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EDUCATION

- 1995-1999 Ph.D., The Pennsylvania State University, University Park: Doctorate in Science Education with emphasis in technology and cognition.
- 1979-1981 M.S. Botany, Central Conn. State College, New Britain: Courses mainly in botanical applications; horticulture, taxonomy, etc.
- 1971-1975 B.A. Zoology, University of Vermont, Burlington: Major courses essentially completed in junior year and senior year completed education certification.
- 1982-1995 Participant in Science Education Workshops including:
AT&T Teachers in Technology Institute; (VT Governor Fellow)
DOE-TRAC Program at Lawrence Livermore National Laboratory
M.I.T. Summer Teacher Program
Principals of Engineering Program at Stony Brook University
Rivers Curriculum Project at So. Illinois State University
Vermont Rivers Study Project, Saint Michael's College

PROFESSIONAL EXPERIENCE

- 2005-Pres. Associate Professor of Education, College of Education and Human Development, University of Southern Maine, Gorham, ME
Duties Include: Teaching Elementary and Secondary Science Methods
Teaching Elementary Science Content, Teaching Theories of Learning,
Supervising student interns
- 1999-2005 Assistant Professor of Education, College of Education and Human Development, University of Southern Maine, Gorham, ME
- 1999 Biology Teacher, State College High School, State College, PA
- 1998-1999 Co-Instructor, Secondary Science Methods, College of Education, The Pennsylvania State University
- 1997-1999 Field Experience Supervisor, College of Ed., The Pennsylvania State University.
- 1997 Graduate Lecturer, Secondary Science Methods, College of Education, The Pennsylvania State University
- 1996-1998. Lab Coordinator, Science Education Labs, The Pennsylvania State University
- 1982-1996 Science Teacher and Coach at Whitcomb High School, Bethel, VT.
Duties included: Teaching and curriculum development for physics, chemistry, physical science, and computer programming classes.
- 1979-1982 Science Teacher at Avon Middle School, Avon, CT.
Duties included: teaching earth and physical science classes in a team-teaching environment.
- 1976-1979 Science and Mathematics Teacher at South Royalton High School, South Royalton, VT.
Duties included: Teaching junior high math, physical science, biology, and chemistry.

RELATED PROFESSIONAL EXPERIENCE

- Proposal Reviewer, NARST Annual Conference, San Diego, CA, 2006
Proposal Reviewer, NARST Annual Conference, Dallas, TX, 2005
Proposal Reviewer, NARST Annual Conference, Vancouver, BC, 2004
Proposal Reviewer, SEED Innovation Review Panel.
Manuscript Reviewer, The International Journal of Learning Technology
Chairman of the MMSTEC Grant Local Leadership Team
Co-coordinator of regional competition of the National Science Bowl
Chair : Wells National Estuarine Reserve Education committee
Board member of Maine Environmental Education Association
College Representative to the Faculty Senate. 2004-
College Representative on the Faculty Senate Executive Council. 2004-
Member of College of Arts and Sciences Committee to develop a Masters Program in Biology at the University of Southern Maine.
Member of the Professional Development Center steering committee. 2000-pres.

Member of Teacher Education Council. 9/99-2003.
Member of the Teacher Education Council Technology Committee. 2001-pres.
Member of Teacher Education Department Technology Committee 2003-pres.

PAPERS PUBLISHED

- Kuech, R. (2006). Pre-Service teachers use hand-held technology to study water quality: Inquiry strategies developed for in the field instruction. . NSF. MMSTEC Monograph.
- Kuech, R. & Sanford, R. (2006) Hand-Held Technology support program for Science Education alumni at the University of Southern Maine. NSF. CTEP. Montana State University monograph.
- Kuech, R. (2004). Science Concept Development in an Inquiry-Based, Informal Learning Environment. the Journal of Classroom Interaction.
- Kuech, R. (2004). Professional Development in Elementary Science Content: Effects on Views and Understandings of NOS. Conference proceedings of the National Association of Research in Science Teaching. Vancouver, BC.
- Kuech, R. and Kimball, W. (2003) . Preparing Teachers for assistive technology using online learning: a descriptive study. Journal of Interactive Online Learning.
- Kuech, R., Zogg, G., Zeeman, S., and Johnson, M. (2003). Technology Rich Biology Labs: Effects on Misconceptions. ERIC online.
- Kuech, R., Lunetta, V. (2002) Digital Technologies Promote Understanding in Science Classrooms. Journal of Computers in Mathematics and Science Teaching.21(2), 103-126
- Blume, G. W., Heid, M. K., Iseri, L., Kuech, R., Laughner, J., Marshall, J., & Wenger, R. (1996) A CAS Learning Study: The Impact Of Access To A Computer Algebra Calculator On The Use Of Multiple Representations By Prospective Mathematics Teachers. In E. Jakubowski, D. Watkins, & H. Biske (Eds.), *Proceedings of the Eighteenth Annual Meeting of the International Group for Psychology in Mathematics Education - North American Chapter..* Columbus, OH: ERIC
- Blume, G. W., Heid, M. K., Iseri, L., Kuech, R., Laughner, J., Marshall, J., & Wenger, R. (1996) A Computer Algebra System (CAS) Learning Study: The Impact Of Access To A CAS Calculator On The Nature Of Mathematical Exploration By Prospective Mathematics Teachers. In E. Jakubowski, D. Watkins, & H. Biske (Eds.), *Proceedings of the Eighteenth Annual Meeting of the International Group for Psychology in Mathematics Education - North American Chapter..* Columbus, OH: ERIC

PROFESSIONAL PRESENTATIONS

- Kuech, R. (2006). Preservice teachers use handheld technology to study water quality: Inquiry strategies developed for in the field instruction. Paper presented at the Society for Information Technology & Teacher Education. Orlando, FL March 20-24.
- Kuech, R. (2005). What makes excellent science teaching. Invited talk at DANE conference, Hyannis, MA October 2005.
- Kuech, R. & Sanford, R. (2005). Participation in Science Bowl – Has it Made a Difference?. Invited talk at the Regional Science Bowl Coordinator’s Meeting, St. Louis, MO. August 17-18, 2005
- Kuech, R. (2004). Professional Development in Elementary Science Content: Effects on Views and Understandings of NOS. Paper presented at the National Association of Research in Science Teaching. Vancouver, BC.
- Kuech, R. (2003). Core Observation Protocol Workshop. Presented for the Maine Math and Science Alliance. Augusta, ME December 18, 2003.
- Kuech, R. and Sanford, R. (2003). National Science Bowl. Presented at MSTA Annual Conference, Gardiner, ME October 10, 2003
- Kuech, R. (2003). Core Observation Protocol workshop. Presented for the University of Maine, Orono. Orono, ME October 4, 2003
- Kuech, R., Zogg, G., Zeeman, S., and Johnson, M. (2003). Technology Rich Biology Labs: Effects on Misconceptions. Presented at the National Association for Research in Science Teaching annual conference in Philadelphia, PA.
- Kuech, R. and Zogg, G. (2002) Understanding Photosynthesis: Comparing Traditional and Technology Rich Inquiry Activities. A paper presented at the National Association for Research in Science Teaching Annual Conference in New Orleans April 7-10.
- Kimball, W. and Kuech, R. (2002) Learning Assistive Technology On-Line: Evaluation of the Learning Environment. Paper Presented at AACTE National Meeting in New York City, Feb 22-26.

- Kuech, R. and Sanford, R. (2001). National Science Bowl. Presented at MSTA Annual Conference, Gardiner, ME October 5, 2001
- Kuech, R. (2001). Science Concept Development in an Inquiry-Based, Informal Learning Environment A paper presented at the National Association for Research in Science Teaching Annual Conference in St. Louis, MO. (Refereed)
- Kuech, R. (2000) Science Concept Development: Discourse Analysis in an Inquiry-Based, Informal Learning Environment. A paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO (Refereed)
- Kuech, R. (1999). Effects of Collaborative Student Interactions, Student-Instructor Behaviors, Problem Types and Technology Tools on Learning. A paper presented at the National Association for Research in Science Teaching Annual Conference in Boston, MA.
- Kuech, R. (1999) Comparison of the Maine Learning Results for Science and Math. MSTA/ATOMIM Annual Conference, China, ME
- Kuech, R. (1999) Effects of Collaborative Student Interactions, Student-Instructor Behaviors, Problem Types and Technology Tools on Learning. National Association for Research In Science Teaching Annual Meeting, Boston, MA
- Kuech, R. (1998) Appropriate Use of Technology Tools in the Science Classroom. Pennsylvania Science Teachers Association, State Conference, Hershey, PA.

PROFESSIONAL HONORS & AWARDS

- Certificate of Appreciation from the U.S. Department of Energy, New England Office, for leadership in the quest for excellence and spirit of discovery that fuel America's advances in science and technology
- National Science Foundation Graduate Research Traineeship at The Pennsylvania State University in Science Education
- Vermont Governor's Fellow at AT&T's Teachers in Technology Program
- Whitcomb High School Senior Class Yearbook Dedication recipient
- Selected to interview for Vermont Commissioner of Education
- Attended the DOE-TRAC Summer Teachers' Program at Livermore National Laboratory

PROFESSIONAL ORGANIZATIONS

- Maine Environmental Education Association
- Maine Science Teachers Association
- Maine Audubon Society
- National Science Teachers Association
- National Association of Biology Teachers
- New England Science Teachers Association
- National Education Association
- National Association for Research in Science Teaching
- Society for Information Technology & Teacher Education