

Faculty Use of MyGateway, WS2003

University of Missouri-St. Louis

Purpose

The purpose of evaluating the ongoing efforts in technology-enhanced credit courses making use of the course web management tool, MyGateway, is designed to document the experiences of two key stakeholders: enrolled students and teaching faculty. This report looks at the teaching faculty. Additionally, the areas of questioning and our analyses focus on identification of essential support strategies for faculty using technology and the improvement of learning experiences for our students. This survey builds upon a survey of the faculty using MyGateway in FS 2001¹. This survey focuses most specifically on:

- (1) Who are the faculty using MyGateway
- (2) How did faculty use the electronic learning environment;
- (3) What did participants learn from their experiences; and,
- (4) What recommendations for improving for technology-enhanced courses come from the faculty?

Methodology

This semester we measured daily instructor access of 12 key content and administrative areas. Measurement was taken on March 1, 2003. The scores ranged from a high of 381 to a low of 1. The mean number of day accesses was 58 (median 41). A use score of 1 would indicate that an instructor had accessed one of the 12 key content areas on one day during the review period (1/13/03-3/1/03). Courses with instructor ranking above the mean were considered *high use* courses, and courses with instructor rankings below the mean were considered *low use* courses. Faculty were contacted for participation and sent a web-link that provided them access to an online survey instrument (see appendix).

A total of 520 active instructors were identified in the system (209 High use, 311 Low use). A stratified random sample of instructors (15 percent of "active" courses within MyGateway) was selected according to levels of faculty use of the course management tool MyGateway [total courses=861]. This produced a sample of 131 (47 High use, 84 Low use). 28 faculty members from the high use group and 31 faculty from the low use groups completed surveys for a total of 59 (45% response rate). Arts and Sciences faculty numbered 32; Education faculty, 15; Nursing faculty, 11; Business Administration faculty, 4; Honors faculty, 1; Other, 1.

Profile of Faculty

The following tables describe Internet access as well as numbers and types of courses instructors reported. Greater percentages of High Use faculty were using High Speed DSL or Cable modems to access the Internet. Forty-four (44%) percent of High Users reported using DSL or cable modems, compared to 31 percent of Low Users.

Table 1. Internet Access

Type of Internet Access	High MG Users	Low MG Users
Dial-up Modem	55.6%	62.0%
High Speed DSL or Cable Modem	44.4%	31.0%
Other access		7.0%

Instructors reported the course types for which they were using MyGateway. The face-to-face traditional class meeting combined with online content was by far the most frequent type of course. A slightly higher percent of high MyGateway users are teaching totally online courses than low MyGateway users, while similar percentages are indicated for those involved in interactive two-way video courses. It was noted that a greater number of Low Use respondents did not indicate a course type than their High Use colleagues. The question might be, did this Low Use group not consider their use of MyGateway to be a “combination of face-to-face and online?” Perhaps, there is a course type (as yet undefined) for limited course maintenance tasks using MyGateway, like announcements and grade book.

Perhaps another contributing factor to their level of use is the finding that a greater percentage of Low Use faculty had used MyGateway in multiple (3-5) courses. See Table 3 for more details.

Table 2. Course Design Types

Course Types	% High MG Users (No.)	% Low MG Users (No.)
Combo Face-to-Face & Online	84.6% (22)	86.4% (19)
Combo Video & Online	3.9% (1)	4.5% (1)
Totally Online	11.5% (3)	9.1% (2)
Undefined Course Type (Missing Respondents)	(2)	(9)

Table 3. Courses in Which MyGateway is Used

Number of Courses	% High MG Users (No.)	% Low MG Users (No.)
One	28.6% (8)	22.6% (7)
Two	42.9% (12)	29.0% (9)
Three to Five	25.1% (7)	42.0% (13)

MyGateway Features Used / Comparisons between 2003 and 2001

In the initial faculty use survey conducted during the first year of MyGateway implementation, instructors reported the features they were using. The table below reports the same usage data for Winter Semester 2003 delineated by high and low use. Further, the 2001 data is not divided by extent of use and probably is *more representative* of early adopters, since those were the faculty more likely to complete the survey than faculty who had not yet used MyGateway.

Table 4. Comparisons

MyGateway Feature	2003, High Users	2003, Low Users	2001, Combined
Announcements	100%	90.3%	88.9%
Email	89.3%	67.7%	68.3%
Student Grade Book	85.7%	64.5%	63.5%
Course Docs- Lecture Notes	75.0%	67.7%	74.6%
External Links	64.3%	32.3%	N/A
Discussion Board	50.0%	29.0%	38.1%
Student Drop Box	35.7%	25.8%	15.9%
PPT Slides	32.1%	12.9%	N/A
Quizzes	25.0%	12.9%	31.7%
Groups	10.7%	6.5%	9.5%
Student Web Pages	7.1%	6.5%	9.5%
Virtual Chat	7.1%	3.2%	N/A
Personal Web Pages	7.1%	22.6%	N/A

The greatest changes noted between the two reporting periods are in faculty use of the Email, Grade Book and Student Drop Box (Email, 78.5 [combined average] in 2003 vs. 68%, 2001; Grade Book, 75% [combined average], 2003 vs. 63.5%, 2001; and Student Drop Box, 30.7% [combined average] in 2003 vs. 15.9%, 2001). For winter semester 2003, the High Use faculty group is utilizing several of the features to a much greater extent than their lower use colleagues (i.e., Email, External Links, Discussion Board, Student Grade Book, PPT slides, and Quizzes). One of the interesting anomalies is that Low Use faculty reported they were *using their personal web pages to a greater extent* than high MyGateway users (22.6% vs. 7.1%).

Teaching with MyGateway

The relationship of use of MyGateway to faculty concerns with student activity and interaction was examined by distinguishing low use from high use classes.

We used an independent samples t-test to analyze the independent variable (use) in relation to specific items from the MyGateway Faculty Survey for Winter Semester 2003 (questions 10-19, see Appendix A). With a relatively small number of cases, we consider these variations between high and low use groups in descriptive, rather than predictive terms. Although overall differences between the two groups exist, and suggest that high use instructors are more likely to expect higher levels of participation and have higher expectations for student outcomes, we found statistically significant difference between the two groups in only two specific areas.

Table 5. Significance of Items Re. Student Responsibility and Faculty Distance

Question	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Q10	2.054	57	.045	.52	.254
Q12	-3.436	57	.001	-1.19	.346

High use instructors indicate that they were more likely to expect students to take more responsibility for their own learning (Question 10, $p < .05$), and less likely to feel distant from their students (Question 12, $p = .001$) than their low use colleagues. We found no significant difference between the two groups on a wide variety of issues ranging from use of off-line content (Question 16), providing more visual information (Question 14), and on a range of outcome expectations (Questions 17, 18, 19).

Further, with the limitations of sample size and respondents, it is unclear whether these particular differences are the product of the use of MyGateway, or the source of interest in using MyGateway (or the product of random chance). However, since responses to all questions reveal interesting differences between the two use groups, it appears consistent to conclude that instructors who engage in high levels of use of MyGateway do come to view the process of teaching and their relationships with students in a manner different from we see in traditional, face-to-face only, instruction. In reference to our fall 2002 student survey² where we document that use of MyGateway stimulates further use, and that the more the MyGateway system is used in a class, the more likely it is that students will come to view it as a positive addition to their educational experience, it seems consistent to conclude that as instructors explore the use of MyGateway in their classes, and extend their use of the system, their recognition of the advantages of a course management system will increase.

Answering the Question of Time

Faculty respondents were asked two questions about the time they spent using MyGateway. First, they were asked to compare the time they spent using MyGateway with the time they typically spend preparing materials for traditional, face-to-face classes. Table 6 summarizes the responses from High Use and Low Use faculty. The percentages verify what one would expect; almost half (46.4%) of the High Use faculty

indicate that they spend *more time* using MyGateway to interact with students, answer course email, develop online materials, grade assignments and upload grades, while only 16 percent of the Low Use faculty marked the “*more time*” category. It is interesting to note that almost 40 percent of the High Users and 50 percent of Low Users point out the time spent is “*about the same.*”

Table 6. Time Spent Using MyGateway

Comparison of MyGateway and Face-to-Face Class Maintenance	High Use Percent	Low Use Percent
Time w/ MG is About the Same	39.3%	48.4%
Time w/ MG is Higher	46.4%	16.1%
Time w/ MG is Less	14.3%	35.5%

A follow up question asked those marking *more time* to specify the number of additional hours they spent per week. The mean additional time for High Users was 6.65 hours per week, while Low Users indicated an additional 5.75 hours per week. It should also be noted that over half of the write-in responses were “0” hours – demonstrating that many instructors do not perceive the use of MyGateway taking any additional time, when compared to the hours spent in traditional class maintenance.

More Details about Teaching

Several open-ended questions provided greater insight into the varied teaching and learning activities for which features of MyGateway and the WWW are used. The table summarizes the unique applications in response to the question, “**Describe briefly a teaching technique you have implemented successfully using MyGateway and the Internet.**”

The variety of teaching techniques included both standard uses and unique applications for the delivery media. There were multiple references to posting lecture outlines, PowerPoint presentations, resource materials and supplemental readings. Course work and communications are increasingly conducted online via email, discussion forums and enrollment in Groups. Faculty members are also assigning World Wide Web searches for paper or project resources, critical incidents, and current events.

Table 7. Teaching Techniques Successfully Implemented with MyGateway & WWW

Techniques -- High Use Faculty	Techniques -- Low Use Faculty
Post Assignments and Homework	Post Assignments
Post PowerPoint Presentations for Note-taking	Information Shared in Announcements
Post Study Guides and Quiz w/ Answers	Email Reflective Journals for Comment
Assign Students to Groups & Group Papers	Course Work Sent and Received Online
Use of Student Web Pages for Getting to Know One Another	Using Email & the Grade Book to Notify Students of Progress
Assigned Critical Friend (Class Peer) to a Group To Discuss Assignments & Do Reality Checks on Expectations, Resources	WWW Search for Theory Applying to Personal or Professional Situation
Post Summaries of Lectures for Exam Preparation	Use Internet for Current Events & Supplemental Information
Place Electronic Portfolio Templates in Assignments for Students' Use	Use Discussion Board to Prepare for Essays and Papers
Resources for Court Case Assignment Placed in MyGateway	Self Quizzes to Assist Learning
Discussion Board Participation -- Extra Credit for a Traditional F-2-F Course	Research Web Sites & Present Findings in Class

A follow-up question asked, ***“What do you do differently, if anything, in class or in planning and managing your course, as a result of using MyGateway?”***

This group of instructors confirms what others have indicated, in that, they are organizing course materials and presenting information to engage their students in more independent learning, and that they expect students to take greater responsibility. A common result is that faculty members find themselves preparing more in advance, “I have to do everything sooner, to get it online for students.”

Table 8. What’s Done Differently in Planning and Managing Courses

<i>What’s Done Differently _ High Use Faculty</i>	<i>What’s Done Differently _ Low Use Faculty</i>
Collect Assignments in Paperless Format	Use Grade Book and Assessment Feature Routinely
Cover More Material w/ Superior Graphic Materials Added	Organize Class Materials
Focus on Organizing Course Materials & Presenting for Independent Learning	Have Increased Use of PowerPoint Presentations
More Resources Online Than I Would Give as Handouts	Get to Know My Students (Better) Through Reflections/Discussions
Transfer Responsibility for Student’s Progress to Them	Communicate Administrative Matters & Post Frequent Announcements
Plan Ahead	Share Test Results More Quickly
Don’t Carry Stack of Handouts to Class	Do Everything Sooner
Time Has Shifted Online & over the Weekends	

In their own words, these faculty respondents expressed evidence that several paradigm shifts are happening on our campus [providing students with alternative ways to learn; renewed interest and enthusiasm for teaching among faculty; and requirements and shifting of instructional time, online]:

I think many students who have had difficulty in “traditional” classrooms do better with the variety of ways they can get help on MyGateway. Seeing students helping each other on the Discussion Board is very encouraging – my role, then, is to be a monitor and guide rather than the sole source of information.

Overall MyGateway offers opportunities for contact with students in new ways. It offers excellent and efficient ways to communicate resources, course modifications, etc. to large groups of students.

...It just becomes routine to plan time for use of MyGateway. I really enjoy being able to use MyGateway in my classes and for lesson preparations.

I’ve been teaching 37 years (3 at UMSL) and the last two years (since I’ve had a technology enhanced classroom) have been the most enjoyable ever because I can do so much more and it encourages student responsibility.

Not everyone had a positive experience to relate. One faculty member emphasized the point that the time s/he spent did not result in sufficient benefits to continue updating and using MyGateway. In his or her own words, *I generally find Blackboard to be a net detriment to the time I have to prepare and conduct my classes. It takes, in other words, more time to maintain the site than the benefits warrant..”*

Taken altogether, however, the faculty using MyGateway to enhance learning materials and engage their students seem to indicate the results are worth the time they spend, as evidenced by data presented and their individual comments above.

Support Needs

Open-ended questions also probed the topic of future support needs by asking, **“How could the MyGateway support group help you do more with online teaching and learning strategies,”** and **“What teaching techniques or tools would you like to know more about?”**

A few of the faculty indicated needing help with aspects of the Blackboard course management system (i.e., MyGateway), such as assessment building and design, using Respondus (third-party software that expedites uploading test questions), and uploading documents created with the Macintosh computer.

The tools and techniques about which they would like to know more included Respondus (n=3), Adobe Acrobat, and PowerPoint. Additional tools they'd like to learn: digitizing and streaming local video clips (n=2) and creating quizzes (n=5). Use of the Virtual Chat and Discussion Board were mentioned as training needs by several of the respondents; as was computing of averages and keying the Grade Book to their point system.

Several respondents also expressed appreciation for the ongoing support provided by the MyGateway support group.

Help has always been there when I needed it.

My thanks to [staff] for their continued help and support. They are always available and helpful.

Thank you for speeding up [MyGateway] this semester.

Thank you very much for this professional resource.

Implications for UM-St. Louis and Information Technology Services

The results of this survey indicate that the faculty at UM-St. Louis is growing accustomed to the use of an online course management system, specifically MyGateway. They are incorporating a wider array of MyGateway features, as well as resources available in the World Wide Web, in their course designs. We see creative instructional techniques in both high and low use groups of respondents. This suggests that expanding efforts to acquaint instructors to the creative activity occurring with the use of MyGateway, as well as to introduce them to new and emerging technologies will enhance overall satisfaction with teaching and learning here at UM-St. Louis.

The relationship between the level of MyGateway use and student learning activity was significant in two areas. That is, high use instructors are more likely to expect students to take greater responsibility for their own learning and are less likely to feel distant from their students, than are their colleagues who use MyGateway to a lesser extent. This trend could be supported by developing programs to assist faculty in understanding and planning for self-directed, independent student learning, including mentoring techniques. Such programs can draw upon high use instructors who have experienced the benefits of the enhanced communication and organizational opportunities offered by MyGateway in their classrooms.

Finally, time and workload factors must be addressed. Time requirements stand out as a factor in analyzing high and low users of MyGateway. High use instructors tend to have faster Internet connections and teach a fewer number of courses (25.1% of high use faculty teach 3 or more courses, 42% of low use faculty). Additionally, low use instructors are 3 times as likely to use personal web pages compared to high use instructors. Online courses oftentimes require (or induce) more time involvement from the instructor.³ With 71.5 percent of high use faculty teaching only 1 or 2 courses, and 71 percent of low use faculty teaching two or more courses, workload becomes a factor influencing how active an

instructor can be in a course. Instructor activity in turn influences overall student satisfaction, and perceived outcomes⁴.

In assessing faculty use and time commitments, it is also important to recognize the perceived benefits derived from using MyGateway. Promoting student-teacher interaction and engaging students to be active learners are effects associated with high use classes. When instructors spend time developing online courses students tend to benefit. It seems reasonable to conclude that providing instructors with the tools to teach in a high-tech environment also means providing them with the opportunities to use those tools most effectively.

For further information about the results, please contact Cheryl Bielema (314.516.7134), email bielema@umsl.edu or Robert Keel (314.516.6052), email rok@umsl.edu.

¹ Bielema, Cheryl and Robert Keel. [MyGateway Faculty and Student Survey: FS 2001](http://mygateway.umsl.edu/umsl/mgwsurvey/surveyfs01.htm) (<http://mygateway.umsl.edu/umsl/mgwsurvey/surveyfs01.htm>) unpublished report, UM -St. Louis, 2001.

² Bielema, Cheryl, Larry Irons, and Robert Keel, [MyGateway Student Survey: FS2002](http://www.umsl.edu/technology/mgwhelp/mgwinfo/MGEVALRpt-fs02.pdf) (<http://www.umsl.edu/technology/mgwhelp/mgwinfo/MGEVALRpt-fs02.pdf>), unpublished report, UM -St. Louis, 2002.

³ National Education Association (NEA). (2000, June). A survey of traditional and distance learning higher education members. (<http://www.nea.org/he/abouthe/dlstudy.pdf>).

⁴ Bielema, Cheryl, Larry Irons, and Robert Keel, [MyGateway Student Survey: FS2002](http://www.umsl.edu/technology/mgwhelp/mgwinfo/MGEVALRpt-fs02.pdf) (<http://www.umsl.edu/technology/mgwhelp/mgwinfo/MGEVALRpt-fs02.pdf>), unpublished report, UM -St. Louis, 2002.