

## VITA

### **Alec M. Bodzin, Ph.D., Associate Professor Science Education Department of Education and Human Services, Lehigh University**

A113 Iacocca Hall, 111 Research Drive, Bethlehem, PA 18015  
Home: 121 Frank Dr. Northampton, PA 18015  
Office: (610) 758-5095 Email: bodzin@lehigh.edu

#### **RESEARCH INTERESTS**

Design of Web-based inquiry learning environments; learning with spatial thinking tools including GIS, Google Earth and remotely sensed images; design and implementation of inquiry-based science and environmental curriculum; visual instructional technologies; motivation and learning; and the use instructional technologies to promote learning

#### **EDUCATION**

- |       |   |      |
|-------|---|------|
| Ph.D. | North Carolina State University, Science Education  | 1999 |
|       | Dissertation: <i>Purposeful Use of a Non-Restrictive, Asynchronous Public Web-Based Forum for Facilitating Reflective Discourse with Preservice Science Teachers.</i> Raleigh, NC: doctoral dissertation. |      |
| M.Ed. | George Washington University, Science Education   | 1992 |
| B.S.  | University of Michigan, Biology and Psychology  | 1988 |

#### **PROFESSIONAL EXPERIENCE**

- |                |   |
|----------------|---|
| 6/05 – current | Associate Professor, Department of Education and Human Services, Lehigh University, Bethlehem, PA.  |
| 8/99 – 5/05    | Assistant Professor, Department of Education and Human Services, Lehigh University, Bethlehem, PA.  |
| 8/96 – 5/99    | National Science Foundation Graduate Research Trainee in Instructional Technology in Science Education, North Carolina State University, Raleigh, NC. |
| 8/94 – 6/96    | Classroom Science Teacher. Ecology and Biology curriculum. Columbia High School, Columbia, SC.  |
| 8/92 – 8/93    | Classroom Science Teacher. Ecology curriculum. Sandburg Intermediate School, Alexandria, VA.  |
| 8/91 – 8/92    | Classroom Science Teacher. Ecology curriculum. Lake Braddock Secondary School, Burke, VA.   |
| 8/90 - 6/91    | Teaching Fellow, Centerville Secondary School, Centreville, VA.   |

## **PUBLICATIONS IN REFEREED JOURNALS**

Bodzin, A., and Cirrucci, L. (in press). Integrating geospatial technologies to examine urban land use change: A design partnership. *Journal of Geography*.

Bodzin, A., Hammond, T., Carr, J. and Calario, S. (in press). Using Geospatial Information Technologies (GIT) with Diverse Middle School Learners. *Learning and Leading with Technology*.

Hammond, T., Bodzin, A., Carr, J. and Calario, S. (in press). Wisdom of practice in scaffolding students' spatial thinking and analysis with GIS. *Social Education*.

Bodzin, A., and Cirrucci, L. (2009). A land use planning simulation using Google Earth. *Science Scope*, 32(7), 30-38.

Bodzin, A. (2008). Integrating instructional technologies in a local watershed investigation with urban elementary learners. *The Journal of Environmental Education*, 39(2), 47-58.

Bodzin, A., Waller, P., Edwards, L., and Kale, D. (2007). Investigating the use of inquiry and Web-based activities with inclusive biology learners. *The American Biology Teacher*, 69(5), 371-377.

Bodzin, A., and Anastasio, D. (2006). Using Web-based GIS For Earth and environmental systems education. *The Journal of Geoscience Education*, 54(3), 295-300.

Bodzin, A. (2005). Implementing Web-based Scientific Inquiry in Preservice Science Methods Courses. *Contemporary Issues in Technology and Teacher Education* [Online Serial], 5(1). Available: <http://www.citejournal.org/vol5/iss1/general/article1.cfm>

Bodzin, A., and Shive, L. (2004). Designing for Watershed Inquiry. *Applied Environmental Education and Communication*, 3(4), 249-258.

Bodzin, A., and Shive, L. (2004). Watershed Investigations. *Science Scope*, 27(7), 21-23.

Beerer, K., and Bodzin, A. (2004). How to develop inquiring minds. District implements inquiry-based science instruction. *Journal of Staff Development*, 25(4), 43-47.

Shive, L. E., Bodzin, A. M., & Cates, W. M. (2004). A national standards-based study of Web-based inquiry in chemistry. *Journal of Chemical Education*, 81(7), 1066-1072.

Bodzin, A., and Cates, W. (2003). Enhancing preservice teachers' understanding of Web-based scientific inquiry. *Journal of Science Teacher Education*, 14(4), 237-257.

Bodzin, A. and Beerer, K. (2003). Promoting inquiry-based science instruction: The validation of the Science Teacher Inquiry Rubric (STIR). *Journal of Elementary Science Education*, 15(2), 39-49.

Cates, W., Price, B., and Bodzin, A. (2003). Implementing technology-rich curricular materials: Findings from the *Exploring Life* project. *Computers in the Schools*, 20(1/2), 153-169. Also published as a chapter

in Technology in Education: A twenty-year prospective [Johnson, D. L., & Maddox, C. D. (2003). Binghamton, NY: Haworth Press.]

Bodzin, A., and Cates, W. (2002). Inquiry *dot* Com. Web-based activities promote scientific inquiry learning. *The Science Teacher*, 69(9), 48-52.

Bodzin, A. and Park, J. (2002). Using a non-restrictive Web-based forum to promote reflective discourse with preservice science teachers. *Contemporary Issues in Technology and Teacher Education*, 2(3). 267-289. Available: <http://www.citejournal.org/vol2/iss3/science/article1.cfm>. Invited paper.

Bodzin A. and Gehringer, M. (2001) Breaking science stereotypes. *Science and Children*, 38(4), 36-41.

Bodzin, A. and Park, J. (2000). Non-restricted asynchronous Web-based forums: A study of preservice science teachers' attitudes. *International Journal of Educational Telecommunications*. 6(4), 363-392.

Bodzin, A. and Park, J. (2000) Dialogue patterns of preservice science teachers using asynchronous computer-mediated communications on the World Wide Web. *Journal of Computers in Mathematics and Science Teaching*, 19(2), 161-194.

Bodzin, A. and Park, J. (2000). Factors That Influence Asynchronous Discourse With Preservice Teachers on a Public, Web-Based Forum. *Journal of Computing in Teacher Education*, 16(4), 22-30.

Bodzin, A. and Mamlok, R. (2000). STS issues-based approach simulations. *The Science Teacher*, 67(9) 36-39.

Bodzin, A. and Park, J. (1999). An online inquiry instructional system for environmental issues. *Meridian: A Middle School Computer Technologies Journal*, 2(2), 1999. [Online]. Available: <http://www.ncsu.edu/meridian/jul99/coastal/index.html> [Included in ERIC Reproduction ED 443668]

Bodzin, A. and Park, J. (1998). A study of preservice science teachers' interactions with a Web-Based forum. *Electronic Journal of Science Education*, 3(1), 1998. [Online]. Available: <http://unr.edu/homepage/jcannon/ejse/ejsev3n1.html>.

Bodzin, A. (1997). Incorporating the World Wide Web in the science classroom. *Electronic Journal of Science Education*, 1(3), 1997. [Online]. Available: <http://unr.edu/homepage/jcannon/ejse/bodzin.html>.

## **PUBLICATION - BOOK CHAPTERS**

Bodzin, A. (2008). Science inquiry projects on the Web. In R. Bell, J. Guess-Newsome, & J. Luft (Eds.) *Technology in the secondary science classroom*. Arlington, VA: NSTA Press. Invited book chapter.

## **ARTICLES ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS**

## **EDITED BOOKS ACCEPTED FOR PUBLICATION**

Bodzin, A., Klein, B., and Weaver, S. (in press). *The Inclusion of Environmental Education in Science Teacher Education*. Springer.

## **ARTICLES ACCEPTED FOR PUBLICATION - BOOK CHAPTERS**

Bodzin, A. Integrating Web-based activities and field-based experiences to investigate environmental issues. (in press). In Bodzin, Klein, & Weaver (Eds) *The Inclusion of Environmental Education in Science Teacher Education*.

Peffer, T. & Bodzin, A. The Value of Non-formal Environmental Education-Based Professional Development in Preservice Science Teacher Preparation. (in press). In Bodzin, Klein, & Weaver (Eds) *The Inclusion of Environmental Education in Science Teacher Education*.

Bodzin, A., Anastasio, D., & Kulo, V. Designing Google Earth Activities for Learning Earth and Environmental Science. (in press). In MaKinster, Trautmann, & Barnett (Eds) *Teaching Science and Investigating Environmental Issues with Geospatial Technology: Designing Effective Professional Development for Teachers*.

## **PUBLICATIONS IN PRESTIGIOUS NON-REFEREED JOURNALS**

Bodzin, A. (2002). LEO EnviroSci Inquiry: Using the Web to learn environmental sciences. *Learning and Leading with Technology*, 29(5), 32-37. Invited paper.

## **MANUSCRIPTS IN EDITORIAL REVIEW (REFEREED NATIONAL JOURNALS)**

## **MANUSCRIPTS IN EDITORIAL REVIEW (BOOK CHAPTER)**

## **MANUSCRIPTS IN REVISION FOR SUBMISSION (NATIONAL JOURNALS)**

## **PUBLISHED CONFERENCE PROCEEDINGS - REFEREED**

Bodzin, A. (2001). Designing Web-based inquiry simulations: Carolina Coastal Science. *Proceedings of the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL*. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE).

Bodzin, A. (2001). Factors that promote and inhibit discourse with preservice teachers on a non-restrictive, public Web-based forum. *Proceedings of the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL*. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE).

Derham, C., and Bodzin, A. (2001). Scoring for preservice teachers' Electronic portfolios: Issues of feasibility and reliability. *Proceedings of the Society for Information Technology and Teacher Education*

(SITE) 12th Annual Conference in Orlando, FL. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE).

Park, J., Grable, L., Bodzin, A., Cleveland, A., and Haase, D. (1999). Developing a science inquiry-based Web site: The Science Junction. *Proceedings of WebNet 99 – World Conference on the WWW and Internet*. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE). ISBN 1-880094-36-3.

Bodzin, A. and Park, J. (1998). The SciTeach Forum - Barriers to preservice teachers. *Tel-Ed '98 Proceedings. ISTE's Seventh International Conference on Telecommunications and Multimedia in Education*. Eugene, OR: International Society for Technology in Education (ISTE). ISBN 1-56484-146-4.

Bodzin, A., Park, J., and Grable, L. (1998). Training Teachers with a CD-ROM and a WWW Support Network. *Proceedings for NECC '98 National Educational Computing Conference*. Eugene, OR: International Society for Technology in Education (ISTE). ISBN 1-56484-135-9.

Bodzin, A. and Park, J. (1998). The Effects of Preservice Science Teachers Engaging in an Electronic Community. *Proceedings for the Society for Information Technology & Teacher Education 9th International Conference*. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE). ISBN 1-880094-28-2.

## **TECHNICAL AND RESEARCH REPORTS**

Bodzin, A. (2003). *Exploring Life, NSF Final Report*. Bethlehem, Pennsylvania: Lehigh University.

Bodzin, A. (2003). *The Discovery Center of Science and Technology IT Youth Leadership Program Evaluation Report*. Lucent Foundation Grant. Bethlehem, Pennsylvania: Lehigh University.

Bodzin, A. (2001). *The Discovery Center 2000-2001 Science Enrichment Outreach Evaluation Report*. Bethlehem, Pennsylvania: Lehigh University.

Bodzin, A. (2000). *Lehigh Valley Science Enrichment Pilot Project (LVSEPP) Evaluation Report*. Bethlehem, Pennsylvania: Lehigh University.

## **OTHER PUBLISHED CONFERENCE PROCEEDINGS**

Bodzin, A. (2002). Teaching science methods courses with Web-enhanced activities. In P. Rubba, J. Rye, W. DiBiase, & B. Crawford (Eds), *Proceedings of the 2002 Annual International Conference of the Association for the Education of Teachers in Science* in Charlotte, NC. Association for the Education of Teachers in Science. (ERIC Document Reproduction Service No. ED 465602).

Bodzin, A., Wilson, E. Hug, B. (2000). A collaboration between scientists and a science educator developing Web-based curricular activities. In P. Rubba, J. Rye, P. Keig, & W. DiBiase, (Eds), *Proceedings of the 2002 Annual International Conference of the Association for the Education of Teachers in Science in Akron, OH*. Association for the Education of Teachers in Science. (ERIC Document Reproduction Service No. ED 438191).

Bodzin, A. (1999). An Online Inquiry Instructional System for Science Education. In P. Rubba, J. Rye, & P. Keig (Ed.), *Proceedings of the 1999 Annual International Conference of the Association for the*

*Education of Teachers in Science* (pp. 134-146). Greenville, NC: Association for the Education of Teachers in Science. (ERIC Document Reproduction Service No. ED431626).

## **ARTICLES IN NON-PEER REVIEWED PUBLICATIONS**

Bodzin, A. (2007, 26 November). Promoting Environmental Literacy in School Settings. *PA Environment Digest*, 17-20.

Excerpt published in the Lehigh EI Newsletter, October 2007 and the Morning Call newspaper.

Bodzin, A., Grable, L. and Park, J. (2001, Spring). Using interactivity on the Web to promote scientific inquiry. *The Natural Selection*, 30-32.

Bodzin, A. (2000, Winter). Using Web-based interactivity to promote scientific inquiry. *PSTA Exchange*, 23(4), 6-9.

Bodzin, A., Grable, L. and Park, J. (1999, Winter). Evaluating science Web resources. *The Natural Selection*, 23-24.

Bodzin, A. (1999, Spring). Web-based science networks. *Tech Learning*. Online available: [http://www.techlearning.com/db\\_area/archives/WCE/archives/bodzin.htm](http://www.techlearning.com/db_area/archives/WCE/archives/bodzin.htm)

Bodzin, A. (1997). Incorporating the World Wide Web in the science classroom. Reprinted with modifications at the request of the editor in *NSTA Reports!* 8(6), 1997.

## **INSTRUCTIONAL WEB SITE PROJECTS**

*Environmental Issues: Land Use Change*. (2008-09). <http://www.ei.lehigh.edu/nes/luc/>. Bodzin, A. & Cirrucci, L. I am the Principal Investigator on this project and lead content developer. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE).

*GIS Storm Sewers Unit*. (2008-09). <http://www.ei.lehigh.edu/nes/sewers/>. Bodzin, A., Carr, J., Hammond, T., & Calario, S. Lead content developer of the instructional design team.

*Earth System Science Education at Lehigh University*. <http://www.ei.lehigh.edu/esse/>. Anastasio, D., Bodzin, A., Ramage, J., Cascione, J., Yu, J., Cascione, J. & Heydenberk, E. (2007). I am the co-Principal Investigator on this project and member of the instructional design team. External validation: NASA Science Mission Directorate - Earth Science Education Products and National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE).

*Carbon Cycle*. <http://www.ei.lehigh.edu/esse/carbon/>. Anastasio, D., Bodzin, A., Ramage, J., Cascione, J., Yu, J., Cascione, J. & Heydenberk, E. (2007). I am the co-Principal Investigator on this project and member of the instructional design team. External validation: NASA/USRA Earth System Science Education Design Guide for Undergraduate Earth System Science Education.

*Remote Sensing*. <http://www.ei.lehigh.edu/esse/rs/>. Anastasio, D., Bodzin, A., Ramage, J., Cascione, J., Yu, J., Cascione, J. & Heydenberk, E. (2007). I am the co-Principal Investigator on this project and member of the instructional design team. External validation: NASA/USRA Earth System Science Education Design Guide for Undergraduate Earth System Science Education.

*LEO EnviroSci Inquiry.* (present - 2000). <http://www.leo.lehigh.edu/envirosoci>. I am project director of this Web site. I have developed a majority of the content, formulated the original instructional design, and have worked with nine graduate student interns to develop various areas of the Website. I also act as subject matter expert for the project as well. External validation: North American Association for Environmental Education (NAAEE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Geology of the Lehigh Gorge.* Wendell, M, Bodzin, A. & Bossert, M. (2005). <http://www.leo.lehigh.edu/envirosoci/geology/gorge/index.html>. Assisted in the design and development of this instructional Website. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE).

*Stockertown Sinkhole Dilemma.* Bodzin, A. & Castronova, M. (2005). <http://www.leo.lehigh.edu/envirosoci/enviroissue/sinkholes/>. I produced all aspects of this Web site including instructional design, programming, resource development, and content. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Coastal Explorations.* Bodzin, A. & Lemon, C. (2004). <http://www.leo.lehigh.edu/envirosoci/geology/coast>. I produced all aspects of this Web site including instructional design, programming, resource development, and content. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Abandoned Mine Drainage in Pennsylvania.* Brown, K. & Bodzin, A. (2003). <http://www.leo.lehigh.edu/envirosoci/enviroissue/amd/>. Assisted in the design and development of this instructional Website. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Environmental Laws and Regulations in Pennsylvania.* Brown, K. & Bodzin, A. (2003). <http://www.leo.lehigh.edu/envirosoci/enviroissue/lawsregs/index.htm>. Assisted in the design and development of this instructional Website. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Sprawl in the Lehigh River Watershed.* Brown, K. & Bodzin, A. (2003). <http://www.leo.lehigh.edu/envirosoci/enviroissue/sprawl/index.html>. Assisted in the design and development of this instructional Website. Served as content expert for the development of GIS coverages. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Lehigh River Watershed Explorations.* (2002, 2000). <http://www.leo.lehigh.edu/envirosoci/watershed>. I formulated the original instructional design and worked with three of my graduate students on its creation and coding. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Geologic Explorations.* (2002, 2000, 1999). <http://www.leo.lehigh.edu/envirosoci/geology/geo/>. I produced all aspects of this Web site for the first version including content and instructional design. Worked with two graduate students to produce additional content and a new navigation interface for the second version. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Science (DLESE); GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Dissolved Oxygen*. Shive, L. & Bodzin, A. (2002).

<http://www.leo.lehigh.edu/envirosoci/watershed/curricular/oxygen/> Assisted in the design and development of this instructional Website. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Carolina Coastal Science*. (2001-1998). <http://www.ncsu.edu/coast>. I produced all aspects of this Web site including instructional design, programming, resource development, and content. External validation: National Science Digital Library (NSDL), Digital Library for Earth System Education (DLESE), Eisenhower National Clearinghouse, National Marine Educators Association (NMEA), GEM: The Gateway to Educational Materials (U.S. Department of Education), Well Connected Educator, North Carolina Department of Public Instruction, New Scientist Magazine, Carolina Health and Environment Community Center at The Environmental Resource Program at the University of North Carolina - Chapel Hill, LEARN North Carolina.

*Which Way Is North?* (2000, 1999). <http://www.leo.lehigh.edu/envirosoci/geology/wwn/>. I produced all aspects of this Web site including instructional design, programming, resource development, and content. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education).

*Dino Inquiry*. (2000, 1999). Online available: <http://www.leo.lehigh.edu/envirosoci/geology/dino/>. I produced all aspects of this Web site including instructional design, programming, resource development, and content.

Phenomenal Weather Explorations. (2000, 1998).

<http://www.leo.lehigh.edu/envirosoci/weather/phenweather/>. I produced all aspects of this Web site including instructional design, programming, resource development, and content.

*Science Junction*. (2000-1997). <http://www.ncsu.edu/sciencejunction>. I contributed content and resource development to this Web site and conducted formative and summative evaluations on online collaborative projects and simulations. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education), North Carolina Department of Public Instruction, LEARN North Carolina.

*Genetic Science Learning Center*. (1999). <http://gslc.genetics.utah.edu/>. Eccles Institute of Human Genetics, University of Utah, Salt Lake City, UT. Assisted in instructional design, and formative and summative evaluation of instructional materials.

## **COMPREHENSIVE PROFESSIONAL RESOURCE WEB SITE PROJECTS**

*Web-Based Inquiry (WBI) for Learning Science*. (2002). <http://www.lehigh.edu/~amb4/wbi/index.html>. I produced this Web site and supplied a substantial amount of its content. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education).

*WebSite Science Resources at Lehigh University*. (1999-current). Online available: <http://www.lehigh.edu/~amb4/websci/>. I produced the content of this Web site.

*IMSEnet*. (1999-1997). <http://www.ncsu.edu/imse>. I produced this Web site and supplied the majority of its content. Coordinated graphic artist and html programmer. External validation: GEM: The Gateway to Educational Materials (U.S. Department of Education); National Education Association, (NEA), Classroom Connect's Ed's Oasis.

*Al Bodzin's Home Page for Science Educators.* (1996-1999). <http://www.ncsu.edu/servit/bodzin/>. I produced all aspects of this Web site and supplied all content.

*Midlands Improving Math and Science (MIMS) Hub.* (1996-1995). <http://scssi.scetv.org/mims/>. I contributed content for an online database search engine of science and math Web sites.

## **VALIDATED INSTRUMENT FOR ASSESSING OR CATEGORIZING TECHNOLOGY PRODUCTS**

Bodzin, A., Waller, P., Edwards, L., Cates, W.M. & Shive, L. (2004). *Reflective Practice Inventories: Science in the Inclusive Classroom.* Lehigh University.

Bodzin, A. & Cates, W. (2002). *Web-based inquiry for learning science (WBI) instrument manual.* Version 1.0. Online available: [http://www.lehigh.edu/~amb4/wbi/wbi-v1\\_0.pdf](http://www.lehigh.edu/~amb4/wbi/wbi-v1_0.pdf)

## **INSTRUCTIONAL SOFTWARE**

Bodzin, A. (2000). *Coastal Explorations: Carolina Coastal Science.* The SERVIT Group, Lehigh University and Shaleo Enterprises. Bethlehem, PA. External validation: Children's Software Review.

Park, J. and Bodzin, A. (1999). *Science Junction Sampler 1999-2000 CD-ROM.* The SERVIT Group, North Carolina State University, Raleigh, NC.

Bodzin, A. and Park, J. (1998). *Instructional Materials for Science Education (IMSE) CD-ROM. Version 2.* The SERVIT Group, North Carolina State University, Raleigh, NC.

Bodzin, A. and Park, J. (1997). *Instructional Materials for Science Education (IMSE) CD-ROM.* The SERVIT Group, North Carolina State University, Raleigh, NC.

## **HONORS AND AWARDS**

CITE/JTATE Technology Award in the category *Exemplary Use of Technology to Teach Content in a Teacher Education Methods Course.* (2005)

NSF Graduate Research Traineeship in Instructional Technology in Science Education fellowship at North Carolina State University (1996-99)

Outstanding Teacher Award for contributions to the advancement of educational technology, presented by the South Carolina Association For Educational Technology (SCAET), (1995)

## **COMPETITELY AWARDED RESEARCH GRANTS**

Toyota USA Foundation. Bodzin, A., Anastasio, D., and Sahagian, D. *Web-enhanced Environmental Literacy and Inquiry Modules (WELIM) for Middle School Learners.* (2008-2011). \$317,718. Principal Investigator.

Commonwealth of Pennsylvania Department of Community and Economic Development grant. Bodzin, A. & Harmer, A. *Materials Research Science and Engineering Center - Education*. (2007-2008) \$121,278. Principal Investigator.

NASA Earth System Science Enterprise (ESSE 21) grant. Anastasio, D., Bodzin, A., Windham, L., and King, M. *Where is the missing carbon? Multidisciplinary Web-based inquiry modules for earth system science instruction*. (2004 – 2006). \$96,195. Co-principal Investigator.

National Science Foundation Instructional Materials Development (IMD) grant. Bodzin, A. and Williamson, B. *Investigating Life*. (2000-2003). \$983,952. Principal Investigator.

## **NON-COMPETITIVE RESEARCH GRANTS**

Bodzin, A. (2003). Pennsylvania Teacher Quality Enhancement Stipend for Technology Support in Teacher Education. \$1,000.

SCALE Collaboration grant funded by the NSF Synergy Communities project. Bodzin, A., Curtis, D., Kali, Y. and Linn, M. *Synergy water quality activity design framework*. (2001). \$3,500. co- Principal Investigator.

## **COMPETITELY AWARDED TRAINING GRANTS**

NASA Explorer Schools. Cirrucci, L., Bodzin, A., Bothwell D., & Santoro, J. *Broughal Middle School NASA Explorer School*. \$17,500. (2006-2009).

Bethlehem Education Foundation grant. Bothwell, D., Bodzin, A., & Dologite, L. *Survivor PA II, Rivers and Forests*. \$2,000. (2006).

Safari Club International Foundation. Bodzin, A. American Wilderness Leadership School Scholarship. Funded at \$1,100. (2006).

Pennsylvania Center for Environmental Education. Bodzin, A. *Environmental education faculty/administrator professional development scholarship*. \$1,000. (2005).

Bethlehem Education Foundation grant. Bothwell, D., & Bodzin, A. (*Survivor Pennsylvania!*) \$4,000. (2005).

Commonwealth of Pennsylvania Department of Environmental Protection Environmental Education grant. Bodzin, A. and Cutcliffe, S. *Preparing teachers to deliver effective standards-based environmental education*. \$11,000. (2002-2003). Principal Investigator.

Philip Morris Incentive Grants Project., A., Park, J., and Munro, M. *Instructional Materials for Science Educators Resource CD-ROM*. (1997). \$5,000. Principal Investigator.

## **INSTITUTIONAL / EQUIPMENT GRANTS**

Pennsylvania Teacher Quality Enhancement Stipend for Technology Support in Teacher Education (2004). \$1,000.

Pennsylvania Teacher Quality Enhancement Stipend for Technology Support in Teacher Education (2003). \$1,000.

Lehigh University's President and Provost's Faculty Development Fund Travel grant. (2000). \$1,000.

## **CONTRACT / CONSULTING WORK**

*Ecology Disrupted*. National Science Foundation Discover Research K-12 Program grant awarded to American Museum of Natural History. (2007-2010).

*GIT Ahead Project, National Visiting Committee*. National Science Foundation ATE Program grant awarded to the Finger Lakes Institute. (2006-2009).

*Inquiry Science Instruction Observation Protocol (ISIOP) Development Project*. National Science Foundation REC Program Evaluation grant awarded to the Education Development Center. (2006-2009).

*Nanotechnology K-12 Education Project*. PA Materials Research Science and Engineering Center grant awarded to the Lehigh Center for Nanotechnology. (2006).

*Da Vinci Teacher Leader Institute*. Pennsylvania Department of Education (PDE) Title II Math and Science Partnership grant awarded to the Allentown School District. (2004-2008). Professional development workshop leader.

*The Discovery Center of Science and Technology IT Youth Leadership Program*. Lucent Foundation Grant. (2000-2003). Program evaluator.

*The Discovery Center 2000-2001 Science Enrichment Outreach Program*. Lucent Foundation Grant. (2000-2001). Program evaluator.

*Lehigh Valley Science Enrichment Pilot Project (LVSEPP)*. The Discovery Center of Science and Technology. Lucent Foundation Grant. (1999-2000). Program evaluator.

The Clipper Project: A Web-based Research and Development Initiative. Lehigh University, Bethlehem, PA. (1999 - 2000). Grant funded by the Andrew W. Mellon Foundation. Program evaluation.

## **EDITORIAL REVIEW BOARD MEMBERSHIP FOR SCHOLARLY PUBLICATIONS**

Journal of Science Teacher Education (2006 – present)

Contemporary Issues in Technology and Teacher Education – Science section. (2004 – present).

The Science Teacher. National Science Teachers Association. (2003 - present).

The Electronic Journal of Science Education. (1999 – 2007).

Meridian: A Middle School Computer Technologies Journal. (1997-1999).

Guest reviewer. Journal of Geoscience Education (April, 2008).

## INVITED PRESENTATIONS, LECTURES, SEMINARS, WORKSHOPS

Bodzin, A. *K-8 Web-based resources for biological sciences*. Two one-hour workshops at the Da Vinci Teacher Leadership Institute Spring Colloquium 2009 presented to 40 K-8 school teachers. April 18, 2009.

Bodzin, A. *Human genetics: Is the dominant trait most prevalent?* Two one-hour workshops at the Da Vinci Teacher Leadership Institute Spring Colloquium 2009 presented to 40 K-8 school teachers. April 18, 2009.

Bodzin, A. Using Google Earth to investigate land use change. A one-hour CHOICES professional development workshop at Lehigh University presented to 10 middle school teachers. April 3, 2009.

Science Symposium Panel. Parkland School District. Symposium to 60 teachers and administrators of the K-12 Science Curriculum Committee.

Bodzin, A. *Understanding by Design for curricular planning*. A two-hour professional development workshop at the Bethlehem Area School District presented to twenty-five science and social studies middle school teachers and administrators. February 13, 2009.

Bodzin, A. *Environmental Literacy*. A one-presentation at the HI-Neighbors lecture series presented to sixty people. February 2, 2009.

Bodzin, A. *Active Ecological Simulations*. A one-hour workshop at the Da Vinci Teacher Leader Institute Fall Workshop in Life Science presented to twenty K-8 school teachers. November 8, 2008.

Bodzin, A. *Designing engaging inquiry and meaningful assessments*. One three-hour workshop at the Da Vinci Teacher Leader Institute Spring Colloquium in Physical Science presented to 15 elementary school teachers. April 12, 2008.

Bodzin, A. *Web-based resources for elementary physical sciences*. Four one-hour workshops at the Da Vinci Teacher Leadership Institute Fall Retreat 2007 presented to 95 elementary school teachers. November 10, 2007.

Bodzin, A. Spatial thinking tools in education. Presented at the Lehigh College of Education's Student Life Enhancement Committee Tuesday Tea. October 16, 2007.

Bodzin, A. Environmental Initiative white paper: Promoting environmental literacy in school settings. Presented at the Lehigh Environmental Initiative faculty lunch, September 20, 2007.

Bodzin, A. *Engaging water activities for K-6 learners*. Four one and a half hour workshops at the Da Vinci Teacher Leader Institute Spring 2007 Colloquium in Earth Sciences presented to 90 elementary school teachers. April 21, 2007.

Bodzin, A. *Online curricular materials to promote Web-based inquiry*. A two-hour CHOICES professional development workshop at Lehigh University presented to 10 middle school teachers. March 30, 2007.

Bodzin, A. *Using the Web to promote inquiry*. A one-day NASA Explorer School workshop at Broughal Middle School presented to 15 middle school science, social studies, and technology teachers. November 22, 2006.

Bodzin, A. & Fullmer, E. *Extreme geology: Literacy connections*. Two two-hour workshops at the DaVinci Teacher Leadership Institute Fall Retreat 2006 presented to 56 elementary school teachers. November 13, 2006.

Sweeney, B. & Sweeney, B. *BioBlitz*. One day-long workshop at the 13<sup>th</sup> Annual Delaware River Watershed Education Youth Eco-Leadership Summit presented to 60 middle school students. April 30 – May 2, 2006.

Bodzin, A. *How do I integrate online digital resources to enhance teaching and learning about the environment?* Four One-hour workshops at the DaVinci Teacher Leadership Institute Spring 2006 Colloquium presented to 60 elementary school teachers. April 29, 2006.

Bodzin, A. *Environmental education simulations for elementary school learners*. Two two-hour workshops at the DaVinci Teacher Leadership Institute Fall Retreat 2005 presented to 60 elementary school teachers. November 4, 2005.

Bodzin, A. *Science activities for preschool learners*. A three-hour workshop at the Allentown Jewish Community Center presented to 42 preschool teachers. November 12, 2005.

Bodzin, A. *Using digital probeware for water quality data collection*. Two one hour workshops at the 12<sup>th</sup> Annual Delaware River Watershed Education Youth Eco-Leadership Summit presented to 12 middle school students and 9 high school students. April 31 – May 2, 2005.

Bodzin, A. *Using the Web to promote science learning*. One-day workshop presented at the IDEAS Institute at Hofstra University. April 30, 2005.

Bodzin, A. *Implementing Web-based scientific inquiry in preservice science methods courses*. Invited presentation at the 2005 Society for Information Technology and Teacher Education (SITE) 16<sup>th</sup> Annual International Conference in Phoenix, AZ. March 1-5, 2005.

Bodzin, A. *Web-based Inquiry*. Two two-hour workshops at the DaVinci Teacher Leadership Institute Spring Retreat 2005 presented to 60 elementary school teachers. February 26, 2005.

Bodzin, A. *Using technology to teach science*. A three-hour workshop at Lehigh Carbon Community College. February 21, 2005.

Bodzin, A. *Probes and computers*. Three one-hour workshops at the DaVinci Teacher Leadership Institute Fall Retreat 2004 presented to 40 elementary school teachers. November 6-7, 2004.

Bodzin, A. *Inquiry-based science for elementary education*. Two-week workshop at the DaVinci Teacher Leadership Institute Summer 2004 presented to 44 elementary school teachers. August 9-20, 2004.

Bodzin, A. *Using digital probeware for water quality data collection*. Two one hour workshops at the 11<sup>th</sup> Annual Delaware River Watershed Education Youth Eco-Leadership Summit presented to 16 middle school students and 10 high school students. April 25-27, 2004.

Bodzin, A. *Environmental careers*. A one-hour workshop at the 11<sup>th</sup> Annual Delaware River Watershed Education Youth Eco-Leadership Summit presented to 16 middle school students. April 25-27, 2004.

Bodzin, A. *Interdisciplinary activities that meet the PA Environment & Ecology Standards*. A three-hour professional development workshop presented to 47 secondary science and social studies teachers in the Northampton Area School District. January, 12, 2004.

Bodzin, A. *LEO EnviroSci Inquiry*. A two-hour professional workshop at the Delaware Watershed Youth Summit for ACT 48 credit. April 27-29, 2003.

Bodzin, A. *Environmental careers*. A one-hour workshop at the 10<sup>th</sup> Annual Delaware River Watershed Education Youth Eco-Leadership Summit presented to 14 high school students. April 27-29, 2003.

Bodzin A. *Integrating Web-Based Activities into Elementary Curriculum Workshop*. A one-day workshop for Eisenhower grant funded PIE 2001 participants. Providence, RI. June, 11, 2001.

Bodzin, A. *Using Interactivity on the World Wide Web to Promote Scientific Inquiry*. Invited presentation at Westminster College. Salt Lake City, UT. November. 1, 2000.

Bodzin, A. *Integrating Web-Based Science into Elementary Curriculum*. A one day workshop for Eisenhower grant funded A Bigger SLICE (Science and Learning in the Community Environment) participants. Providence, RI. September, 11, 2000.

Bodzin, A. *Internet Resources for Environmental Science*. Presented at the Advanced Placement Environmental Science Summer Institute, North Carolina State University, Raleigh, NC. June 30, 1999.

Bodzin, A. *Web-based Science Seminar series*. A series of seven topics presented at the Eccles Institute of Human Genetics, University of Utah, Salt Lake City, UT. April, 1999.

Bodzin, A. *Using the Web in K-2 Science Education*. A one day workshop for Eisenhower grant funded SLICE (Science and Learning in the Community Environment) participants. Providence, RI. March 31, 1999.

Bodzin, A. *Internet Resources for Environmental Science*. Presented at the Advanced Placement Environmental Science Summer Institute, North Carolina State University, Raleigh, NC. August 4, 1998.

Bodzin, A. *Developing Web-based Educational Materials*. Presented at the Carolina Environmental Casebook Institute: NC's Hog Industry, UNC-CH Environmental Resource Program, Chapel Hill, NC. July 13, 1998.

Bodzin, A. *Coastal Science Computer Simulation*. Presented at the Environmental/Earth Science Share-A-Thon, North Carolina State University, Raleigh NC. June 10, 1998.

Bodzin, A. *Integrating Instructional Technology into the Science Classroom*. Presented to the Dillon District Two science faculty, Dillon, SC. February 16, 1998.

Bodzin, A. *Incorporating WWW Science Datasets and CD-ROMs into Environmental Science Curricula*. Presented at the Advanced Placement Environmental Science Institute, North Carolina State University, Raleigh NC. August 7, 1997.

Bodzin, A. and Creighton, L. *Incorporating the WWW into Science and Math Curricula*. Presented to the science and math faculty at Cary Academy, Cary, NC. July 28, 1997.

## **PRESENTATIONS AT NATIONAL OR INTERNATIONAL MEETINGS**

Kulo, V., Cates, W., & Bodzin, A. (2009, October). Designing for Geospatial Information Technologies. Paper to be presented at the 2009 Association for Educational Communications and Technology (AECT) in Louisville, KY.

Bodzin, A., & Cirucci, L. (2009, June). Teaching “spatially” with Google Earth to investigate land use issues. Paper to be presented at the 2009 National Educational Computing Conference (NECC) in Washington, DC.

Kulo, V., Bodzin, A., & Pepper, T. (2009, June). Using GIS in the Classroom to Investigate Energy. Paper to be presented at the 2009 National Educational Computing Conference (NECC) in Washington, DC.

Peffer, T., & Bodzin, A. (2009, January). The value of non-formal environmental education-based professional development in preservice science teacher preparation. Paper presented at the 2009 Association for Science Teacher Education (ASTE) Annual Meeting in Hartford, CT.

Bodzin, A., Cirucci, L., & Maher, P. (2008, March). Promoting Earth System Science Education: A School/University/NASA Explorer School Partnership. Paper presented at the 2008 National Science Teachers Association (NSTA) National Conference on Science Education in Boston, MA.

Bodzin, A., & Cirucci, L. (2008, March). Integrating Technology-based Tools to Investigate Environmental Change. Paper presented at the 2008 National Science Teachers Association (NSTA) National Conference on Science Education in Boston, MA.

Bodzin, A. (2008, January). Integrating geospatial technologies to examine urban land use change: A design partnership. Paper presented in the multiple paper set, *Professional Development Models Using Geospatial Technologies* (Trautmann, Bodzin, Blank, & MaKinster) at the 2008 Association for Science Teacher Education (ASTE) Annual Meeting in St. Louis, MO.

Bodzin, A. (2008, January). Introduction to using geospatial technologies to promote spatial thinking. Workshop presented at the 2008 Association for Science Teacher Education (ASTE) Annual Meeting in St. Louis, MO.

Bodzin, A. (2007, September). Biology Exploring Life: Implementation findings in inclusive classrooms. Poster session presented at the 2007 National Science Foundation Discovery Research K-12 PI Meeting in Arlington, VA.

Bodzin, A. & Anastasio, D. (2007, January). Integrating environmental education content and pedagogy into preservice science teacher education. Paper presented at the 2007 Association for Science Teacher Education (ASTE) Annual Meeting in Clearwater Beach, FL.

Bodzin, A. (2007, January). Teaching environmental issues: Integrating field-based experiences and Web-based inquiry activities. Paper presented in the multiple paper set, *Integrating Environmental Education Content and Pedagogy into Preservice Science Teacher Education* (Klein, Bodzin, & Weaver) at the 2007 Association for Science Teacher Education (ASTE) Annual Meeting in Clearwater Beach, FL.

Bodzin, A., Anastasio, D., Cascione, J. Ramage, J., Yu, Z. & Heydenberk, E. (October, 2006). Designing Web-based activities to promote inquiry in Earth, environmental, and Earth systems science education. Poster session presented at the 2006 Geological Society of America Annual Meeting in Philadelphia, PA.

Cascione, J., Bodzin, A., Anastasio, D., Ramage, J., Yu, Z. & Heydenberk, E. (October, 2006). Engaging learners with a Web-based instruction to the carbon cycle. Poster session presented at the 2006 Geological Society of America Annual Meeting in Philadelphia, PA.

Bodzin, A. (April, 2006). Environmental inquiry: Web-based activities to support environmental studies. Presentation presented at the 2006 National Science Teachers Association (NSTA) National Conference on Science Education in Anaheim, CA.

Bodzin, A. (2006, January). Integrating online digital resources to enhance science teaching and learning. Presentation presented at the 2006 Association for Science Teacher Education (ASTE) Annual Meeting in Portland, OR.

Bodzin, A. (2005, November). *Promoting environmental literacy with Web-based activities*. Presentation to be presented at the 2005 North American Association for Environmental Education (NAAEE) Annual Meeting in Albuquerque, NM.

Bodzin, A. (2005, August). *Using Web-based GIS and other resources to promote Web-based inquiry*. Workshop presentation at the 2005 NASA Earth System Science Education for 21<sup>st</sup> Century meeting, Fairbanks, AK.

Bodzin, A. (2005, July). *Using the Web to promote inquiry in marine science*. Presentation presented at the 2005 National Marine Educators Association Conference (NMEA) in Maui, HI.

Bodzin, A. & Shive, L. (2005, June). *Using the Web to promote environmental studies*. Presentation presented at the 2005 National Educational Computing Conference (NECC) in Philadelphia, PA.

Bodzin, A., Edwards, L., Waller, P. & Shive, L. (2005, April). *A study of inclusive learners using a Web-integrated biology curriculum*. Paper presented at the 2005 National Association for Research in Science Teaching (NARST) Annual Meeting in Dallas, TX.

Baird, B., Bodzin, A., Courson, S., Smith, R., Eick, C., & Brownstein, E. (2005, January). *Syllabus sharing – Secondary methods courses*. Session presented at the 2005 Association for the Education of Teachers in Science (AETS) Annual International Conference in Colorado Springs, CO.

Bodzin, A. (2005, January). *Using Web-based GIS to promote inquiry and environmental literacy*. Paper presented at the 2005 Association for the Education of Teachers in Science (AETS) Annual International Conference in Colorado Springs, CO.

Bodzin, A. & Cates, W. (2004, May). *Summative evaluation of the Biology: Exploring Life Curriculum*. Poster session presented at the 2004 National Science Foundation K-12 Math, Science, and Technology Curriculum Developers Conference in Washington, DC.

Edwards, L., Kale, D., Bodzin, A., Waller, P., & Shive, L. (2004, April). *Promoting Science Learning for ALL Students in Inclusive Classrooms*. Paper presented at the 2004 Council for Exceptional Children (CEC) Annual Convention in New Orleans, LA.

Bodzin, A., Waller, P., Edwards, L., Kale, D. & Shive, L. (2004, April). *Let's talk about integrating technology in inclusive science classrooms*. Paper presented at the 2004 National Science Teachers Association (NSTA) Annual Meeting in Atlanta, GA.

Waller, P., Bodzin, A., Kale, D & Edwards, L. (2004, April). *Inclusion students have inquiring minds!* Paper presented at the 2004 National Science Teachers Association (NSTA) Annual Meeting in Atlanta, GA.

Bodzin, A., & Barnhardt, G. (2004, April). *Biology online: The realities of integrating Web-based curricula in the biology classroom*. Presentation presented at the 2004 National Science Teachers Association (NSTA) Annual Meeting in Atlanta, GA.

Bodzin, A., Waller, P., Edwards, L., Shive, L., & Kale, D. (2004, January). *Classroom Instruction with Technology for Inclusion: The Science Instructional Practices Inventory*. Paper presented at the 2004 Association for the Education of Teachers in Science (AETS) Annual International Conference in Nashville, TN.

Beerer, K., & Bodzin, A. (2004, January). *Promoting Inquiry-Based Science Instruction With the Science Teacher Inquiry Rubric (STIR)*. Paper presented at the 2004 Association for the Education of Teachers in Science (AETS) Annual International Conference in Nashville, TN.

Shive, L., & Bodzin, A. (2004, January). *What Matters in the Classroom: A Model of Teacher and Contextual Influences on Science Literacy*. Paper presented at the 2004 Association for the Education of Teachers in Science (AETS) Annual International Conference in Nashville, TN.

Waller, P., Bodzin, A., Edwards, L., & Kale, D. (2004, January). *Web-based curricular innovations with diverse learners: Stories from a university/school partnership*. Paper presented at the 2004 Association for the Education of Teachers in Science (AETS) Annual International Conference in Nashville, TN.

Bodzin, A., Cates, W., Price, B., & Pratt, K. (2003, June). *Implementing a Web-integrated high school biology program*. Web poster session presented at the 2003 National Educational Computing Conference (NECC) in Seattle, WA.

Bodzin, A. (2003, March). *Web-based inquiry for learning science*. Paper presented at the 2003 National Science Teachers Association (NSTA) Annual Meeting in Philadelphia, PA.

Shive, L. & Bodzin, A. (2003, March). *The best of both worlds: Using authentic data and the World Wide Web to promote inquiry*. Paper presented at the 2003 National Science Teachers Association (NSTA) Annual Meeting in Philadelphia, PA.

Edwards, L., Bodzin, A., Waller, P., & Kale, D. (2003, March). *Promoting scientific literacy for ALL students: A framework for including students with learning disabilities in a Web-enhanced biology classroom*. Presentation presented at the 2003 National Science Teachers Association (NSTA) Annual Meeting in Philadelphia, PA.

Waller, P., Kale, D., Bodzin, A., & Edwards, L., (2003, March). *Professional partnerships: Using a Web-enhanced biology program in a team-taught-inclusion biology classroom*. Paper presented at the 2003 National Science Teachers Association (NSTA) Annual Meeting in Philadelphia, PA.

Bodzin, A., Cates, W., & Price, B. (2003, March). *Formative evaluation of the Exploring Life curriculum: Year two implementation fidelity findings*. Paper presented at the 2003 National Association for Research in Science Teaching (NARST) Annual Meeting in Philadelphia, PA.

Bodzin, A., & Cates, W. (2003, January). *Preparing preservice science teachers to understand Web-based inquiry*. Paper presented at the 2003 Association for the Education of Teachers in Science (AETS) Annual International Conference in St. Louis, MO.

Shive, L. & Bodzin, A. (2003, January). *Partnering in watershed inquiry*. Paper presented at the 2003 Association for the Education of Teachers in Science (AETS) Annual International Conference in St. Louis, MO.

Bodzin, A., Price, B., Cates, W., Heyden, R., and Weidenaar, J. (2002, June). *Developing A Web-Enhanced high school biology program*. Web poster session presented at the 2002 National Educational Computing Conference (NECC) in San Antonio, TX.

Price, B., Cates, W., & Bodzin, A. (2002, June). *Challenges in implementing technology-rich curricular high school biology materials: First year findings from the Exploring Life project*. Paper presented at the National Educational Computing Conference in San Antonio, TX.

Bodzin, A., Price, B. Cates, W. Williamson, B. and Campbell, N. (2002, April). *Formative evaluation of the design and development of a Web-based biology curriculum: Y1 findings*. Paper presented at the National Association for Research in Science Teaching Annual Meeting in New Orleans, LA.

Shive, L., Bodzin, A., and Cates, W., (2002, April). *The status of Web-based inquiry for secondary school chemistry*. Paper presented at the National Association for Research in Science Teaching Annual Meeting in New Orleans, LA.

Bodzin, A. (2002, April). *Designing a flexible Web-based instructional system for watershed exploration and inquiry*. Poster session in Poster/Symposium session The Role of Customization in Shaping Innovative Science Curricula: Implications for Design, Practice, and Professional Development (Baumgartner, E. chair) presented at the American Education Research Association (AERA) in New Orleans, LA.

Bodzin, A., Williamson, B. and Price, B. (2002, March). *Learning biology with a Web-enhanced curriculum*. Presentation session presented at the 2002 National Science Teachers Association (NSTA) National Convention in San Diego, CA.

Bodzin, A. (2002, January). *Teaching science methods courses with Web-enhanced activities*. Demonstration session presented at the 2002 Association for the Education of Teachers in Science (AETS) Annual International Conference in Charlotte, NC.

Bodzin, A. (2002, January). *Using Web-based portfolios to assess preservice science teachers*. Poster session presented at the 2002 Association for the Education of Teachers in Science (AETS) Annual International Conference in Charlotte, NC.

Cates, W. and Bodzin, A. (2001, November). *Designing for Web-based scientific inquiry: Research findings into practice*. Paper presented at the Association for Educational Communications and Technology (AECT) annual meeting in Atlanta, GA.

Bodzin, A., Price, B. and Heyden, R. (2001, November). *A formative evaluation approach to guide the development of a Web-text biology curriculum*. Paper presented at the National Association of Biology Teacher's annual meeting (NABT) in Montreal, Quebec.

Bodzin, A. and Bothwell, D. (2001, June). *LEO EnviroSci Inquiry: Making a vision into a reality*. Paper presented at the National Educational Computing Conference (NECC) in Chicago, IL.

Heist, M. and Bodzin, A. (2001, June). *Effectively integrate existing Web sites into a traditional curriculum*. Web poster session presented at the National Educational Computing Conference (NECC) in Chicago, IL.

Bodzin, A., Cates, W., and Vollmer, V. (2001, March). *Codifying Web-based inquiry activities: Preliminary instrument development*. Paper presented at the National Association for Research in Science Teaching Annual Meeting in St. Louis, MO.

Bodzin, A. (2001, March). *Collaborative inquiry about the process of researching while teaching*. Invited participant. Symposium presented at the National Association for Research in Science Teaching Annual Meeting in St. Louis, MO.

Bodzin, A., and Park, J. (2001, March). *The SciTeach Forum: Preservice science teachers using asynchronous computer-mediated communications on the World Wide Web*. NSTA/NARST poster session presented at the National Science Teachers Association (NSTA) National Convention in St. Louis, MO.

Bodzin, A., Heist, M., and Park, J. (2001, March). *Enhancing science learning with visual Web-based instructional resources*. Presentation presented at the National Science Teachers Association (NSTA) National Convention in St. Louis, MO.

Heist, M. and Bodzin, A. (2001, March). *Making the A-list: Biology Web-based activities that really work in the classroom*. Presentation presented at the National Science Teachers Association (NSTA) National Convention in St. Louis, MO.

Bodzin, A. (2001, March). *Designing Web-based inquiry simulations: Carolina Coastal Science*. Paper presented at the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL.

Bodzin, A. (2001, March). *Factors that promote and inhibit discourse with preservice teachers on a non-restrictive, public Web-based forum*. Paper presented at the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL.

Derham, C., and Bodzin, A. (2001, March). *Scoring for preservice teachers' Electronic portfolios: Issues of feasibility and reliability*. Paper presented at the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL.

Bodzin, A. (2000, November). *Formative evaluation for a Web-based biology curriculum*. Invited speaker. Presentation at the Learning Strategies for Science Education Websites meeting, Salt Lake City, UT.

Bodzin, A. (2000, November). *Evaluation of Internet science programs*. Chair of panel discussion at the Learning Strategies for Science Education Websites meeting, Salt Lake City, UT.

Bodzin, A. (2000, November). *QuickTime Virtual Reality in instructional science*. Presentation at the Learning Strategies for Science Education Websites meeting, Salt Lake City, UT.

Bodzin, A. (2000, April). *Using critical incidents in science teaching to promote Web-based discourse with preservice science teachers*. Paper presented at the National Association for Research in Science Teaching Annual Meeting, New Orleans, LA.

Bodzin, A. (2000, January). *Preservice science teachers and Internet telecommunications tools: Issues to consider*. Paper presented at the Association for the Education of Teachers in Science (AETS) Annual Meeting in Akron, OH.

Bodzin, A., Wilson, E. Hug, B. (2000, January). *A collaboration between scientists and a science educator developing Web-based curricular activities*. Paper presented at the Association for the Education of Teachers in Science (AETS) Annual Meeting in Akron, OH.

Park, J., Bodzin, A., Grable, L., and Cleveland, A. (2000, January). *“Doing science” online with the Science Junction*. Presentation at the Association for the Education of Teachers in Science (AETS) Annual Meeting in Akron, OH.

Bodzin, A. (1999, November). *How can the Internet best encourage inquiry-oriented science?: Carolina Coastal Science*. Invited speaker. Presentation at the Science Education Website Developers meeting, Salt Lake City, UT.

Bodzin, A. (1999, November). *Science and social perspectives: Carolina Coastal Science*. Invited speaker. Presentation at the Science Education Website Developers meeting, Salt Lake City, UT.

Park, J., Grable, L., Bodzin, A., Cleveland, A., and Haase, D. (1999, October). *Developing a science inquiry-based Web site: The Science Junction*. Paper presented at WebNet 99 – World Conference on the WWW and Internet, Honolulu, HI.

Bodzin, A. and Park, J. (1999, March). *Reflective discourse in a non-restrictive, asynchronous Web-based forum with preservice science teachers*. Paper presented at the National Association of Research in Science Teaching (NARST) Annual Meeting in Boston, MA.

Park, J., Grable L., Bodzin, A., and Cleveland, A. (1999, March). *Implementing new science standards with NCSU’s Science Junction*. Presentation at the National Science Teachers Association (NSTA) National Convention in Boston, MA.

Bodzin, A. (1999, March). *Carolina Coastal Science: Engaging students with online inquiry*. Presentation at the National Science Teachers Association (NSTA) National Convention in Boston, MA. March 25-28, 1999.

Park, J., Grable L., Bodzin, A., Cleveland, A., and Haase, D. (1999, March). *Using Web resources to promote hands-on collaborative science inquiry: The Science Junction*. Paper presented at the Society for Information Technology and Teacher Education (SITE) 10th Annual Conference in San Antonio, TX.

Bodzin, A. (1999, January). *An online inquiry instructional system for science education*. Paper presented at the Association for the Education of Teachers in Science (AETS) Annual Meeting in Austin, TX.

Bodzin, A. and Park, J. (1998, October). *The SciTeach Forum - barriers to preservice teachers*. Paper presented at the Tel-Ed '98 Conference in New Orleans, LA.

Bodzin, A. (1998, September). *The SciTeach Forum - benefits and barriers*. Paper presented at the Mid-Atlantic Association of Educators of Teachers of Science (MAAETS) Annual Meeting in Chapel Hill, NC.

Bodzin, A., Park, J., and Grable, L. (1998, June). *Training teachers with a CD-ROM and a WWW support network*. Paper presented at the National Educational Computing Conference (NECC) in San Diego, CA.

Bodzin, A. *Using a Web forum as a support network for preservice science teachers*. Paper presented at the National Science Teachers Association (NSTA) National Convention in Las Vegas, NV. April 16-19, 1998.

Bodzin, A. and Park, J. *The effects of preservice science teachers engaging in an electronic community*. Paper presented at the Society for Information Technology and Teacher Education (SITE) 9th Annual Conference in Washington, DC. March 10-14, 1998.

Bodzin, A., Grable, L., and Park, J. *Teaching instructional materials to science educators with a CD-ROM and a World Wide Web support network*. Presentation at the Association for the Education of Teachers in Science (AETS) Annual Meeting in Minneapolis, MN. January 8-11, 1998.

Bodzin, A., Park, J. and Grable, L. *Compiling a CD-ROM: Issues to consider*. Invited paper presented at the American Association of Physics Teachers (AAPT) Winter Meeting in New Orleans LA. January 3-8, 1998.

Bodzin, A. (November, 1996). *Internet resources for science teachers*. Paper presented at the 1996 National Science Teachers Association (NSTA) Southern Area Convention in Atlanta, GA.

## **PRESENTATIONS AT REGIONAL AND STATE MEETINGS**

Cirrucci, L. & Bodzin, A. (2008, December). Integrating technology-based tools to investigate environmental change. Presentation session presented at the 2008 Pennsylvania Science Teachers Association Annual Meeting in Hershey, PA.

Bodzin, A. (2008, October) Teaching and learning with Google Earth and remotely sensed imagery to investigate land use change. Presentation session presented at the 2008 Association for Science Teacher Education Northeast Region (NE-ASTE) Annual Meeting in Dingman's Ferry PA.

Bodzin, A., Klein, B. S., & Weaver, S.D. (2008, October). Keynote Panel: Overcoming Barriers to Including Environmental Education in Preservice Science Education. Panel session presented at the 2008 Association for Science Teacher Education Northeast Region (NE-ASTE) Annual Meeting in Dingman's Ferry PA.

Wendell, M., Pazzaglia, F.J., Anastasio, D.J., & Bodzin, A.M. (2006, March). A new geologic map of the Lehigh Gorge State Park and development of a Web inquiry-based learning model for middle school geoscience education. Poster to be presented at the Geological Society of America Northeast Section 41st Annual Meeting in Harrisburg, PA.

Bodzin, A. (2004, October). *A Web-enhanced approach to teaching an environmental education methods course*. Presentation session presented at the 2004 Association for the Education of Teachers in Science Northeast Region (AETS-NE) Conference, October 14-15, 2004 in Syracuse, NY.

Bodzin, A., Shive, L. & Brown, K. (2003, December). *Using the Internet to meet PA Environment and Ecology Standards*. Presentation session presented at the 2003 Pennsylvania Science Teachers Association annual meeting (PSTA) in Hershey, PA.

Shive, L. & Bodzin, A. (2003, December). *What good is student water quality data?* Presentation session presented at the 2003 Pennsylvania Science Teachers Association annual meeting (PSTA) in Hershey, PA.

Waller, P., Bodzin, A., Shive, L. & Edwards, L. (2003, December). *Using inquiry in an inclusive classroom*. Presentation session presented at the 2003 Pennsylvania Science Teachers Association annual meeting (PSTA) in Hershey, PA.

Lemon, C., Waller, P., & Bodzin, A. (2003, December). *The role of technology in a pre-teacher's classroom*. Presentation session presented at the 2003 Pennsylvania Science Teachers Association annual meeting (PSTA) in Hershey, PA.

Bodzin, A. (2002, November). *LEO EnviroSci Inquiry: A Web-based resource for learning environmental science*. Presentation presented at the 2002 Pennsylvania Alliance for Environmental Education annual meeting (PAEE) in Lancaster, PA.

Bodzin, A. (1999, December). *Coastal Explorations: Using a CD-ROM and the Internet to explore coastal issues*. Paper presented at Pennsylvania Science Teachers Association (PSTA) Annual Convention, Hershey, PA.

Bodzin, A. (1999, December). *Using Web-based interactivity to promote scientific inquiry*. Paper presented at Pennsylvania Science Teachers Association (PSTA) Annual Convention, Hershey, PA.

Park, J., Grable L. and Bodzin, A. (1999, November). *What's new in Science Junction?* Presented at the North Carolina Science Teachers Association (NCSTA) 31th Annual Conference in Greensboro, NC.

Bodzin, A., Park, J. and Grable, L. (1999, March). *NCSU's Science Junction: Online science activities to engage students*. Presentation at the North Carolina Association for Educational Communications and Technology (NCAECT) Annual Meeting in Durham, NC.

Bodzin, A. (1999, February). *Carolina Coastal Science: Environmental inquiry online!* Presented at the North Carolina Environmental Education (NCEE) Conference in Research Triangle Park, NC.

Bodzin, A., Park, J., and Grable, L. (1998, December). *Engage students actively in "doing and thinking" with the World Wide Web*. Presentation at the North Carolina Educational Technology Conference (NCECT) in Greensboro, NC

Park, J., Bodzin, A., and Grable, L. (1998, December). *NCSU's Science Junction: Online science for North Carolina students and educators*. Presentation at the North Carolina Educational Technology Conference (NCECT) in Greensboro, NC

Park, J., Bodzin, A., Slusher, J. and Cleveland, A. (1998, December). *Using interactive Web-based solar eclipse simulations to explore the earth, moon and sun movements*. Presentation at the North Carolina Educational Technology Conference (NCETC) in Greensboro, NC

Bodzin, A. *Multimedia extravaganza of science happenings*. (1998, November). Invited speaker. Presentation at the South Carolina Science Council '98 Conference (SC2) in Greenville, SC.

Bodzin, A., Spence, L. and Kube, J. (1998, November). *Carolina Coastal Science - an inquiry-based Web site*. Presented at the North Carolina Science Teachers Association (NCSTA) 30th Annual Conference in Greensboro, NC.

Park, J., Bodzin, A., Grable L. and Cleveland, A.. (1998, November). *Science Junction: Learn and collaborate with the Web*. Presented at the North Carolina Science Teachers Association (NCSTA) 30th Annual Conference in Greensboro, NC.

Bodzin, A., Grable, L., and Park, J. (December, 1997). *IMSEnet: Teaching instructional materials to science educators with a CD-ROM and a World Wide Web support network*. Presented at the North Carolina Educational Technology Conference (NCETC) in Greensboro, NC.

Bodzin, A. (November, 1997). *The IMSE CD-ROM demonstration*. Presentation at the South Carolina Science Council (SC2) Fall Conference in Charleston, SC

Bodzin, A., Grable, L., and Park, J. (November, 1997). *Website Science: Using IMSEnet in the classroom*. Paper presented at the North Carolina Science Teachers Association 29th Annual Conference in Greensboro, NC.

Grable, L., Bodzin, A., Anderson, A. and Park, J. (November, 1997). *www.teach.science: An inservice technology workshop for science teachers*. Paper presented at the North Carolina Science Teachers Association 29th Annual Conference in Greensboro, NC.

Bodzin, A. (December, 1996). *Awesome WWW resources for science educators*. Paper presented at the 1996 North Carolina Educational Technology Conference in Greensboro, NC. December 1-5, 1996.

Bodzin, A., Mountfield, L., and Rinehart, B. (1995, October). *Academic resources on the World Wide Web (WWW)*. Presentation at the 1995 South Carolina Council on Educational Collaboration: 21st Century Connections Conference in Columbia, SC

Bodzin, A. (1995, October). *World Wide Web for the Educator*. Paper presented at the 1995 South Carolina Association for Educational Technology Conference (SCAETC) in Columbia, SC.

## **ORGANIZED OR CHAIRED SESSIONS / COLLOQUIA / WORKSHOPS**

Bodzin A., Price, B., Heist, M., and Williamson, B. *Exploring Life Workshop*. A one day workshop funded by the National Science Foundation. National Association of Biology Teachers Conference, Montreal, Quebec, November 7, 2001.

Bodzin, A., Boulton, T., Knecht, K., McLaughlin, T., Woodburn, C. and Zukoski, M. *The Information & Communication Technologies Scholars Program, Summer Experience*. A one week workshop presented to seventeen Freedom High School students. July 16-20, 2001.

Bodzin A., Price, B., Heist, M., Bothwell, D. and Williamson, B. *Exploring Life Workshop*. A three day workshop funded by the National Science Foundation. Lehigh University, Bethlehem, PA. July 11-13, 2001.

Bodzin, A. *LEO EnviroSci Inquiry*. Presentation at the Synergy workshop. Northwestern University, Evanston Il. June 25, 2001.

Bodzin A., Price, B., Heist, M., Bothwell, D. and Williamson, B. *Exploring Life Workshop*. A one day workshop funded by the National Science Foundation. National Education Computer Conference, Chicago, Il. June 24, 2001.

Bodzin A., Price, B. and Heist, M. *Exploring Life Workshop*. A one day workshop funded by the National Science Foundation. National Science Teachers Association annual meeting, St. Louis, MO. March 23, 2001.

Bodzin, A. *Exploring Life: Evaluation to Guide Development of a Web-enhanced Biology Curriculum*. Presented to the College of Education faculty at Lehigh University, Bethlehem, PA. April 6, 2001.

Bodzin A., Price, B. and Peebles, P. *Exploring Life Workshop*. A one day workshop funded by the National Science Foundation. National Association of Biology Teachers annual meeting, Orlando, FL. October 26, 2000.

Bodzin A., Price, B. Williamson, B. and Eldert, S. *Exploring Life Workshop*. A two day workshop funded by the National Science Foundation. Lehigh University, Bethlehem, PA. August 15 and 16, 2000.

Bodzin, A. and Park, J. *Online Science Inquiry Simulations and Resources*. Presented to the North Carolina State University Math and Science Club, Raleigh NC. February 12, 1998.

Bodzin, A. *IMSE CD-ROM: Integrating WWW Datasets and Video into Science Instruction*. Presented to the North Carolina State University Math and Science Club, Raleigh NC. December 4, 1997.

Bodzin, A. and Park, J. *MEGA training: Integrating Technology and Teaching Using IMSEnet and the IMSE CD-ROM*. A one day workshop for MEGA - Middle School Global Educators. College of Education and Psychology, North Carolina State University, Raleigh, NC. October 14, 1997.

Bodzin, A. *Writing Web Pages*. Presented to science summer camp participants at The Science House, North Carolina State University, Raleigh, NC. July 30, 1997.

Bodzin, A., Grable, L., and Park, J. *Website Science: Making IMSE Work in the Classroom*. A two week workshop for high school science teachers. The Science House, North Carolina State University, Raleigh, NC. July 14-25, 1997.

Bodzin, A. and Grable, L. *Using the IMSE CD-ROM with the World Wide Web*. Presented to participants at the EMPOWER! workshop at The Science House, North Carolina State University, Raleigh, NC. July 9, 1997.

Bodzin, A. *The IMSE CD-ROM*. Presented at NC Sea Grant's Operation Pathfinder Summer Institute, North Carolina State University, Raleigh, NC. June 30, 1997.

Bodzin, A. and Grable, L. *www.teach.science: Surf and Master the Web*. A four session workshop for science teachers grades 4-12. The Science House, North Carolina State University, Raleigh, NC. March 1997.

Bodzin, A. *K-12 Internet Resources on the World Wide Web*. A one day learning styles workshop. Richland School District 1, Columbia, SC. March 1996.

Bodzin, A. *Science Internet Resources on the World Wide Web*. A one day learning styles workshop. Richland School District 1, Columbia, SC. March 1996.

Bodzin, A. *Interactive HyperCard Simulations for the Science Classroom*. Presented at the Midlands Improving Math and Science 1995 Spring Technology Fair, Columbia, SC. April 1995.

## **COURSES TAUGHT**

### **Lehigh University (1999 – present)**

- Science in Middle and High School Education (2004-1999). Enrollments: 6-15 students. Web-enhanced course.
- Science in Elementary Education (2008-1999). Enrollments: 6-17 students. Web-enhanced course.
- Special Topics in Education: Environmental Education/Environmental Issues (2008, 2006 – 2003). Enrollments: 9-14 students. Web-based/field-based course.
- Intern Teaching Seminar (2007, 2006, 2005, 2000, 2001). Enrollments: 4-33 students. Web-enhanced course.
- Participation in Teaching (2006, 2005, 2000). Enrollments: 3-18 students.
- Intern Teaching Supervision (2007, 2005, 2004, 2000. 1999). Enrollments: 5-9 students.
- Classroom Management and Assessment (2008, 2007, 2006, 2005). Enrollments: 9-25 students.
- Designing for K-12 Teaching and Learning (2006). Enrollments: 14 students.
- Curriculum Design and Innovation (2007). Enrollments: 14 students.

## **COURSE OR CURRICULUM DEVELOPMENT**

*Web-based / field based course development- TBTE 394 – Special Topics in Education: Environmental Education/Environmental Issues*. (2006, 2005, 2004, 2003).

Designed and developed a series of online modules for course. Modules included: Environmental education essentials; Teaching environmental issues; Activity selection for environmental education; GIS in environmental education; Designing and implementing water quality curricular projects; and Environmental laws and regulation. Students completed online course modules during the course. Five full-day Fridays of the course was field-based and included a canoe water quality sampling field trip on the Lehigh River and van trips to areas of environmental impacts in the Lehigh River watershed.

Web-based GIS Coverages (2003).

Designed nine GIS Web-based maps to be used for Web-based inquiry activities in Lehigh courses. I worked with my LEO (Lehigh Earth Observatory) intern Nina Fink to develop the coverages.

Coverages available online at: <http://www.leo.lehigh.edu/envirosoci/watershed/gis/investigations.html>

- WBI activity coverage: Why does the Lehigh River flow along the specific course that it does? Has its course or pattern of flow changed over time?
- WBI activity coverage: Where have people concentrated their settlements and conducted their activities during human history in the Lehigh River watershed?
- WBI activity coverage: Which part of the Lehigh River watershed is the best place to build your new home?
- WBI activity coverage: What are some natural processes in the Lehigh River watershed and how do human actions modify them?
- WBI activity coverage: What is sprawl and how has it affected the Lehigh River watershed?
- WBI activity coverage: In what ways are different parts of society in the Lehigh River watershed economically interdependent today? What role do science and technology play in this interdependence? How would this interdependence have been different 150 years ago?
- WBI activity coverage: What environmental issues should planners consider when designing and locating a site for a new information technology company that will create jobs for 7000 new workers in the Lehigh River watershed? Build a case for the site you think will do the least damage to the watershed.

*Water Quality Data Retrieval PHP coded database. (2002).*

<http://www.leo.lehigh.edu/envirosoci/wqdata/index.php>. Interactive Web-based data retrieval system developed with an undergraduate computer science student. My students use probeware to collect water quality data. The data is submitted to this database. Learners can selectively query the database by selecting fields of interest. Data can be ordered based on the user's query. Data can be exported by into excel files for further manipulation.

*Web-enhanced course development – TBTE 446 Science in Mid Level & High School Education. TBTE 426 Science in Elementary Education; TBTE 426 Science in Elementary Education.* Available online through Lehigh University's Blackboard Website. Web-based learning activities. Specific technologies used to enhance learning for science education learning include Web-based QuickTime Virtual Reality, video delivery through MPEG clips, use of GIS ArcCafe applets, development of Web-based data collection forms, Pasco probeware and GPS data collection protocols, interface with USGS real-time data.

*Web-enhanced course development – TBTE 464/Educ 414 Intern Teaching Seminar.* Available online through Lehigh University's Blackboard Website. Digital portfolio template development. Web-based learning activities used in course instruction.

*The Science Teaching Forum. (1997- 2005).* <http://www.ncsu.edu/sciteach>. Creator and moderator of this Web-based forum used by preservice and inservice science teachers for discussion of science teaching and technology issues from remote geographic locations.

## **ADVISING OTHER THAN RESEARCH DIRECTION**

*M.Ed. and M.A. students:*

Fall 1999 - Summer 2000 – 9 students

Fall 2000 - Summer 2001 – 21 students

Fall 2001 - Summer 2002 – 27 students

Fall 2002 - Summer 2003 – 25 students

Fall 2003 – Summer 2004 - 28 students  
Fall 2004 - Summer 2005- 44 students  
Fall 2005 - Summer 2006- 32 students  
Fall 2006 - Summer 2007- 30 students  
Fall 2007 - Summer 2008 - 32 students  
Fall 2008 - Summer 2009 - 22 students

*B.A. or B.S./M.Ed Students:*

Fall 2000 - Summer 2001 – 18 students  
Fall 2001 - Summer 2002 – 17 students  
Fall 2002 - Summer 2003 - 21 students  
Fall 2003 – Summer 2004 – 13 students  
Fall 2004 - Summer 2005 - 18 students  
Fall 2005 - Summer 2006 - 32 students  
Fall 2006 - Summer 2007 - 21 students  
Fall 2007 - Summer 2008 - 24 students  
Fall 2007 - Summer 2009 - 12 students

## ADVISING RESEARCH DIRECTION

- Violet Kulo (2008 – present). Member, Dissertation Committee. The effects of GIS-supported Web-based inquiry on middle school student science achievement.
- Tamara Peffer. (2007 – present). Member, Qualifying Project Committee. Technology use in informal environmental education settings.
- Sally Heistand Moritz. (2004 – 2008). Member, Dissertation Committee. Computer Science Design of object-based solutions in expert systems.
- Shahida Parvez. (2004 – 2007). Member, Dissertation Committee. *A Pedagogical framework for integrating individual learning style into an intelligent tutoring system.*
- Matt Wendell. (2003 – 2005). Member, Master's thesis committee. Earth and Environmental Science. *Bedrock mapping and structural analysis of a section of the Lehigh Gorge through the Unionville Anticline.*
- Louise Shive (2002 – 2005). Chair, Dissertation Committee. *What matters in the classroom: A structural model of standards-based scientific literacy.*  
Bodzin, A., and Shive, L. (2004). Watershed Investigations. *Science Scope*, 27(7), 21-23.  
Shive, L. E., Bodzin, A. M., & Cates, W. M. (2004). A national standards-based study of Web-based inquiry in chemistry. *Journal of Chemical Education*, 81(7), 1066-1072.  
Bodzin, A., and Shive, L. (2004). Designing for Watershed Inquiry. *Applied Environmental Education and Communication*, 3(4), 249-258.
- Karen Beerer (2001 – 2004). Co-chair, Dissertation Committee. *The effects of professional study groups on teacher's transfer of training into classroom and students' science achievement.*  
Beerer, K., and Bodzin, A. (2004). Inquiring Minds Want to Know: Implementing Science Standards in Elementary Classrooms. *Journal of Staff Development.*

Bodzin, A. and Beerer, K. (2003). Promoting inquiry-based science instruction: The validation of the Science Teacher Inquiry Rubric (STIR). *Journal of Elementary Science Education*, 15(2), 39-49.

• Carol Derham (2001 – 2003). Member, Dissertation Committee. *The digital portfolio assessment of teaching competencies (D-PATCO): Initial development and validation*.  
Derham, C., and Bodzin, A. (2001). Scoring for preservice teachers' Electronic portfolios: Issues of feasibility and reliability. *Proceedings of the Society for Information Technology and Teacher Education (SITE) 12th Annual Conference in Orlando, FL*. Charlottesville, VA: Association for the Advancement of Computing in Education (AACE).

• Pat Methews (1999 – 2003). Member, Dissertation Committee. *The relationship between participation in student-centered discussions and the academic achievement of fifth-grade science students*.

## **SERVICE - UNIVERSITY**

### **Service to University:**

10/08 – present Member, Advisory Council on Information Services (ACIS), Lehigh University  
9/05 – 12/07 Member, *Graduate Research Committee*, College of Education Rep., Lehigh University  
9/07 – 12/07 Chair, *Graduate Student Life Committee*, *Graduate Research Committee*, Lehigh University  
9/07 – 5/08 Graduate Research Committee representative to *Standing of Graduate Student (SOGS) Committee*, Lehigh University  
9/06 – 5/07 Chair, *Curriculum Committee*, *Graduate Research Committee*, Lehigh University  
9/04 – 5/06 Member, College of Education representative to the College of Arts and Sciences, Lehigh University  
9/05 – 5/06 Member, *Lecture Series on Evolution Committee*  
9/04 – 5/05 Member, *Educational Policy Committee*, College of Education Rep., Lehigh University  
5/00 – 5/04 Chair, *Nominations Committee*, College of Education Rep., Lehigh University.  
8/08 – present Member, College of Education representative to the College of Engineering, Lehigh University

### **Service to College:**

8/08 – present Member, *Teacher Certification Curriculum Committee (TCCRC)*  
9/05 – present Member, *Promotion and Tenure Committee*  
9/06 – 5/07 Member, *Search Committee: Transcultural, Comparative, and International Education*.  
10/02 – 5/06 Member, *Learning Science and Technology Doctoral Program Committee*.  
9-05 – 5/06 Member, *Teaching, Learning, & Technology Merger Committee*  
11/03 – 5/04 Member, *Search Committee: College of Education Associate Dean*.  
10/02 – 5/03 Member, *Enrollment Management Committee, Technology-based Teacher Education Program*.  
10/01 – 5/02 Member, *Search Committee: Technology-based Teacher Education Program*.  
10/00 – 4/01 Member, *Search Committee: Technology-based Teacher Education Program*.

### **Service to interdisciplinary programs:**

8/07 – present	Chair of <i>Lehigh Environmental Initiative Education and Outreach Committee</i>
11/00 – present	Member, <i>Lehigh Environmental Initiative Steering Committee</i>
9/02 – 7/07	Chair of <i>Lehigh Environmental Initiative LEO and Synergistic Opportunities Committee</i>
9/05 – 5/06	Member, <i>Lehigh Environmental Initiative Curriculum Committee</i>
9/03 – 5/04	Member, <i>Search Committee: Lehigh Environmental Initiative Director.</i>
5/02 – 12/03	Task Force Leader, <i>Lehigh Environmental Education Task Force.</i>
1/00 – 5/01	Member, <i>Lehigh Environmental Initiative Curriculum Committee</i>
9/99 – 5/01	Member, <i>LEO Operating Board</i> , Lehigh University.
5/00 – 10/00	Member, Lehigh Workshop on Environmental Science/Technology/Studies Committee.

## SERVICE - PROFESSIONAL

### Offices and committee memberships held in professional organizations:

2/09 – present	Member, The American Association for the Advancement of Science (AAAS) Committee on Opportunities in Science (COOS).
1/07 – present	Co-chair, Association for Science Teacher Education (ASTE) Environmental Education forum.
1/07 – present	Chair, 2008 Association for Science Teacher Education NorthEast Region (NE-ASTE) Annual Meeting.
1/05 – 1/08	Member, Association for Science Teacher Education (ASTE) Technology Committee.
1/04 – 1/05	Co-chair, Association for the Education of Teachers in Science (AETS) Committee on Technology Enhancement for Teacher Education.
6/03 – 1/07	Member, ASTE (formerly AETS) Inclusive Science Education Forum.
1/02 – 12/03	Member, AETS Committee on Technology Enhancement for Teacher Education.
2002 – present	Key Leader, NSTA Building a Presence for Science.
1998-1999	Member, AETS Electronic Communications Committee.

### Other non-university committees, commissions, panels, etc.:

9/99 – 8/04	Education Committee Member, The Discovery Center of Science and Technology, Bethlehem, PA.
10/01	Panel member, National Science Foundation Teacher Enhancement Proposal Review Panel.
9/99 – 5/02	Advisory board member, Middle Educators Global Activities (MEGA), North Carolina State University, Raleigh, NC
3/99 – 12/01	Advisory Council Member, Amoco Interactive Web site focusing on Families Exploring Mathematics and Science in Everyday Life, Georgia State University.

### Other:

10/08	Textbook prospectus reviewer, <i>Think Globally, Teach Locally</i> , SAGE Publications
7/08	Proposal reviewer. Association for Science Teacher Education (ASTE) 2009 Annual Meeting.
3/08	Grant proposal reviewer, Discovery Research program, National Science Foundation
12/07	Textbook reviewer, <i>Readings in Science Methods, K-8</i> , An NSTA Press Journals Collection, NSTA Press

7/07	Proposal reviewer. Association for Science Teacher Education (ASTE) 2008 Annual Meeting - technology sessions.
2/07	Textbook reviewer, <i>The Essentials of Science Classroom Assessment</i> , SAGE Publications
10/06	Proposal reviewer, Society for Information Technology Education 2007 Annual Meeting, Science Education Strand.
7/06	Proposal reviewer. Association for Science Teacher Education (ASTE) 2007 Annual Meeting - technology sessions.
11/05	Textbook reviewer, <i>Science in the Secondary School</i> , Allyn & Bacon.
10/05	Proposal reviewer, Society for Information Technology Education 2006 Annual Meeting, Science Education Strand.
9/05	Proposal reviewer, National Association for Research in Science Teaching 2006 Annual Meeting, Educational Technology Strand.
9/05	Textbook reviewer, <i>Elementary Secondary science teaching methods: Constructing scientific knowledge (1st ed.)</i> , Wadsworth.
7/05	Proposal reviewer. Association for Science Teacher Education (ASTE) 2006 Annual Meeting - technology sessions.
3/05	Textbook reviewer, <i>Teaching about Environmental Issues</i> , Pennsylvania Center for Environmental Education.
1/05	Textbook Reviewer, <i>Elementary Science methods: A constructivist approach (4<sup>th</sup> ed.)</i> , Wadsworth.
11/04	Textbook reviewer, NETS-S Curriculum Series: Science Units for Grades 9-12, International Society for Technology in Education (ISTE).
10/04	Guest Reviewer, <i>Journal of Behavioral Education</i>
10/04	Proposal reviewer, National Association for Research in Science Teaching 2005 Annual Meeting, Educational Technology Strand.
9/04	Proposal reviewer. Association for the Education of Teachers in Science (AETS) 2005 Annual Meeting - technology sessions.
5/04	Textbook reviewer, <i>Elementary science methods</i> textbook, Wiley.
10/03	Proposal reviewer, National Association for Research in Science Teaching 2004 Annual Meeting, Educational Technology Strand.
10/02	Proposal reviewer, National Association for Research in Science Teaching 2003 Annual Meeting, Educational Technology Strand.
11/01	Proposal reviewer, National Association for Research in Science Teaching 2002 Annual Meeting, Educational Technology Strand.
1996 – 2001	Web Forum Moderator, The Science Teaching (SciTeach) Forum, North Carolina State University, 1996-2001.

## PROFESSIONAL MEMBERSHIPS

Association for Science Teacher Education (ASTE)

International Society for Technology in Education (ISTE)

National Association for Research in Science Teaching (NARST)

National Science Teachers Association (NSTA)

Pennsylvania Alliance for Geographic Education (PAGE)

Pennsylvania Science Teacher Association (PSTA)