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Education

Ph.D. (Learning Sciences), School of Education & Social Policy, Northwestern University, 1997.
Dissertation entitled *Guiding science expeditions: The design of a learning environment for project-based science*.
Dissertation Chair: Roy D. Pea, D.Phil.

B.A. (Comparative Literature, with German), Brown University, 1988.
Thesis: Representations & receptions of individualism in modern novels of the United States and the German Democratic Republic.

Awards and Honors

Gustav Ohaus Innovations in Science Teaching, College Level Award, from the National Science Teachers Association, 2002 (with Patricia Simmons, Monya Ruffin, and Chrissie Kirkendall).
University of Missouri System New Faculty Teaching Scholars selection, 2001-2002.
University of Missouri-St. Louis Faculty Performance Shares award (with Carl Hoagland) for promoting the UM-St. Louis Strategic Planning goal of program quality and success, 2001.
Saint Louis Science Center "Shining Star Award" for educators, 2001.
Outstanding Faculty Award, University of Missouri-St. Louis College of Education, 2001.
James S. McDonnell Foundation Postdoctoral Fellowship in Cognitive Studies for Educational Practice, 1997-1999.
Outstanding Dissertation Award, Northwestern University Chapter of Phi Delta Kappa, 1998.
Constance Dorothea Weinman Scholarship for Graduate Study in Instructional Technology, 1994-1995.
University Fellowship, Northwestern University Graduate School, 1992-1993.
Graduated magna cum laude with Honors Thesis, Brown University, 1988.

Grants

PI, Science Literacy through Science Journalism, National Science Foundation (Discovery Research K-12 Program), \$3.5 million, September 2008-August 2012.
PI, The Mediated Critique and Construction of Empirical Narratives, Spencer Foundation, \$40,000, October 2006-September 2007.
Participating faculty, Missouri Science Teaching and Education Partnership (MO-STEP), National Science Foundation (GK-12 program), \$1.5 million, July 2004-June 2007.
PI, Historical Thinking with the *Foundations of Freedom* DVD, U.S. Department of Education, \$9,286, September 2003-March 2004.

Co-PI, St. Louis Consortium Preparing Tomorrow's Teachers to Use Technology, U.S.
Department of Education, \$1.04 million, September 1999-February 2003.

Professional Experience

Associate Professor, Educational Technology and Educational Psychology, 2005-present
College of Education, University of Missouri-St. Louis

Assistant Professor, Educational Technology and Educational Psychology, 1999-2005
College of Education, University of Missouri-St. Louis

James S. McDonnell Foundation Postdoctoral Fellow, 1997-1999
Washington University in St. Louis, St. Louis, MO

Instructor, "Informal Learning Environments" Course 1998-1999
Washington University in St. Louis, St. Louis, MO

Curriculum Developer, 1997
TERC (Technical Education Research Center), Cambridge, MA

Research Assistant, Learning Through Collaborative Visualization (CoVis) Project, 1993-1997
School of Education and Social Policy, Northwestern University, Evanston, IL

Project Manager, 1991-1992
Spinnaker Software Corporation, Cambridge, MA

Product Development and Technical Support Specialist, 1989-1990
Spinnaker Software Corporation, Cambridge, MA

Teacher, International Research and Exchange (IREX) Intensive English Program, 1988 & 1989
Brown University, Providence, RI

Faculty Member, Fachpraktikum Anglistik Intensive English Program, 1988
Wilhelm Pieck University, Rostock, Germany

University Service and Committees

Chair, Division of Teaching and Learning, University of Missouri-St. Louis College of Education, August 2007-present.

Associate Director, E. Desmond Lee Technology and Learning Center, University of Missouri-St. Louis College of Education, May 2000-present.

Program Audit Committee, University of Missouri-St. Louis, September 2007-May 2010.

COE Institutional Review Board (IRB) Committee, University of Missouri-St. Louis College of Education, August 2008-December 2009.

Coordinator for Faculty, Division of Teaching and Learning, University of Missouri-St. Louis College of Education, June 2005-May 2006.

Faculty Senate, University of Missouri-St. Louis (representing the Division of Teaching and Learning, College of Education), August 2004-July 2006.

Faculty Senate Nominating Committee, March 2005-July 2006 (Chair, February-July 2006).

Graduate Education Council, College of Education, University of Missouri-St. Louis, September 2001-May 2006 (Chair, 2004-05, 2005-06).
Doctoral Admissions Committee, Division of Teaching and Learning, College of Education, University of Missouri-St. Louis, September 2002-May 2006.
University of Missouri System Comprehensive Program Assessment, October 2004 – June 2005.
Ad Hoc Division Chair Nominating Committee, Division of Teaching and Learning, College of Education, University of Missouri-St. Louis, March 2005.
Graduate Faculty Nominating Committee, University of Missouri-St. Louis, Spring 2004.
University-wide committee for Scheduling of Advanced Technology & ITV Classrooms, University of Missouri-St. Louis, September 2001-May 2002.
University-wide Teaching Subcommittee of the University IT Strategic Planning Committee, University of Missouri-St. Louis, September 2001-May 2002.
University Senate Video and Instructional Technology Committee, University of Missouri-St. Louis, September 1999-May 2001.
Curriculum and Policy Council, College of Education, University of Missouri-St. Louis, September 2000-May 2001.

Community Boards

Emerging Technologies Advisory Board, St. Louis Science Center, December 2002-2008.
Board of Directors, St. Louis B-Works (BicycleWorks and ByteWorks), June 2001-April 2005.
Advisory Committee Member, Sumner MEGA Magnet High School, St. Louis Public Schools, July 2000-May 2001.
Board of Directors & Education Committee, City Academy at Mathews-Dickey, November 1997-June 2002 (committee chair 1997-2001).

Professional Organizations and Service

Editorial Board, *The Journal of the Learning Sciences*, 2003-present.
National Science Foundation Review Panels,
 Advanced Learning Technologies Program, July 2006 and July 2008
 Informal Science Education, February 2010
Co-Founder and Co-Director, Digital Media Festival (<http://dmf.umsl.edu>), an annual regional festival sponsored by the E. Desmond Lee Technology and Learning Center, University of Missouri-St. Louis College of Education, 2002-present.
Editorial Review Board, The Robert Bowne Foundation, 2005-present.
Local Host Committee, Visitor Studies Association 2009 Conference (St. Louis, MO)
Planning Committee, 2008 Connections Institute: Science in Art, Art in Science (St. Louis, MO)
Program Committee, International Conference of the Learning Sciences (ICLS), 2002 (Seattle), 2004 (Santa Monica).
Planning Committee, Annual Qualitative Research Conference, UM-St. Louis, 2001, 2002, 2003, 2004, 2005, 2008, 2009.
Planning Committee, Focus on Teaching and Technology Conference, UMSL, 2004, 2005.
Member, International Society of the Learning Sciences (ISLS), 2004-present.
Member, International Society for Cultural and Activity Research (ISCAR), 2003-present.
Member, American Educational Research Association (AERA), 1993-present.
Member, National Association for Research on Science Teaching (NARST), 1998, 2010-present.
Member, National Science Teachers Association (NSTA), 2008-present.

Member, Visitor Studies Association, 2009-present.
Member, Association for the Advancement of Computers in Education (AACE), 2000-2003.
Member, Association for Computing Machinery (ACM), 1993-2001.
Founding Member, AERA Special Interest Group (SIG) on Informal Learning Environments Research (ILER), 1997-present.
Webmaster, AERA SIG on Informal Learning Environments Research, 1999-2001.
Program Chair, AERA Special Interest Group on Education in Science and Technology (EST), 2001-2002. Member 1993-2008. Renamed SIG-Learning Sciences 2008; member 08-present.
Member, AERA Special Interest Group (SIG) on Cultural Historical Research, 2001-present.
Manuscript reviewer for AERA Division C, AERA SIG EST/LS, AERA SIG ILER, The International Conference of the Learning Sciences, *The Journal of the Learning Sciences*, *American Educational Research Journal*, *Science Education*, *International Journal of Science and Mathematics Education*, *Journal of Teacher Education*, *Afterschool Matters*, Teachers College Press, and Cambridge University Press.
Discussant for conference sessions at AERA and ICLS.

Book

Polman, J. L. (2000). *Designing project-based science: Connecting learners through guided inquiry*. New York: Teachers College Press.

Refereed Journal Articles

Polman, J. L. (2010). The zone of proximal identity development in apprenticeship learning. *Revista de Educación* (special issue on Identity and Education), 353 (September-December), 129-155. Available: http://www.revistaeducacion.educacion.es/re353_05.html

Polman, J. L., and Miller, D. (2010). Changing stories: Trajectories of identification among African American youth in a science outreach apprenticeship. *American Educational Research Journal*, 47(4), 879-918.

Biddix, J. P., Somers, P. A., & Polman, J. L. (2009). Protest reconsidered: Identifying democratic and civic engagement learning outcomes. *Innovative Higher Education*, 34 (3), 133-147.

Kulla-Abbott, T., and Polman, J. (2008). Engaging student voice and fulfilling curriculum goals with digital stories. *THEN Journal: Technology Humanities Education and Narrative*, 5 (Spring). Available: <http://thenjournal.org/feature/160/> (Accessed April 28, 2008).

Westhoff, L., and Polman, J. L. (Fall-Winter 2007-08). Developing preservice teachers' pedagogical content knowledge about historical thinking. *International Journal of Social Education*, 22 (2), 1-28.

Polman, J. L. (2006). Mastery and appropriation as means to understand the interplay of history learning and identity trajectories. *The Journal of the Learning Sciences*. 15(2), 221-259.

Burns, K., & Polman, J. L. (2006). The impact of ubiquitous computing in the Internet age: How middle school teachers integrated wireless laptops in the initial stages of implementation. *Journal of Technology and Teacher Education*, 14 (2), 363-385.

- Polman, J. L. (2004). Dialogic activity structures for project-based learning environments. *Cognition and Instruction, 22* (4), 431-466.
- Polman, J. L. (2004). The perils and promise of afterschool programs on school territory. *Afterschool Matters, 3*, 3-12.
- O'Neill, D. K., & Polman, J. L. (2004). Why educate "little scientists?" Examining the potential of practice-based scientific literacy. *Journal of Research in Science Teaching, 41* (3), 234-266.
- Simmons, P., Ruffin, M., Polman, J., Kirkendall, C., & Baumann, T. (2003). If stones could talk. *The Science Teacher, 70* (5), pp. 52-54.
- Polman, J. L. & Pea, R. D. (2001). Transformative communication as a cultural tool for guiding inquiry science. *Science Education, 85*, pp. 223-238.
- Gordin, D.N., Polman, J.L., & Pea, R.D. (1994). The Climate Visualizer: Sense-making through scientific visualization. *Journal of Science Education and Technology, 3* (4), pp. 203-226.
- Fraser, C. C., & Polman, J. (1989). Establishing a hypermedia corpus for teaching German language and culture using Macintosh HyperCard. *Die Unterrichtspraxis/Teaching German, 22* (2), pp. 138-145.

Book Chapters

- Polman, J. L. (in press). Trajectories of participation and identification in learning communities involving disciplinary practices. In Yun Dai, D. (Ed.), *Design research on learning and thinking in educational settings: Enhancing intellectual growth and functioning*. New York: Routledge.
- Polman, J. L., & Pea, R. D. (2007). Transformative communication in project science learning discourse. In R. Horowitz (Ed.) *Talking texts: How speech and writing interact in school learning*. Mahwah, NJ: Erlbaum.
- Wertsch, J. V., & Polman, J. L. (2002). The impact of mediation on goal structure. In M. Hildebrand-Nilshon & C.-W. Kim (Eds.), *Kultur (in) der Psychologie (Cultural psychology)* (pp. 223-232). Heidelberg: Asanger Verlag.
- Wertsch, J.V., & Polman, J.L. (2001). The intuitive mind and knowledge about history. In B. Torff & R.J. Sternberg, (Eds.), *Understanding and teaching the intuitive mind* (pp. 57-72). Mahwah, NJ: Lawrence Erlbaum Associates.

Curriculum Resources

- Missouri Historical Society (2001). *Through the eyes of a child*. St. Louis: Missouri Historical Society. (author of educational CD-ROM including oral histories of African-American communities in St. Louis and curriculum).
- World Resources Institute and TERC (1999). *DataScape Instructor Guide*. Washington DC: World Resources Institute. (author of chapters 2 through 5)

Refereed Conference Proceedings

- O'Neill, D. K., Kolikant, Y. B., Polman, J. L., and Radinsky, J. (2010). Understanding a future with multiple pasts - Projects on metahistorical understanding. In Gomez, K., Lyons, L., & Radinsky, J. (Eds.) *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 2, Short Papers, Symposia, and Selected Abstracts*, pp. 77-84. International Society of the Learning Sciences: Chicago IL.
- Polman, J. L., Saul, E. W., Newman, A., Farrar, C., Singer, N., Turley, E., Pearce, L., Hope, J., McCarty, G., and Graville, C. (2010). A cognitive apprenticeship for science literacy based on journalism. In Gomez, K., Lyons, L., & Radinsky, J. (Eds.) *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 2, Short Papers, Symposia, and Selected Abstracts*, pp. 61-69. International Society of the Learning Sciences: Chicago IL.
- Polman, J. L., and Miller, D. (2008). Sociocognitive apprenticeship: Mediating practices and identities. In G. Kanselaar, V. Jonker, P. A. Kirschner, & F. J. Prins, *International Perspectives in the Learning Sciences: Creating a learning world. Proceedings of the Eighth International Conference for the Learning Sciences – ICLS 2008*, pp. 3-115 – 3-116. Utrecht, Holland: International Society of the Learning Sciences.
- Polman, J. L. (2006). True stories, storied truth: Stitching narrative and logico-scientific discourse together in an age of "spin". In S. A. Barab, K. E. Hay, & D. T. Hickey, *Proceedings of the International Conference of the Learning Sciences 2006*, pp. 557-563. Mahwah, NJ: Erlbaum.
- Burns, K., & Polman, J. L. (2005). How middle school teachers adapted to ubiquitous technology. In *Information technology & teacher education annual: Proceedings of SITE [Society for Information Technology and Teacher Education International Conference] 2005*. Norfolk, VA: Association for the Advancement of Computing in Education (AACE).
- Polman, J. L., Mastin, J., & Beyer, K. (2002). Transforming activities with technology: Professional development in preservice education. In D. A. Willis, J. Price, & N. Davis (Eds.), *Information technology & teacher education annual: Proceedings of SITE [Society for Information Technology and Teacher Education International Conference] 2002*, pp. 1728-1732. Norfolk, VA: Association for the Advancement of Computing in Education (AACE).
- Suess, P., Hoagland, C., & Polman, J. (2002). Assessing the integration of technology within a context of change: A center-based approach. In D. A. Willis, J. Price, & N. Davis (Eds.), *Information technology & teacher education annual: Proceedings of SITE 2002*, pp. 731-735. Norfolk, VA: AACE.
- Mastin, J., Polman, J. L., & Beyer, K., (2001). Lessons learned: School based reform and its impact on the restructuring of a teacher preparation program. In J. Price, D. A. Willis, N. Davis, & J. Willis (Eds.), *Proceedings of SITE [Society for Information Technology and Teacher Education International Conference] 2001*, pp. 63-67. Norfolk, VA: AACE.

Polman, J. L., Mastin, J., Beyer, K., & Navarro, V. (2001). Putting the pieces together: Systemic change for technology integration in teacher education. In J. Price, D. A. Willis, N. Davis, & J. Willis (Eds.), *Proceedings of SITE 2001*, pp. 2058-2063. Norfolk, VA: AACE.

Polman, J. L. (1996). Bootstrapping a community of practice: Learning science by doing projects in a high school classroom. In D. C. Edelson & E. A. Domeshek (Eds.) *Proceedings of the International Conference on the Learning Sciences, 1996* (pp. 474-479). Charlottesville, VA: AACE.

Refereed Conference Papers and Presentations

Polman, J. L. (2011, September). Establishing a distributed activity system for scientific literacy based on youth science journalism. In J. Vadeboncoeur, *Expansive learning and development as a valuable lens to examine informal educational systems in transition in a global world: Case studies of youth, museum and school programs*. Symposium to be conducted at the Third Congress of the International Society for Cultural and Activity Research (ISCAR), Rome.

Polman, J. L. (2011, September). The zone of proximal identity development in apprenticeship learning. In L. Falsafi, *Identity in education: the potentials and challenges of theoretical and analytical diversity*. Symposium to be conducted at the Third Congress of the International Society for Cultural and Activity Research (ISCAR), Rome.

Polman, J. L. (2011, April). Building an environment to engage young people in becoming science citizen-journalists. In A. Luehmann, *Redefining science, redefining selves: Youth's identity development in agentic environments*. Structured poster session to be conducted at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Polman, J. L., Saul, E. W., Newman, A., Farrar, C., Singer, N., Turley, E., Pearce, L., Hope, J., and McCarty, G. (2010, June). A cognitive apprenticeship for science literacy based on journalism. Symposium conducted at the International Conference of the Learning Sciences, Chicago, IL.

Polman, J. L. (2010, June). Narrative metacognition and story diagrams as scaffolds for the critique and construction of history narratives. In D. K. O'Neill, *Understanding a future with multiple pasts: Projects on metahistorical understanding*. Symposium conducted at the International Conference of the Learning Sciences, Chicago, IL.

Polman, J. L., Hope, J., and McCarty, G. (2010, April). Reframing and measuring engagement with science and technology. Paper discussed at the Annual Meeting of the American Educational Research Association, Denver, CO.

McCarty, G., Hope, J., and Polman, J. L. (2010, March). The youth engagement with science and technology survey: Informing practice and measuring outcomes. Paper presented at the Annual Meeting of the National Association for Research on Science Teaching, Philadelphia, PA.

Farrar, C. L., and Polman, J. L. (2010, March). Assessing students' scientific literacy. Presented at the Annual Meeting of the National Science Teacher's Association, Philadelphia, PA.

- Polman, J. L. (2009, April). Identity and historical thinking about racially-charged history in the United States. Paper presented at the annual meeting of the American Educational Research Association (AERA), San Diego.
- Polman, J. L. (2008, September). Scaffolding trajectories of participation and identification in a science apprenticeship. Paper presented at the Second Congress of the International Society for Cultural and Activity Research (ISCAR), San Diego, CA.
- Polman, J. L. and Miller, D. (2008, September). Trajectories of participation and identification in a sociocognitive apprenticeship. Paper presented at the Second Congress of the International Society for Cultural and Activity Research (ISCAR), San Diego, CA.
- Polman, J. L. (2008, March). Scaffolding the critique and construction of empirical narratives. Paper presented at the annual meeting of the American Educational Research Association (AERA), New York.
- Polman, J. L., and Miller, D. (2008, March). Change in action: Learning and identity development in a youth apprenticeship. Paper discussion at the annual meeting of the American Educational Research Association (AERA), New York.
- Kulla-Abbott, T. M., and Polman, J. L. (2007). Engaging student voice and fulfilling curriculum goals with digital stories. Paper presented at the Annual Meeting of the Mid-Western Educational Research Association (MWERA), St. Louis, MO, October 24-27, 2007.
- Polman, J. L., & Pea, R. D. (2007). Transformative communication in project science learning discourse. In R. Horowitz (Chair), *Talking texts: How speech and writing interact in school learning*. Symposium conducted at the annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Polman, J. L. (2005). True stories, storied truth: Stitching narrative and logico-scientific discourse together in an age of "spin". Paper presented at the First International Society for Cultural and Activity Research (ISCAR) Congress, Seville, Spain, September.
- Polman, J. L. (2005). Disability studies, inclusive education, and learning sciences. In D. L. Ferguson & S. Danforth (Co-chairs), *Broadening the vision: How disability studies, character education, and the learning sciences can collaborate toward the development of inclusive communities of practice in P-12 school settings*. Symposium conducted at the annual meeting of the American Educational Research Association, Montreal, April, 2005.
- Polman, J. L., Westhoff, L., O'Neill, D. K., Sohbat, E., Asgari, Mahboubbeh, Shin, N., McGee, S., Radinsky, J., & Bell, P. (2004). Developing historical thinking practices through technology-supported inquiry (a symposium). In Y. B. Kafai, W. A. Sandoval, N. Enyedy, A. S. Nixon, & F. Herrera (Eds.), *Proceedings of the Sixth International Conference of the Learning Sciences 2004: Embracing diversity in the learning sciences* (pp. 19-22). Mahwah, NJ: Erlbaum.

- Polman, J. L., & Westhoff, L. (2004). Digital history in an after-school learning environment: Developing preservice teachers pedagogical content knowledge and the historical thinking of youth. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA, April, 2004.
- Coulter, B., and Polman, J. L. (2004). Enacting technology-supported inquiry learning through Mapping the Environment. In B. Foley (Chair), *Enacting change in earth science education*. Symposium conducted at the annual meeting of the American Educational Research Association, San Diego, CA, April, 2004.
- Polman, J. L. (2002). Re-creating the past: Building historical simulations with hypermedia to learn history. In J. L. Polman (Chair), *Text, context, and perspective in learning history*. Symposium conducted at the annual meeting of the American Educational Research Association, New Orleans, LA, April, 2002.
- Polman, J. L. (2002). Inquiry into local heritage as a means to foster multiple aspects of development. In J. L. Polman (Chair), *Connecting the transformation of communities and individuals through after school technology programs*. Symposium conducted at the annual meeting of the American Educational Research Association, New Orleans, LA, April, 2002.
- Polman, J. L. (2002). Design issues for project-based science learning environments in schools. In S. Lewis (Chair), *Issues in Project-Based Science: Designing environments and enacting reform*. Symposium conducted at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA, April, 2002.
- Stevens, R., & Polman, J. L. (2002). VideoTraces: Supporting interpretation, representation and distributed interaction through a digital video based annotation system. In R. Stevens (Chair), *Mediating visitor experience of objects in museums: Exploring the roles of people and things through video-based analysis and intervention*. Symposium conducted at the 5th International Society for Cultural Research and Activity Theory (ISCRAT) congress, June 18 – 22, 2002, Amsterdam.
- Polman, J. L. (2001). Historical learning and identity development on the borders of school. In S. Mosborg (Chair), *History, identity, and construction of the self*. Symposium conducted at the annual meeting of the American Educational Research Association, Seattle, WA, April 2001.
- Polman, J. L., & Wertsch, J. V. (2001). The intuitive mind and knowledge about history. In B. Torff (Chair), *Understanding and teaching the intuitive mind*. Symposium conducted at the annual meeting of the American Educational Research Association, Seattle, WA, April 2001.
- Polman, J. L. (2000, July). Mediated action and inaction in a complex community of learners. Paper presented at the III Conference for Sociocultural Research, Campinas, São Paulo, Brazil.
- Polman, J. L. (2000, June). Identity development through participation in an informal setting. In B. J. Fishman & S. F. O'Connor-Divelbiss (Eds.), *Proceedings of the International Conference of the Learning Sciences, 2000* (pp. 340-341). Mahwah, NJ: Lawrence Erlbaum Associates.

- Polman, J. L. (2000, April). The culture of school and the problems of open-ended science projects. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Shrader, G., Lento, E., D'Amico, L., Polman, J. L., Kwon, S., & Gomez, L. (1999, April). Measuring student inquiry and technology efficacy in technology-facilitated project-based science classrooms. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.
- Polman, J. L., (1998, April). Adapting activity structures across settings: From science to history projects. In S. McGee (Chair), *Changing the game: Activity structures for reforming education*. Symposium conducted at the annual meeting of the American Educational Research Association, San Diego, CA.
- Polman, J. L., (1998, April). Why train "little scientists": The purposes and practices of science education in today's democracy. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA (ERIC Document Reproduction Service No. ED 424 094).
- Polman, J. L., & Pea, R. D. (1997, March). Transformative communication in project science learning discourse. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Polman, J. L., & Pea, R. D. (1997, March). Scaffolding science inquiry through transformative communication. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Oak Brook, IL.
- Polman, J. (1997, March). Evaluating project science learning through inquiry planning. In *The CoVis Project: A national testbed for science learning reform*. Symposium conducted at the annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL.
- Polman, J. L. (1996, July). Guiding expeditions: The iterative, situated design of a learning environment for project-based science. In D. C. Edelson & E. A. Domeshek (Eds.) *Proceedings of the International Conference on the Learning Sciences, 1996* (pp. 585-586). Doctoral Consortium conducted at ICLS 96. Charlottesville, VA: AACE.
- Polman, J. L., & Fishman, B. (1995, April). Electronic communication tools in the classroom: Student and environmental characteristics as predictors of adoption. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Edelson, D.C., Gordin, D.N., Polman, J., & Fishman, B. (1994, April). Scaffolding student inquiry with collaborative visualization tools. In *Next-generation computing and communications environments for learning and teaching*. Symposium conducted at the meeting of the American Educational Research Association, New Orleans, LA.

Gomez, L., Fishman, B., & Polman, J. (1994, April). Media spaces and their application in K-12 and college learning communities. Panel organized and conducted at the meeting of the Computer Human Interaction special interest group of the Association for Computing Machinery, Boston, MA.

Book Reviews

Polman, J. L. (2007, April 18). A role for reason in a realm often dominated by heat and light. [Review of the book *Science education and student diversity: Synthesis and research agenda*, by O. Lee and A. Luykx (Eds.)]. *PsycCritiques-Contemporary Psychology: APA Review of Books*, 52 (No. 16), Article 9. Retrieved April 18, 2007, from the PsycCRITIQUES database.

Polman, J. L. (2006, January 25). A starting point for inquiry into inquiry. [Review of the book *Integrating inquiry across the curriculum*, by R. H. Audet and L. K. Jordan (Eds.)]. *PsycCritiques-Contemporary Psychology: APA Review of Books*, 51 (No. 4), Article 8. Retrieved February 24, 2006, from the PsycCRITIQUES database.

Polman, J. (1999). [Review of the book *CSCL: Theory and Practice of an Emerging Paradigm*, by T. Koschmann (Ed.)]. *Mind, Culture, and Activity*, 6(2), 163-165.

Polman, J., & Wertsch, J. V. (1998). [Review of the book *Cultural Psychology: A Once and Future Discipline* by Michael Cole]. *American Journal of Education*, 106(3), pp. 451-456.

Invited Presentations and Posters

Polman, J. L. (2011, April). Informal learning environments that build connections to local communities while engaging citizens. Informal Learning Environments SIG. Panel presentation at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Polman, J. L. (2009, April). Equity in informal learning institutions. In L. Melber, "Informal Learning Environments Research SIG Business Meeting". Symposium conducted at the annual meeting of the American Educational Research Association, San Diego, CA.

Miller, D., and Polman, J. L. (2007, August). YES as an environment for building youth identity. Panel presentation in session "Communicating with Your Teen: How to Engage and Learn from Teens in Museum Programs", Bay Area Institute: Expanding and Diversifying STEM Participation, San Francisco, CA.

Polman, J. L. (2007, July). The mediated critique and construction of empirical narratives. Invited presentation at the Center for History and New Media, George Mason University, Fairfax, VA.

Polman, J. L. (2005, November). Hesse in Amerika: Geschichte einer Legende (Hesse in America: Story of a Legend). Invited presentation at "Grenzüberschreitungen" (Border Crossings) Hermann Hesse Ausstellung (Exhibit), Gymnasium Carolinum, Neustrelitz, Germany.

- Polman, J. L. (2005, September). Developing information technology fluency within the context of science inquiry. Invited presentation at the Connecting Science and Literacy in the K-8 Classroom Conference, St. Louis, MO.
- Polman, J. L. (2005, June). Designing project-based science: Issues in facilitating student-centered inquiry. Invited presentation at the No Question Left Behind: Bringing Guided-Inquiry Curricula into Science and Mathematics Classrooms Workshop, Northport, Maine.
- Polman, J. L. (2005, June). Using technology as a tool in the course of student inquiry. Invited workshop at the No Question Left Behind: Bringing Guided-Inquiry Curricula into Science and Mathematics Classrooms Workshop, Northport, Maine.
- Polman, J. L. (2003, October). Learning history and becoming engaged citizens through digital community history projects. Invited presentation to the Urban Achievement Alliance's Urban Education Summit, St. Louis, MO.
- Polman, J. L. (2003, October). Designing environments to promote youth learning and community engagement. Invited presentation to the University of Missouri Board of Curators, St. Louis, MO.
- Polman, J. L. (2003, July). History learning research. Invited presentation at the Center for Educational Technologies, Wheeling Jesuit University, Wheeling, WV.
- Polman, J. L. (2001, October). Designing environments for history learning and identity development on the borders of school. Invited presentation at Simon Fraser University, Vancouver, British Columbia, Canada.
- Polman, J. L. (2001, September). Designing project-based science: Connecting learners through guided inquiry. Invited presentation at the University of Texas, Austin, TX.
- Polman, J. L. (2000, May). Designing project-based science: Connecting learners through guided inquiry. Invited presentation at Florida International University, Miami, FL.
- Polman, J. L. (1999, November). Technology in the classroom: Changing possibilities for learning. Presented to the University of Missouri-St. Louis chapter of the Student National Education Association.
- Polman, J. L. (1999, April). Framing research on museum experiences. Invited presentation at the Lowenthal Symposium on Informal Learning Environments and Museums, St. Louis, MO.
- Polman, J. L. (1998, October). Understanding informal learning environments involving historical inquiry. Poster presented at the Cognitive Studies for Educational Practice Annual Meeting, Boulder, CO.
- Polman, J. (1998, July). HistoryWeb St. Louis: Re-constructing the history of the underground railroad. Invited exhibit at the National Park Service's unveiling of "The Spirit of Freedom", the new African-American Civil War Memorial, Washington, DC.

Polman, J. (1998, May). New forms of learning by doing: History and technology projects in after school clubs. Presented at the Washington University in St. Louis Education Department's Annual Spring Forum, St. Louis, MO.

Polman, J. (1998, April). HistoryWeb St. Louis: New designs and settings for history learning. Invited address presented at the Goals 2000 Social Studies Project Conference: "Best Practices in Social Studies", St. Louis, MO.

Polman, J. (1998, February). A neo-Vygotskian perspective on museum experiences. Invited address presented at the meeting of the Asociación Mexicana de Museos y Centros de Ciencia y Tecnología (Mexican Association of Museums and Science and Technology Centers), Mexico City, Mexico.

Polman, J. L. (1997, October). Creating an activity system to foster historical and technological fluency. Poster presented at the Cognitive Studies for Educational Practice Annual Meeting, Seattle, WA.

Doctoral Dissertations Chaired (all at University of Missouri-St. Louis)

Good, R. (2010). Social studies teachers who teach toward social justice: An examination of life histories.

Banks, S. (2010). Project-based learning about nutrition with technology in an African-American middle school: An action research study.

Suess, P. A. (2007). The experience of technology integration by teacher educators in higher education.

Gregg, D. E. (2007). Principals and library media specialists working together: A case study of one elementary school.

Isaac-Johnson, D. (2007). Creating culturally relevant technological operas in an urban school.

Biddix, J. P. (2006). The power of "Estudentprotest." A study of electronically-aided student activism.

Kulla-Abbott, T. (2006). Developing literacy practices through digital storytelling.

Jaradat, S. (2004). Jordanian students' participation in their first experience of online coursework.

Burns, K. (2003). The impact of ubiquitous wireless computers in the Internet age: How middle school teachers adapted to the technology in the initial stages of implementation.

Russell, D. (2003). The mediated action of educational reform: An inquiry into collaborative online professional development and unit implementation.

Courses Developed (Except where noted, courses are in Educational Technology)

- Introduction to Computers and the Internet in Education
- Selection & Utilization of Educational Multimedia
- Teaching and Learning with Technology: Authoring Tools
- Instructional Technology and Education Reform
- Computer-Mediated Communication in Education
- Cognition and Technology (Ed Tech/Ed Psych)
- Technology-Supported Inquiry Learning (Ed Tech/Ed Psych)
- Educational Multimedia Design
- Seminar in Educational Technology Research – Video as a Research Tool
- Instruction, Learning, and Assessment (Ed Psych/Teacher Ed masters degree core course)
- Teaching and Learning with Technology: Graphical Representation Tools