**Laura Wenk**
Assistant Professor of Cognition and Education
School of Cognitive Science
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## EDUCATION

### Graduate

University of Massachusetts, Amherst. School of Education.
Ed.D. September, 2000.
Major: Curriculum Studies
Minors: Teacher Education, Human Development.

University of Massachusetts, Amherst. School of Education.
M.Ed. February, 1990.
Major: Secondary Science Education.

University of Massachusetts, Amherst. Department of Botany.
M.S. May, 1986.

### Undergraduate

Rutgers University, Cook College, New Brunswick, New Jersey.
B.S. 1980. magna cum laude
Major: Plant Pathology.

### Certification

Massachusetts certified to teach: Biology grades 9-12, General Science grades 9-12 (lapsed).

## RESEARCH INTERESTS

College students' epistemology in science
Relationships among pedagogy and higher order learning outcomes in K-16 classrooms
College students' facility with and understanding of primary literature, particularly in science
K-12 teacher's understanding of the science of learning

## RELEVANT EXPERIENCE

### Academic Positions and College Teaching

**Assistant Professor of Cognition and Education** – School of Cognitive Science, Hampshire College, Amherst, MA. 2003 to present

**Visiting Assistant Professor of Education** – School of Cognitive Science, Hampshire College, Amherst, MA. 2000 – 2003.

**Instructor** – School of Natural Science, Hampshire College, Amherst, MA 2000.

**Instructor** – Smith College. Clinical Internship in Teaching. Summer 1997.

**Visiting Lecturer** – Smith College, Northampton MA 1992 - 1993.

**Laboratory Instructor** – Department of Biological Sciences, Mount Holyoke College. 1986 -1987.

**Instructor** – Western New England College. Introductory biology. 1986

## High School Teaching

**Biology and Physical Science Teacher** –Northampton High School, Northampton, MA.1987 - 1993.

## Grants

Co-PI: Scaffolding Effective Practice for Use of Animations in Teaching Mineralogy and Physical Geology 2008-2010 (NSF Grant No. DUE-0836907 $31,577).

Co-PI: (Pending) Evolution and Islam: Acceptance of biological evolution and perspectives on science and religion among Muslim physicians and medical students (NSF proposal ID 0925982 to the Science, Technology and Society (STS) Program)

Co-PI: Hampshire College Center for Science Education: Expansion of Science Education Research & Outreach Activities, 2006-2008. (Department of Energy Grant No. DE-FG0206ER64256, $481,000)

Senior Researcher: The Development of Scientific Thinking and Conceptions of Science in College Science Students, 1999-2004. (NSF Grant No. 9980519, $997,612). A research and instructional intervention project on higher-order cognitive outcomes in college science students.

Curriculum Developer: Collaboration for Excellence in Science Education under the Hampshire College Center for Science Education, 2002-04. (Department of Energy grant DE-FG02-02ER63397, Work with Springfield, MA schools on science curriculum and teacher development.

## Evaluation research and/or advisory consulting to

Mount Holyoke College  Astronomy, NSF-CCLI funded (2006 – 2008 M. Darby Dyar, PI)
Mount Holyoke College Geoscience Department, NSF-CCLI funded (2000 – 2003, Lauret Savoy, PI)
Mount Holyoke College, South Hadley, MA. Biology Department. (2001 – 2004)
Hitchcock Center for the Environment, Amherst, MA, funded by Massachusetts Environmental Trust and the Massachusetts Environmental Protection Agency (2006 - 2008, Julie Johnson, Director of HCE, PI)
Hampshire College, Amherst, MA. School of Natural Sciences. NSF CRUI funded. (Alan Goodman, PI) 2002 – 2003.
Hampshire College, Amherst, MA. School of Natural Sciences. HHMI grant funded (1995 – 1999 Ann McNeal and Charlene D'Avanzo Co-PI's)

**PROFESSIONAL MEMBERSHIP**

American Educational Research Association (AERA)
National Association for Research in Science Teaching (NARST)
National Science Teachers Association (NSTA)

**COURSES TAUGHT**
How People Learn: Introduction to cognition and education
Designing Curriculum for Understanding
Instructional Methods for Inquiry Based Teaching
Interdisciplinary Teaching (co-taught with M. Bruno)
Special Topics in Childhood, Youth, and Learning
Knowing and Transforming Environments with Children and Youth (co-taught with M. Breitbart)
Educational Research
Educational Research and Program Evaluation
Teacher Inquiry
Inquiring Minds: Finding out what other students think and do
The Social Foundation of Cognition: Theory and practice

**New Course Designed for Fall 09**
Making Sense of the Past: Learning to think and teach like a historian (to be co-taught with J. Wald)

## SERVICE ACTIVITIES AT HAMPSHIRE COLLEGE

Founding member and member of the steering committee for the Critical Studies of Childhood, Youth, and Learning (CYL) program 2004 - present.
Member of the steering committee for Hampshire College Center for Teaching and Learning 2007-present.
Member of the Diversity Committee (2008-present)
Member of the Admissions and Financial Aid Diversity Subcommittee (2008-present)
Member of the Affirmative Action Committee (2008-present)
Member of the Cultural Center Academic Advisory Group (2007-present)
Chair, Search Committee for Assistant Professor of Cognitive Development.
Chair of the Educational Policy Committee (2007 - 2008)
Member of the Educational Policy Committee (2006 - 2007)
Member of the Academic Connections Committee to the Hampshire College Children's Center (2004 - 2006)

## SERVICE ACTIVITIES BEYOND HAMPSHIRE COLLEGE

Amherst Regional Public Schools, Legislative Action Committee – report writing

## PUBLICATIONS, REPORTS, AND THESIS

Wenk, L. & Tronsky, L. (submitted) First Year Students Benefit from Reading Primary Scientific Articles. The Journal of College Science Teaching

Smith, C. & **Wenk, L.** (2006). Relations among three aspects of first-year college students' epistemologies of science. Journal of Research in Science Teaching. 43(8) 747-785.

**Wenk, L.** (2000). Improving Science Learning: Inquiry-based and traditional first-year college science curricula. Dissertation Abstracts International, 61 (10), 3885A. (University Microfilms No. AAT 9988852)

**Wenk, L.,** Dufresne, R., Gerace, W., Leonard, W., & Mestre, J. (1997). Technology-assisted active learning in large lectures. In C. D'Avanzo and A. McNeal (Eds.), Student-active science: Models of innovation in college science teaching, Philadelphia, PA.: Saunders College Publishing.

Dufresne, R. J., W. J., Leonard, W. J., Mestre, J. P., & **Wenk, L.** (1996). *Classtalk*: A classroom communication system for active learning. Journal of Computing in Higher Education, 7, (2) 3-47.

**PAPERS PRESENTED**

**Wenk, L**., Tronsky, L., McNeal, A. (2005, April). Improving college students' primary literature skills: Using primary literature in first year science courses. Paper presented at the meeting of the American Educational Research Association, Montreal, Quebec, Canada.

**Wenk, L.** and Smith, C. L. (April 2004) The Impact of First-Year College Science Courses on Epistemological Thinking: A Comparative Study. Paper presented at the meeting of National Association for Research on Science Teaching, Vancouver, B. C. Canada.

Smith, C. L. and **Wenk, L.** (2003, March). The Relation Among Three Aspects of College Freshmen's Epistemology of Science. Paper to be presented at the meeting of National Association for Research on Science Teaching, Philadelphia, Pa.

**Wenk, L.** (2002, April). Improving students' understanding of the nature of science: inquiry-based instruction in introductory college science courses. Paper presented at Pathways to Change: An International Conference on Transforming Math & Science Education in the K16 Continuum, Washington, DC.

Bruno, M. S., Jarvis, C., & **Wenk, L.** (2002, April). Freshman human biology students solve medical cases through small group work. Paper presented at Pathways to Change: An International Conference on Transforming Math & Science Education in the K16 Continuum, Washington, DC.

Khan, S., Stillings, N., Tronsky, L., **Wenk, L**, & Izumi, A. (2002, April). The integration of multiple, compact simulations to achieve process and content goals in an introductory chemistry course. Presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Khan, S., Stillings, N., Tronsky, L., **Wenk, L**, & Izumi, A. (2002, April). Reasoning processes ofintroductory chemistry students using multiple compact simulations. Presented at theAnnual Meeting of the American Educational Research Association, New Orleans, LA.

**Wenk, L.** (2001, March). Improving students' understanding of the nature of science: Primary literature in the introductory college science course. Paper presented at the meeting of the National Association for Research on Science Teaching, St. Louis, MO.

Stillings, N. A., Ramirez, M. A., & **Wenk, L.** (2000, April). Teaching and learning the nature of science in inquiry-oriented college science courses. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

**Wenk, L.** (1999, December). Inquiry-based introductory science courses increase college students' scientific maturity. Paper presented at la Conferencia Internacional de Ciencias de la Educacion, Camaguey, Cuba.

**Wenk, L.** (1999, March). Developmental measures as evaluation tools for inquiry science programs. Paper presented at the meeting of the National Association for Research on Science Teaching, Boston, MA.

Stillings, N. A., Ramirez, M. A., & **Wenk, L.** (1999, March). Assessing critical thinking in a student-active science curriculum. Paper presented at the meeting of the National Association for Research on Science Teaching, Boston, MA.

**Wenk, L.** & Bruno, M. (1998). Inquiry-based courses - You get more than you ask for: Evaluation of first year science courses at Hampshire College. Paper presented at National Institute for Science Education conference, Washington, DC.

## INVITED TALKS

"Why Inquiry Science in Middle School" Board of Trustees, Eaglebrook School, Deerfield, MA. July 2009

'Teaching and Assessing Discipline-Independent and Discipline-Specific Metacognitive Skills" at The Role of Metacognition in Teaching Geoscience, an On the Cutting Edge: Professional Development for Geoscience Faculty workshop. November 2008.

"Metacognition and Ecology Teaching." Presentation at the joint meeting of the Ecological Society of America and the International Congress of Ecology in Montreal. August 2005.

*"Inquiry and Epistemology in Science: Implications for Instruction in the Sciences and Beyond."* Plenary at the American Association of Higher Education (AAHE) Focus on Learning Workshop: What Faculty and Administrators Need to Know about Learning. February 2004

"Innovative Courses in the First Year and Beyond: Community-, Learner-, Assessment-, and Knowledge-Centered Instruction." American Association of Higher Education (AAHE) Focus on Learning Workshop: What Faculty and Administrators Need to Know about Learning. February 2004

"Metacognition and Higher Order Thinking: How learning goals and learning skills affect effort, intention, and learning." American Association of Higher Education (AAHE) Focus on Learning Workshop: What Faculty and Administrators Need to Know about Learning. February 2004

*"Learning Theory: Application to the College Classroom."* Mitchell College October, 2004.

## WORKSHOPS FOR COLLEGE FACULTY

Mitchell College "Teaching for Intentional Learning" October, 2004.

Winona State University *"Teaching for Intentional Learning"* April 2004.

American Association of Higher Education "Metacognition and Higher Order Thinking: Intentional Learning" given at the Focus on Learning Workshop: What Faculty and Administrators Need to Know about Learning February 20-22, 2004

American Association of Higher Education "Innovative Courses for the First Year" given at the Focus on Learning Workshop: What Faculty and Administrators Need to Know about Learning February 20-22, 2004

University of Delaware *"Using Medical Cases to Teach Human Biology"* (with Merle Bruno and Chris Jarvis) given at Pathways for Better Learning conference. June 2002.

## OUTREACH PROGRAMS TO K-12

Curriculum Director, Collaboration for Excellence in Science Teaching (CESE). CESE's mission is to improve science learning by collaborating with teachers and schools to (1) conduct basic research on the students' conceptual learning in science and on teacher change, (2) design and disseminate curricula and assessments informed by these findings, and (3) enhance teachers' practice by providing opportunities for them to (a) add to their content knowledge, (b) learn pedagogical practices that promote conceptual development, and (c) learn pedagogical practices that engage youth in exploring their schools and communities.

Ongoing workshops throughout the school year and summer institutes in Springfield High Schools, Amherst Regional Middle School, and Amherst Regional Public Schools grades K-6. September 2002 - present.

## Other Languages

Functional in Spanish