program at the University of Wisconsin in 2004. The program is done entirely on-line and one may sign up for either a self-paced version of the program or as a member of a cohort group that progresses through the program at the same time. The program is designed to be finished within one year, so a faculty member need only commit to that length of time to complete the Certificate. This paper is NOT an advertisement for this program. It is simply my example of how being a online student can help faculty learn to create better courses for online delivery.

Although I did not know what to expect, I knew that on-line courses would involve some interaction among the students and instructor. What I did not realize was how much time a student must spend to keep up with the work. We were initially asked to create a student profile in the software (initially the University used WebCT, but changed to a University-developed system after a couple of months). Some students had problems with learning how to use the software, but since I've used many types of course management software, I was able to find all the required pages and do the assignments with no problem.

Courses were set up with some on-line reading assignments (Web sites), some CD-ROM video and audio files, and some readings from course handbooks (mailed to the students). Although the readings took some time, much more time was spent reading and responding to discussion groups. Each week, a set of assignments were posted with questions related to our readings. The students' responsibility was to provide a thoughtful response to the questions posed, and to respond to other students' responses. Just keeping up with the e-mail and discussion postings was a process that could take 5 or 6 hours per week. And, most students were asked to be group facilitators or summarizers during the class, meaning that you had to respond to other students and ask questions to get clarification or to expand on ideas. The instructors in the courses also responded to student posts, sometimes offering Web sites for additional information about certain topics.

What a learning experience! The phrase "Walking in Someone Else's Shoes" comes to mind with this experience. It gives the instructor an excellent opportunity to experience what a student should experience in an on-line course. The main idea is to get the students engaged and get them discussing topics so that

they learn both from their own research and from information they get from other students. Now, in these courses we have the advantage that the 'students' are adults, some have taught on-line and some have not, and some are administrators. So, the amount of information provided is probably more thought through than what might be exchanged in a typical undergraduate course.

These courses are taught by faculty who have many years experience in on-line teaching and have done research and written papers on these procedures. In addition, the instructors provide many additional resources that can be perused at a later time, or filed for use in the future for creating an on-line course. And, the instructors respond in a very timely manner, an extremely good example for those who have not taught on-line before these classes. One of the main complaints that students usually have about on-line courses is the lack of involvement in the class by the instructor. My personal rule is that I respond to e-mails within 24 hours on week days, and I check e-mail at least once over weekends and holidays. It is also important to let students know if you are going to be out of town and not checking e-mail for several days. All of these things were done by our instructors, giving the students the feeling that the instructors do really care.

On-line courses provide the learners with many benefits. One can work on the assignments at any time of day. No travel is required. People from across the country or across the world may be in the program, so experiences from many diverse personalities and different cultures are possible. An on-line course also provides the learner with the ability to reflect on assignments, compose responses off-line, and then post them within the time guidelines determined by the instructor. All of these things help to teach faculty the right way to conduct an on-line course.

Conclusion

I am a firm believer in hands-on training for anyone who needs or wants to teach on-line. There is nothing like experiencing the potential loneliness and fear that students may feel when they don't have an instructor in a classroom to answer their questions. Interacting through electronic media with other students in the class can also be a challenge for some people. If faculty experience these things first-hand, they will have a better understanding of how their students feel when they take an on-line course for the first time.

Some universities already have requirements that their faculty have some sort of formal training before they teach online. To make our educational system truly adaptable to the online world, all faculty need to be trained in this manner. Otherwise, we may turn students off using faculty who don't understand the problems that students encounter in the online educational environment. We need to make our online courses as desirable as possible to the widest audience. Having well-trained and engaged faculty can accomplish this.

References

Atherton, J. S. (2010). *Learning and teaching; Experiential learning* [On-line] UK. Retrieved from http://www.learningandteaching.info/learning/experience.htm

Kolb, D. A., (2001). *David A. Kolb on experiential learning.* Retrieved from http://www.infed.org/biblio/b-explrn.htm (Accessed: January 12, 2011).

Kolb, D. A. (1984). *Experiential learning:E experience as the source of learning and development.* Upper Saddle River, NJ: Prentice-Hall (0 13 295261 0).

Luckner, J,. & Nadler, R. (1997). *Processing the experience: Strategies to enhance and generalize learning.* Dubuque, IA: Kendall/Hunt.

About the Presenter

Dr. Judy Ann Serwatka is a Professor of Management Information Systems at Purdue University North Central. She received her EdD in Business Education from Northern Illinois University with minors in Management Information Systems and Instructional Technology. She has taught at Purdue for 26 years in Business and Computer Information Systems, with specialties in networking and distance education. She is a past Editor for the Information Technology Editorial Board in Project Merlot. She has authored more than 40 articles and conference presentations on distance learning. Dr. Serwatka has Certificates in distance education from Indiana University and the University of Wisconsin-Madison.

Address: Purdue University North Central
1401 S. US 421
Westville, IN 46391
Email: jserwatka@pnc.edu
URL: http://www.pnc.edu/bols/serwatka.html
Phone: 219-785-5445

Implementing an Online Synchronous Peer-Tutoring Program In a Higher Education Setting: From Design to Delivery

Johanna Dvorak, PhD.
Director, Panther Academic Support Services
University of Wisconsin-Milwaukee

Kevin Roessger, M.S.
Project Assistant, Panther Academic Support Services
Instructor, Department of Administrative Leadership
University of Wisconsin-Milwaukee

Introduction

This paper focuses on how an online synchronous peer-tutoring program was successfully implemented at our university. An overview of the Web conferencing software program will be given, followed by a discussion of the training program. Changes in tutor attitudes and self-efficacy following training will be discussed, as well as tutors' qualitative reactions to the training program and online tutoring experience.

The Web Conferencing Software Program

Currently, there are over 30 Web conferencing software programs available for various platforms. Each differs in its level of functionality, usability, security, and cost. However, each is similar in its ability to allow users from remote locations to synchronously collaborate online. Group size can range from 2 to 400. Web conferencing programs can be used as standalone offerings, or they they may be integrated with a learning management system (e.g., Blackboard, Desire2Learn, or WebCT) to ensure accessibility and security.

Various learning tools are featured within the Web conferencing software program to promote interactivity and ease of communication. For interactivity, tutors can utilize an application sharing function to share software (e.g., PowerPoint, MathTutor, 3D Chemical Structures, etc.) with students, who are then able to manipulate the software given the tutor's permission. Tutors and students can also use the file sharing feature to exchange electronic documents in any format. Online resources and Websites (e.g., YouTube or Wikipedia) can be brought into the session using the Web tour feature.

For communication, a text chat box is available for students to communicate with the group. Text chat may be made public to the group or private to specific individuals. In addition, students and tutors can communicate through voice chat using headsets or conferencing microphones. Tutors can allow up to five students to speak simultaneously.

The Web conferencing software program also features a virtual whiteboard that tutors and students can write on, import images to, and upload slideshow presentations to. The virtual whiteboard can be integrated with interactive whiteboards in physical locations to allow online students to participate in in-person sessions. Tutors can also use the polling feature to elicit student responses to multiple choice questions.

The Online Peer-Tutor Training Program

To ensure tutor proficiency using the Web conferencing software, an online tutor training program was conducted over a one month period across four one-hour weekly sessions at the beginning of each semester. Prior to the first session, a tutor-training course site was created within the university's learning

management system. Participants were given access to review training related materials, practice using Web conferencing tools, and communicate asynchronously with fellow participants. A designated campus computer lab was used for each session.

Four training modules were presented: (a) introducing the Web conferencing software program, (b) utilizing Web conferencing tools, (c) integrating interactive whiteboard technology within the Web conferencing software program, and (d) fostering student interactivity in online tutoring sessions. In each session, new skills were first introduced and modeled to participants, then tutors were given time to practice and apply these skills in a manner relevant to their subject area.

As Web conferencing tools were demonstrated on an overhead screen, participants took part using their own computers, allowing them to experience a student's perspective while simultaneously viewing a tutor's perspective on the overhead. As Web conferencing tools were demonstrated on an overhead screen, participants interacted on their own computers, which allowed them to experience a student's perspective while simultaneously viewing a tutor's perspective on the overhead. Each session incorporated approximately 25% trainer modeling and 75% guided practice. During the latter phase, questions were posed to the group to promote dialog and build connections between new information and tutors' subject area knowledge.

Job aids and program objectives were distributed at the first session. Electronic copies were made available in the content area of the tutor training course site. Job aids were created for all procedural tasks related to online tutoring, and were based on a task analysis of the sequential skill. Program objectives were created based on Mager's (1997) three-part model, which focuses on the behavior the learner will exhibit, the conditions under which the behavior will occur, and the criteria used to determine effective performance. Training objectives addressed demonstrable Web conferencing skills, as well as meaningful applications within the context of online tutoring. A two-tier objective design was used. Thirty-one first-tier objectives (FTOs) were grouped in four categories representing specific Web conferencing competencies: (a) whiteboard tools, (b) audio tools, (c) type-chat tools, and (d) advanced tools. Four second-tier objectives (STO) were also presented. These focused on applied performance expectations—that is, how tutors were to apply new knowledge and skills in real world online tutoring sessions.

Effect of Training on Peer-Tutors' Attitudes and Perceptions of Self-Efficacy

After implementing the training program in Summer 2010, we looked for a way to quantify the apparent affect training had had on tutors' online participation. Tutors appeared to me more receptive to online tutoring following training, but we were unsure if training had contributed to this effect. Given the significant resources required to carry out a training program, we felt it was imperative to determine if training led to desirable outcomes for tutors, students, and the learning center itself. As a result, we designed a study aimed at quantifying potential changes in tutors' distance learning attitudes and self-efficacy using distance learning tools. We worked from the assumption that positive changes in tutors' attitudes and self-efficacy would lead to positive changes in tutors' behavior, which would immediately impact students and the learning center itself. Our assumptions were based on research demonstrating a correlation between: (a) high self-efficacy in a task and increased effort and persistence (Schunk, 1990), and (b) strong attitudes and subsequent behavior (Holland, Verplanken, & Knippenberg, 2002).

A pilot study was conducted in Fall 2010 to assess the effect of this training program on peer tutors' attitudes toward distance learning and self-efficacy using distance learning tools. Twenty-eight students employed as peer tutors participated in this study. Their ages ranged from 18 to 30 years old. The study followed a quasi-experimental design in which participants were presented with a 10-item pre-test survey prior to training and an identical post-test survey following completion of training.

Results demonstrated a significant change in four pre- and post-test survey items following training. First, tutors' responses indicated an increased sense of the importance of providing distance learning opportunities to overall student success (t=-2.448, p=.021). Second, tutors reported an increased sense of the effectiveness of distance learning programs compared to face-to-face (t=-3.124, p=.004). Third, tutors reported an increase in experience level using distance learning tools (t=-3.187, p=.004). Finally, tutors reported an increased level of comfort using distance learning tools (t=-2.204, p=.037). One implication of these findings is that a structured tutor-training program may serve to increase peer-tutor commitment to an online synchronous tutoring program.

Tutors' Qualitative Reactions to Training and the Online Experience

Qualitative questionnaires were administered to determine peer-tutor and student reactions to the online synchronous tutoring program at the conclusion of the fall semester. Students and tutors cited increased access, availability, and convenience as primary factors for participation. In addition, tutors cited training as an essential pre-requisite for success when using the Web-conferencing platform.

Twenty tutors participated in the end-of semester survey in Fall 2010 about their online training and tutoring experience. Of the 20, 60% (12) were seniors, 20% (4) were juniors, 15% (3) were first-year graduate students, and 5% (1) was a sophomore. None had taken any previous training in Elluminate; however, 30% (6) had taken an online course. Nineteen (95%) responded that they had no or little experience using educational technology before the Elluminate training. They described themselves as "very uncomfortable," "very apprehensive," "very nervous," "apprehensive," "not comfortable," to "slightly comfortable." One person indicated a good comfort level. After the training and practice with Elluminate, 9 tutors were "very comfortable," and 10 tutors were "comfortable" navigating the software.

The Art 100 tutor said, "Originally I was not interested in online use since I felt that it was too impersonal and lacked an important student/tutor relationship. However, I feel much better about online tutoring since I had such a great attendance online with students who otherwise would not have attended in-person sessions. It was great for outreach."

Another tutor reported, "I didn't see the value in online tutoring before the session. After learning the software, I was able to see what the program could offer my students. My students enjoyed the fact that they could access the session after it was conducted."

Students reported the following benefits to online tutoring:

- Accessibility: they could stay home or work from office
- It is fast and to the point
- There is a real-time white board feature
- I can review archives of the session and learn at my own pace
- It made up for schedule conflicts for in-person sessions
- I felt like I was the only one in the room
- I was more comfortable asking questions: "having the ability to ask questions without everyone being able to see who asked them, aside from my name"
- The review format helped to know where to focus
- I could follow thorough explanations

Conclusion

Online tutoring is growing as a means of college academic support for online courses, blended courses, and in-person courses. A technology that is easy to learn and use is essential. Tutor training is a key component for the success of the program. Once tutors could use the technology, they could engage their

students, who participated in growing numbers and provided positive feedback. The program was repeated in Spring Semester 2011; those results will be included in the session.

References

Holland, R. B., Verplanken, B., & Knippenberg, A. D. (2002). On the nature of attitude-behavior relations: The strong guide, the weak follow. *European Journal of Social Psychology, 32,* 869-876.

Mager, R. F. (1997). *Preparing instructional objectives: A critical tool in the development of effective instruction.* Atlanta, GA: Center for Effective Performance.

Schunk, D. H. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist, 25*(1), 71-86.

About the Presenters

Johanna Dvorak directs a comprehensive educational support program the services program at the University of Wisconsin-Milwaukee (UWM). Panther Academic Support Services (PASS) includes peer tutoring, Supplemental Instruction, and online academic support services. She is a past president of the National College Learning Center Association (NCLCA). A qualitative researcher, her research interests include learning assistance management, tutoring programs and resources, and online support services. She earned her PhD in Educational Leadership and Information Studies from UWM, her M.Ed. at University of Texas at Austin in Curriculum & Instruction and Library Science, and her B.A. in English at Drake University.

Address: University of Wisconsin-Milwaukee
Bolton 180
P.O. Box 413, 2200 E. Kenwood Blvd.
Milwaukee, WI 53201-0413
Phone: 414-229-3726
Email: jdvorak@uwm.edu

Kevin Roessger is a doctoral student in urban education with a concentration in adult and continuing education at the University of Wisconsin-Milwaukee. He currently works as a project assistant in Panther Academic Support Services (PASS) where he coordinates the online tutoring program. He is also an ad hoc instructor in the department of Administrative Leadership where he teaches courses in instructional design and teaching strategies. Kevin worked as a vocational instructor in building and construction trades for several years before coming to PASS. His research interests include instructional design for motor learning in vocational learning contexts, applications of behavioral learning theory to adult education, and the role of reflective practice in adult instrumental learning.

Address: University of Wisconsin-Milwaukee
Bolton 180
P.O. Box 413, 2200 E. Kenwood Blvd.
Milwaukee, WI 53201-0413
Phone: 414-229-3726
Email: roessge2@uwm.edu

Wikis, Blogs and Facebook, Oh My! Using Web 2.0 Effectively

Rena M. Palloff, PhD, LCSW
Fielding Graduate University and Crossroads Consulting Group

Keith Pratt, PhD
Walden University and Crossroads Consulting Group

Summary

The following is a brief listing of the benefits and concerns regarding the inclusion of Web 2.0 tools, such as wikis, blogs, and social networking sites, such as Facebook and Twitter, in online teaching.

The Positives
Positives of incorporating Web 2.0 tools into online teaching include:

- Supports community building by promoting collaboration.
- Can increase the level of interaction and communication student-to-instructor and student-to-student.
- Increases variety and creativity.
- Increases the level of social presence in the online course.
- The depth of a sense of community can be enhanced.
- Empowers students to take charge of content creation.
- Reduces the isolation that can accompany online learning.
- Facilitates the completion of small group assignments.
- Can help to increase the level of relevance of the material being taught.

The Concerns
Some of the concerns about incorporating Web 2.0 tools into online teaching:

- Because these are technologies in the public domain, for the most part, issues about copyright and intellectual property emerge.
- Because of their primarily social nature, students can "wander" into questionable territory.
- Students and instructors may be wary about "friending" each other.
- Because materials are created and posted on a site outside of the college or university, concerns emerge about loss of content and the ability to archive material and discussions.
- Privacy concerns emerge – is it possible to keep discussions and access truly private on a Web 2.0 site?
- Instructors fear the loss of control – this is truly user-generated content, which means that students can more easily take charge of the process. This is a concern to some and a benefit to others.
- Rarely are norms for the use of Web 2.0 tools developed as part of the online class.

A Focus on Best Practices Helps!
Some best practices for incorporating Web 2.0 effectively include the following:

- Develop, negotiate, and publicize norms for use.
- Be clear about the role of Web 2.0 technologies in the delivery of the course.
- Let go of the control and allow the students to experiment with content creation.
- Link the use of Web 2.0 tools directly to learning outcomes.

- If students are working on multiple wiki or blog sites, use aggregators to help keep track of their work.
- Use social bookmarking to help keep track of what's new and exciting online and make use of this to add relevance to your online class.
- Use blogs and wikis as alternatives to traditional paper assignments – the collaborative nature of these tools adds depth to group assignments.

As always, a focus on learning outcomes should be the ultimate guide. If the use of these tools does not support the desired learning on the part of students, they should not be included in an online class. However, their use is becoming ubiquitous – consequently, attention to how best incorporate them should be the goal.

Presenter Bios

Rena Palloff and **Keith Pratt** are the managing partners of Crossroads Consulting Group. Rena and Keith are program directors and faculty in the Teaching in the Virtual Classroom program at Fielding Graduate University, which trains instructors to teach online. They are the authors of the 1999 Frandson Award winning book *Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom* (Jossey-Bass, 1999), *Lessons from the Cyberspace Classroom* (Jossey-Bass, 2001), *The Virtual Student* (Jossey-Bass, 2003), *Collaborating Online: Learning Together in Community* (Jossey-Bass, 2005), and *Assessing the Online Learner* (2009). The second edition of *Building Learning Communities in Cyberspace*, now titled, *Building Virtual Learning Communities* was published in July 2007. *The Excellent Online Instructor* (Jossey-Bass, 2011) is forthcoming. The books are comprehensive guides to the development of an online environment that helps promote successful learning outcomes while fostering collaboration and building a sense of community among the learners. Drs. Palloff and Pratt have been presenting this work across the United States and internationally since 1994 as well as consulting to academic institutions regarding the development of effective distance learning programs. They have presented at the Distance Learning Conference annually since 1999.

Contact Information:
Rena M Palloff, PhD
rpalloff@mindspring.com

Keith Pratt, PhD
drkpratt@mindspring.com

Get Over It: Creating Video Updates in Online Courses

Sarah J. Noreen
Communications Instructor
General Studies Division
Wisconsin Indianhead Technical College

Summary

You have typed directions in the Announcements section of your online course, you have emailed your students, and you have posted comments to the Discussion Board. Your wrists and fingers are sore from typing, and yet you feel as though you are still struggling to connect with your students. Take a break from all the writing and do what so many students are doing: record yourself. Create and post video updates to connect with your online students.

The tools available in an online learning environment have multiplied so rapidly in the past decade, it is not only overwhelming for instructors, but can also be overwhelming and distracting for our students. As instructors, we want to use the technology to help us create a strong connection with students and to seamlessly deliver content; however, all too often, the learning curve for new technology is steep and the process along with the time commitment are intimidating. Add to that the discomfort that many people, instructors included, face when sharing their recorded video image. This presentation is intended to provide: examples from the presenter's experience teaching speech online, motivation to participants, and tools to help instructors get over the discomfort of recording brief updates and posting them to their online student population.

Getting Over It will help you connect with your students. If you don't believe me, take it from a student in my speech online class this semester. She states, "I really enjoy your weekly video updates, they are helpful, and it's nice to be able to put a face with a name."

Presenter Bio

Sarah Noreen is a Communication Skills instructor at Wisconsin Indianhead Technical College in New Richmond, Wisconsin where she teaches writing and public speaking courses. Sarah developed and teaches the College's Speech Online course. She holds a Bachelor's degree in English and Spanish from the University of Wisconsin–Eau Claire and a Master's of Science in Teaching English as a Second Language from Northern Arizona University. Sarah worked as the Assistant Director of Learning Enhancement and Testing Services in Flagstaff, Arizona prior to returning to her home state of Wisconsin in 2007. Her passions are learning, discovering, and sharing insight into communication at an elemental level.

Contact Information:
Sarah Noreen
Wisconsin Indianhead Technical College
1019 S Knowles Ave
New Richmond, WI 54017
Office Phone: 715.25.6562, x4348
Cell Phone: 715.505.3538
sarah.noreen@witc.edu

A Management Accounting Simulation

Louise Miller
Instructor
Department of Accounting
School of Business
South University

Summary

My video presentation will portray the dynamic simulation of an accounting problem in Microsoft Excel. This problem will involve the simulation of many possible scenarios in a real-life management accounting case which can be used to facilitate learning in an accounting course.
This problem will involve varying input parameters for the simulation of many possible scenarios and their solutions. Results will be presented with dynamic graphing. The accounting problem presented, which is a profit analysis activity, is useful in advanced general business courses because it also utilizes and emphasizes concepts in marketing and economics. The student plays the role of management accountant of an athletic shoe company. The CEO of the company launches a project to determine how to maximize the profit of a particular type of shoes they sell. He asks the sales and marketing department to analyze prior sales and present a formula for sales level based on the price and various factors: the quality of the shoes, the advertising level and location strategies are specified and quantified.

The students are given the sales equation presented by the marketing department which has the price of a pair of shoes as one of the dependent variables. This makes use of the concept of marketing effectiveness and the law of supply and demand. The students are tasked to determine the maximum possible profit. The task involves selecting the optimal quality level of the shoes, the appropriate advertising level, the best location strategy, and the optimal price of the shoes to result in the maximum profit possible for the company. Fixed and variable cost equations are also given to the students. The demonstration video will explain the solution and demonstrate dynamic variation of the input parameters and resulting profit with graphical techniques.

Presenter Bio

Louise Miller, Ph.D., worked as a software engineer for Raytheon Systems Company for twenty years and now teaches accounting courses at South University. She has a B.S. degree in Electrical Engineering, an M.A.T. in Science Education, an M.B.A., and a Ph.D. in Management Science from the University of Texas at Dallas.

Contact Information:
Louise Miller
Instructor
South University
Savannah, Georgia
972-974-4055
loumiller@southuniversity.edu

Listening to faculty voice during the formation of distance learning programs and policies

Amanda M. Maddocks, Ph.D.
Associate Professor
Concordia University Chicago

Cynthia Grant, Ph.D.
Assistant Professor
Concordia University Chicago

Jie Lin, Ph.D.
Associate Professor
Concordia University Chicago

Summary

This presentation will report on the results of a year-long qualitative study examining the impact of a college reorganization on the changes made to online and face-to-face programs, policies and faculty responsibilities at a mid-sized university.

During July 2009 a major reorganization occurred at University X impacting the structure of the Colleges of Education and Graduate and Innovative Programs. This research sought to understand how faculty in the College of Graduate and Innovative Programs articulated their desire for change, how they accepted change and how they supported change (Prochaska&Prochaska, 1999). This presentation will specifically focus on the development of new online programs and policies and how faculty were and weren't included in that process.

As part of this study we examined the different perceptions of what the changes have been in our colleges. Issues of culture, influence, resistance, knowledge and communication of information in the change process, vision, quality, generational challenge and others will be explored (Fogg, 2008; Kelly &Weispfennng, 1995; Matthews, 2008). Recommendations for inclusion of all faculty in distance learning programs and policies will be discussed. This research will benefit those engaging in new or changing distance programming who are also interested in the voice of faculty in these processes.

References

Cladwell, P.F. & Gould, E. (1992).Effecting change in a resistant organization. Report from Victor Valley Community College District, Victorville, CA.

Fogg, P. (2008). When generations collide. *Chronicle of Higher Education, 54,* 45.

Harvey et al. (2006). Viewpoint: Managing change in business schools: Focus on faculty responses. *Journal of Education for Business, 160-164.*

Kelly, C.M. &Weispfennng, J. (1995, November). The rhetoric of downsizing at the University of Maine: a case study. Paper presented at the Annual Meeting of the Speech Communication Association, San Antonio, TX.

Matthews, N. (2008). Conflicting perceptions and complex change: promoting web-supported learning in an arts and social sciences faculty. *Learning Media and Technology, 33,* 1, 35-44.

From Print to Digital: Lessons Learned in Course Delivery

Peter J. Shapiro
Director, Creative Learning Services
Florida State College at Jacksonville

Jill M. Hagenberger
Senior Instructional Designer
Florida State College at Jacksonville

Introduction

Textbooks have traditionally been the bedrock of college courses and the physical and monetary anchor in students' backpacks. College administrators and content providers have heard the complaints from students and faculty about the portability, affordability, and availability of course materials. SIRIUS Academics, an auxiliary business of Florida State College at Jacksonville, adopted a social based e-book platform, the Follett Higher Education Group's CaféScribe, to deliver course materials previously distributed in print. This paper provides an overview of the decision to move to digital materials distribution, how this move fits within the SIRIUS Academics course framework, and the subsequent decision by the college to institute a "one-stop shopping" approach to the purchase of SIRIUS Academics course materials by students at Florida State College at Jacksonville. Implementing this change is the first step of a content delivery plan that will impact both students at the college and eventually students across the country, at partner institutions that use SIRIUS Academics courses.

Transitions to Digital Text Materials

Publishers and booksellers alike admit that the face of publishing is changing. Some of these forces are easier to see in the commercial world, where one cannot go a day without seeing an advertisement for e-readers like the Amazon Kindle, Barnes & Noble's NOOK Color, or the ubiquitous Apple iPad. Yet some organizations report that while many e-books are being sold (over $90 million in 2010, according to Forester Research), the penetration of e-book sales into the book buying market as a whole is significantly lower than forecasted.

The release of new hardware platforms and the proliferation of low-cost to no-cost applications has caused a number of leaders in higher education to pilot the adoption of an alternative to the traditional: "political pressure associated with unhappiness over the rising cost of textbooks is driving a search for lower-cost alternatives, and some digital solutions may provide that option" (Nelson, 2008).

In the higher education market, the concept of e-books has been discussed since the new millennium, but adoption of this innovation, only measureable in the last year or two, is slow. In an interview with Vineet Madan from McGraw-Hill Higher Education Group, Madan admitted that the academic publishing market moves more slowly than the commercial sector. Students were also reported as hesitant about using e-books, since money spent on textbooks is an investment related to an important outcome, their grade (Waters, 2011).

The 2011 National Association of College Stores annual meeting revealed that the average cost of a new textbook is now $104 (Rosen, 2011). High cost is the force that has driven students away from new textbooks, and is credited with the current popularity of textbook rental programs and other low-cost resellers. Despite the competition of low-cost textbook rentals, e-book sales are expected to increase to more than 25 to 30% of textbook sales in the next five years (Rosen, 2011).

Innovation and Adoption
Some faculty might give students an option to buy e-books for a given course. However, Nelson (2008) reveals that in general, faculty are not only one of the largest influences on textbook adoption, but are also the greatest obstacle to moving to e-books, expecting to see empirical data proving that using e-books positively impacts student success before recommending their use in courses.

This scenario reflects Gleicher's formula for change—a combination of dissatisfaction with the status quo (high cost) coupled with an institutional vision for change (to e-books), and a plan for first steps (pilot), which need to exceed the resistance/mistrust of stakeholders (faculty, students, and administration) for the innovation to be successfully adopted (Peck & Carr, 1997). Carefully piloting digital delivery and providing training and support for stakeholders is critical. Will faculty and students perceive an advantage to this delivery option? Is this change in materials delivery compatible with the groups' needs? The pilot's long-term success hinges on the answers to these questions, which represent the characteristics of innovation, and would determine, based on widely disseminated results, how fast the constituent groups embrace this technological innovation (Rogers, 1995).

SIRIUS Academics and the CaféScribe Platform
In 2009, staff of the SIRIUS Project, now SIRIUS Academics, was introduced to Follett's CaféScribe platform. The Follett Higher Education Group, which was already the sole distributor of SIRIUS Academics print books, presented an overview of CaféScribe. Software-driven, CaféScribe allows students and faculty alike to share information, create groups, and communicate across class sections, since the e-book title is the focal point of the interaction. Without purchasing a dedicated hardware e-reader, participants can create notes and ask or answer questions in the e-book content itself, which effectively corresponds with the interactive nature of SIRIUS Academics courses. Beginning in fall 2010, CaféScribe became the official digital e-book platform of these online and blended courses.

Low-Cost Digital Course Materials Delivery
As the first step toward an integrated, digitally delivered course experience, Florida State College at Jacksonville tested CaféScribe as an alternative to printed books. In fall 2010, five SIRIUS Academics courses used only CaféScribe e-books. Through CaféScribe, students could benefit from a social learning approach to note taking and sharing, while experiencing a versatile, software-driven, platform-independent e-reader.

In the 2011 spring semester, Florida State College at Jacksonville's administration mandated that course materials all 23 SIRIUS Academics course were to be primarily delivered through CaféScribe. These low-cost, digital books supplement courses designed for blended and online delivery methods. In conjunction, the institution embarked on a "one-stop shopping" student convenience pilot, by providing the digital materials to all students who paid for both course tuition and materials (in that same transaction) by the first day of class. Attempting to foster further innovation, the college decided that, with the exception of basic skills courses, e-books were the preferred delivery option, and print copies would be available at a small additional cost. For basic skills courses, students automatically received the e-book and were told that a printed version was available to them from the college bookstore at no extra cost. These delivery options acknowledge and support students' diverse learning preferences and individual differences.

Initial Impact on Students
Traditionally, students would purchase printed books either by visiting a Follett bookstore on campus or by ordering online. Still, not all students enrolled in a course chose to purchase the required course materials, potentially compromising their academic success. Depending on the SIRIUS Academics course, students' purchases of print materials for their courses have ranged from 65% to 98%. With the new one-stop registration and purchasing system, all students enrolled in SIRIUS Academics course sections are required to buy the digital course materials. Once students pay tuition and the materials fee,

the system automatically assigns electronic access to the digital materials. This system ensures that 100% of SIRIUS Academics students have access to the course materials needed for success.

Once enrolled, students can click a link to register with CaféScribe and download their e-book. End-user directions and brief instructional videos are included in the opening announcement of all SIRIUS Academics courses in the college's learning management system. Students receive communication about available training opportunities, either in person or via Webinar, by email and in the student newspaper.

Initial Impact on Faculty

Lists of faculty members are provided to CaféScribe, so their accounts can be created. Faculty members then receive an email from CaféScribe support, stating that an account has been established for them. The message also includes directions on how to set up CaféScribe on their computers and how to download their e-book desk copy. In addition, faculty can view brief online videos that provide a CaféScribe introduction. All SIRIUS Academics course faculty receive emails regarding available training opportunities, covering such topics as how to support students who have technical difficulties. Several questions arose about how this change would affect faculty. Would faculty notice their email from CaféScribe and download the e-book? Would they acknowledge the e-book in their class? Would they engage with the technology or think of it solely as a resource for students?

Initial Impact on Professional Staff and Administrators

Changing the distribution method from the local bookstore to direct electronic access (that is, the shopping cart approach) required changes to vendor contracts and meetings with internal stakeholders, including the Registrar's office, information technology (IT), legal, finance, Bursar's office, local bookstore manager, and SIRIUS Academics team. How would the new system of material procurement be presented to students? How would the institution change billing practices? Would students in basic skills courses pay enough attention to their registration and payment process to realize they could get a hard-copy version of their book at no extra charge? For the first semester of one-stop shopping, mandated for spring 2011, many of these issues had to be quickly addressed. The outsourced tier-one helpdesk needed awareness of all potential student and faculty issues. To resolve more difficult issues, a connection was made between SIRIUS Academics and CaféScribe's technical second-tier help.

Spring 2011 Pilot Results and Considerations

Evaluation of the SIRIUS Academics courses in spring 2011 is underway, with data due in summer 2011. According to data already filed by the Follett Higher Education Group on student CaféScribe accounts, the number and percent of total books downloaded for the spring term was high, but not meaningful without other associated personal data on CaféScribe use. In spring 2011, in the SIRIUS Academics courses that did not supply a print book (nonbasic skills), approximately 89% of students downloaded their e-books. Therefore, while the college could mandate that materials be purchased and available to 100% of the students in a class, perfect utilization might be unattainable. However, an 89% average is more impressive than the previous 65% average of students who would purchase materials, given the choice.

Communication to students and faculty about the changes assisted both groups with using the new technology. Calls received by SIRIUS Academics from students or faculty with problems not resolved by the first-tier helpdesk were limited (less than 1% of enrollment). While the second-tier support issues seem to be minimal, some challenges remain. Questions about how students register (since they must personally accept the course materials charge), retaking of courses, and how e-book and specialized software for math are handled, along with rethinking of the distribution of printed matter to basic skills students, are items still being discussed and modified as needed.

The technology of e-book delivery advances, as does the distribution method. At this time meetings with the Follett Higher Education Group and other vendor partners are ongoing, examining the option of single sign-on as ways to further alleviate the burden on students. Follett is also completing their first major CaféScribe redesign, due for fall 2011. Most importantly, as with all new innovations, evaluation is critical for continuous improvement. SIRIUS Academic's stakeholders—students, faculty, and internal and external administrative support personnel, and organizational partners—need to conduct a comprehensive analysis of the process and progress thus far. Inclusion of stakeholders in the process is critical in influencing full adoption, implementation, and institutionalization of the print to digital transition.

References

Nelson, M. R. (2008, November 28). Is higher education ready to switch to digital course materials? *Chronicle of Higher Education, 55*(14), A29.

Peck, K. L., & Carr, A. A. (1997). Restoring public confidence in schools through systems thinking. *International Journal of Educational Reform, 6*(3), 316–323.

Rogers, E. M. (1995). *The diffusion of innovations* (4th ed.). New York, NY: Free Press.

Rosen, J. (2011, March 7). CAMEX 2011: Moving beyond the book. *Publishers Weekly, 258*(1), 24.

Waters, J. K. (2011, March 1). Can tech transcend the textbook? *Campus Technology.* Retrieved from http://campustechnology.com/articles/2011/03/01/can-tech-transcend-the-textbook.aspx

About the Presenters

Peter J. Shapiro is Director of Creative Learning Services for Florida State College at Jacksonville. He earned his PhD in Education, with a specialization in Instructional Design for Online Learning, from Capella University and an MS in Communication from the University of Louisiana at Lafayette. Peter is a Quality Matters Master Reviewer, and he has authored journal articles and delivered presentations at conferences regarding faculty development for online teaching, distance learning administration, and the SIRIUS Academics project. He has over 25 years of higher education experience, including 13 years in the management, design, and delivery of online courses.

Address: Florida State College at Jacksonville
501 West State Street
Jacksonville FL 32202
Email: pshapiro@fscj.edu
URL: http://www.siriusacademics.org
Phone: 904-633-5479
Fax: 904-632-3364

Jill M. Hagenberger is a Senior Instructional Designer at Florida State College at Jacksonville. She earned her MEd and PhD in Instructional Systems at The Pennsylvania State University, University Park, PA. Jill has 26 years combined experience in higher education and the private sector. Her expertise includes theoretical foundations of learning, systems theory, and human performance technology.

Address: Florida State College at Jacksonville
501 West State Street
Jacksonville FL 32202
Email: jhagenbe@fscj.edu
Phone: 904-357-8915
Fax: 904-632-3364

Prochaska, J.O. &Prochaska, J.M. (1999). Why don't continents move? why don't people change? *Journal of Psychotherapy Integration, 9*, 1, 83-102.

Stengel, J.C. & Richardson, R.C. (1984, April). Faculty commitment to administrative priorities. Paper presented at the American Educational Research Association, New Orleans, LA.

Amanda M. Maddocks is an associate professor at Concordia University Chicago. She is also Executive Director of Doctoral Programs in the College of Graduate and Innovative Programs. In her role as director of doctoral programs she oversees the administration of all programs both on campus and online. She has developed and taught five different advanced research methods courses online including statistics. Her research interests include the assessment of quality in online education environments.

Address: Concordia University Chicago
7400 Augusta St.
River Forest, IL 60305
E-mail: Amanda.Maddocks@CUChicago.edu
Phone: (708)209-3159
Fax: (708)209-3246

Dr. Cynthia Grant is an Assistant Professor of Research at Concordia University Chicago. She joined the interdisciplinary research faculty in 2009 after spending 8 years teaching social work research methods. Dr. Grant teaches research courses in the Masters and Doctoral programs, both online and face-to-face. She holds an MSW and PhD from Loyola University Chicago School of Social Work.

Address: Concordia University Chicago
7400 Augusta St.
River Forest, IL 60305
E-mail: Cynthia.Grant@CUChicago.edu
Phone: (708)209-3554
Fax: (708)209-3246

Dr. Jie Lin has taught Educational Administration and school law at East China Normal University in Shanghai, China. She then graduated from Texas A&M University—College Station, and joined Concordia University Chicago in 2005. Dr. Lin now teaches as an Associate Professor in the Department of Foundations, Social Policy, and Research at CUC. She also serves as a program leader for research, and shares her expertise on qualitative research and research design with fellow adjunct faculty.

Address: Concordia University Chicago
7400 Augusta St.
River Forest, IL 60305
E-mail: Jie.Lin@CUChicago.edu
Phone: (708)209-3455
Fax: (708)209-3246

Best Practices, Leadership Strategies, and a Model for Online Implementation

Sangeetha Gopalakrishnan, Director
Foreign Language Technology Center
Wayne State University

Introduction

A large number of higher education institutions are offering online courses and programs for existing and new student populations. Academic institutions, units and individuals wanting to establish large-scale online programs may need to know how to succeed in online learning (OL), and how leadership can be deployed to this end. Implementing institution-wide online initiatives may be seen as leading organizational change. Perhaps, procedures for effecting organizational transformation may be useful in moving to OL. Using a framework of organizational change this study sought to determine the best practices and leadership strategies for achieving sustainable success in online education, and to develop a model for OL implementation in higher education. This paper will describe the model that resulted from this study rather than discuss the numerous best practices and leadership strategies that were identified.

Review of Related Literature

Given the dramatic increases in online enrollment over the past decade (Allen & Seaman, 2010), the growing acceptance of online education as a legitimate and effective means of facilitating learning (Allen & Seaman, 2010; Means, Toyama, Murphy, Bakia, & Jones, 2010), and its strategic importance (Allen & Seaman, 2010), many in higher education today are interested in succeeding in online learning (OL). However, institutional leaders and planners of online initiatives are confronted by many obstacles to online education. There is recognition amongst institutional leaders and planners that the large-scale implementation of online courses and programs is a complex undertaking requiring a systemic approach (Ellsworth, 2000) and strategic thinking (Hawkins, 1999; Hitt & Hartman, 2002; Levine & Sun, 2002). Several benchmarks and guidelines for achieving quality in distance education (DE), and success factors for OL exist in the literature. Only a few studies situate these quality characteristics and success factors within a theoretical framework or a model for implementing OL. There is a need to know more about integrating these isolated characteristics and success factors into a systemic approach.

Perhaps viewing the implementation of institution-wide online programs as a change initiative may provide a theoretical framework. The changes heralded by online education are broad and deep within the institution and call for reconfiguring the entire academic environment (Bates, 2000; Beaudoin, 2002; Watkins & Kaufman, 2003). However, only a few scholars regard the large-scale migration of online courses and programs as a matter of leading organizational transformation (Owen & Demb, 2004; Keaster, 2005). Practices and leadership strategies that bring about organizational change in businesses could also be effective in establishing successful online ventures in academia. Systemic strategies, frameworks, and models for planning, leading and managing organizational change exist in the literature. The strategies and steps described in four prominent organizational change models, Kotter's Eight-Stage Process, the Cummings and Worley Model, the Whetten and Cameron model, and Pascale and Sternin's Six-Step Strategy, can provide a framework for implementing online programs.

The literature underscores the importance of leadership when educational technology innovations are implemented at universities. Scholars also emphasized the need for leadership in any major organizational change. There is a paucity of research on the specific subject of the role of leadership in setting up large-scale online programs at academic institutions (Beaudoin, 2002). There is, however, a significant amount of research that addresses the role of the change agent in the diffusion of innovations. Leadership for creating large-scale online programs should emanate from different sources in an institution (Green, 1997;

Senge, 2000). Institutional leadership and a principal change agent entrusted with establishing institution-wide online initiatives could be influential in implementing OL.

Academia has unique traits such as faculty autonomy, shared governance and a decentralized power structure. These characteristics of academic institutions impact the way change can be implemented (Green, 1997; Jaffee, 1998; O'Neil et al., 1999). An entirely leadership-driven approach to the move to online education is untenable in the academic setting; faculty will have to take on a leadership role as well. Therefore, a combination of top-down and bottom-up approaches is recommended by many researchers (Wickersham, 2010).

In this study a framework for leading organizational change was used to understand successful online initiatives, identify best practices and leadership strategies for OL implementation, and to develop a model that encapsulated these.

Research Methodology

The participants in this study were both institutions and individuals. Eleven institutions with the reputation for being successful providers of online education and ten individuals with lead responsibility for the implementation of OL at these institutions were selected for this study. Institutions were under public control, at the research and masters levels, and located in different parts of the United States. This research was a qualitative study and consisted of two phases. During the first phase best practices and leadership strategies for OL implementation were identified through in-depth one-on-one interviews. The second phase of this study had to do with model building. The primary instrument used for data collection in this study was based upon four prominent change management models (Kotter's Eight-Stage Process, Cummings and Worley Model, Whetten and Cameron Model, Pascale and Sternin's Six-Step Strategy). Interview questions were aimed at gathering information about the strategies deployed for the establishment of OL at these institutions. Data were analyzed by reviewing the interview transcripts for themes and patterns and noting frequencies.

Results

Overview of Participating Institutions and OL Leaders

Eight of the participating institutions were individual universities and three were university systems. Almost all of the institutions had tenure-track systems. The institutions varied in size from 196,000 to 5,000 students and had online enrollments ranging from 196,000 to 3,368. Most participating institutions had a history of involvement with DE. The majority of institutions in this study have been in the business of OL for more than 10 - 15 years and had specific units for OL. While the OL leaders' educational backgrounds varied somewhat, they all had earned a doctorate. Either by virtue of their education or their work experience, all the participants had extensive backgrounds in the field of DE. Most of the participants had a long institutional affiliation, and had served in an DE/OL leadership capacity for at least a decade. Participants were situated fairly high in the organizational hierarchy.

Model Development

The findings, which were the best practices and leadership strategies, were essentially organized into several major topics which included motivating the move to OL, creating and communicating goals, developing political support, managing the move, measuring outcomes, ensuring quality, and sustaining the OL initiative. Other topics included the role of institutional leadership, the role of the OL leader and the institutional approach to OL implementation. The final topic was the definition and measurement of success in OL. These results categories led to the creation of the major components and phases of the Leadership and Change Model for OL Implementation.

The Leadership and Change Model for OL implementation developed in this study is associated with six essential conditions. Based on the findings the following conditions need to prevail for sustained success in OL:

1. Leadership – Top institutional leadership (particularly the university president, the provost, vice presidents and other senior administrators) must strongly support online education.
2. Faculty – Faculty support for the online initiative must be present.
3. Change Agent – A change agent, in a high position in the organizational hierarchy, must be charged with the responsibility of implementing OL. The change agent should orchestrate the implementation at the levels of both institutional leadership and faculty.
4. Institutional Importance – Online education must be viewed as an institutional priority, and a way to meet institutional strategic objectives.
5. Size and Scope – The online initiative must be appropriately resourced. It must have both adequate finances and personnel.
6. Structure – The online initiative should be a non-profit, integral part of the institution rather than a profit, stand-alone entity that is parallel to the institution.

These conditions have influenced the parameters of the model. The first three conditions represent the three main components of this model.

The Leadership and Change Model for OL Implementation

The model is constituted by three components and nine major phases. The model along with its three components and nine phases is visually depicted in Figure 1. In Figure 1 the oval, shadowed boxes represent each of the three components. The square boxes represent each of the nine phases and are numbered. The line arrows indicate the sequence of the phases, and the arrows along the oval indicate their cyclical nature.

Three sources of leadership emerge as critical for establishing online education at higher education institutions: institutional leaders, faculty, and the OL leader. The three components of the model are:

1. Institutional leadership
2. Faculty leadership
3. OL leader

The first component implies that institutional leadership should drive the implementation of online education and provide strong support for it. The faculty leadership component indicates that the transition to OL should be propelled by faculty as well. Thus, there should be a combination of both leadership-driven and faculty-led approaches. The third component calls for the move to the online environment to be orchestrated by a principle change agent, that is, by an OL leader.

There are nine major phases in the

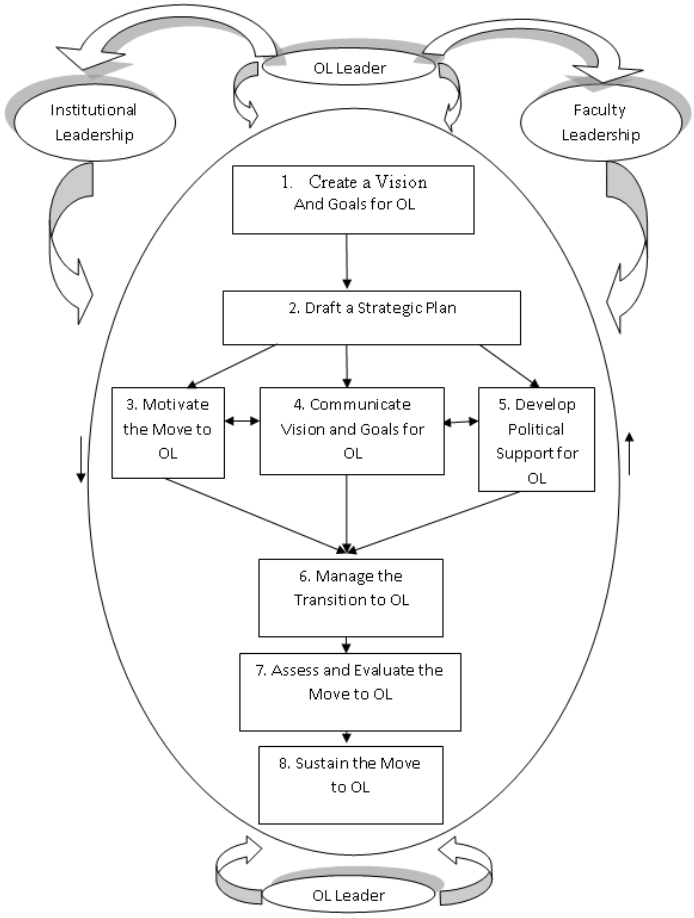


Figure 1. *Leadership and Change Model for OL Implementation*

Leadership and Change Model for OL Implementation. Many of the phases are further constituted by various elements. Best practices and strategies are associated with each of the elements. The phases are:

1. Create a vision and goals for OL
2. Draft a strategic plan
3. Motivate the move to OL
4. Communicate vision and goals for OL
5. Develop political support for OL
6. Manage the transition to OL
7. Measure outcomes of OL
8. Ensure quality of OL
9. Sustain the OL initiative

At the outset, a vision for what is to be accomplished with the adoption of online education is created and specific goals are set. There is a strategic planning process during which several key questions about the online modalities of delivering instruction are addressed. A strong case should be made for the adoption of OL to faculty, administrators and other stakeholders. The OL goals that have been created are communicated to stakeholders. Political support for the online initiative is engendered. The actual transition to the online environment is orchestrated. Outcomes of the online enterprise are measured and quality is ensured. Once the move to OL is underway efforts are made to sustain the momentum of initial successes. Some of the model phases are sequential, while others are concurrent. All the phases are iterative and repetitive over the course of OL implementation.

Discussion and Conclusions

Several factors that were identified by various researchers as influencing OL success were confirmed in this study as well, but new strategies for succeeding in OL also emerged. Leadership and change management are the most important aspects in effecting a move to online education. Regarding the move to OL as an organizational change enabled a framework to be built which incorporated best practices and leadership strategies into a systemic approach for making the migration to online education. While this model can be deployed at any institution implementing OL, some conditions, components, and phases may not be appropriate or as critical in certain institutional settings. The control of the institution (public or private), and focus (teaching or research) all influence which aspects of the model can be applied. Institutions can experience varying degrees of success in their online venture; likewise, OL leaders can also differ in their effectiveness as a principal change agent. Measures of success identified in this study can be used to determine the extent of success of institutions. Future research should validate the best practices, leadership strategies and the model.

References

Allen, I. E., & Seaman, J. (2010). *Class differences online education in the United States, 2010*: [Babson Park, MA]: Babson Survey Research Group.

Bates, A. W. (2000). *Managing technological change: Strategies for college and university leaders* (1st ed.). San Francisco, CA: Jossey-Bass.

Beaudoin, M. F. (2002). Distance education leadership: An essential role for the new century. *Journal of Leadership Studies, 8*(3), 131-144.

Ellsworth, J. B. (2000). *Surviving change: A survey of educational change models*. Syracuse, NY: ERIC Clearinghouse on Information & Technology, Syracuse University.

Green, M. F. (Ed.). (1997). *Transforming higher education: Views from leaders around the world*. Phoenix, AZ.: Oryx Press.

Hawkins, B. L. (1999). Distributed learning and institutional restructuring. *Educom Review, 34*(4).

Hitt, J. C., & Hartman, J. L. (2002). *Distributed learning: New challenges and opportunities for institutional leadership*. Washington, DC: American Council on Education.

Jaffee, D. (1998). Institutionalized resistance to asynchronous learning networks. *Journal of Asynchronous Learning Networks, 2*(2), 21-32.
Keaster, R. (2005). Distance education and the academic department: The change process. *Educause Quarterly, 28*(3), 48-53.
Levine, A., & Sun, J. C. (2002). *Barriers to distance education*. Washington, DC: American Council on Education.
Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies: US Department of Education.
O'Neil, H. F. J., Bensimon, E. M., Diamond, M. A., & Moore, M. R. (1999). Designing and implementing an academic scorecard. *Change, 31*(6), 32.
Owen, P. S., & Demb, A. (2004). Change dynamics and leadership in technology implementation. *Journal of Higher Education, 75*(6), 636-666.
Senge, P. M. (2000). The academy as learning community: Contradiction in terms or realizable future? In A. F. Lucas (Ed.), *Leading academic change: essential roles for department chairs*. San Francisco, CA: Jossey-Bass.
Watkins, R., & Kaufman, R. (2003). Strategic planning for distance education. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp. xxiii). Mahwah, NJ: L. Erlbaum.
Wickersham, L. E., & McElhany, J. A. (2010). Bridging the divide: Reconciling administrator and faculty concerns regarding online education. *Quarterly Review of Distance Education, 11*(1), 1-12.

About the Presenter

Sangeetha Gopalakrishnan is Director of the Foreign Language Technology Center at Wayne State University (WSU) in Detroit, Michigan. In her role, she works with faculty, teaching language, literature, and culture to foster meaningful uses of emerging technologies, and oversees their robust technology infrastructure. Prior to WSU she was an instructor at the Goethe-Institute in Chennai, India where she taught German to adult learners. She is presently completing a doctoral dissertation in Instructional Technology at WSU. In her research she is looking to identify best practices and leadership strategies, and develop a model for implementing institution-wide online learning.

Address: 385 Alex Manoogian Hall
906 W. Warren Avenue
Detroit, Michigan 48202, USA
Email: sangeetha@wayne.edu
URL: http://www.langlab.wayne.edu
Phone: 313-577-6391
Fax: 313-577-3041

