Joseph L. Polman

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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.

Certificate, President's Academic Leadership Institute, University of Missouri System, 2010.

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.

Professional Experience

Professor, Learning Sciences/Educational Psychology, 2012-present
School of Education, University of Colorado Boulder

Associate Dean for Research, 2012-present
School of Education, University of Colorado Boulder

Professor, Educational Technology and Educational Psychology, 2012
College of Education, University of Missouri-St. Louis

Associate Professor, Educational Technology and Educational Psychology, 2005-2012
College of Education, University of Missouri-St. Louis

Chair, Division of Teaching and Learning, 2007-2012
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

Teaching Assistant, "Human-Computer Interaction" Course Fall 1994
Northwestern University (Lead Instructor, Louis Gomez)

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

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., Newman, A., Farrar, C., and Saul, E. W. (2012). Science journalism: Students learn lifelong science literacy skills by reporting the news. *The Science Teacher* (January), 44-47.

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. doi: 10.3102/0002831210367513

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/

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. doi: 10.1207/s15327809jls1502_3

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. Available: http://www.editlib.org/p/5777

Polman, J. L. (2004). Dialogic activity structures for project-based learning environments. *Cognition and Instruction*, *22* (4), 431-466. doi: 10.1207/s1532690Xci2204_3

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. doi: 10.1002/tea.20001

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* (3), 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), 203-226. doi: 10.1007/BF01575897

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), 138-145.

Book Chapters

Kirshner, B., and Polman, J. L. (forthcoming). Adaptation by design: A context-sensitive, dialogic approach to interventions. To appear in Fishman, B., Penuel, W. R., Allen, A., & Cheng, B. H. (Eds.). *Design-based implementation research: Theories, methods, and exemplars. National Society for the Study of Education Yearbook, Volume 112, Issue 2.* New York: Teachers College Press.

Polman, J. L. (2012). Introduction. In W. Saul, A. Kohnen, A. Newman, & L. Pearce, *Front-page science: Engaging teens in science literacy* (pp. xi-xiii). Arlington, VA: NSTA Press.

Polman, J. L. (2012). Trajectories of participation and identification in learning communities involving disciplinary practices. In D. Yun Dai, (Ed.), *Design research on learning and thinking in educational settings: Enhancing intellectual growth and functioning* (pp. 225-242). 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: Cre8ing 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.

Works in Progress

Polman, J. L., Newman, A., Saul, E. W. & Farrar, C. (under review). Adapting practices of science journalism to foster science literacy.

Polman, J. L., and Hope, J. (under review). Science news stories as boundary object affecting engagement with science.

Lamb, G. R., Polman, J. L., Newman, A., & Graville Smith, C. (under review). Science news infographics in the classroom.

Polman, J. L., and Enoch, J. (in preparation). Scaffolding the critique and construction of empirical narratives.

Polman, J. L., and Good, R. (in preparation). Identity and historical thinking about racially-charged history in the Unites States.

Refereed Conference Papers and Presentations

Polman, J. L., Farrar, C. and Hope, J. M. G. (2013, April). Science journalism as preparation for everyday scientific literacy. In L. Bricker, *Reading, writing, and communicating science: Exploring the intersections of science and literacy education*. Symposium to be conducted at the Annual Meeting of the National Association for Research on Science Teaching, Rio Grande, Puerto Rico.

Polman, J. L., Hope, J. M. G., and Graville-Smith, C. (2013, April). Science journalism experiences from a youth perspective: Who or what transforms? In T. Sato, *Learners in action: Youth narratives on accessing and transforming science*. Symposium to be conducted at the Annual Meeting of the National Association for Research on Science Teaching, Rio Grande, Puerto Rico.

Newman, A., Polman, J. L., Kohnen, A., & Farrar, C. (2012, April). Navigating the science information landscape: Fostering understanding of and engagement with sources through citizen science journalism. In C. Chinn, *Learning from others: Advancing theory and research on learning from sources*. Symposium conducted at the Annual Meeting of the American Educational Research Association, Vancouver, BC.

Polman, J. L., and Hope, J. (2012, April). Personally relevant science news stories as boundary objects within and beyond a hybrid, distributed activity system. In D. Fields, *Science artifacts as boundary objects: Designs that cross social settings*. Symposium conducted at the Annual Meeting of the American Educational Research Association, Vancouver, BC.

Polman, J. L. (2012, April). Youth citizen science journalism as a means to develop competent outsiders. In N. Feinstein, *Science education for the competent outsider: What we already know and do*. Symposium conducted at the Annual Meeting of the American Educational Research Association, Vancouver, BC.

Polman, J. L., and Hope, J. (2012, March). Citizen science journalism: A pathway to developing a scientifically literate and engaged public? In Varelas, M., Identity and science education research: Topics, issues, and trends. Symposium conducted at the Annual Meeting of the National Association for Research on Science Teaching, Indianapolis, IN.

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 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 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 conducted at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Polman, J. L. (2011, April). Informal learning environments that build connections to local communities while engaging citizens. In J. Rahm & M. Phipps, *Informal learning across sites and disciplines: What do we know, where do we need to go*. Symposium 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, Mahboubeh, 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

Saul, E. W., Polman, J. L., and Newman, A. (2011, June). A transactional view of science literacy: Considering sources in use. DFG-NSF Conference: Public Understanding and Public Engagement with Science. New York, NY.

Polman, J. L. (2011, May). Mendeley. In Holmes, K., "Lost in citations: Four approaches to keeping your citations and notes organized this summer." Invited presentation at Center for Teaching and Learning, University of Missouri–St. Louis, St. Louis, MO.

Polman, J. L., and Kohnen, A. (2011, January). Science literacy through science journalism. Invited presentation at Hazelwood School District, Hazelwood, MO.

Polman, J. L., and Hope, J. (2010, December). Science literacy through science journalism. Poster presented at the Discovery Research K-12 PI Meeting, Washington, DC.

Polman, J. L. (2010, July). Increasing scientific literacy through apprenticeship into science journalism. Invited presentation at Simon Fraser University, Burnaby, British Columbia, Canada.

Newman, A., Farrar, C., Polman, J. L., and Saul, E. W. (2010, March). Science literacy through science journalism: How student research becomes news. Invited presentation at Missouri Junior Science, Engineering, and Humanities Symposium, St. Louis, MO.

Polman, J. L. (2009, November). Science literacy through science journalism. Poster presented at the Discovery Research K-12 PI Meeting, Washington, DC.

Polman, J. L., Newman, A., and Farrar, C. (2009, September). Science literacy through science journalism. Invited presentation at Sherwood Foundation, Omaha, Nebraska.

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.

Polman, J. L. (2008, November). Science literacy through science journalism. Poster presented at the Discovery Research K-12 PI Meeting, Washington, DC.

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.

Grants & Contracts

PI, Collaborative Infographics for Science Literacy (CISL), National Science Foundation (Cyberlearning Program), $550,000, 2012-2014.

PI, Science Literacy through Science Journalism, National Science Foundation (Discovery Research K-12 Program), $3.5 million, 2008-2012.

PI, The Mediated Critique and Construction of Empirical Narratives, Spencer Foundation, $40,000, 2006-2007.
External Evaluator, YES-2-Tech, Saint Louis Science Center, National Science Foundation Information Technology Experiences for Students and Teachers, May 2007-September 2007.
Participating faculty, Missouri Science Teaching and Education Partnership (MO-STEP), National Science Foundation (GK-12 program), $1.5 million, 2004-2007.
PI, Historical Thinking with the *Foundations of Freedom* DVD, U.S. Department of Education, $9,286, 2003-2004.
Co-PI, St. Louis Consortium Preparing Tomorrow's Teachers to Use Technology, U.S. Department of Education, $1.04 million, 1999-2003.
Postdoctoral Fellow, HistoryWeb St. Louis: Developing expressive fluency through the collaborative construction of online museum exhibits, James S. McDonnell Foundation (Cognitive Studies for Educational Practice program), $70,000, 1997-1999

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

Porterfield, M. (2013). The religious formation of graduate ministry students in an online wisdom community.

Farrar, C. (2012). Assessing the impact participation in science journalism activities has on scientific literacy among high school students.

Hope, J. M. G. (2012). Exploring the nature of high school student engagement with science and technology as an outcome of participation in science journalism.

McMahon, A. (2011). Elementary teachers' mental models of engineering design processes: A comparison of two communities of practice.

Gray, Jenny E. (2011). The impact of a Saturday enrichment program with a university partnership in an urban elementary school.

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

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

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

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

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

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

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

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

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

Doctoral Dissertation Committees

University of Missouri-St. Louis: Sarah Coppersmith, Linda Gaither, Karen LaFever, Ying Liu, Glenda McCarty, Angela Kohnen, Amy Peach, Tina Fanetti, Denise Ford, Olena Zhadko, Daniel Blash, Julieta Ocuaman, Melissa Gustafson-Hinds, Ray Martinez, Amy Ruffus Doerr, Linda Kralina, Lisa Paredes, José Pareja, Carole Huang, Andrew Shaw, Kathleen Kurz, Cindy Poston, Deb Baldini, Nancy Singer, Monya Ruffin

Simon Fraser University: Mark Weiler

Washington University in St. Louis: Diane Hui, Shawn Rowe

Courses Developed and Taught
(Except where noted, courses are in Educational Technology, at the Graduate level)

- 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 M.Ed. core course)
- Teaching and Learning with Technology: Graphical Representation Tools
- Informal Learning Environments (Education, Undergraduate)

University Service and Committees

Member, Dean's Administrative Team, School of Education, University of Colorado Boulder (CU), September 2012-present.
Member, Dean's Advisory Committee, School of Education, CU, September 2012-present.
Member, Academic Affairs Budget Advisory Committee, CU, September 2012-present.
Member, Search Committee, School of Education, CU, Elementary Science Education, 2012-13.
Chair, Faculty Mentoring Program, CU, September 2012-present.

Chair, Ad Hoc Online Learning Committee, School of Education, CU, 2012-13.
Chair, Division of Teaching and Learning, University of Missouri-St. Louis (UMSL) College of Education (COE), 2007-2012.
Associate Director, E. Desmond Lee Technology and Learning Center, UMSL COE, 2000-2012.
Member, Access to Success (A2S) Guiding Coalition, UMSL, 2010-2011.
Member, Program Audit Committee, UMSL, 2007-2010.
Member, Search Committee, University of Missouri-St. Louis, College of Education:
Dean, 2010-2011
Interim Dean, 2010
Assistant Professor of Educational Psychology, 2007-08
Lecturer in Physical Education, 2006
Director, Search Committee (as Division of Teaching and Learning Chair or Coordinator for Faculty), University of Missouri-St. Louis, College of Education:
Assistant Professor of Language Diversity and Learning, 2012
Assistant Professor of Elementary Literacy, 2012
Assistant Teaching Professor of Elementary Literacy, 2011
Assistant Professor of Special Education, 2010
Lecturer in Elementary Education (Outreach), 2009
Associate Professor of Early Childhood Education, 2008
Assistant/Associate Professor in Literacy, 2006
Assistant Professor in Mathematics Education, 2006
Member, Faculty Advisory Committee, St. Louis GEAR-UP Grant, 2009-2011.
Member, University of Missouri Research Board, 2003, 2007, 2008.
Member, COE Institutional Review Board (IRB) Committee, UMSL COE, 2008-2009.
Chair, Dean's Ad Hoc Model Classroom Committee, UMSL COE, 2007-08.
Coordinator for Faculty, Division of Teaching and Learning, UMSL COE, 2005-2006.
Representative, Faculty Senate, UMSL (representing the Division of Teaching and Learning, College of Education), 2004-2006.
Member, Faculty Senate Nominating Committee, UMSL, 2005- 2006.
Chair, Faculty Senate Nominating Committee, UMSL, 2006).
Member, Graduate Education Council, UMSL COE, 2001-2003.
Chair, Graduate Education Council, UMSL COE, 2004-2006.
Doctoral Admissions Committee, Division of Teaching and Learning, UMSL COE, 2002-2006.
University of Missouri System Comprehensive Program Assessment, 2004-05 & 2005-06.
Member, Ad Hoc Division Chair Nominating Committee, Division of Teaching and Learning, UMSL COE, 2005.
Member, Graduate Faculty Nominating Committee, UMSL, 2004.
Member, University-wide Committee for Scheduling of Advanced Technology & ITV Classrooms, UMSL, 2001-2002.
Member, University-wide Teaching Subcommittee of the University IT Strategic Planning Committee, UMSL, 2001-2002.
Member, University Senate Video and Instructional Technology Committee, UMSL, 1999-2001.
Member, Curriculum and Policy Council, UMSL COE, 2000-2001.

Community Boards

Advisory Committee, Challenger Learning Center-St. Louis, 2011-2012.
Emerging Technologies Advisory Board, Saint Louis Science Center, 2002-2008.

Board of Directors, St. Louis B-Works (BicycleWorks and ByteWorks), 2001-2005.
Advisory Committee Member, Sumner MEGA Magnet High School, St. Louis Public Schools, 2000-2001.
Board of Directors & Education Committee, City Academy at Mathews-Dickey, 1997-2002 (committee chair 1997-2001).

Service in Professional Organizations

Program Co-Chair, 2014 International Conference of the Learning Sciences (ICLS) to be hosted at University of Colorado Boulder in June 2014.
Board of Directors, International Society of the Learning Sciences, 2013-present.
Executive Editor, *Cognition and Instruction*, 2012-present.
Editorial Board, *The Journal of the Learning Sciences*, 2003-present.
Editorial Board, *Journal of Research in Science Teaching*, 2011-present.
Section Co-Chair, Section 3a Learning Environments of Division C (Learning and Instruction), for the American Educational Research Association (AERA) 2013 Annual Meeting, Summer 2012-Fall 2012. (Coordinated review and selection of paper sessions and symposia for the section's program at the meeting).
Mentor, AERA Division C (Learning and Instruction) Graduate Student Seminar, 2012.
National Science Foundation Review Panels,
Advancing Informal STEM Learning (AISL), 2013
Advanced Learning Technologies, 2006 and 2008
Informal Science Education, 2010, 2012
Cyberlearning, 2011, 2012, 2013.
Finances Committee, International Society of the Learning Sciences, 2011-13.
Israel Science Foundation Reviewer, 2008
Editorial Review Board, The Robert Bowne Foundation, 2005-2009.
AERA SIG Advanced Technologies for Learning/Learning Sciences Best Student Paper Award Review Committee, 2005-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, ICLS, and QuaRC.
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, 2002-2011.
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 (QuaRC), UM-St. Louis, 2001, 2002, 2003, 2004, 2005, 2008, 2009, 2011.
Planning Committee, Focus on Teaching and Technology Conference, UMSL, 2004, 2005.
Program Chair, AERA Special Interest Group on Education in Science and Technology (EST), 2001-2002.
Webmaster, AERA SIG on Informal Learning Environments Research, 1999-2001.

Membership in Professional Organizations

International Society of the Learning Sciences (ISLS), 2004-present.
International Society for Cultural and Activity Research (ISCAR), 2003-present.
American Educational Research Association (AERA), 1993-present.
- AERA Special Interest Group-Learning Sciences, 2008-present. AERA SIG-Education in Science and Technology (EST), 1993-2008 (SIG was renamed in 2008).
- AERA Special Interest Group on Informal Learning Environments Research, 1997-present.
- AERA Special Interest Group on Cultural Historical Research, 2001-present.
- AERA Special Interest Group on Out-of-School Time, 2008-present.

National Association for Research on Science Teaching (NARST), 1998, 2010-present.
National Science Teachers Association (NSTA), 2008-present.
Visitor Studies Association, 2009-2010.
Association for the Advancement of Computers in Education (AACE), 2000-2003.
Association for Computing Machinery (ACM), 1993-2001.