

Chandra Hawley Orrill

Research Scientist

Learning and Performance Support Laboratory

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EDUCATION

Ph.D.: Instructional Systems Technology, Indiana University, December, 1999
Dissertation Title: *Building technology-based, learner-centered environments: Professional development in real time*

M.S.: Instructional Systems Technology, Indiana University, December, 1996

B.A.: The New College, magna cum laude, The University of Alabama, May, 1993
Depth Study: Computer Applications in Music

RESEARCH EXPERIENCE

Project Manager: InterMath

PIs: Jim Wilson, Mike Hannafin, & Paul Ohme (September, 2000 — present). InterMath is an NSF-funded statewide professional development program for mathematics educators that focuses on using technology tools in mathematics and increasing the mathematics content knowledge of middle-grades teachers. It is a collaborative effort between the LPSL, UGA's Mathematics Education Department; and Georgia Institute of Technology. Duties: Management of project, development and implementation of research and evaluation plan, coordination of sites.

Project Manager: Man on the Moon

With Mike Hannafin, Jim Wilson, & others (September, 2000 — present). The MOTM initiative is a school-based educational reform effort designed to develop, test, and validate a model for using technology to promote ambitious change and lead to dramatic improvements in performance. The current efforts focus on math and technology across K-12 levels. Duties: Design and development of professional development and support structures, identification of needs, consultation, research, day-to-day management, grant-writing.

UGA PI/Researcher: Learning to Teach with Technology Studio

Partnership with Tom Duffy & CRLT, Indiana University (July, 2001-present). LTTS is an online professional development tool based on inquiry-based learning. This project focuses on technology integration in K-12 classrooms. UGA's participation in the project focuses on supporting teachers in developing inquiry-based modules that will be used by other teachers to support their own classroom technology integration. Duties: Manage UGA's involvement in the project, support teachers online and in-person, oversee evaluation of modules produced.

Researcher/Mentor: Wired Professor Project Research

With Joseph Blankson, Ohio University (May, 2000 — present). Work with graduate student to conduct evaluative research on the Wired Professor mentoring project. We are looking at what factors affected participant satisfaction and value of this project. Duties: Project management, data collection and analysis.

Researcher: Problem Based Learning in an Online Instructional Technology Course. With Sara Sage, Indiana University — South Bend & Jamie Kirkley, Indiana University, (May, 1999 — April, 2000). This case study is focused on understanding using problem-based learning in an online, graduate-level course. Duties: Primarily responsible for designing and carrying through the research element focused on the design of a problem for this environment.

Researcher: Classrooms of the Future Project

With Jamie Kirkley, Julie Moore, and Tom Duffy, Indiana University (1997-2000). This project considers how the use of technology in individual university classrooms impacts pedagogy as well as the roadblocks to successful implementation. Duties: Design and conceptualization, data collection, analysis, and write-up working collaboratively with research team.

Research Assistant: Center for Innovation in Assessment - Sage Project , Indiana University (May, 1996-July, 1999). This project was a 5-year effort to understand the implications of using computer-based simulations in the classroom from the perspectives of problem-solving, school-to-work, and assessment. Duties included: data collection, analysis, and write-up for problem-solving aspects of project as well as conception, design, and implementation/write-up of professional development aspects.

PROFESSIONAL EXPERIENCE

Research Scientist: Learning and Performance Support Laboratory
University of Georgia (September, 2000 — present)

Instructional Design Consultant: Transparent Media
Athens, GA (September, 2000 — present)

Assistant Professor: Instructional Technology — Educational Studies
Ohio University (September, 1999 — August, 2000)

Research Assistant: (May, 1996 — June 1999)
Center for Innovation in Assessment — Sage Project (PIs: Roger Farr, Tom Duffy, Beth Greene & Larry Mikulecky)
Data collection and analysis of teachers use of computer-based simulations, support for teachers in our local experimental site, producer — Problem Solving in Classroom, Inc. Simulations (video project)

Graduate Assistant: (May, 1995 — December, 1997)
 Center for Adolescent Studies, Indiana University (Director: Dr. Kris Bosworth)
 Webmaster - Adolescent Directory On-line & Teacher Talk Forum,
 Editor/Webmaster - Teacher Talk (Vol. 3)

Volunteer Intern: (May, 1995 - August, 1995)
 Teaching and Learning Technologies Lab, Indiana University
 Instructional Consultant - work with faculty and TLTL staff, Multimedia
 Developer on parts of ongoing projects

UNIVERSITY TEACHING

Instructor: *Masters Research Project* (Spring, 2000)
 Educational Studies, Ohio University — Chillicothe Campus

Instructor: *Educational Applications of the Internet* (Spring, 2000)
 Educational Studies, Ohio University — Athens Campus

Instructor: *Instructional Design* (Winter, 2000; Spring, 2000)
 Educational Studies, Ohio University — Zanesville & Southern Campuses
 Spring, 2000 — Co-instructor with Jason Orrill

Instructor: *Internship: Theory into Practice* (Winter, 2000)
 Educational Studies, Ohio University — Chillicothe Campus

Instructor: *Technology Applications in Education* (Fall, 1999)
 Educational Studies, Ohio University

Instructor: *Teaching With the Internet Across the Curriculum* (3 times — 1998-99)
 Instructional Systems Technology, Indiana University

Instructor: *Developing WWW Sites for Public Schools* (Summer, 1998)
 Instructional Systems Technology, Indiana University

Guest Lecturer: *General Secondary Teaching Methods* (Spring, 1998)
 Curriculum & Instruction, Indiana University
 Course Instructor: Dr. Kate Cruikshank

GRANTS SUBMITTED

Georgia Rural Mathematics Enhancement Initiative: A Pilot Systemic Change Effort.
 Submitted to the National Science Foundation's Pilot Local Systemic Change
 Program. (Co-PI with Michael Hannafin).

EisenSWET (Eisenhower — Scientific Workings of Everyday Things). Submitted to
 Georgia's Eisenhower Higher Education Program. (Co-PI with J. Steve Oliver).

High School Math Improvement Through Integration. Submitted to Georgia s Eisenhower Higher Education Program. (Principal Investigator).

GRANTS RECEIVED

- Understanding Mathematics Reform from the Teachers Perspective. OVPR — University of Georgia, January — December 2002, \$7,842. (Principal Investigator).
- Learning to Teach with Technology Studio. U.S. Department of Education, July, 2001 — August, 2004. UGA Subaward: \$104, 500. (UGA PI. Grant PI is Thomas Duffy, Indiana University).
- Exploring Math: Primary grade math through technology and investigations. Eisenhower Higher Education, March, 2001-May, 2002, \$57,364. (Project Director with PI Michael Hannafin).

PUBLICATIONS

Journal Articles & Book Chapters Published

- Orrill, C. H. (in press). Supporting online PBL: Design considerations for collaborative problem-solving communication tools. To appear in a special issue of *Distance Education*.
- Orrill, C. & Hill, J. (in press). Maya Thomas. To appear in P. Ertmer & J. Quinn (Eds.) *The ID casebook*. Upper Saddle River, NJ: Merrill.
- Orrill, C. H. (2001). Learning objects to support inquiry-based, online learning. In D. A. Wiley (Ed.) *The instructional use of learning objects*. Bloomington, IN: Association for Educational Communications and Technology
- Orrill, C. H. (2001). Building learner-centered classrooms: A professional development framework for supporting critical thinking. *Educational Technology Research and Development*, 49(1), pp. 15-34.
- Duffy, T. M., Dueber, B., & Hawley, C. L. (1999). Critical thinking in a distributed environment: A pedagogical base for the design of conferencing systems. In C. J. Bonk & K. King (Eds.) *Electronic Collaborators: Researching the Discourse of Learner-Centered Technologies* (pp. 51-78). Hillsdale NJ: Lawrence Erlbaum & Associates.
- Hawley, C. L. (1997). Snapshots of systemic change: A roadmap. *Educational Technology*, 37(6), 57-64.

Published Proceedings of Conference Presentations

- Brown, S.; Erbas, A. K.; Glazer, E.; Orrill, C. H.; Umberger, S. (in press). Learner-Centered Professional Development Environments in Mathematics: The InterMath Experience. To appear in *23rd annual proceedings: Selected research*

and development presentations at the 2001 convention of the Association for Educational Communications and Technology.

Orrill, C. H. & Galloway, C. (in press). Developing a Scaffolding System to Support Mathematical Investigations. To appear in *23rd annual proceedings: Selected research and development presentations at the 2001 convention of the Association for Educational Communications and Technology.*

Hawley, C. L. & Duffy, T. M. (1998). Design model for learner-centered, computer-based simulations. In N. J. Maushak & C. Schlosser (Eds.). *20th annual proceedings: Selected research and development presentations at the 1998 convention of the Association for Educational Communications and Technology* (pp. 159-166). Ames, IA: Iowa State University.

Hawley, C., Moore, J., Chuang, W., & Angeli, C. (1996). Electronic mail. An examination of high-end users. In M. R. Simonson, M. Hays, & S. Hall (Eds.) *18th Annual Proceedings of Selected Research and Development Presentations at the 1996 Convention of the Association for Educational Communications and Technology* (pp. 264-269). Ames, IA: Iowa State University.

PRESENTATIONS

National & State Conferences

Brown, S.; Erbas, A. K.; Glazer, E.; Orrill, C. H.; Umberger, S. (in press). Learner-Centered Professional Development Environments in Mathematics: The InterMath Experience. Roundtable presented at the International meeting of the Association for Educational Communications and Technology: Atlanta. November, 2001.

Orrill, C. H., Black, C. & Hackenberg, A. (2001). *Implementing change: A case study in one mathematics classroom*. Paper presented at the International meeting of the Association for Educational Communications and Technology: Atlanta. November, 2001.

Orrill, C. H. & Galloway, C. (2001). *Developing a Scaffolding System to Support Mathematical Investigations* . Paper presented at the International meeting of the Association for Educational Communications and Technology: Atlanta. November, 2001.

Orrill, C. H. (April, 2001). Supporting online PBL: Design considerations for collaborative problem-solving communication tools. In T. Koschmann (chair), *Studying collaboration in distributed PBL environments*. Structured Poster Symposium to be presented at American Educational Research Association Annual Meeting: Seattle, WA.

Orrill, C. H. (April, 2000). Designing a problem for online delivery. In Sage, S. (chair) *Problem based learning in an online instructional technology course*. Structured Poster Symposium to be presented at American Educational Research Association Annual Meeting: New Orleans, LA.

- Orrill, C. H. (February, 2000) *Building learner-centered classrooms: A professional development framework for supporting critical thinking*. Presented at the Association for Educational Communications and Technology National Convention: Long Beach, CA.
- Dueber, B., Hawley, C., & Duffy, T. (February, 1998). *Supporting critical thinking with web-based conferencing*. Paper presented at the Association for Educational Communication and Technology National Convention: St. Louis.
- Hawley, C. L. & Duffy, T. M. (April, 1998). *The role of the teacher in simulation learning environments*. Poster presented at American Educational Research Association Annual Meeting: San Diego, CA.
- Hawley, C. L., & Duffy, T. M. (February, 1998). *Design model for learner-centered, computer-based simulations*. Presented at the Association for Educational Communications and Technology Annual Meeting: St. Louis, MO.
- Hawley, C. L., Kirkley, J. R., Moore, J. A., Duffy, T. M. (April, 1998). *The impact of technology on building learner-centered environments in higher education: Four case studies*. Roundtable presented at American Educational Research Association Annual Meeting: San Diego, CA.
- Kirkley, J., Moore, J., Hawley, C., & Duffy, T. (February, 1998). *Using technology to create innovative learning environments in higher education: Four studies*. Presented at the Association for Educational Communications and Technology National Convention: St. Louis, MO.
- Boling, E., Hawley, C., Michael, N., & Schwartz, N. (February, 1997) *How to produce professional level work in an academic course*. Presented at the Association for Educational Communications and Technology National Convention: Albuquerque, NM.
- Duffy, T. M., & Hawley, C. L. (March, 1997) *A design analysis of the Chelsea Bank program*. Paper presented at American Educational Research Association Annual Meeting: Chicago, IL.
- Hawley, C. L. & Duffy, T. M. (April, 1997) *Student teacher interactions in the Chelsea Bank simulation*. Paper presented at American Educational Research Association Annual Meeting: Chicago, IL.
- Hawley, C. L., & Kirkley, J. R. (February 1997). *Computer and Internet use in K-12 classrooms: Myths and realities*. Roundtable presented at the Association for Educational Communications and Technology National Convention: Albuquerque, NM.
- Slemp, C., Bray, M., Hawley, C. (February, 1997) *Creating a showcase for instructional and technological innovations: The DID WWW site*. Presented at the Association for Educational Communications and Technology National Convention: Albuquerque, NM..

Hawley, C., Moore, J., & Chuang, W. (February, 1996) *Attitudes of high-end email users*. Paper presented at the Association for Educational Communications and Technology National Convention: Indianapolis, IN.

Moore, J., Kirkley, J., Hawley, C., & Duffy, T. (November, 1996) *Teaching with technology in higher education: A cross-case analysis*. Paper presented at Hypermedia 96: Indianapolis, IN.

Workshops

Orrill, C. & Black, C. (2001). *Strategies for math instruction (5th grade — high school)*. Presented at Teaching Mathematics for Student Success: Watkinsville, GA. (Sponsored by Northeast Georgia RESA)

Duffy, T. M. and Hawley, C. L. (May, 1997) Distance Education Tools and a Pedagogical Framework. Presented at the Connecticut Higher Education Technology Association s Digital Video Expo XVII, Hartford, CT.

Duffy, T. M. and Hawley, C. L. (Feb, 1997) Distance Education Tools and a Pedagogical Framework. Presented at the Association for Educational Communications and Technology National Convention, Albuquerque, NM.

Duffy, T. M. and Hawley, C. L. (July, 1996) Problem Based Learning and the Internet. Presented at DePaul University, Chicago, IL.

Hawley, C. L. & Orrill, J. (1996) Searching the Internet. Presented to the Martinsville Teachers on the Internet, Martinsville, IN.

TECHNICAL REPORTS

Center for Innovation in Assessment (2001). *A study examining three issues concerning an innovative classroom program: Distance education, accountability, and problem solving, 1998-2001. Final Report — August 31, 2001*. Bloomington, IN: Author.

Center for Innovation in Assessment (1998). *Assessing learning and supporting the teacher as coach in Chelsea Bank simulations* . Bloomington, IN: Author.

Center for Reading and Language Studies (1996). *Cognitive, social, and literacy competencies: The Chelsea Bank simulation report*. (Year One Final Report) Bloomington, IN: Author.

Fischler, A., Hawley, C., & Kirkley, J. (1995) *Building educational tools for educational concerns: A needs analysis of the concerns facing Internet use in the K-12 educational systems*. Bloomington, IN: Center for Excellence in Education — Research and Development.

Hawley, C., Kirkley, J., Moore, J., Duffy, T. (1996) *Teaching with technology at Indiana University - A cross-case analysis*. Bloomington, IN: Office of Information Technology, Indiana University.

Orrill, C. H. (2000) *Summary: Building technology-based, learner-centered environments: Professional development in real time*. Athens, OH: Ohio University. (Prepared for the New York City School Board Division of Assessment and Accountability)

SOFTWARE DEVELOPMENT & INSTRUCTIONAL PROJECTS

eWorkshop design for Ohio University Without Boundaries (2001-present):
Development of online strategy for design of self-paced, reorganizable workshops for personal growth.

Learning Objects in Support of the MBAWB (2000-2001): Online information database to support problem-based learning MBA program. Acted as instructional designer and initial information architect and navigation designer.

Pilot MPA Program: Ohio University Without Boundaries (2000): Create a framework for converting face-to-face MPA program to online program. Acted as instructional designer and developed initial prototype.

Problem Solving in Classroom Inc. Simulations (1997-1998): Video for integrating problem-solving skills into teaching. Acted as project manager and co-instructional designer.

Wisdom Tools: Benchmarks Project (1997): All-in-One course development tools for the Web co-evaluator.

DocuHelp (1996): Computer-based interactive manual. Acted as interface designer and co-instructional designer.

I-Web (1996): Web site development effort for educators. Participated in data collection for needs analysis.

Martinsville Teachers on the Internet (1996): Training and support effort for teachers using the Internet, Acted as consultant, trainer, and instructional designer

Peaceful Classrooms (1996-1997): Video developed to improve classroom management. Acted as project manager, co-wrote instructional manual.

AECT-DID Website Design Project (1995): Website designed for members of the Division of Instructional Development in the Association for Educational Communications and Technology. Acted as project manager working with a large team. Continued as site manager until 1999.

Multimedia Exploration of Motown Instruments (1995): Interactive CD-ROM developed for faculty member to support his students in learning the sounds of musical instruments common to Motown music. Acted as interface designer.

COMMITTEE MEMBERSHIPS

National

Association of Educational Communications and Technology

- Member of Leadership Planning Committee (1998-2000)
- Member of Electronic Services Committee (1998-2001)
- DID (Division of Instructional Development) Webmaster (1997-1999)
- Conference paper reviewer for DID 1996-1998

Ohio University

Undergraduate Curriculum Committee, Ohio University (1999-2000)
Curriculum & Instruction Master s Program Committee, Ohio University (2000)
Educational Studies Finance Committee, Ohio University (1999-2000)

AWARDS AND HONORS

Young Researcher Award (2000), Association for Educational Communications and Technology.

University Fellowship (1994-1996), Indiana University

DID Convention Intern (AECT, 1997), Association for Educational Communications and Technology Annual Meeting, Albuquerque, NM

PROFESSIONAL ACTIVITIES

Member of the Design-Based Research Collective (2001-present)

Coordinator of EDCI 203/532 faculty and teaching associates, Ohio University (1999-2000)

Coordinator of EDCI 203/532 teaching associates program, Ohio University (1999-2000)

Reviewer for the Research Center for Educational Technology (Kent State University) grant program (2000 - 2001)

MEMBERSHIPS

National Organizations

Association for Educational Communication and Technology (1994-present)

- Member of Division of Instructional Development, 1995-1999

American Educational Research Association (1996-present)

- Member of Problem-Based Learning Special Interest Group
- Member of Instructional Technology Special Interest Group
- Member of Division C, 1996-2000

Association for the Advancement of Computing in Education (1998-2000)

International Society for Technology in Education (1999-2000)