

MJ Bishop

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Department of Education and Human Services, College of Education, Lehigh University
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Education

Doctor of Education, Educational Technology, Lehigh University, Bethlehem, PA (June 2000).

Dissertation: *The Systematic Use of Sound in Multimedia Instruction to Enhance Learning*. This theoretical study used a systems approach to inquiry to meld information-processing and communication theories in order to derive a model of the “instructional communication system.” This model suggested a framework of potential strategies for the optimal use of sound in multimedia instruction to enhance learning.

Master of Arts, English, Millersville University of Pennsylvania, Millersville, PA (December 1987).

Juris Doctor Program, completed three of six semesters, University of Maryland School of Law, Baltimore, MD (September 1984 – January 1986).

Bachelor of Arts, Political Science and English, Lebanon Valley College, Annville, PA (graduated with honors, May 1984).

Employment History

Associate Professor, Teaching, Learning, and Technology Program, Lehigh University, Bethlehem, PA. (May 2007 – present, assistant August 2001 – May 2007, visiting August 2000 – August 2001). As detailed further below, responsible for research and scholarship, teaching, and service to the college, university, community, and profession. Write grant proposals, conduct research, and publish manuscripts. Develop curricula and courses for master’s and doctoral programs in instructional technology, learning sciences, and teacher education. Mentor doctoral students as they pursue their qualifying projects, comprehensive exams, and dissertations. Play leadership role in college/university initiatives and professional organizations.

Vice President for Operations, Intelligent Applications Development, Center Valley, PA (February 2000 – February 2002). Involved in the writing and submission of technology-related proposals, the formulation of business and marketing plans, and the daily management of the indirect budget for the Multimedia Thinking Skills (MMTS) project (see below) as it evolved from funded project to commercially-viable product. Was also responsible for copyright law compliance, addressing intellectual property issues, and preparing materials for copyright and patent applications.

Project Manager, Intelligent Applications Development, Center Valley, PA (August 1995 – February 2002). Assigned to manage the Multimedia Thinking Skills (MMTS) project (funded by CAETI and National Science Foundation subcontracts from George Mason University). Had primary responsibility for the daily management of the MMTS project including supervising the multimedia/Web developers, bringing the instructional designer’s ideas from inception through storyboarding to actual code, and supporting the programmers’ efforts by supplying most of the visual and auditory resources, coding some modules, and debugging and modifying programs.

Sales Representative, ComputerLand, Trexlertown, PA (January 1990 – August 1993).

Alumni Director, Lebanon Valley College, Annville, PA (August 1986 – December 1989).

Publications and Creative Activities

Publications: Articles in Refereed Journals

- Weidman, R., & Bishop, M.J. (in press). Using the jigsaw model to facilitate cooperative learning in an online course. *Quarterly Review of Distance Education*, 10(1).
- Bishop, M.J., Amankwatia, T.B., & Cates, W.M. (2008). Sound's use in instructional software: A theory to practice content analysis. *Educational Technology Research & Development*, 56, 467-486.
- Bishop, M.J., & White, S.A. (2007). The Clipper Project: Exploring whether early engagement through web-based instruction can help ease high school students' college transition. *Journal of College Student Retention: Research, Theory, and Practice*, 9(3), 357-376.
- Bishop, M.J., & White, S.A. (2007). The Clipper Project: Discovering what online courses offer residential universities. *EDUCAUSE Quarterly*, 30(1), 14-20.
- Bishop, M.J., Hyclak, T., & Yerk-Zwickl, S. (2007). The Clipper Project: Lessons learned teaching an online economics course. *Journal of Computing in Higher Education*, 18(2), 99-120.
- Slagter van Tryon, P.J., & Bishop, M.J. (2006). Identifying "e-mmediacy" strategies for web-based instruction: A Delphi study. *Quarterly Review of Distance Education*, 7(1), 49-62.
- Brill, J.M., Bishop, M.J., & Walker, A.E. (2006). The competencies and characteristics required of an effective project manager: A Web-based Delphi study. *Educational Technology Research & Development*, 54(2), 115-140.
- Bishop, M.J., & Edwards Santoro, L.L. (2006). Evaluating beginning reading software for at-risk learners. *Psychology in the Schools*, 43(1), 57-70.
- Cates, W.M., Bishop, M.J., & Hung, W. (2005). Characterization versus narration: A study on drama's role in multimedia instructional software. *Journal of Educational Technology Systems*, 33, 437-460.
- Cates, W.M., & Bishop, M.J. (2003). Learner as bobsled operator: The physics of learner engagement. *Journal of Educational Technology Systems*, 31, 291-305.
- Bishop, M.J., & Cates, W.M. (2001). Theoretical foundations for sound's use in multimedia instruction to enhance learning. *Educational Technology Research and Development*, 49(3), 5-22.

Publications: Articles in Review in Refereed Journals

- Edwards Santoro, L.L., & Bishop, M.J. (in review). Selecting software with caution: An empirical evaluation of popular beginning reading software for children with early literacy difficulties. [Manuscript submitted to *Computers in the Schools* for publication.]
- Slagter van Tryon, P., & Bishop, M.J. (in review). Theoretical foundations for enhancing social connectedness in online learning environments. *Distance Education*.

Publications: Articles in Process for Refereed Journals

Bishop, M.J., & Edwards Santoro, L.L. (in review). Special educator's use of computer-based technologies for reading instruction: It's déjà vu all over again. [Manuscript submitted for to *Journal of Special Education Technology* for publication.]

Publications: Articles in Renowned Non-refereed Journals that have Significant Impact on the Field

Bishop, M.J., Bross, T., & Nelson, J.H. (2001). Generating physics content for the designers. *Educational Technology*, 41(1), 7-13.

Cates, W.M., & Bishop, M.J. (2001). Author's discussion of special issue. *Educational Technology*, 41(1), 60-61.

Publications: Articles in Conference Proceedings (all refereed)

Bishop, M.J., & White, S.A. (2004). The Clipper Project: A web-based curriculum research and development initiative. In Kommers, P., & Richards, G. (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2004* (pp. 4671-4676). Chesapeake, VA: AACE.

Bishop, M.J., & Cates, W.M. (2001). A framework for researching sound's use in multimedia instruction to enhance learning. *Proceedings of selected research and development presentations at the 2001 international convention of the Association for Educational Communications and Technology*. (ERIC Document No. ED453243)

Cates, W.M., Bishop, M.J., & Hung, W. (2000). Characterization versus narration: Empirical investigations of drama's role in multimedia instructional software. *Proceedings of selected research and development presentations at the February 2000 international convention of the Association for Educational Communications and Technology*, 22, 43-58.

Bishop, M.J., & Cates, W.M. (2000). A model for the efficacious use of sound in multimedia instruction. *Proceedings of selected research and development presentations at the October 2000 international convention of the Association for Educational Communications and Technology*, 22, 104-159. (ERIC Document No. ED455758)

Bishop, M.J., & Cates, W.M. (1996). A door is a big wooden thing with a knob: Getting a handle on metaphorical interface design. *Proceedings of selected research and development presentations at the 1996 international convention of the Association for Educational Communications and Technology*, 18, 80-88. (ERIC Document No. ED397779)

Publications: Edited Publications and Other Articles

Bishop, M.J., & Carr-Chellman, A.A. (2006). The Design and Development Division and systemic change. *TechTrends Linking Research and Practice to Improve Learning*, 50(2), 15-16. [Invited commentary.]

Bishop, M.J., Schuch, D., Spector, J.M., & Tracey, M.W. (2005). Providing novice instructional designers real-world experiences: The PacifiCorp Design and Development Competition. *TechTrends Linking Research and Practice to Improve Learning*, 49(2), 20-21. [Non-refereed.]

Creative Activities: Instructional Computer Programs

(1995-2001). **The Thoughtful Reporter**: A patented, large-scale instructional shell that uses a metaphorical interface to deliver instruction. It supports formal and indirect instruction

in thinking skills while teaching learners to create presentations using primary source materials. Dynamically linked to the World Wide Web. Presently offers instruction in American History (slavery and government) and Science (ecology and research design). Written in Macromedia Director and mTropolis for both Windows and Macintosh computers. The shell's major components include a Log-in, a Virtual Office, Direct-instructional courses on thinking skills, and a Source Investigator.

- (2001). **Rallytowne: A Thoughtful Reporter Science Product** (see above): A patented, Web-based resource-rich product designed to introduce middle-school students to some basic physics concepts. Written in HTML, JavaScript, and CDML (FileMaker Pro's proprietary mark-up language) for both Windows and Macintosh, Netscape and Internet Explorer. Entirely recoded the existing "stand-alone" product for the Web. Working in conjunction with representatives of the National Museum of American History at the Smithsonian Institution, helped generate/derive the content, produced many of the learning objects, integrated the content, tweaked resources, and helped bring the product to completion.
- (2000). **The Science Investigator: A Thoughtful Reporter Science Product** (see above): A patented, CD-ROM-based product designed to help middle-school students understand the inspiration and "perspiration" involved in coming up with a science fair project (where students conduct, write-up, and present original research to their peers). Written in Macromedia Director for both Windows and Macintosh. Helped generate/derive the content, produced many of the learning objects, integrated the content, tweaked resources, and helped bring the product to completion.
- (2000). **Community-oriented Primary Care: A Thoughtful Reporter Medical Training Product** (see above): A patented, CD-ROM-based product for medical residents on community-oriented primary care. Written in Macromedia Director for both Windows and Macintosh. Integrated the content, tweaked resources, and helped bring the product to completion.
- (1999). **Sexist PorQué:** A 15-minute program on sexist stereotypes. Designed for use with Multicultural Issues-type courses. Written in Oracle Media Objects for both Windows and Macintosh. Recoded several behaviors, worked on graphics and sound effects, and made compatible with Windows-based computers.
- (1998). **The IPP Package-shipping Center:** A 15-minute computer-based lesson on the information-processing model. Written in mTropolis for both Windows and Macintosh. Revised the original instructional design to make more effective use of sound, worked on graphics, and recoded the entire lesson from Oracle Media Objects to mTropolis.
- (1998). **The 1850's —An Increasingly Divided Nation: A Thoughtful Reporter History Product** (see above): A patented, CD-ROM-based product on the period leading up to the Compromise of 1850. Field tested in three countries in Europe in spring 1998 and fall 1999. Funded through the President's Technology Initiative (PTI) for use in DoDDS (Department of Defense) schools worldwide. Written in mTropolis and Director for both Windows and Macintosh. Managed the daily operations of the project and directed its coding, acting as liaison for the lead instructional designer, subject matter experts, and the programmers.
- (1998). **Accuracy —A Thoughtful Reporter thinking skills development course** (see above): Written in mTropolis for both Windows and Macintosh. Was secondarily responsible

for the instructional design and content of the course. Generated all course resources and coded it in mTropolis.

- (1998). **Synthesis: A *Thoughtful Reporter* thinking skills development course** (see above): Written in mTropolis for both Windows and Macintosh. Collaborated with the lead instructional designer on the content. Was principally responsible for the final design, for generating all resources, and for bringing the course content to code.
- (1996-1997). **Building Coping Skills on a Firm Foundation.** A stress management instructional program for college freshman. Written in mTropolis and Macromedia Director for Windows and Macintosh. Managed the project, serving as liaison between the instructional designers and the programmers.
- (1997). **Credibility: A *Thoughtful Reporter* thinking skills development course** (see above): Written in mTropolis for both Windows and Macintosh. Assisted on the instructional design and content of the course and Managed its coding in mTropolis. For both Windows and Macintosh.
- (1997). **Interpreting Graphs: A *Thoughtful Reporter* thinking skills development course** (see above): This was developed under NSF funding. Written in mTropolis for both Windows and Macintosh. Served as design assistant, generated all of its resources, and managed the coding.
- (1997). **Our Waters, Our World: A *Thoughtful Reporter* Science Product** (see above): A patented, CD-ROM-based product on the ecology of watersheds. Funded through NSF. Written in Director and mTropolis for both Mac and Windows. Integrated the content, tweaked resources, and helped bring the product to completion.
- (1997). **Thomas Jefferson —The Founding of a Nation: A *Thoughtful Reporter* History Product** (see above): A patented, CD-ROM-based product on the life and presidency of Thomas Jefferson. Funded through the Department of Defense and president's Technology Initiative. Presently in use in DoDDS schools in Europe. Written in Director and mTropolis for both Mac and Windows. Integrated the content, tweaked resources, and helped bring the product to completion.
- (1997). **Computer Hardware.** A CD-ROM-based interactive multimedia program that teaches about computer equipment. Coded in Oracle Media Objects for both Windows and Macintosh. Revised the original Macintosh-only product to make it compatible with Windows and worked on graphics.
- (1996). **Slavery in the United States: A *Thoughtful Reporter* History Product** (see above): A patented, CD-ROM-based product on slavery. Field tested in three countries in Europe in spring 1997 in its Oracle Media Objects version and then recoded in summer 1997 in mTropolis. Funded through the Department of Defense. For both Windows and Macintosh computers. The new version is being used in DoDDS schools worldwide. Assisted in the instructional design and managed the project. Coordinated the efforts of the subject-matter experts, lead instructional designer, and programmers.
- (1996). **Assignments: A *Thoughtful Reporter* thinking skills development course** (see above): Assisted in the instructional design, generated the resources, and managed its coding —first in Oracle Media Objects then later in mTropolis. For both Windows and Macintosh computers.
- (1996). **Relevance: A *Thoughtful Reporter* thinking skills development course** (see above):

Assisted in the instructional design, generated the resources, and managed its coding—first in Oracle Media Objects then later in mTropolis. For Windows and Macintosh.

- (1996). **ModMath**. An instructional multimedia program for teaching college undergraduates about modular math. Written in Oracle Media Objects for both Macintosh and Windows computers. Assisted in the instructional design, designed the interface, and coded the program.

Honors and Awards

Awards for Scholarship

Received the 2001 Educational Technology Research and Development (ETR&D) **Young Scholar Award** by the ECT Foundation of the Association for Educational Communications and Technology (AECT) for *Theoretical Foundations for Sound's Use in Multimedia Instruction to Enhance Learning*, which discussed a theoretical construct that could guide research and development for sound's more effective use in educational technology.

Named by Lehigh University to a **Class of 1961 Professorship** for two years (2008-2009 and 2009-2010) for associate professors who have shown distinction in research, teaching, and service.

Awards for Teaching

Named by Lehigh University to a **Frank Hook Assistant Professorship** for two years (2004-2005 and 2005-2006) for exemplifying the scholar-teacher model and contributing significantly to the mentoring of students.

Recipient of the **Lehigh Junior Award for Distinguished Teaching** (2006) for distinguished teaching and mentoring during the 2005-06 academic year.

Awards for Service

Received the **Outstanding Service to the Division Award** from the Design and Development Division of Association for Educational Communications and Technology (AECT) at their annual national meeting in Chicago (October 2004).

Received the **Outstanding Reviewer Award** for the development side of *Educational Technology Research and Development* (October 2005).

Co-recipient of the **Branch Out Award** (with Dr. Arpana Inman) from the Lehigh University Community Service Office for our work co-chairing the College of Education Diversity Committee (April 2008).

Research Funding and Training Grants

Competitively Awarded Research Grants

- (2002-2005). **The Clipper Project.** Project director (PD) and co-principle investigator (Co-PI) on this second phase of the 5-year project with Dr. Sally A. White (Co-PI), College of Education Dean and Professor, that explored the future of teaching and learning technologies by evaluating the short- and long-term costs and benefits associated with offering Web-based courses to high-school seniors who had been “pre-admitted” to a medium-sized private university. Had primary responsibility for the daily management of the project, which ended December 2005. Funded by the Andrew Mellon Foundation (\$370,000).

Institutional Grants Awarded

- (2002). **Technology Applications for Beginning Reading (TABR) Project: A Survey of the Learning Environment.** Evaluating teachers’ use of pre-reading software with at-risk readers in order to derive a detailed description of the learning environment including current practices, existing materials, and educational needs. Faculty research grant with Dr. Lana Edwards, Assistant Professor in Special Education (\$2,500).
- (2001). **Technology Applications for Children with Early Literacy Difficulties: An Evaluation of Beginning Reading Computer Software.** Evaluating the instructional design and development of beginning reading software in order to document the efficacy of popular programs for at-risk learners. Faculty research grant with Dr. Lana Edwards, Assistant Professor in Special Education (\$2,500).

Research Grants Submitted (in review)

- (2008). **Technology Applications for Beginning Reading: Enhancing Reading Comprehension and Vocabulary Acquisition of First Grade Children (RESUBMISSION).** A 3-year research and development project aimed at expanding upon a well-established and efficacious reading curriculum (The Read Aloud Project, Pacific Institutes for Research) by combining it with a technology integration tool (The Instructional Architect, Utah State University) to enable teachers to localize read aloud protocols for their own needs and to disseminate those resources to colleagues and caregivers. Submitted to the Institute of Education Sciences’ Educational Technology Grant Competition on September 30, 2008 (\$1,421,306).
- (2008). **Technology Applications for Beginning Reading: Enhancing Reading Comprehension and Vocabulary Acquisition of At-risk First Grade Children.** A 2-year research and development project for the creation and feasibility testing of a technology-based tool aimed at complementing the reading comprehension and vocabulary acquisition strategies used in the Read Aloud Project curriculum. Submitted to the Stepping Stones of Technology Innovation for Children with Disabilities, Technology and Media Services for Individuals with Disabilities program on September 1, 2008 (\$399,396).

Research Grants Submitted (not funded)

- (2007). **Technology Applications for Beginning Reading: Enhancing Reading Comprehension and Vocabulary Acquisition of First Grade Children.** A 3-year research and development project aimed at expanding upon a well-established and

- efficacious reading curriculum (The Read Aloud Project, Pacific Institutes for Research) by combining it with a technology integration tool (The Instructional Architect, Utah State University) to enable teachers to localize read aloud protocols for their own needs and to disseminate those resources to colleagues and caregivers. Submitted to the Institute of Education Sciences' Educational Technology Grant Competition on July 24, 2007 (\$1,116,793).
- (2006). **The Story Read Aloud Technology Applications Project: Enhancing the Reading Comprehension and Vocabulary of First Grade Children.** A 4-year research and development project to create of a technology-based tool aimed at complementing the reading comprehension and vocabulary acquisition strategies used in the Story Read Aloud Project curriculum. Will serve as PD/PI with Dr. Lana Edwards Santoro (Co-PD/PI), Pacific Institutes for Research. Submitted to the Institute of Education Sciences' Reading, Writing, and Language Development Research Grant Competition on July 27, 2006 (\$1.3M).
- (2006). **Integrating "Real-world Problems" into Engineering Education.** A 2-year instructional technology project aimed at developing a database of real-world problems derived from current media sources for engineering and technology educators to use as a resource for finding examples and homework problems. Co-PI/PD for the evaluation of the technology tool with Drs. Joseph C. Hartman (PI/PD) and M. Jean Russo (Co-PI/PD). Submitted to the National Science Foundation's Course, Curriculum, and Laboratory Improvement (CCLI) Competition on May 10, 2006 (\$150,000).
- (2005). **An Adaptive Multimedia Learning Environment for a Design-first Programming Course.** A 3-year instructional technology research and development project aimed at creating a learning environment designed to help students learn computer programming by first showing them the "big picture" of software development through object-oriented analysis and design techniques, rather than jump right into coding techniques and syntaxes. Co-PI/PD for the supervision of LST doctoral students on the project and the formative/summative evaluation of the tool with Drs. Glenn D. Blank (PI/PD) and William M. Pottenger (Co-PI/PD). Submitted to the National Science Foundation's IIS-Advanced Learning Technologies Competition on May 26, 2005 (\$543,427).
- (2004). **The Story Read Aloud Technology Applications Project: Enhancing the Reading Comprehension and Vocabulary of First Grade Children.** A 3-year research and development project submitted to the Institute of Education Sciences' Reading Comprehension and Reading Scale-up Research Grant Competition with Dr. Lana Edwards, Pacific Institutes for Research (\$1,266,208). Being resubmitted for 2006 competition, see above.

Editorial Review Board Membership for Scholarly Publications

Consulting Editorships

Educational Technology Research and Development (ETR&D) – Research side of journal.

Educational Technology Research and Development (ETR&D) – Development side of journal.

Scholarly Presentations

Invited Presentations/Lectures/Workshops

Bishop, M.J. *, Brill, J.M., Walker, A.E., & Slager van Tryon, P.J. (2004, May). Online Teaching and Learning at Lehigh. Invited presentation given to the technology staff of *Lebanon-Lancaster Intermediate Unit #13* during their annual, end-of-year retreat.

Bishop, M.J. *, Cates, W.M., & Slagter van Tryon, P.J. (2002, June). HorizonLive: A Real-time Online Educational Tool. An invited talk given as part of Lehigh University's 2-day *Cybertools Professional Development Workshops*.

Refereed Presentations at International Conferences

Bishop, M.J., & Slagter van Tryon, P. (2008). Thinking more systematically about the selection and design of online tools to support socially connected learning experiences. A paper presented at the annual convention of the Association for Educational Communications & Technology, Orlando, FL, November.

Slagter van Tryon, P., & Bishop, M.J. (2008). Thinking more systematically about the design of social connectedness in online learning environments. A paper presented at the annual convention of the Association for Educational Communications & Technology, Orlando, FL, November.

Amankwatia, T., & Bishop, M.J. (2008). Teaching with technology for 21st century learning: A multiple-case study of a school district's high school laptop initiative. A paper presented at the annual convention of the Association for Educational Communications & Technology, Orlando, FL, November.

Bishop, M.J. (2007). Necessary bells and whistles: Designing with sound to enhance learning. A paper presented at the annual convention of the Association for Educational Communications & Technology, Anaheim, CA, October.

Bishop *, M.J., & White, S.A. (2007). How academic competencies relate to success in an online course. A paper accepted for presentation at the American Educational Research Association, Chicago, IL, April.

Bishop *, M.J., & White, S.A. (2006). The Clipper Project: Can web-based instruction help ease students' college transition? A paper presented at the annual convention of the Association for Educational Communications & Technology, Dallas, TX, October.

Bishop *, M.J., & White, S.A. (2006). Successfully making the transition from high school to college: The roles that achievement motivation and academic enablers play in students' first-semester adjustment to college. A paper presented at the annual convention of the American Educational Research Association, San Francisco, CA, April.

Amankwatia *, T., & Bishop, M.J. (2005). Auditory design strategies and cognitive support: A theory to practice investigation of computerized instruction. A paper presented at the annual convention of the Association for Educational Communications & Technology, Orlando, FL, October.

Koszalka *, T., Mukerji, K., Bishop, M.J., Choi, I., Grabowski, B., Persichitte, K., Reigeluth, C., Richey, R., & Wilson, B. (2005). Exploring the vision of technology integration research:

* Key presenter.

Scholars' thoughts on definitions, theories, and methodologies. A panel discussion at the annual convention of the Association for Educational Communications & Technology, Orlando, FL, October.

Bishop*, M.J., Hyclak, T., & Yerk-Zwickl, S. (2005). Blazing trails on the economics curriculum cyber-frontier: Lessons learned from the Clipper Project. A paper presented at the Allied Social Science Association's 2005 annual meeting, Philadelphia, PA, January.

Bishop*, M.J., & White, S.A. (2004). The Clipper Project: A Web-based curriculum research and development initiative. A paper presented at the Ed-Media World Conference on Educational Multimedia, Hypermedia, & Telecommunications, Lugano, Switzerland, June. [Cross-referenced above in "Articles in Conference Proceedings" section.]

Walker*, A.E., Brill, J.M., & Bishop, M.J. (2004). Delphi surveys: An alternative approach to needs assessment. A paper presented at the International Society for Performance Improvement's 2004 Annual Conference, Tampa, FL, April.

Bishop*, M.J., & Edwards, L.L. (2003). Special educator's use of computer-assisted instruction for teaching beginning reading. A paper presented at the annual convention of the Association for Educational Communications & Technology, Anaheim, CA, October.

Bishop*, M.J., & White, S.A. (2003). The Clipper Project: Can web-based instruction improve learning productivity? A paper presented at the annual convention of the Association for Educational Technology & Communications, Anaheim, CA, October.

Brill*, J.M., Bishop, M.J., & Walker, A.E. (2003). An Investigation into the competencies required of an effective project manager. A paper presented at the annual convention of the Association for Educational Communications & Technology, Anaheim, CA, October.

Edwards*, L.L., & Bishop, M.J. (2003). Technology applications for children with early literacy difficulties: A framework for review and evaluation of popular beginning reading computer software. A paper presented at the annual convention of the American Educational Research Association, Chicago, IL, April.

Edwards*, L.L., & Bishop, M.J. (2003). Phony or phabulous? An empirical evaluation of beginning reading software. A paper presented at the annual convention of the Council for Exceptional Children, Seattle, WA, April.

Cates, W. M., Bishop, M. J., & Slagter van Tryon, P. J. (2003) Web-based audio online teaching: Findings and concerns. A poster presentation at the Computers and Learning International Convention, Belfast, Ireland. April.

Bishop*, M.J., & Edwards, L.L. (2002). Technology applications for children with early literacy difficulties: An empirically based framework for evaluating beginning reading computer software. A paper presented at the annual convention of the Association for Educational Communications & Technology, Dallas, TX, November.

Slagter van Tryon*, P.J., & Bishop, M.J. (2002). Identifying "e-mmediacy" strategies for web-based instruction: A Delphi survey. A paper presented at the annual convention of the Association for Educational Communications & Technology, Dallas, TX, November.

Edwards*, L.L., & Bishop, M.J. (2002). Evaluating technology applications for children with early literacy difficulties. A paper presented at the annual international convention of the Council for Learning Disabilities, Denver, CO, October.

* Key presenter.

Bishop*, M.J. (2001). What designers should know about using sound in learning products. A paper presented at the annual convention of the Association for Educational Communications & Technology, Atlanta, GA, November.

Bishop*, M.J., & Cates, W.M. (2001). Sound decisions in web-based learning: Moving from text-based to two-way audio. A paper presented at the annual convention of the Association for Educational Communications & Technology, Atlanta, GA, November.

Slagter van Tryon*, P.J., & Bishop, M.J. (2001). Strategies Affecting Instructional Immediacy in Web-based Instruction. A paper presented at the annual convention of the Association for Educational Communications & Technology, Atlanta, GA, November.

Bishop*, M.J. (2001). A framework for researching how sound might be used in multimedia instruction to enhance learning. Roundtable session at the 2001 annual meeting of the American Educational Research Association, Seattle, WA, April. [Cross-referenced above in "Articles in Conference Proceedings" section.]

Bishop*, M.J., & Cates, W.M. (2000). A model for the efficacious use of sound in multimedia instruction. A paper presented at the annual convention of the Association for Educational Communications & Technology, Long Beach, CA, February. [Cross-referenced above in "Articles in Conference Proceedings" section.]

Cates*, W.M., Bishop, M.J., & Hung, W. (2000). Characterization versus narration: Empirical investigations of drama's role in multimedia instructional software. A paper presented at the annual convention of the Association for Educational Communications & Technology, Long Beach, CA, February. [Cross-referenced above in "Articles in Conference Proceedings" section.]

Cates*, W.M., Rieber, L., Merrill, M.D., Hannum, W., Matzko, M., & Bishop, M.J. (2000). Different designers: Different designs. A paper presented at the annual convention of the Association for Educational Communications & Technology, Long Beach, CA, February.

Bishop*, M.J., & Cates, W.M. (1999). Necessary bells and whistles: Some guidelines for the systematic use of sound in computerized instruction. A paper presented at the annual convention of the Association for Educational Communications & Technology, Houston, TX, February.

Cates*, W.M., Bishop, M.J., Fontana, L., & vanNest, C. (1998). The Thoughtful Reporter, one year later: An update on the multimedia thinking skills project. A paper presented at the annual convention of the Association for Educational Communications & Technology, St. Louis, MO, February.

Bishop*, M.J., & Cates, W.M. (1997). The physics of immersion: Investing one's energy in designs that motivate learners to get involved. Paper presented at the annual convention of the Association for Educational Communications and Technology, Albuquerque, NM, February.

Cates*, W.M., Bishop, M.J., & vanNest, C. (1997). The Thoughtful Reporter: Teaching thinking skills using the Internet. Paper presented at the annual convention of the Association for Educational Communications and Technology, Albuquerque, NM, February.

Bishop*, M.J., & Cates, W.M. (1996). A door is a big wooden thing with a knob: Getting a handle on metaphorical interface design. Paper presented at the annual convention of the Association for Educational Communications and Technology, February. [Cross-referenced above in "Articles in Conference Proceedings" section.]

* Key presenter.

Teaching and Research Advising

Courses taught at Lehigh (all graduate)

- Fall '06 • TBTE 406: Tools for K-12 Teaching and Learning (taught hybrid online/F2F, 37 enrolled)
- LST 401: Overview of Learning Sciences and Technology (new prep, 24 enrolled)
- Summer '06 • TBTE 406: Tools for K-12 Teaching and Learning (new prep, redesigned course with focus on asynchronous online components, 22 enrolled)
- Spring '06 • EdT 432: Development I: Website and Resource Development for Learning (taught hybrid online/F2F, 12 enrolled)
- LST 403: Learning Environments (new course, 21 enrolled)
- Fall '05 • EdT425: Design II: Applied Instructional and Interface Design Principles (7 enrolled)
- EdT438: Development III: Using E-Learning Tools and Technologies to Create Online Learning Environments (8 enrolled)
- Summer '05 • On pretenure academic leave.
- Spring '05 • On pretenure academic leave.
- Fall '04 • EdT 432: Development I: Website and Resource Development for Learning (taught hybrid online/F2F, 12 enrolled)
- EdT425: Design II: Applied Instructional and Interface Design Principles (new course taught hybrid online/F2F, 7 enrolled)
- Summer '04 • EdT405: Website and Resource Development (taught hybrid online/F2F, 15 enrolled)
- Spring '04 • EdT422: Design 1: The Systematic Design of Instruction (new course, taught hybrid online/F2F for first time, 11 enrolled)
- EdT443: Principles of Interface Design (taught hybrid online/F2F, 10 enrolled)
- Fall '03 • EdT405: Website and Resource Development (taught hybrid online/F2F, 13 enrolled)
- EdT407: Advanced Website & Resource Development (16 enrolled)
- Summer '03 • EdT405: Website and Resource Development (added asynchronous online components for more advanced learners, 16 enrolled)
- Spring '03 • EdT433: Introduction to Instructional Design (14 enrolled)
- Fall '02 • EdT405: Website and Resource Development (19 enrolled)
- EdT407: Advanced Website & Resource Development (11 enrolled, new course)
- Summer '02 • EdT405: Website and Resource Development (16 enrolled)
- EdT477: Research Topics in Ed Technology: Techniques for Online Teaching (new course, co-taught as 1-week workshop, 16 enrolled)

- Spring '02 • EdT433: Introduction to Instructional Design (taught hybrid online/F2F for first time, 18 enrolled)
- EdT477: Issues in Technology Use (new course, 6 enrolled)
- Fall '01 • EdT405: Website and Resource Development (14 enrolled)
- EdT443: Principles of Interface Design (co-taught entirely online for first time, 14 enrolled)
- Summer '01 • EdT405: Website and Resource Development (21 enrolled)
- Spring '01 • EdT433: Introduction to Instructional Design (co-taught entirely online for first time, 11 enrolled)
- Educ491-13: Technology-based Teaching and Learning 2: Methods and Assessment (co-taught, new cross-disciplinary course, 37 enrolled)
- Fall '00 • EdT458: Integrating Experience in Educational Technology (6 enrolled)
- Educ491-11: Website and Resource Development (new course prep, 19 enrolled)
- Educ491-12: Technology-based Teaching and Learning 1: Foundations and Issues (co-taught, new cross-disciplinary course, 48 enrolled)

New Course Development

- Overview of Learning Sciences and Technology (revised course, Fall 2006). Switched content from Learning Environments course, below, into this course. Revised to make more into more of a “survey course.”
- Tools for K-12 Teaching and Learning (revised course, Summer 2006). Developed approximately 60 Web-based “how to” videos in Camtasia to support teacher-education students’ learning various productivity and multimedia/Web development tools. Plan is to have these supporting materials be made available to students throughout their degree program.
- Learning Environments (new course, Spring 2006). Second in the sequence of “core courses” for the new Learning Sciences and Technology program.
- Development 3: Using E-Learning Tools and Technologies to Create Online Learning Environments (new course, Fall 2005). Project-based, group collaboration to explore the use of new state-of-the-art communications technologies in teaching and learning.
- Design 2: Applied Instructional and Interface Design Principles (new course, Fall 2004). Reconfigured design courses to work in sequence for cohorts of students. Taught as hybrid online/F2F.
- Design 1: The Systematic Design of Instruction (new course, Spring 2004). Reconfigured design courses to work in sequence for cohorts of students. Taught as hybrid online/F2F.
- Advanced Website & Resource Development (new course, Fall 2002). Using a team-based approach to design and development, focuses on more advanced areas of Website and digital resource development in the creation of highly interactive e-learning sites.
- Research Topic in Ed Technology: Techniques for Online Teaching (new course, Summer 2002). Co-taught as 1-week workshop.

- Issues in Technology Use (new course, Spring 2002). Targeted to address remaining Counseling Psychology majors' Educational Technology requirement before it was dropped by the program.
- Technology-based Teaching and Learning 2: Methods and Assessment (co-taught, new course, Spring 2001). Shared core between Ed Tech and Tech-based Teacher Ed; foundations of technology and education, curriculum design, learning theory, and research methods.
- Technology-based Teaching and Learning 1: Foundations and Issues (co-taught, new course, Fall 2000). Shared core between Ed Tech and Tech-based Teacher Ed; applied instructional design, basic curricular concepts. Also fulfilled Counseling Psychology's Educational Technology requirement.
- Website & Resource Development (new course, Fall 2000). Introduction to the use of digital resource capture, creation, and manipulation programs and HTML editing tools used in the creation of e-learning Websites. Added asynchronous online component for more advanced learners (Summer, 2003).

Curriculum Development: Professional Development and Degree Programs

Since 2000, have worked with colleagues in the Educational Technology and Technology-based Teacher Education programs, in the College of Education, and throughout the University to help develop the following new professional development and degree programs:

- Teaching, Learning, and Technology Program: Collaborating with colleagues to merge the Educational Technology and Technology-based Teacher Education programs and to develop a new merged program aimed at meeting new Pennsylvania Department of Education requirements with specializations offered in each of these areas (AY2005-06 and 2006-07).
- Technology Use in Schools Certificate Program: Developed Fall 2004 to enhance enrollments and address the needs of educators in the field.
- Ph.D. in Learning Sciences and Technology: Worked with colleagues across the University from Spring 2003-Fall 2004 to develop this first-ever, cross-disciplinary doctoral program.
- Project Management Certificate Program: Worked with colleagues in the College of Business and Economics during the Spring 2003 and Fall 2003 semesters to develop this 12-credit, comprehensive certificate program in the development of project management skills.
- Master of Science in Instructional Design & Development: In AY 2000-2001, with the inception of the new master's in Educational Technology, we renamed our existing master's degree program as "Instructional Design and Development." In AY 2003-2004, we completely overhauled that program to better sequence courses and to move student through in cohort groups. Dropped in AY 2005-06 as part of EdTech/TBTE merger (see below).
- Master of Science in Instructional Technology: Initially developed AY 2000-2001 in conjunction with the College of Education's Office of International Programs in order to address needs of students overseas. Revised AY2005-06 as part of EdTech/TBTE merger (see below).

Curriculum Development: Online Tutorials Developed to Enhance Learning from Lehigh Courses

- (2006). Productivity Tools How 2s: Word, PowerPoint, Excel. Worked alone and with a graduate student on the development of more than 70 Web-based "how to" videos (made with Camtasia) on how to use Microsoft Office products.

- (2006). Web and Resource Development Tools. Developed approximately 35 Web-based “how to” videos on Photoshop, iMovie, and Dreamweaver using Camtasia.
- (2004). General Topics in Interface Design Unit. A set of 6 introductory lessons that cover general principles, menus, navigation, media selection and use, and thematic unity.
- (2004). Media Design Guidelines Unit. A set of 4 lessons that cover interface design guidelines for text, graphics, sound, and video.
- (2004). TIPCASE Unit. A set of 7 lessons that cover the TIPCASE interface design principles in depth.
- (2004). Writing Embedded Items Unit. A redesign of the earlier unit (8 lessons) in which students learn interface and instructional design principles for writing good embedded items for computerized instruction.
- (2003). Internet Copyright. This lesson explains the current state of Internet copyright law and how it applies in educational situations.
- (2003). Accessibility on the Web. This lesson explains how Web developers can make their sites more accessible to the disabled.
- (2003). Internet Basics. A lesson that introduces students to the Internet, the World Wide Web, networking, and important terms and concepts.
- (2003). Mac Basics. A lesson that introduces students to the Macintosh lab and that explains the differences between Macintosh and Windows-based computers.
- (2003). TIPCASE. This lesson teaches learners the TIPCASE principles of good interface design.
- (2002). Graphics Design and Development. This unit (2 lessons) supplies background on digital imaging technologies and instructional design techniques for using graphics to enhance learning.
- (2002). Audio Design and Development. This unit (3 lessons) supplies background on audio technologies, procedures for developing digital audio, and instructional design techniques for using sound to enhance learning.
- (2002). Video Design and Development. This unit (3 lessons) supplies background on video technologies, procedures for developing digital video, and instructional design techniques for using video to enhance learning.
- (2002). Website Design and Development. This unit (3 lessons) supplies background on Web technologies, procedures for developing Web pages/sites, and design techniques for creating e-learning environments.
- (2002). The Tree of Learning. An online framework for understanding the similarities and differences between behaviorist, cognitivist, and constructivist learning theories with links to external resources.
- (2001). Learning to Write Performance Objectives Overview. This overview helps students begin to learn to write their own performance objectives that conform to the accepted standards for such objectives.

- (2001). Learning to Write Performance Objectives Unit. This set of lessons presents learners with more information on how to write performance objectives and supplies many interactive practice opportunities.
- (2000-2001). Writing Embedded Items Unit. Students learn how to write good embedded items for computerized instruction in this series of lessons.
- (2000). Front-end Analysis. This unit contains lessons that cover needs assessment, task analysis, objectives, and audience analysis.
- (2000). Bloom's Cognitive Hierarchy. This lesson teaches learners the levels of Bloom's Cognitive Hierarchy and how to apply them.
- (2000). Understanding Computer Hardware. A unit of introductory lessons that teaches hardware terms, concepts, compatibilities and incompatibilities to technology "newbies." Lessons include "computers," "monitors," "printers," "removable storage devices," "scanners," and "health and safety."

Advising: Research Direction (all graduate)

Dissertation Chair

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|-----------------------------|---|
| Qian, Yufeng | Making Optimal Use of the Web as a Learning Tool: The Development of an Instructional Design Model for Web-based Instruction (completed Spring 2004). |
| Slagter van Tryon, Patricia | Thinking more systematically about the design of social connectedness in online learning environments (completed Fall 2007). |
| Amankwatia, Tonya | Teaching with technology for 21st century learning: A multiple-case study of a school district's high school laptop initiative (completed Spring 2008). |
| Weidman, Robert | Exploring the use of characterization in online library tools (in progress with expected completion May 2011). |

Dissertation Committee Membership

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| Pate-Carolan, L. | <i>An Examination of Interpersonal Responses During Counseling Sessions In the Context of Session Evaluations and Client Self-Reported Symptomatology</i> (Dr. Nick Ladany, Chair, completed November 2003). |
| Kramer, Barry | Investigating the Underutilization of Internet and Communication Technology Assisted Collaborative Project-Based Learning Among International Educators (Dr. Judith Duffield, Chair, in progress with expected completion May 2009). |
| Kulo, Violet | The Effects of GIS-supported Web-based Inquiry on Middle School Student Science Achievement. (Dr. Ward Cates, Chair, in progress with expected completion December 2009). |
| Goh, Ailsa | (Dr. Linda Bambara, Chair, in progress with expected completion May 2009). |

Qualifying Project Chair

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| Slagter van Tryon, Patricia | <i>Identifying “E-mmediacy” Strategies for Web-based Instruction: A Delphi Study</i> (completed September 2004). |
| Amankwatia, Tonya B. | <i>Is Sound Being Used in Cognitively Supportive Ways? A Theory to Practice Content Analysis of Sound’s Use in Instructional Software</i> (completed May 2005). |
| Wiedman, Robert | <i>Jigsaw Cooperative Learning Activities in an Online Course at Lehigh University</i> (completed May 2007). |
| Weppel, Sheri | <i>Instructional Gaming in Middle School Computer Science</i> (in progress, expected completion May 2009). |
| Zhao, Xiaoli | (in progress, expected completion May 2009). |
| Bettermann, William | (in progress, expected completion May 2010). |
| Metan, Demet | (in progress, expected completion May 2010). |
| Young, Emily | (in progress, expected completion May 2010). |

Advising: Other than Research Direction (all graduate)

Academic Advisees: currently advising 8 doctoral students and approximately 40 masters students per year.

Internships: Serve as main contact for Instructional Technology degree program internships and actively solicit opportunities for our students. Coordinate up to 4 internship placements each semester and serve as instructor of record for final evaluation purposes.

Independent Studies: Have supervised approximately 40 independent studies since Fall 2000.

Recruitment: Currently serve as main contact for prospective students. Market program, field questions, give tours, and support admission process. Worked in the Fall 2004 on an aggressive recruitment campaign that included the development of marketing materials, reworking the program Website, and increasing awareness of our programs.

Service

University Service

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| 2008-present | Member, <i>Council for Equity and Community</i> |
| Spring 2009 | Member, <i>Faculty Awards Committee</i> |
| Spring 2008 | Member, <i>Faculty Awards Committee</i> |
| 2007-2008 | Member, <i>Martin Luther King Day Celebration Committee</i> |
| Spring 2008 | Substitute member (for Dr. Alec Bodzin), <i>Graduate and Research Committee</i> |
| 2006-present | Member, <i>Faculty Compensation Committee</i> |
| 2006-present | Director-at-Large, <i>Lehigh University Alumni Association Board of Directors</i> |
| 2006-2008 | Member, <i>Middle States Accreditation, Committee on the First Year and Beyond</i> |

- 2002-2008 Member, *Library Users Committee*
- 2005-2006 Member, *Library and Technology Services Strategic Planning Committee*
- Spring 2005 Member, *Provost's Task Force on the First-year Experience*
- 2001-2006 Member, *Software Advisory Committee*

Interdisciplinary Service

- 2007-present Member, *TLT/SPED Curriculum Development Committee*
- 2003-2004 Member, *Learning Sciences and Technology Program Development Committee*
(interdisciplinary Ph.D. program)
- 2003 Member, *Project Management Certificate Program Development Committee*
(interdisciplinary certificate program developed with College of Business and Economics)

College/Interdisciplinary/Departmental Service

- 2007-present Co-Chair, *College of Education Diversity Committee*
- 2007-present Member, *College of Education Alumni Council*
- 2007-2008 Chair, *College of Education Mentoring Committee*
- 2007-2008 Member, *College of Education Dean Search Committee*
- 2003-2008 Member, *Student Life Enhancement Committee*
- 2004-2007 Member, *College of Education Mentoring Committee*
- 2006-2007 Chair, *Teaching, Learning, and Technology Professor of Practice Search Committee.*
- 2006-2007 Member, *Teaching, Learning, and Technology Faculty Search Committee*
- 2005-2006 Member, *International Programs ESL Faculty Search Committee*
- Fall 2005 Member, *International Programs Task Force*
- 2003-2004 Member, *Mentoring Planning Committee*
- 2003-2004 Member, *International Program Assistant Director Search Committee*
- 2001-2002 Member, *Educational Technology/TBTE Faculty Search Committee*

Professional Service

- 2008-present Reviewer, *Journal of Computing in Higher Education.*
- 2007-2008 Past President, Design and Development Division of the *Association for Educational Communication and Technology (AECT).*
- 2006 Invited reviewer for the *Association for Educational Communication and Technology (AECT)*'s revisions to *The Definition of Educational Technology: An analysis and explanation of the concept.*

- 2005-2007 President, Design and Development Division of the *Association for Educational Communication and Technology (AECT)*. Responsible for leading the division's efforts toward achieving its short- and long-term goals for the organization.
- 2005-present Conference Presentation Proposal Reviewer, American Educational Research Association (AERA).
- 2004-2005 President-elect, Design and Development Division of the *Association for Educational Communication and Technology (AECT)*. Responsible for divisional program planning for the Fall 2005 international conference.
- 2004-2005 Member, *PacifiCorp Design and Development Award Competition Committee* for promising design and development work by graduate students working with mentors in the Design and Development Division of the Association for Educational Communications and Technology.
- 2004-present Reviewer, *Educational Technology Research and Development* (development side).
- 2003-2004 Chair, *PacifiCorp Design and Development Award Competition Committee* for promising design and development work by graduate students working with mentors in the Design and Development Division of the Association for Educational Communications and Technology.
- 2002-present Reviewer, *Educational Technology Research and Development* (research side).
- 2001-2002 Program Chair and Facilitator for the annual national meeting of the *Professors of Instructional Design and Technology* for the May 2002 meeting in Virginia.
- 2001-present Conference Presentation Proposal Reviewer, Design and Development Division, Association for Educational Communications and Technology (AECT).
- 1999-present Reviewer, *Journal of Educational Computing Research*.

Professional Memberships

Association for Educational Communications and Technology (AECT).

Professors of Instructional Design and Technology (PIDT).

American Educational Research Association (AERA).

Phi Delta Kappa International (PDK).