

Vitae

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Educating by Example ... Integrity by Choice

EDUCATION

Ph.D. – Education, Indiana University, Bloomington, IN, 1985.

M.Ed. – University of Nebraska, Lincoln, NE, 1980.

B.S. – Education (Distinction), University of Nebraska, Lincoln, NE, 1978.

PROFESSIONAL POSITIONS HELD - Higher and Secondary Education

Chair, Department of Teaching, Learning and Teacher Education; Melvin C. & Jane N. Nore Professor of Education, College of Education and Human Sciences, University of Nebraska-Lincoln.

Assistant Dean/Director of the School of Teacher Education; Anne & John Daves Distinguished Professor of Education, College of Education, Florida State University, 2010-2014.

Chair, Department of Secondary Education, Kansas State University, 1995 to 2010.

Professor, Department of Secondary Education, Kansas State University (KSU), 1996 to 2010.

Associate Professor, Department of Secondary Education, KSU, 1991 to 1996.

Assistant Professor, Division of Teacher Education, KSU, 1988 to 1991.

Assistant Professor of Biology, Indiana University of Pennsylvania (Indiana, PA), 1985 to 1988.

Instructor, School of Education, Indiana University (Bloomington, IN), 1982-1985.

PROFESSIONAL POSITIONS HELD – Other

Research Assistant, University of Nebraska-Lincoln (UNL), Curriculum and Instruction, 1979-1980.

Teaching Assistant, UNL, School of Life Sciences, 1978-1979.

Editor, NARST News, National Association for Research in Science Teaching, 1991-1996.

Education Coordinator/K-12 Inservice Director, Nebraska State Energy Office, Lincoln, NE, 1980-1982.

AWARDS & HONORS

2010 NARST Outstanding Paper Award (with Mark W. Winslow and John R. Staver). Awarded at the 2010 Annual Conference of the National Association for Research in Science Teaching (Philadelphia, PA March 23, 2010). Paper Title: Evolution and Personal Religious Belief: Christian University Biology-Related Majors' Search for Reconciliation at a Christian University.

2009 Assessment Award for Closing the Gap (with W. White and P. Burden) in recognition of the use of Higher Learning Commission assessment data articulated with statewide and national accreditation. Kansas State University Office of Assessment.

2009 "Making a Difference" Award, Women in Engineering and Science Program, Kansas State University.

2008 Assessment Award for Diversity Initiatives (with W. White and P. Burden) in recognition of valuable contributions to Kansas State University Assessment of Student Learning.

Professorial Performance Award, Kansas State University (May 2007).

2002 College of Education Excellence in Advising Award, Kansas State University.

Award of Excellence - for exemplary performance and leadership in the profession, University of Nebraska-Lincoln Teachers College Alumni Association (May 5, 2000).

Elected "Full" Member, KSU Chapter of Sigma Xi, the Scientific Research Society of North America (March, 1997).

AETS 1996 Award for Best Paper on "Implications of Research for Educational Practice" (with Ann Stalheim-Smith, Division of Biology, KSU). Association for the Education of Teachers of Science. (Seattle, WA, January 13, 1996). Manuscript Title -- "General Biology: Creating a Positive Learning Environment for Elementary Education Majors."

Presidential Award for Distinguished Undergraduate Teaching, Kansas State University, May 13, 1995.

AWARDS & HONORS (continued)

Distinguished Research in Teacher Education for 1994 (with Ann Stalheim-Smith). Association of Teacher Educators - Kansas. (Salina, KS, April 15, 1994).

AETS 1994 Award for Best Paper on "Implications of Research for Educational Practice". Association for the Education of Teachers of Science. (Anaheim, CA, March 31, 1994). Manuscript Title: "Teaching Evolution: Designing Successful Instruction."

Outstanding Contributed Manuscript for 1989, Helen Dwight Reid Educational Foundation, Heldref Publications. Manuscript Title -- "Energy Conservation: A Contest for Elementary/Middle School Students, Grades 5-7."

Lieber Memorial Teaching Associate Award (in recognition of distinguished teaching). Indiana University, Bloomington, IN, April 17, 1985.

GRANT PROPOSALS FUNDED

Enhancement to the TeachLive Learning Environment (\$13,132). Florida State University Information Technology Services IT Governance Council. April 2012.

Evidence-based Inquiry into the distant, remote, or past (EIDRoP): Linking Evidence to Inference in the Kansas science classroom (\$3.1 million) (Senior Collaborator). National Science Foundation (Washington, DC). February 2009 – January 2014.

K-State TEACH Program (\$875,359) (Principal Investigator). National Science Foundation (Washington, DC). June 15, 2009 – May 31, 2014.

The Nature of Science and the Instructional Role of Scientific Theories (\$90,858) (Principal Investigator). National Science Foundation (Washington, DC). June 1, 1990 - November 30, 1992.

Critical Thinking about Ecological Themes (Project Co-Director) (\$17,596). Kansas Board of Regents (Topeka, Kansas). June 1989 - May 1990.

CITAC Equipment Allocation (\$3,000). Vice Provost for Academic Services, Kansas State University (Manhattan, KS). February 1994 – May 1994.

AAAS Student Research Grant (\$1,000). American Association for the Advancement of Science (Washington, DC). 1989-90 academic year.

Creation, Evolution, or Both? (\$950). Symposium on the teaching of evolution. Indiana University of Pennsylvania and the Commonwealth of Pennsylvania University Biologists (November, 1986).

AAAS Student Research Grant (\$800). American Association for the Advancement of Science (Washington, DC). 1990-91 academic year.

GRANT PROPOSALS FUNDED (continued)

A Qualitative Analysis of Student Responses Regarding an Understanding of the Premises of Evolutionary Theory (\$ 400). Faculty Research Grant 1989-90, Graduate School, Kansas State University.

GRANT PROPOSALS SUBMITTED (Not Funded)

Project Metrics: Model for Elementary Teacher Recruitment, Induction, and Certification in STEM. Submitted to the NSF (DRK-12 Teaching “Exploratory” 2013 Grant Proposal, \$438,618)

PUBLICATIONS

Peer-Reviewed Manuscripts

Noh, T., Yang, C., Scharmann, L.C., & Kang, S. (2014). A study of elementary school teachers’ alternative conceptions about change of states and dissolution. *The Asia-Pacific Education Researcher*, 23, 683-698. [Impact factor = 0.933]

Southerland, S.A., & Scharmann, L.C. (2013). Acknowledging the religious beliefs students bring into the science classroom: Using the bounded nature of science. *Theory into Practice*, 52(1), 59-65. [2 cites] [Impact factor = 0.540]

Winslow, M., Staver, J., & Scharmann (2011). Evolution and personal religious belief: Christian university biology-related majors’ search for reconciliation. *Journal of Research in Science Teaching*, 48, 1026-1049. [15 cites] [Impact factor = 2.552]

Kang, H., Scharmann, L.C., Kang, S., & Noh, T. (2010). Cognitive conflict and situational interest as factors influencing conceptual change. *International Journal of Environmental and Science Education (IJESE)*, 5, 383-405. [20 cites] [Impact factor = 0.891]

Griffith, G., & Scharmann, L. (2008). Initial impacts of No Child Left Behind on elementary science education. *Journal of Elementary Science Education*, 20(3), 35-48. [45 cites]

Smith, M.U., & Scharmann, L.C. (2008). A multi-year program developing an explicit reflective pedagogy for teaching preservice teachers the nature of science by ostention. *Science and Education*, 17, 219-248. [22 cites] [Impact factor = 0.707]

Garrett, K.A., Esker, P.D., Sparks, A.H., & Scharmann, L.C. (2008). Writing teaching documents as a class project. *The Plant Health Instructor*. Published online and available at <http://apsnet.org/education/InstructorCommunication/TeachingArticles/Garrett>.

James, M.C., & Scharmann, L.C. (2007). Using analogies to improve the teaching performance of preservice teachers. *Journal of Research in Science Teaching*, 44, 565-585. [23 cites] [Impact factor = 2.552]

Peer-Reviewed Manuscripts (continued)

- Scharmann, L.C. (2007). A dynamic professional development school partnership in science education. *The Journal of Educational Research*, 100 (4), 235-242. [16 cites] [Impact factor = 1.145]
- Kang, S., Scharmann, L.C., Noh, T., & Koh, Hanjoong (2005). The influence of students' cognitive and motivational variables in respect of cognitive conflict and conceptual change. *International Journal of Science Education*, 27, 1037-1058. [60 cites] [Impact factor = 1.340]
- Scharmann, L.C., Smith, M.U., James, M.C., & Jensen, M. (2005). Explicit reflective nature of science instruction: Evolution, Intelligent design, & Umbrellaology. *Journal of Science Teacher Education*, 16, 27-41. [76 cites]
- Kang, S., Scharmann, L.C., & Noh, T. (2005). Examining Students' Views on the Nature of Science: Results from Korean 6th, 8th, and 10th Graders. *Science Education*, 89,314-334. [112 cites] [Impact factor = 2.382]
- Scharmann, L.C. (2005). A Proactive Strategy for Teaching Evolution. *American Biology Teacher*, 67, 12-16. [34 cites] [Impact factor = 0.390]
- Noh, T., Cha, J., Kang, S., & Scharmann, L.C. (2004). Perceived professional needs of Korean science teachers majoring in chemical education and their preferences for online and on-site training. *International Journal of Science Education*, 26, 1269-1289. [10 cites] [Impact factor = 1.340]
- Kang, S., Scharmann, L. C., & Noh, T. (2004). Reexamining the role of cognitive conflict in science concept learning. *Research in Science Education*, 34, 71-96. [75 cites] [Impact factor = 1.104]
- Niaz, M., Abd-El-Khalick, F., Bennarroch, A., Cardellini, L., Laburu, C.E., Marin, N., Montes, L.A., Nola, R., Orlik, Y., Scharmann, L.C., Tsai, C., Tsaparlis, G. (2003). Constructivism: Defense or a continual critical appraisal - A response to Gil-Perez et al. *Science & Education*, 12, 787-797. [25 cites] [Impact factor = 0.707]
- Smith, M.U., & Scharmann, L.C. (2001). Kuhn's ducks, geese, and swans: Teaching and learning the nature of science by ostension (9 pp). In W. F. McComas (Ed.) Proceedings of the 6th International History, Philosophy and Science Teaching Group meeting. (Denver, USA). [File 133 on CD Rom]. Available from the International History, Philosophy and Science Teaching Group, IHPST.ORG.
- Woods, C.S., & Scharmann, L.C. (2001). High school students' perceptions of evolutionary theory. *Electronic Journal of Science Education*, [On-line serial] 6(2), Available via -- <http://ejse.southwestern.edu/article/view/7676> [49 cites]
- Scharmann, L.C., & Smith, M.U. (2001). Further thoughts on defining versus describing the nature of science: A response to Niaz. *Science Education*, 85(6), 691-693. [16 cites] [Impact factor = 2.382]
- Smith, M.U., & Scharmann, L.C. (1999). Defining versus describing the nature of science: A pragmatic analysis for classroom teachers and science educators. *Science Education*, 83(4), 493-509. [203 cites] [Impact factor = 2.382]

Peer-Reviewed Manuscripts (continued)

- Scharmann, L.C., Shroyer, M.G., & Lee, C. (1997). Preservice science teacher orientations toward Science-Technology-Society (STS) Instruction. *Electronic Journal of Science Education*, [On-line serial] 1(3), Available via -- <http://unr.edu/homepage/jcannon/ejse/html> [3 cites]
- Noh, T., & Scharmann, L.C. (1997). Instructional influence of a molecular-level pictorial presentation of matter on students' conceptions and problem solving ability. *Journal of Research in Science Teaching*, 34(2), 199-217. [85 cites] [Impact factor = 2.552]
- National Science Teachers Association (1997). NSTA position statement: The teaching of evolution. *Journal of College Science Teaching*, 27(1), 7-8. (46 cites) [Impact factor = 0.680]
- Stalheim-Smith, A., & Scharmann, L.C. (1996). General biology: Creating a positive learning environment for elementary education majors. *Journal of Science Teacher Education*, 7(3), 169-178. (Reprinted with permission of the National Association of Biology Teachers.) [21 cites]
- Cannon, J.R., & Scharmann, L.C. (1996). Influence of a cooperative early field experience on preservice elementary teachers' science self-efficacy. *Science Education*, 80(4), 419-436. [101 cites] [Impact factor = 2.382].
- Scharmann, L.C., & Hampton, C.M. (1995). Cooperative learning and preservice elementary teacher science self-efficacy. *Journal of Science Teacher Education*, 6(3), 125-133. [45 cites]
- Enochs, L., Scharmann, L.C., & Riggs, I. (1995). The relationship of pupil control to science teacher self-efficacy and outcome expectancy. *Science Education*, 79(1), 63-75. [202 cites] [Impact factor = 2.382]
- Scharmann, L.C. (1994). Teaching evolution: Designing successful instruction. *Journal of Science Teacher Education*, 5(4), 122-129. (Reprinted with permission of the National Association of Biology Teachers.) [51 cites]
- Mead, J., & Scharmann, L.C. (1994). Enhancing critical thinking through structured academic controversy. *American Biology Teacher*, 56(7), 416-419. [19 cites] [Impact factor = 0.390]
- Scharmann, L.C. (1994). Teaching evolution: the influence of peer instructional modeling. *Journal of Science Teacher Education*, 5(2), 66-76. [12 cites]
- Stalheim-Smith, A., & Scharmann, L.C. (1994). General biology: Creating a positive learning environment for elementary education majors. *American Biology Teacher*, 56(4), 216-220. [6 cites] [Impact factor = 0.390]
- Scharmann, L.C. (1993). Teaching evolution: Designing successful instruction. *American Biology Teacher*, 55(8), 481-486. [8 cites] [Impact factor = 0.390]
- Scharmann, L.C., & Block, T. (1992). Teaching evolution: Understanding, concerns, and instructional approach alternatives. *Kansas Biology Teacher*, 2(1): 13-15. [6 cites]

Peer-Reviewed Manuscripts (continued)

- Scharmman, L.C., & McLellan, H. (1992). Enhancing science-technology-society (STS) instruction: an examination of teacher goal orientations. *School Science and Mathematics*, 92(5): 249-252. [9 cites]
- Scharmman, L.C., & Harris, W.H., Jr. (1992). Teaching evolution: Understanding and applying the nature of science. *Journal of Research in Science Teaching*, 29(4): 375-388. (Special Issue on Teaching About the History and Nature of Science and Technology). [95 cites] [Impact factor = 2.792]
- Lumpe, A.T., & Scharmman, L.C. (1991). Meeting contemporary goals for lab instruction: a content analysis of two secondary biology textbooks. *School Science and Mathematics*, 91(6): 231-235. [23 cites]
- Scharmman, L.C. (1991). Teaching angiosperm reproduction by means of the learning cycle. *School Science and Mathematics*, 91(3): 100-104. [8 cites]
- Nastase, A.J., & Scharmman, L.C. (1991). Nonmajors' biology: enhanced curricular considerations. *American Biology Teacher*, 53(1): 31-36. [10 cites] [Impact factor = 0.390]
- Scharmman, L.C. (1990). Enhancing an understanding of the premises of evolutionary theory: The influence of a diversified instructional strategy. *School Science and Mathematics*, 90(2): 91-100. [73 cites]
- Scharmman, L. (1989). Developmental influences of science process skill instruction. *Journal of Research in Science Teaching*, 26(8): 715-726. [10 cites] [Impact factor = 2.792]
- Scharmman, L.C. (1989). Energy conservation: a project for grades 5-7. *Science Activities*, 26(4): 8-13.
- Staver, J.R. & (alphabetical order) Enochs, L.G., Koeppe, O.J., McGrath, D., McLellan, H., Oliver, J.S., Scharmman, L., & Wright, E.L. (1989). A summary of research in science education -1987. *Science Education*, 73(3): 243-389. [11 cites] [Impact factor = 2.382]
- Scharmman, L. (1988). The influences of sequenced instructional strategy and locus of control on preservice elementary teachers' understanding of the nature of science. *Journal of Research in Science Teaching*, 25(7): 589-604. [12 cites] [Impact factor = 2.792]
- Scharmman, L. (1988). Locus of control: a discriminator of the ability to foster an understanding of the nature of science among preservice elementary teachers. *Science Education*, 72(4): 453-465. [18 cites]. [Impact factor = 2.382]
- Scharmman, L.C. (1988). Process orientation to science scale: Author response. *Investigations in Science Education*, 14(3): 77-80.
- Scharmman, L., Harty, H., & Holland, J. (1986). Development and partial validation of an instrument to examine preservice elementary teachers' process orientation to science. *Science Education*, 70(4): 375-387. [9 cites] [Impact factor = 2.382]

Peer-Reviewed Manuscripts (continued)

- Scharmman, L., & Harty, H. (1986). Shaping the nonmajor general biology course. *American Biology Teacher*, 48(3): 166-169. [8 cites] [Impact factor = 0.390]
- Scharmman, L., & Harty, H. (1985). Role expectations of the two-year college biology instructor. *Community/Junior College Quarterly of Research and Practice*, 9(2): 111-118. [3 cites]
- Harty, H., Beall, D., & Scharmman, L. (1985). Relationships between elementary school students' science achievement and their attitudes toward science, interest in science, reactive curiosity, and scholastic aptitude. *School Science and Mathematics*, 85(6): 472-479. [17 cites]
- Scharmman, L., & Harty, H. (1985). Two-year college biology instructors' perceptions about their role expectations. *Proceedings of the Indiana Academy of Science*, 94(1985): 509-515.
- Scharmman, L. (1984). Autumn leaf chromatography. *Science and Children*, 22(1): 11-13.

Peer-Reviewed Manuscripts Under Review

None at present

Manuscripts in Progress

- Scharmman, L., Butler, W., & Varol, M. Nonmajors' Introductory Biology: Adopting Superior Pedagogy. Submitted to Science Education.
- Griffith, G.W., & Scharmman, L.C. Elementary school science and equity issues in science, mathematics, and reading.
- Scharmman, L., Strimaitis, A., & Jakubowski, E. Teacher candidates' use of data for making instructional decisions.

Chapters in Books

- Noh, T., Scharmman, L.C., & Kang, S. (2013). The Influences of Students' Cognitive and Motivational Characteristics in Conceptual Change Using Discrepant Events. In C.B. Lee and D. Johassen (Eds.), *Fostering Conceptual Change with Technology* (pp 79-116). Singapore: Cengage Learning (Asia) Publishers.
- Scharmman, L.C. (2005). The instructional role of scientific theory. In J. Cracraft and R. Bybee, *Evolutionary Science and Society: Educating a New Generation* (pp.83-86). Colorado Springs, CO: Biological Sciences Curriculum Study. (1 cite)
- Scharmman, L.C., James, M.C., & Stalheim-Smith, A. (2004). Assessment in college science courses. In Dennis W. Sunal, Emmett L. Wright, & Jeanelle Bland (Eds.), *Reform in undergraduate science teaching for the 21st century*. Greenwich, CN: Information Age Publishing, Inc. (5 cites)

Chapters in Books (continued)

Scharmann, L.C. (1994). Teaching evolution: Past and present. In John S. Simmons (Ed.), *Censorship - a threat to reading, learning, thinking* (pp. 148-165). Newark, DE: International Reading Association. (15 cites)

Essays in Books (Invited)

Scharmann, L.C. (2004). Teaching evolution: Debate versus discussion. In T. Koballa and D. Tippins, *Cases in Middle and Secondary Science Education (2nd Ed.)*(pp. 199-200). Upper Saddle River, NJ: Pearson/Merrill/Prentice Hall Publishers.

Scharmann, L.C. (2002). Enhancing instructional success in teaching evolution. In D. Tippins and T. Koballa, *Learning from cases. Unraveling the Complexities of Elementary Science Teaching* (pp. 123-127). Boston: Allyn & Bacon. [26 cites]

Scharmann, L.C. (2000). Teaching evolution: Debate vs. discussion. In T. Koballa and D. Tippins, *Cases in Middle and Secondary Science Education* (pp. 172-173). Upper Saddle River, NJ: Merrill/Prentice Hall Publishers.

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1998). A NSTA position statement on the teaching of evolution. In National Academy of Sciences, *Teaching about evolution and the nature of science* (pp.124-126). Washington, DC: National Academy Press.

Essays in Journals (Invited)

Scharmann, L.C. (2003). The risk of intelligent design. *The Science Teacher*, 70(8), 12.

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1997). NSTA position statement on the teaching of evolution. *Journal of College Science Teaching*, 27(1), 7-8. (41 cites)

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1997). NSTA position statement on the teaching of evolution. *NSTA Reports*, 8(6), 11-13.

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1997). NSTA position statement on the teaching of evolution. *Science & Children*, 35(2), 41-42.

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1997). NSTA position statement on the teaching of evolution. *Science Scope*, 21(2), 26-27.

Skoog, G., Cielen, R., Jordan, L., Lariviere, J., Scharmann, L., & Scott, E. (1997). NSTA position statement on the teaching of evolution. *Science Teacher*, 64(7), 57-58.

Published Abstracts/Book Reviews

- Scharmann, L.C., Butler, W., & Varol, M. (2013). Evolutionary Theory as an Advance Organizer in Introductory Biology. Presentation Abstracts (pp. 110-111). NARST Annual International Conference, April 6-9, 2013.
- Scharmann, L.C., Kang, H., Kang, S., & Noh, T. (2012). Situational Interest and Cognitive Conflict as Factors Influencing Conceptual Change. Presentation Abstracts (p. 111). NARST Annual International Conference, March 25-28, 2012.
- Griffith, G.W., & Scharmann, L.C. (2012). The initial Impact of No Child Left Behind with a Focus on Time for Elementary Science and Equity in Science, Math, and Reading. Presentation Abstracts (p. 22). NARST Annual International Conference, March 25-28, 2012.
- Winslow, M.W., Staver, J.R., & Scharmann, L.C. (2009). Evolution and Personal Religious Belief: Christian Biology-Related Majors' Search for Reconciliation. Final Program (p. 221). 82nd National Association for Research in Science Teaching (NARST) International Conference, Anaheim, CA, April 17-21, 2009.
- Southerland, S., Gess-Newsome, J., Good, R., Lederman, N., & Scharmann, L. (2009). Should Pseudoscience Studies Become an Integral Part of NOS and Science Inquiry Curricula? Final Program (p. 318). 82nd NARST International Conference, Anaheim, CA, April 17-21, 2009.
- Scharmann, L.C., Smith, M., Osborne, J., & Griffith, G. (2007). Views of the Nature of Science from Biology, Philosophy/Theology, Pre-service Instruction, International Perspectives, Scientists, and a (Kansas) Classroom Teacher. Final Program (p. 315). 80th NARST International Conference, New Orleans, Louisiana, April 15-18, 2007.
- James, M.C. & Scharmann, L.C. (2004). The Influence of Analogy-Based Pedagogy Instruction on Pedagogical Reasoning Ability. Final Program and Abstracts (p. 191). 77th NARST International Conference, Vancouver, British Columbia (Canada), April 1-3, 2004.
- Scharmann, L.C., Smith, M.U., James, M.C., & Jensen, M. (2003). Explicit Reflective Nature of Science Instruction: Evolution, Intelligent Design, & Umbrellaology. Final Program and Abstracts (p. 218). 76th NARST International Conference, Philadelphia, PA, March 23-26, 2003.
- Shroyer, M.G., Scharmann, L.C., & Hancock, M. (2003). PDS Partnerships and Simultaneous Reform. Final Program and Abstracts (p. 225). 76th NARST International Conference, Philadelphia, PA, March 23-26, 2003.
- Scharmann, L.C., Smith, M.U., & James, M.C. (2002). Novice teachers' understanding of the nature of science: An action research project. Final Program and Abstracts (p. 221). 75th NARST International Conference, New Orleans, LA, April 7-10, 2002.
- Smith, M.U., & Scharmann, L.C. (2001). Kuhn's ducks, geese, and swans: Teaching and learning the nature of science by ostension. Program of Sessions, Events, and Abstracts (p. 137). 6th International History, Philosophy, and Science Teaching Group, Denver, CO, November 7-10, 2001.

Published Abstracts/Book Reviews (continued)

- Scharmann, L.C. & Stallings, M.A. (2000). Perceptions of evolution among high school students in rural north Georgia. Final Program and Abstracts (p. 263). 73rd Annual NARST Conference, New Orleans, LA, April 28-May 1, 2000.
- Jones, L.S., Haury, D.L., Jackson, D.F., Meadows, L., Scharmann, L.C., Smith, M.U., and Woods, C.S. (1999). Teaching strategies that promote student understanding/acceptance of evolutionary theory. Final Program and Abstracts (p. 184). 72nd Annual NARST Conference, Boston, MA, March 28-31, 1999.
- Lee, C.A., & Scharmann, L.C. (1998). Influential instructional factors in an introductory college nonmajors biology laboratory. Final Program and Abstracts (p. 187), 71st Annual NARST Conference, San Diego, CA, April 19-22, 1998.
- Woods, C.S., & Scharmann, L.C. (1998). Influence of race, ethnicity, gender, and grade level on an acceptance of evolutionary theory among secondary science students (contributed paper). Final Program and Abstracts (p. 275), 71st Annual NARST Conference, San Diego, CA, April 19-22, 1998.
- Scharmann, L.C. (1997). Cooperative learning in preservice teacher education: A synthesis of three applications. Final Program and Abstracts (page 183), 70th Annual NARST Conference, Oak Brook, IL, March 21-24, 1997.
- Scharmann, L.C., Shroyer, M.G., & Lee, C. (1996). Preservice secondary science teachers' orientations toward science-technology-society (STS) instruction. Final Program and Abstracts (page 178), 69th Annual NARST Conference, St. Louis, MO, March 31-April 3, 1996.
Published Abstracts/Book Reviews (cont.)
- Scharmann, L.C. & Hampton, C. (1995). Science teaching self-efficacy of preservice elementary teachers as influenced by heterogeneous grouping. Final Program and Abstracts (page 167), 68th Annual NARST Conference, San Francisco, CA, April 22-25, 1995.
- Woods, C.S. & Scharmann, L.C. (1995). The influence of race, ethnicity, gender, and grade level on an acceptance of evolutionary theory among secondary science students (poster session). Final Program and Abstracts (page 189), 68th Annual NARST Conference, San Francisco, CA, April 22-25, 1995.
- Wilson, J.D. & Scharmann, L.C. (1994). An evaluation of field experiences for the preparation of elementary teachers for science, mathematics, and technology. Abstracts of Presented Papers (page 69), 67th Annual NARST Conference, Anaheim, CA, March 26-29, 1994.
- Cannon, J.R. & Scharmann, L.C. (1994). Influence of cooperative early field experiences on preservice elementary teachers' science self-efficacy. Abstracts of Presented Papers (page 7), 67th Annual NARST Conference, Anaheim, CA, March 26-29, 1994.

Published Abstracts/Book Reviews (continued)

- Scharmann, L.C. & Stalheim-Smith, A. (1993). Research results from a constructivist learning environment for elementary education majors: General biology. Abstracts of Presented Papers (pages 154-155), 66th Annual NARST Conference, Atlanta, GA, April 15-19, 1993.
- Scharmann, L.C. (1993). Book Review. Teaching science. A guide for college and professional school instructors (Gastel, 1991). *Journal of Natural Resources and Life Science Education*, 22(2): 193-194.
- Scharmann, L.C. (1992). Problems & questions: Evolution education. Proceedings of the 1992 Evolution Education Research Conference (pages 170-171), Baton Rouge, LA, December 4-5, 1992.
- Scharmann, L.C. (1992). Teaching evolution: the influence of peer instructional modeling. Abstracts of Presented Papers (page 74), 65th Annual NARST Conference, Boston, MA, March 21-25, 1992.
- Scharmann, L.C. (1991). From the Beginning (David Peters, 1991). Morrow & Company. Book review appearing in *School Science and Mathematics* 91(7): 333.
- Scharmann, L.C. & Harris, W.M., Jr. (1991). Teaching evolution: under-standing, concerns, and instructional approaches. Abstracts of Presented Papers (page 92), 64th Annual NARST Conference, The Abbey at Lake Geneva, WI, April 7-10, 1991.
- Lumpe, A. & Scharmann, L.C. (1991). A content analysis of secondary biology laboratory activities. Abstracts of Presented Papers (page 74), 64th Annual NARST Conference, The Abbey at Lake Geneva, WI, April 7-10, 1991.
- Scharmann, L.C. (1990). Results of an inservice workshop to promote science-technology-society instructional orientations. Abstracts of Presented Papers (pages 138-139), 63rd Annual NARST Conference, Atlanta, GA, April 8-11, 1990.
- Enochs, L., Scharmann, L.C., & Riggs, I. (1990). Further validation of a preservice elementary science efficacy belief instrument: the contribution of pupil control ideology. Abstracts of Presented Papers (page 93), 63rd Annual NARST Conference, Atlanta, GA, April 8-11, 1990.
- Scharmann, L.C. (1989). The influence of a diversified instructional strategy on an understanding of the nature of scientific/evolutionary theory. Abstracts of Presented Papers (page 49), 62nd Annual NARST Conference, San Francisco, CA, Mar. 30-Apr. 1, 1989.
- Scharmann, L.C. (1989). The influence of a diversified instructional strategy on an understanding of the nature of scientific/evolutionary theory. Abstracts of Presented Papers (page 49), 62nd Annual NARST Conference, San Francisco, CA, Mar. 30-Apr. 1, 1989.
- Scharmann, L.C. (1989) [with Larry Enoch, Emmett Wright, John Staver, & Steve Oliver]. Rural science teaching: characteristics, pre- and inservice preparation, and research. Abstracts of Presented Papers (page 98), 62nd Annual NARST Conference, San Francisco, CA, March 30 - April 1, 1989.

Published Abstracts/Book Reviews (continued)

Scharmann, L.C. (1989) [with John Staver, Larry Enochs, Steve Oliver, & Emmett Wright]. Annual Review of research for 1987. Abstracts of Presented Papers (page 98), 62nd Annual NARST Conference, San Francisco, CA, March 30 - April 1, 1989.

Scharmann, L.C. (1988). Creation vs. evolution: a belief in both? Proceedings from the Rural and Small Schools Conference, page 13 (10th Annual Rural and Small Schools Conference, Manhattan, KS, October 24 - 25, 1988).

Scharmann, L.C. (1986). The influence of sequenced instructional strategy and locus of control on preservice elementary teachers' understanding of the nature of science. Abstracts of Presented Papers (page 99), 59th Annual NARST Conf., San Francisco, March 28 - 31, 1986.

Scharmann, L.C. (1986). The effects of sequenced instructional strategy and locus of control on preservice elementary teachers' understanding of the nature of science. (Indiana University.) Dissertation Abstracts International, 46(10): 2988-A.

Invited Essays

Scharmann, L.C. (1999). Evolution does have its place. *The Chalkboard* (September/October; pp 6-7). Manhattan, KS: Kansas State University, College of Education.

Scharmann, L.C. (1999). Teaching evolution. *Swap Session Newsletter*, No. 10. Faculty Exchange for Teaching Excellence (Kansas State University).

Scharmann, L.C. (1995). Assessing and enhancing student performance. *The Master Teacher*, 26(20), 1-6.

Scharmann, L.C. (1994). Understanding students who hurt. *The Master Teacher*, 25(9), 1-6.

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Newspaper Editorials

- Scharmann, L.C. (2000). Evolution/Creation. Forum/Opinion (August 15, 2000; p. B-6). Kansas City, MO: Kansas City Star.
- Scharmann, L.C. (2000). Raising more questions. Opinion (July 19, 2000; p. A-4). Topeka, KS: The Topeka Capital-Journal.
- Scharmann, L.C. (2000). The risk of Intelligent Design Theory. Opinion (July 14, 2000; p. A-6). Manhattan, KS: The Manhattan Mercury.
- Scharmann, L.C. (2000). The risk of I.D. Local News/Letters (July 13, 2000). Pratt, KS: The Pratt Tribune.
- Scharmann, L.C. (1999). Why we should bother with evolution. Letters to the Journal (June 9, 1999; p. B-2). Salina, KS: The Salina Journal.
- Scharmann, L.C. (1999). It's not about beliefs it's about usefulness. Opinions-Editorials-Letters (June 4, 1999; p. A-8). Hutchinson, KS: The Hutchinson News.
- Scharmann, L.C. (1999). Evolution does have place. Op-Ed (May 30, 1999; p. 5-A). Topeka, KS: The Topeka Capital-Journal.
- Scharmann, L.C. (1999). 'Intelligent design' no alternative to evolution. Opinion (May 24, 1999; p. A-6). Manhattan, KS: The Manhattan Mercury.

Newsletters Edited

- Scharmann, L.C. [Editor] (December, 1995). NARST News, 37(4), 1-16.
- Scharmann, L.C. [Editor] (September, 1995). NARST News, 37(3), 1-12.
- Scharmann, L.C. [Editor] (June, 1995). NARST News, 37(2), 1-8.
- Scharmann, L.C. [Editor] (March, 1995). NARST News, 37(1), 1-8.
- Scharmann, L.C. [Editor] (December, 1994). NARST News, 36(4), 1-8.
- Scharmann, L.C. [Editor] (September, 1994). NARST News, 36(3), 1-8.
- Scharmann, L.C. [Editor] (June, 1994). NARST News, 36(2), 1-16.
- Scharmann, L.C. [Editor] (March, 1994). NARST News, 36(1), 1-8.
- Scharmann, L.C. [Editor] (December, 1993). NARST News, 35(4), 1-12.
- Scharmann, L.C. [Editor] (September, 1993). NARST News, 35(3), 1-12.
- Scharmann, L.C. [Editor] (June, 1993). NARST News, 35(2), 1-16.
- Scharmann, L.C. [Editor] (March, 1993). NARST News, 35(1), 1-8.
- Scharmann, L.C. [Editor] (December, 1992). NARST News, 34(4), 1-16.
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Newsletters Edited (continued)

Scharmann, L.C. [Editor] (June, 1992). NARST News, 34(2), 1-20.
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Scharmann, L.C. [Editor] (December, 1991). NARST News, 33(4), 1-12.
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Scharmann, L.C. [Editor] (March, 1991). NARST News, 33(1), 1-4.

Curriculum Development / Technical Reports

- Scharmann, L.C. (2008). Biology (6-12). Licensure Program Report, Kansas State Department of Education. (79 pp.)
- Scharmann, L.C. (2008). Chemistry (6-12). Licensure Program Report, Kansas State Department of Education. (77 pp.)
- Scharmann, L.C. (2008). Earth and Space Science (6-12). Licensure Program Report, Kansas State Department of Education. (77 pp.)
- Scharmann, L.C. (2008). Physics (6-12). Licensure Program Report, Kansas State Department of Education. (76 pp.)
- Scharmann, L.C. (2003). The consequences of evolutionary thought. Manhattan, KS: Department of Secondary Education. (58 pp.)
- Scharmann, L.C. (2001). Institutional Report (Standard 3: Field Experience). National Council for the Accreditation of Teacher Education.
- Scharmann, L.C. (2000). Why bother with evolution. Manhattan, KS: Department of Secondary Education. (63 pp.)
- Scharmann, L.C. (1982). Nebraska energy education - 1982: an evaluation. Lincoln, NE: Nebraska State Energy Office. (118 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Coal: fuel of the past, hope of the future. Lincoln, NE: Nebraska State Energy Office. (67 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Electrical power generation. Lincoln, NE: Nebraska State Energy Office. (39 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Energy conservation in the home. Lincoln, NE: Nebraska State Energy Office. (83 pp.)

Curriculum Development / Technical Reports (continued)

- Scharmann, L.C., & McDermott, H. [Editors] (1981). Energy from the atom. Lincoln, NE: Nebraska State Energy Office. (29 pp.)
- Scharmann, L.C. [Editor] (1981). Energy: yesterday, today, and tomorrow. Lincoln, NE: Nebraska State Energy Office. (79 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Fueling around could be hazardous to your health. Lincoln, NE: Nebraska State Energy Office. (38 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Gasohol: an energy alternative. Lincoln, NE: Nebraska State Energy Office. (49 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). History of United States energy. Lincoln, NE: Nebraska State Energy Office. (25 pp.)
- Scharmann, L.C., & McDermott, H. [Editors] (1981). Oil: fuel of the past. Lincoln, NE: Nebraska State Energy Office. (75 pp.)
- Scharmann, L.C. [Editor] (1981). Solar energy in the home. Lincoln, NE: Nebraska State Energy Office. (23 pp.)
- Scharmann, L.C. [Editor] (1980). Energy efficiency for architectural drafting instructors. Lincoln, NE: Nebraska State Energy Office. (35 pp.)
- Scharmann, L.C. [Editor] (1980). Energy efficiency for automotive instructors. Lincoln, NE: Nebraska State Energy Office. (21 pp.)
- Scharmann, L.C. [Editor] (1980). Energy efficiency for building construction technology. Lincoln, NE: Nebraska State Energy Office. (33 pp.)
- Scharmann, L.C. [Editor] (1980). Energy efficiency for electrical technology. Lincoln, NE: Nebraska State Energy Office. (38 pp.)
- Scharmann, L.C. [Editor] (1980). Energy efficiency for heating, ventilating, air-conditioning instructors. Lincoln, NE: Nebraska State Energy Office. (28 pp.)
- Scharmann, L.C. [Editor] (1980). Oil shale: the reluctant energy source. Lincoln, NE: Nebraska State Energy Office. (31 pp.)
- Scharmann, L.C. [Editor] (1980). Hydroelectric power: energy from falling water. Lincoln, NE: Nebraska State Energy Office. (24 pp.)
- Scharmann, L.C. [Editor] (1980). Oil refineries: what do we get from a barrel of crude oil? Lincoln, NE: Nebraska State Energy Office. (12 pp.)

Curriculum Development / Technical Reports (continued)

Scharmann, L.C. [Editor] (1980). Gasohol supplement: a laboratory experiment. Lincoln, NE: Nebraska State Energy Office. (10 pp.)

Scharmann, L.C. [Editor] (1980). A project to obtain data on motor vehicle fuel economy over short distances. Lincoln, NE: Nebraska State Energy Office. (11 pp.)

Scharmann, L.C. [Editor] (1980). The U.S. and OPEC: where do we go from here? Lincoln, NE: Nebraska State Energy Office. (28 pp.)

Scharmann, L.C. (1980). Tour of a nuclear power plant: a slide narrative. Lincoln, NE: Nebraska State Energy Office.

Scharmann, L.C. (1980). Tour of a coal-fired power plant: a slide narrative. Lincoln, NE: Nebraska State Energy Office.

DOCTORAL CANDIDATES GRADUATED (Major Professor)

Name	Year	Dissertation Title
Ana Lorena Barboza	2010	Perceptions and Practices in Integrating Technology in Spanish Language Instruction.
John Christopher Herrera	2010	Teacher Beliefs and Practices: Their Effects on Student Achievement in the Urban School Setting.
George W. Griffith	2009	The Initial Impact of No Child Left Behind with a Focus on Time for Elementary Science and Equity in Science, Mathematics, and Reading.
Mark W. Winslow	2008	Evolution and Personal Religious Belief: Christian Biology-Related Majors' Search for Reconciliation at a Christian University.
Mark C. James	2003	The Influence of Analogical Reasoning Instruction on the Pedagogical Reasoning Ability of Preservice Elementary Teachers.
Cherin A. Lee	1997	A Qualitative Characterization of an Introductory College Nonmajors Biology Laboratory.
Mark A. Stallings	1996	Enhancing an Understanding of Evolution: The Influence of a Diversified Instructional Strategy on High School Biology Students.
Corey S. Woods	1995	The Influence of Race, Ethnicity, Gender, and Grade Level on an Acceptance of Evolutionary Theory among Secondary Science Students.
Taehee Noh	1995	The Instructional Influence of Pictorial Presentation of Matter at the Molecular Level on Students' Conceptions and Problem Solving Ability.
John R. Cannon	1992	Influence of Cooperative Early Field Experience on Preservice Teachers' Science Self-Efficacy.

MASTERS THESIS/REPORT CANDIDATES GRADUATED (Major Professor)

Name	Year	Thesis/Report Title
Matthew D. Krehbiel	2006	Science is as Science Does: Aligning Teaching Philosophy, Objectives, and Assessment.
Frederick L. Nelson	2003	Implementing Portfolio Assessment in a High School Physics Class.
Kyler Alan Barnes	1997	First Radio, Then Television, Now Computers and the Internet: Waves in Technology.
Lesli A. Johnson	1997	Influence of Cooperative Learning on 9th Grade Physical Science Students.
Colleen M. Hampton	1991	Science Teaching Self-Efficacy of Preservice Elementary Teachers as Influenced by Heterogeneous Grouping.

PRESENTATIONS

What Makes a Theory Powerful? Presented at the FSU Young Scholars Program, 2013 Summer Institute. Tallahassee, FL (July 16, 2013).

Evolutionary Theory as an Advance Organizer in Introductory Biology. Presented at the NARST Annual International Conference, April 6-9, 2013.

The Long-Term Impacts of Teachers. Presented for Rotary International. Tallahassee, FL (November 19, 2012).

Situational Interest and Cognitive Conflict as Factors Influencing Conceptual Change. Presented (with Kang, H., Kang, S., & Noh, T.), at the NARST Annual International Conference, March 25-28, 2012.

The Initial Impact of No Child Left Behind with a Focus on Time for Elementary Science and Equity in Science, Math, and Reading. Presented (with George W. Griffith) at the NARST Annual International Conference, March 25-28, 2012.

What Makes a Theory Powerful? Presented for the FSU-Teach Program. Tallahassee, FL (December 1, 2011).

What Makes a Theory Powerful? Presented at the FSU Young Scholars Program, 2011 Summer Institute. Tallahassee, FL (July 11, 2011).

Evolutionary Theory: Finding a Place to Stand. Presented at the KSU GK-12 2010 Summer Institute. Manhattan, KS (June 15, 2010).

Curriculum Making. Presented at a KSU GK-12 academic year seminar. Manhattan, KS (April 28, 2010)

Talking about Conflicts and Considerations of Different Belief Structures. Presented at the KSU GK-12 2009 Summer Institute. Manhattan, KS (July 3, 2009).

Inquiry-Based Teaching and Making it Work. Presented (with Matt Krehbiel) at the KSU GK-12 2009 Summer Institute. Manhattan, KS (July 3, 2009).

Teaching the Nature of Science as a Continuum: Pseudoscience without the Pejorative (with Mike U. Smith) at the International History, Philosophy, and Science Teaching Conference, Notre Dame University (South Bend, IN), June 25, 2009.

Standards-Based Teaching and its Impact on Education. Presented (with Jackie Spears and Mary Mignano) at the KSU GK-12 2009 Summer Institute. Manhattan, KS (June 24, 2009).

But No One Was There. Presented as a part of a panel discussion (with Timothy Bolton, Bruce Glymour, Anthony Joern, and Iris Totten) at the KSU GK-12 2009 Summer Institute. Manhattan, KS (June 22, 2009).

PRESENTATIONS (cont.)

Evolutionary Theory – Finding a Place to Stand. Presented at the conference, "Connecting your Classroom to Agriculture." Manhattan, KS, June 9, 2009.

Evolution and Personal Religious Belief: Christian Biology-Related Majors' Search for Reconciliation. Presented (with Mark Winslow and John Staver) at the 82nd National Association for Research in Science Teaching (NARST) International Conference, Anaheim, CA, April 17-21, 2009.

Should Pseudoscience Studies Become an Integral Part of NOS and Science Inquiry Curricula? Presented (with Sherry Southerland, Julie Gess-Newsome, Ron Good, and Norm Lederman) at the 82nd National Association for Research in Science Teaching (NARST) International Conference, Anaheim, CA, April 17-21, 2009.

Views of the Nature of Science: An Introspective Analysis (1985-2008). Presented at a research seminar, Florida State University, Tallahassee, FL (December 3, 2008).

Middle School Physical Science Inquiry Instruction. Presented at the professional development summer science institute entitled, "Project Connect" (connections that create science conceptual change). Manhattan, KS, July 10-11, 2008.

What is Science? A Proactive Strategy for Teaching Evolution. Presented at the conference, "Connecting your Classroom to Agriculture." Manhattan, KS, June 20, 2008.

Inquiry and the Nature of Science. Presented at the professional development summer science institute entitled, "Project Connect" (connections that create science conceptual change). Manhattan, KS, July 10-12, 2007.

Why Bother with Evolution? Presented at the conference "Connecting your Classroom to Agriculture." Manhattan, KS, June 29, 2007.

Evolution & the Nature of Science: Transcending Dichotomies. Presented at the 2007 Annual Meeting of the Kansas Association of Teachers of Science (KATS), Junction City, KS (Rock Springs 4-H Ranch), April 21, 2007.

Views of the Nature of Science: Pre-service Science Teacher Education. Presented at the 80th National NARST International Conference, New Orleans, LA (April 15, 2007).

Evolution & Nature of Science Education - A Research Retrospective. Invited seminar presentation for the School of Education and Department of Biology, Indiana University, Bloomington, IN (April 2, 2007).

Initial Impacts of "No Child Left Behind" on Elementary Science Education. Poster session presented (with George Griffith) at the Graduate Research Forum, KSU, Manhattan, KS (March 2, 2007).

Evolutionary Theory: Finding a Place to Stand. Presented at the 98th Annual National Rural Education Convention and Research Symposium (Kansas City, MO, October 23, 2006).

PRESENTATIONS (cont.)

Strategies for Teaching Evolution. Presented (with Albert Frisby, Brad Williamson, and David Rintoul) at the Sigma Xi invited lecture series, Manhattan, KS, February 15, 2006.

Scientific Inquiry's Most Powerful Tools - Theories! Presented at the 2005 Annual Meeting of KATS, Junction City, KS (Rock Springs 4-H Ranch), April 23, 2005.

Understanding and Misunderstanding Scientific Theories. Presented at the International Friendship Dinner sponsored by Ecumenical Campus Ministries, Manhattan, KS, January 26, 2005.

Reform in Undergraduate Science Teaching for the 21st Century: Research Trends. Presented (with Mark James and Ann Stalheim-Smith) at the Association for the Education of Teachers in Science (AETS) International Meeting, Colorado Springs, CO, Jan. 20, 2005.

Teaching the Tree of Life: The Instructional Role of Scientific Theory. Presented an invited paper at an American Institute of Biological Sciences Symposium entitled "Evolutionary Science and Society: Educating a New Generation." Sponsored by the Biological Sciences Curriculum Study and American Institute of the Biological Sciences. 2004 NABT Annual Meeting, Chicago, November 10-13, 2004.

Real World Problems: How Medical Students Learn. Presented (with J. Pickrell, F. Oehme, R. Roland, R. Chun, L. Garrett, B. Biles, and J. Staver) at the Case Study Teaching in Science Conference, Buffalo, NY, October 8-9, 2004.

The Influence of Analogy-Based Pedagogy Instruction on Pedagogical Reasoning Ability. Presented (with Mark James) at the 77th National Association for Research in Science Teaching (NARST) International Conference, Vancouver, British Columbia (Canada), April 1-3, 2004.

Analogies at the Heart of Teaching and Learning. Presented (with Mark James) at the 2003 Annual Meeting of the Kansas Association of Teachers of Science (KATS), Junction City, KS (Rock Springs 4-H Ranch), April 26, 2003.

Explicit Reflective Nature of Science Instruction: Evolution, Intelligent Design, & Umbrellaology. Presented (with Mike Smith, Mark James, and Murray Jensen) at the 76th NARST International Conference (NARST), Philadelphia, PA, March 24, 2003.

Partnerships and Simultaneous Reform. Presented (with Gail Shroyer and Lisa Biteau) at the 76th NARST International Conference (NARST), Philadelphia, PA, March 23, 2003.

Science Education at KSU: A Dynamic Professional Development School (PDS) Partnership. Presented (with Tish Simpson, Dru Clarke, and Gail Shroyer) at AETS, St. Louis, MO, January 31, 2003.

Novice Science Teachers' Understanding of the Nature of Science: An Action Research Project. Presented (with Mike U. Smith & Mark C. James) at the 75th NARST International Conference, New Orleans, LA, April 8, 2002.

PRESENTATIONS (cont.)

- Kuhn's Ducks, Geese, and Swans: Teaching and Learning the Nature of Science by Ostension. Presented (with Mike U. Smith) at the 6th Conference of the International History, Philosophy, and Science Teaching Group, Denver, CO, November 10, 2001.
- Intelligent Design Theory: The latest Chapter in the ongoing Controversy between the Creationist Community and the Scientific and Science Education Communities. Presented (with John Staver) at the 74th Annual Meeting of NARST, St. Louis, MO, March 25, 2001.
- Preparing Science Teachers for Anti-science Actions: Avoiding Red Flags, Using Proactive Strategies, & being Prepared. Presented at the AETS International Meeting, Costa Mesa, CA, January 18, 2001.
- Teaching Evolution: Managing a Difficult Dialog. Presented at a High Plains Consortium Conference entitled, "Helping Secondary Methods Faculty with the Teaching of Evolution," Columbia, Missouri, May 19, 2000.
- Perceptions of Evolution among High School Students in Rural North Georgia. Presented (with Mark A. Stallings) at the 73rd Annual Meeting of NARST, New Orleans, LA, May 1, 2000.
- Teaching Strategies that Promote Student Understanding/Acceptance of Evolutionary Theory. Symposium presented (with Jones, L.S., Haury, D.L., Jackson, D.F., Meadows, Smith, M.U., and Woods, C.S. (1999) at the 72nd Annual Meeting of NARST, Boston, MA, March 29, 1999.
- Creation, Evolution, or Both? Strategies for Teaching Evolution. Presented as a guest lecture for the Department of Elementary Education, Kansas State University, March 3, 1999.
- Classroom Strategies for Dealing with Difficult Dialogues. Presented at a Faculty Exchange for Teaching Excellence "Swap Session." Kansas State University, February 22, 1999.
- Teaching Evolution: Misrepresenting the Nature of Science? Paper presented (with J.D. Hand) at a Regional Meeting of the National Science Teachers Association (NSTA), Albuquerque, NM, December 3-5, 1998.
- PDS Challenges: Establishing University/School District Agreements and Funding. Presented at the Kansas Professional Development School Conference, Manhattan, KS, September 18, 1998.
- Creation, Evolution, or Both? Presented as a guest lecture for the Department of Elementary Education, Kansas State University, June 3, 1998.
- Teaching Evolution: Misrepresenting the Nature of Science? Paper presented (with J.D. Hand) at the 1998 KATS Meeting. Rock Springs Ranch, Kansas, April 25, 1998.
- Influence of Race, Ethnicity, Gender, and Grade Level on an Acceptance of Evolutionary Theory among Secondary Students. Paper presented (with Corey S. Woods) at the 71st Annual Meeting of NARST, San Diego, CA, April 19-22, 1998.

PRESENTATIONS (cont.)

Faculty Perspectives on Multimedia in the Classroom. Presented at a Provost's Seminar for KSU Department Heads. Kansas State University, November 12, 1997.

A Framework for "Active Learning." Presented at a KSU University Teaching Scholar "Swap Session." Kansas State University, October 20, 1997.

Using the Learning Cycle in Collegiate Science Instruction. Presented at Operation SMART: Science and Mathematics - Assessing, Reinforcing, Teaching. Wichita State University, Wichita, KS, May 3, 1997.

Simulating Divergent Speciation. Workshop presented at the 1997 Kansas Association of Teachers of Science (KATS). Rocks Springs Ranch, Kansas, April 25-26, 1997.

Cooperative Learning in Preservice Teacher Education: A Synthesis of Three Applications. Paper presented at the 70th Annual Meeting of NARST, Oak Brook, IL, March 21-24, 1997.

Preservice Secondary Science Teachers' Orientations Toward Science-Technology-Society (STS) Instruction. Paper presented (with M. Gail Shroyer and Cherin Lee) at the 69th Annual Meeting of NARST, St. Louis, MO, March 31 - April 3, 1996.

Evolution Theory in Secondary School Science: Designing Successful Instruction. Inservice Program provided to Lincoln Public Schools (Lincoln, NE: February 16, 1996).

Expanding the KSU/USD 383 PDS Model: Secondary Education. Sustaining School Change: What Lies Ahead Conference. (Manhattan, KS: February 2-3, 1996).

Integrating a Vision for Reform: Secondary Education at Kansas State University. Poster presented (with Lori Navarette, Marilyn Hetzel, and Jan Wissman) at the South Central Region Holmes Group Meeting (Dallas, TX, November 12-13, 1995).

Science Teaching Self-Efficacy of Preservice Elementary Teachers as Influenced by Heterogeneous Grouping. Paper presented (with Colleen Hampton) at the 68th Annual Meeting of NARST, San Francisco, CA, April 22-25, 1995.

The Influence of Race, Ethnicity, Gender, and Grade Level on an Acceptance of Evolutionary Theory among Secondary Science Students. Poster presented (with Corey S. Woods) at the 68th Annual Meeting of NARST, San Francisco, CA, April 22-25, 1995.

Publishing in NARST Publications (with Richard Duschl & William Kyle). Presented at the 68th Annual Meeting of NARST, San Francisco, CA, April 22-25, 1995).

Collaborative vs. Individual Planning of S-T-S Lessons. Paper presented (with Gail Shroyer) at the AETS Annual Meeting, Charleston, West Virginia, January 5-8, 1995.

PRESENTATIONS (cont.)

General Biology: Creating a Positive Learning Environment for Elementary Education Majors. Paper presented at the Annual Meeting of the Association of Teacher Educators - Kansas (ATE-K), Salina, KS, April 15, 1994.

Influence of Cooperative Early Field Experience on Preservice Elementary Teachers' Science Self-Efficacy. Paper presented (with John Cannon) at the 67th Annual Meeting of NARST, Anaheim, CA, March 26-29, 1994.

An Evaluation of Field Experiences for the Preparation of Elementary Teachers for Science, Mathematics, and Technology. Paper presented (with Janell Wilson) at the 67th Annual Meeting of NARST, Anaheim, CA, March 26-29, 1994.

Teaching Evolution: Designing Successful Instruction. Presented at the AETS Annual Meeting, El Paso, TX, January 6-9, 1994.

Research Results from a Constructivist Learning Environment for Elementary Education Majors: General Biology. Presented (with Ann Stalheim-Smith) at the 66th Annual Meeting of NARST, Atlanta, GA, April 15-18, 1993.

Cooperative Grouping and Elementary Science Teaching Confidence. Presented (with Colleen Hampton) at the 1993 National Science Teachers Association (NSTA) National Convention (Kansas City, MO, April 1-4, 1993).

Influence of Cooperative Early Field Experience on Preservice Elementary Teachers' Science Self-Efficacy. Presented (with John Cannon) at the 1993 NSTA National Convention (Kansas City, MO, April 1-4, 1993).

Conference on Evolution Education Research. Conceptual difficulties students experience in learning evolution-of-life concepts (Louisiana State Univ., Baton Rouge, LA, Dec. 4-5, 1992).

Collaborative Learning and Group Problem-Based Learning, presented for the Physics Department (KSU), November 6, 1992.

Creation vs. Evolution? Invited guest speaker for the fall Genetics and Evolution Conference of the Kansas Association of Biology Teachers (KABT). (Manhattan, KS, October 3, 1992).

Teaching Evolution: Understanding and Applying the Nature of Science. Invited paper presented at the History and Philosophy of Science in Sci. Teaching - 2nd Intl. Conference. (Kingston, Ontario, CANADA, May 11-15, 1992).

Teaching Evolution: Understanding, Concerns, & Instructional Approaches, presented (with Maury Harris) at the 1992 NSTA National Convention (Boston, MA, March 26-29, 1992).

Biology Textbook Laboratory Activities ... Making the Grade? Presented (with Andrew Lumpe) at the 1992 NSTA National Convention (Boston, MA, March 26-29, 1992).

PRESENTATIONS (cont.)

Teaching Evolution: The Influence of Peer Instructional Modeling, presented at the 65th Annual Meeting of NARST (Boston, MA, March 21-25, 1992).

Teaching Evolution: Understanding, Concerns, & Instructional Approaches, presented at the 1991 National Association of Biology Teachers (NABT) National Convention (Nashville, Tennessee, November 6-10, 1991).

Teaching Evolution: Concerns and Instructional Approaches, presented at the 1991 Geological Society National Meeting (San Diego, California, October 28-30, 1991).

Alternative Instructional Approaches for Teaching Evolution, presented at the 1991 School Science and Mathematics Association (SSMA) Annual Convention (Tulsa, Oklahoma, October 17-19, 1991).

Alternative Instructional Approaches for Teaching Evolution, presented (with Maury Harris) at the 1991 Annual Meeting of KATS, Rock Springs Ranch, Kansas, April 26-28, 1991.

The Learning Cycle: A Student-Active Instructional Alternative for the Biological Sciences, presented (with Andrew Lumpe) at the 1991 Annual Meeting of KATS (Rock Springs Ranch, Kansas, April 26-28, 1991).

Teaching Evolution: Understanding, Concerns, and Instructional Approaches, presented (with Maury Harris) at the 64th Annual Meeting of NARST (April 7-10, 1991, Lake Geneva, Wisconsin).

A Content Analysis of Secondary Biology Laboratory Activities, presented (with Andrew Lumpe) at the 64th Annual Meeting of NARST (April 7-10, 1991, Lake Geneva, Wisconsin).

Teaching Evolution: Understanding, Concerns, and Instructional Approaches, presented (with Maury Harris) at the Southwestern Regional Meeting of AETS. (Colorado Springs, Colorado, January 10-12, 1991).

Teaching about Evolution: Legal, Philosophical, and Instructional Perspectives, presented (with Gail Shroyer and Maury Harris) at the NSTA Area Convention (Kansas City, Missouri, October 18-20, 1990).

Cooperative Learning in Science Instruction, presented (with Larry Enochs) at the 1990 SSMA Annual Convention (Cincinnati, Ohio, October 12-13, 1990).

Critical Thinking and Student Participation II: An Alternative Instructional Strategy for Science Teaching, presented at the 1990 Annual Meeting of KATS (Rock Springs Ranch, Kansas, April 27-29, 1990).

The Kansas Junior Academy of Science and Student Research, presented (with Andrew Lumpe) at the 1990 Annual Meeting of KATS (Rock Springs Ranch, Kansas, April 27-29, 1990).

Results of an Inservice Workshop to Promote Science-Technology-Society Instructional Orientations, presented at the 1990 Annual Meeting of NARST (Atlanta, Georgia, April 8-11, 1990).

PRESENTATIONS (cont.)

- Further validation of a preservice elementary science efficacy belief instrument: the contribution of pupil control ideology, presented (with Larry Enochs and Iris Riggs) at NARST (Atlanta, Georgia, April 8-11, 1990).
- Fruit or Vegetable: Overcoming a Persistent Misconception using the Learning Cycle, presented at the NSTA National Convention (Atlanta, Georgia, April 5-8, 1990).
- The Learning Cycle: Translating Theory into Elementary Science Teaching Practice, presented (with Priscilla Callison) at the Southwestern Region Association for the Education of Teachers of Science Annual Meeting (Overland Park, Kansas, January 11-13, 1990).
- Presenter, inservice workshop entitled "Creation vs. Evolution" for science teachers at the North Central Kansas Educational Service Center, Concordia, Kansas (November 17, 1989).
- Presenter, "Interdisciplinary Study in Ecology and Mathematics," Manhattan High School (November 6, 1989).
- Cooperative Learning in Elementary Science Methods, presented at the 1989 NSTA Fall Regional Meeting (Tulsa, Oklahoma, October 26-28, 1989).
- Using the Learning Cycle to Teach Plant Reproduction: Overcoming A Persistent Misconception (Fruit or Vegetable?), presented at the 1989 Annual Meeting of SSMA (Des Moines, Iowa, October 20-21, 1989).
- Critical Thinking and Student Participation I: An Alternative Instructional Strategy for Science Teaching, presented at the 1989 KATS (KATS KAMP, Rock Springs Ranch, Kansas, April 28-30, 1989).
- The Influence of a Diversified Instructional Strategy on an Understanding of the Nature of Scientific/Evolutionary Theory, presented at the 62nd Annual Meeting of NARST (San Francisco, CA, March 30 - April 1, 1989).
- Rural Science Teaching: Characteristics, Pre- and Inservice Preparation, Curriculum, and Research, a Round Table symposium presented (with Larry Enochs, Emmett Wright, John Staver, and Steve Oliver) at the 62nd Annual Meeting of NARST (San Francisco, California, March 30 - April 1, 1989).
- A Summary of Research in Science Education -- 1987, presented (with John Staver, Larry Enochs, Steve Oliver, and Emmett Wright) at the 62nd Annual Meeting of NARST (San Francisco, California, March 30 - April 1, 1989).
- An Alternative Instructional Strategy for Science Teaching, Twelfth Annual Symposium of the Kansas Association for Middle Level Education (Emporia State University, Emporia, Kansas, February 24-25, 1989).

PRESENTATIONS (cont.)

Effective Teaching, invited panel speaker for the 2nd Annual Kansas State University / College of Education Symposium, February 10, 1989.

Promoting an Understanding of the Nature of Science in College Science Teaching, invited speaker for the twelve-member delegation from the National University of Paraguay, January 18, 1989.

Creation versus Evolution: A Belief in Both? 1988 Rural and Small Schools Conference (Kansas State University, Manhattan, Kansas, Oct. 24-25, 1988).

Teaching Concept Mapping from Reaction Statements/Analogies, 1988 NSTA Fall Regional Meeting (Columbus, Ohio, October 20-22, 1988).

Teaching of Evolution/Creation Origins, 1987 NSTA Fall Regional Meeting (Pittsburgh, PA, November 5-7, 1987).

Evolution versus Creation: A False Dichotomy? 1987 School Science and Mathematics Annual Meeting (Billings, Montana, October 14-16, 1987).

Creation and Evolution: A Belief in Both? Valley High School, New Kensington, Pennsylvania, April 15, 1987. (IUP Visiting Scientists Program).

Developmental Influences of Science Process Skill Instruction. 1986 School Science and Mathematics Annual Meeting (Lexington, Kentucky, November 20-22, 1986).

The Influences of Locus of Control and Sequenced Instructional Strategy on Preservice Elementary Teachers' Understanding of the Nature of Science, 59th Annual Meeting of NARST (San Francisco, California, March 27-30, 1986).

Regional Meeting of the Commonwealth of Pennsylvania University Biologists [panel discussant] (Slippery Rock University, Slippery Rock, PA, October 18, 1985).

Two-year College Biology Instructors' Perceptions about their Role Expectations, 1984 Annual Meeting of the Indiana Academy of Science (Butler University, Indianapolis, Indiana, November 17, 1984).

TEACHING EXPERIENCE

Graduate (Florida State University)

C&I Doctoral ProSeminar (EEX 6935: F'13; SPR '14)

Graduate (Kansas State University)

Adv. Sci. Tchg. Meth. (EDSEC 786/886: SUM'92; SUM'93; SUM'94)

The Science Curriculum (EDCI/EDSEC 873: F'89; F'93; SUM '96)

Sem.: Hist. & Phil. of Science Education (EDSEC 886: F'91; SUM'93; SUM '95; SUM '97)

Sem.: Super. & St. Dev. in Sci. (EDCI/EDSEC 886: SUM'89; SUM'92; SUM'94)

Sem.: Dev. Sci. Ldrshp. in the Elem. School (EDCI 886: SUM'89)

Prob. in C. & I.: Tchr. Expec. and Student Ach. (EDCI 886: SPR'89; SPR '90).

Undergraduate (Kansas State University)

Secondary Science Teaching Methods/Lab (EDSEC 500/520) F'88 to present).

Secondary Student Teacher Supervision (EDCI/EDSEC 586: F'88 to present).

Laboratory Techniques in Tchg. Sci. (EDSEC 614: F'92 to SUM 1995-present).

Elementary Biological Sciences Teaching Methods (EDEL 502: SPR'92; SPR '00)

Sci. Meth. for Elem. Schools (EDCI 470: F'88 to SPR'91)

Honors Seminar (DED 320: SPR'89)

Honors Research (DED 520: F'92)

Undergraduate (Indiana University of Pennsylvania)

Tchg. of Sci. in the Sec. School (ED 451: F'86; SUM'87; F'87; SPR'88).

Pre-Student Teaching I [seminar] (ED 242: F'85).

Pre-Student Teaching II [seminar] (ED 342: SPR'86; SPR'87).

Sec. Student Tchr Super. (ED 441): F'85 to SPR'88).

Teaching of Science in the Elementary School (EL 312: SPR'87).

Elementary Student Teacher Supervision (EL 312: SPR'87).

Biology (Undergraduate) (Indiana University of Pennsylvania)

Environmental Biology (BI 311: F'86).

General Biology I (BI 103: F'85; F'87).

General Biology II (BI 104: SPR'86; SUM'86; SPR'88; SUM'88).

Seminar (BI 480: Biology Education Majors, SPR'88).

Public School (K-12)

Inservice Instructor, performed workshops/presentations at nearly 40 secondary and 20 elementary schools throughout the State of Nebraska, Nebraska State Energy Office, January, 1980 to July, 1982.

Student Teaching, Southeast High School, Lincoln, NE, Spring, 1978.

Licensed Substitute Teacher (Ocean County, New Jersey public schools, May-June, 1975-1977).

Private Tutor (Summers, 1975-1977; 1982-1983).

SERVICE - PROFESSIONAL ORGANIZATIONS

Member, Association of Science Teachers Educators, *Ad hoc* Committee on Teaching Biological Evolution, October 2013-January 2014.

Co-Coordinator, Program Committee Strand 13 (History, Philosophy, and Epistemology) National Association for Research in Science Teaching (NARST) Annual Conference, 2006-2008.

Member, Early Career Award Committee, NARST, June, 2004-December, 2006.

Member, National Association of Biology Teachers' Task Force to develop a position statement on the teaching of evolution, Oct., 2003-2005.

Member, Science Teacher Award Committee, Sigma Xi, 1993-2002; 2006-2010 (Chair 2003-2005).

Senior Director At-Large, Association for the Education of Teachers in Science (AETS), 2001 - 2002.

Member, Science Teaching Standards Committee, Kansas State Department of Education, 2000 - 2004.

Member, Board of Directors, Association for the Education of Teachers in Science (AETS), 1999 - 2001.

Member, Task Force on the Teaching of Evolution vs. Creationism, National Science Teachers Association, 1996 - 1999.

Member, Publications Committee, School Science and Mathematics Association; 1994 - 1995.

Member, Outstanding Dissertation Award Committee, NARST, 1994 - 1996.

Chair, Program Committee, Association for the Education of Teachers of Science (AETS Sessions), 1993 NSTA Annual Meeting (Kansas City, MO).

Reviewer, Journal of Science Teacher Education, 1993 - present.

Reviewer, Journal of Research in Science Teaching (Special Issue on the Teaching of Organic Evolution): 1992-1993. Special topics reviewer, 1996 - present.

Reviewer, Science & Education. Special topics reviewer, 2004-present.

Reviewer, Science Education. Special topics reviewer, 2001-present.

Member, Program Committee, National Association for Research in Science Teaching: 1991-2003.

Member, Finance Committee, School Science and Mathematics Association; 1989-1994.

Associate Editor, School Science and Mathematics, 1988 – 1993 (Reviewer, 1988-1995).

Director, Kansas Junior Academy of Sciences, 1989 - 1991.

SERVICE - PROMOTION (&/OR) TENURE EXTERNAL REVIEW

External Reviewer, Arizona State University – Eugene Judson, a candidate for promotion from Assistant to Associate Professor (August 2, 2013)

External Reviewer, Kent State University – Lisa Donnelly, a candidate for promotion from Assistant to Associate Professor (July 16, 2012)

External Reviewer, Texas A&M University – Carol Stuessy, a candidate for promotion from Associate to Full Professor (July 9, 2012)

External Reviewer, Clemson University – Jeff Marshall, a candidate for promotion from Assistant to Associate Professor (October 26, 2009).

External Reviewer, Old Dominion University - Daniel Dickerson, a candidate for promotion from Assistant to Associate Professor (April 3, 2008).

External Reviewer, Ohio State University - Dr. Ross Nehm, a candidate for employment with the condition of tenure and promotion to Associate Professor (April 20, 2007).

External Reviewer, University of Connecticut - John Settlage, a candidate for tenure (October 12, 2005).

External Reviewer, Florida State University - Sherry Southerland, a candidate for promotion from Assistant to Associate Professor (May 25, 2005).

External Reviewer, Oregon State University - Lawrence B. Flick, a candidate for promotion from Associate to Full Professor (December 3, 2004).

External Reviewer, Florida State University - Diana C. Rice, a candidate for tenure and promotion from Assistant to Associate Professor (July 2, 2004).

External Reviewer, University of Connecticut - David M. Moss, a candidate for tenure and promotion in rank from Assistant to Associate Professor (September 9, 2003).

External Reviewer, Indiana University School of Education - Valerie Akerson, a candidate for promotion from Assistant to Associate Professor (May 28, 2003).

External Reviewer, Florida State University - Sherry A. Southerland, a candidate for appointment to the faculty (May 27, 2003).

External Reviewer, Mercer University School of Medicine - Mike U. Smith, a candidate for promotion from Associate to Full Professor (October 14, 1998).

External Reviewer, Wright State University - Linda K. Ramey, a candidate for tenure and promotion from Assistant to Associate Professor (October 12, 1998).

External Reviewer, University of Minnesota - General College, Murray S. Jensen, a candidate for tenure and promotion from Assistant to Associate Professor (October 11, 1998).

SERVICE - PROMOTION (&/OR) TENURE EXTERNAL REVIEW (cont.)

External Reviewer, University of Central Florida - Mary Kalen Romjue, a candidate for tenure and promotion from Assistant to Associate Professor (August 19, 1996).

External Reviewer, University of Minnesota - General College, Kimberly Wilcox, a candidate for tenure and promotion from Assistant to Associate Professor (July 22, 1996).

External Reviewer, Cleveland State University, John Settlage, a candidate for tenure and promotion from Assistant to Associate Professor (July 20, 1996).

SERVICE – GENERAL

Manuscript Review, Development and Evaluation of a Model for Secondary Evolution Educators' Professional Development Needs, *Evolution: Education and Outreach* (July, 2014).

Manuscript Review, The Development of the KSU PDS Model: 25 Years in the Making. Special Issue of *Educational Considerations* (July, 2014).

Manuscript Review, Creationism on the Couch: The Social Psychology of Evolution Denial, *Science Education* (January, 2013)

Revised Manuscript Review, Teaching the Nature of Science through Scientific Errors, *Science Education* (January, 2012)

Book Chapter Review, Teaching Evolution in the Context of the History and Philosophy of Science, *International History & Philosophy of Science in Science Teaching Association* (December, 2011)

Manuscript Review, Where Cognitive Conflict Arises From?: The Structure of Creating Cognitive Conflict, *International Journal of Science and Mathematics* (December, 2011)

Judge, Tropicana Speech Competition, December 2, 2011.

Manuscript Review, Teaching the Nature of Science through Scientific Errors, *Science Education* (July, 2011).

Manuscript Review, Knowledge about genetics, evolution, nature of science, opinions on evolution, and the presence of non-scientific explanations by Czech, Slovakian, Slovenian, and Turkish students, *Science and Education* (April, 2011).

Manuscript Review, The Impact of a Working Conference Focused on Supporting Students with Mobility and Sensory Disabilities in Science, Technology, Engineering, and Mathematics (STEM), *Journal of the Iowa Academy of Science* (August, 2010).

Manuscript Review, Evolution Acceptance and Epistemological Views of College Biology Students, *Science Education* (June, 2010).

Judge, 43rd International Science Fair (Regional), March 5, 2010.

Manuscript Review, Essential characteristics for a professional development program for promoting the implementation of a multidisciplinary science module, *Journal of Science Teacher Education* (December, 2009).

Manuscript Review, "Let's start with respect": Teaching Evolution through Intellectual Discussion in the Secondary Science Classroom, *Science Education* (December, 2009).

Manuscript Review, The influence of an activity-based reflective explicit approach on the [anonymous] prospective science teachers' conceptions of the nature of science, *Science and Education* (October, 2009).

SERVICE - GENERAL (continued)

Consultant – Educational Assessment, Christine Aikens (Department of Chemistry, KSU) in the preparation of an NSF CAREER program proposal, June 15, 2009.

Judge, 42nd International Science Fair (Regional), March 6, 2009 (Wamego, KS).

Program Review, Kansas State Department of Education. Reviewed Biology (6-12) programs (pursuant to continued accreditation) for Baker, Kansas Wesleyan, and Wichita State Universities (November 5, 2008).

Manuscript Review, Biology Students' and Teachers' Religion Beliefs and Attitude on Evolutionary Theory, *Journal of Science Teacher Education* (September, 2008).

Manuscript Review, Evolution Teaching Practice: Striving for Scientific Literacy in a Democratic Society. *Journal of Science Teacher Education* (August, 2008).

Presider, "Students' Views of the Nature of Science," Strand Coordinator Organized Paper Set, 81st National Association for Research in Science Teaching (NARST) Annual International Conference, Baltimore, MD (March 30, 2008).

Judge, 41st International Science Fair (Regional), March 8, 2008 (Wamego, KS).

Panelist, High School Student Visitation, Wichita Heights Future Teachers Club. December 5, 2007.

Representative, KSU All-University Campaign, Fall Semester, 2007.

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 31, 2007).

Presider, "Interactions of Teaching and Learning of the Nature of Science," Strand Coordinator Organized Paper Set, 80th NARST Annual International Conference, New Orleans, LA (April 18, 2007).

Manuscript Review, Students' Perceptions of the Nature of Science and the Process of Science Through a Project-Based Science Program. *Science Education* (March, 2007).

Panel Discussant, "Let's Talk Science, a Meeting of the Minds" (with Lawrence Krauss, internationally known theoretical physicist - KSU Center for Understanding of Origins, March 12, 2007 (Manhattan, KS).

Judge, 40th International Science Fair (Regional), March 9, 2007 (Wamego, KS).

Manuscript Review, Lessons from Arkansas. *Science & Education* (August 2006).

Judge, 39th International Science Fair (Regional), March 10, 2006 (Wamego, KS).

Manuscript Review, Still More 'Fancy' and 'Myth' than 'Fact' in Students' Conceptions of Evolution. *Current Anthropology* (February 25, 2006).

SERVICE - GENERAL (continued)

Guest Speaker, Hymns & Reflections Service - Observance of Martin Luther King Week, Manhattan, KS: Fellowship Temple, (January 14, 2006).

Manuscript Review, Teaching the Theory of Evolution: Stimulating Student Reflection and Defusing Controversy. Science Education (December 2005).

Reviewer, Targeted Excellence Proposal entitled, "Frontiers in Advanced Learning: Towards a Complete E-delivery Environment." Provost's Office, Kansas State University (October 19, 2005).

Reviewer, Nature of science: Past, present, and future. In Handbook of Research on Science Education (Chapter 30), written by Norman G. Lederman (August, 2005).

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (June 2, 2005).

External Reviewer, Vanderbilt University - research proposal submitted to the Associate Provost for Research and Graduate Education by Laura Novick and Kefyn Catley (November 16, 2004).

Review Panelist, Setting recommended scores on the Praxis II tests for: Biology, Chemistry, Earth/Space Science, Physics, and Middle-Level Science. KSDE, October 7, 2004.

Book Reviewer, The Importance of Story and Imagery to Learning Science. Written by Charles Ault for Lawrence Erlbaum Associates, Inc., Publishers (October 1, 2004).

Review Panelist, Content performance evaluation training session. Kansas State Department of Education, September 9, 2004.

Review Panelist, Unit Assessment System (NCATE/KSDE Standards 1 & 2). Kansas State Department of Education, September 3, 2004.

Manuscript Review, Relationship between achievement and students' acceptance of evolution or creation in an upper level evolution course. Written by Ella Ingram and Craig Nelson, Department of Biology, Indiana University (February 28, 2004).

External Reviewer, Vanderbilt University - research proposal submitted to the Associate Provost for Research and Graduate Education by Kefyn Catley (January 6, 2004).

Commentary, KSU Partnership Activities, USD 383 School Board Meeting, April 2, 2003.

Manuscript Review, Teaching Students 'Ideas-About-Science': Case Studies from the Classroom, Science Education (February, 2003).

Reviewer, Teaching about Scientific Origins: Taking Account of Creationism. RoutledgeFalmer Publishers (January, 2003).

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 30, 2002).

SERVICE - GENERAL (continued)

- Manuscript Review, Special Issue (October, 2002) of School Science and Mathematics (March, 2002).
- Panel Member, Life After Tenure, COE Mentoring Program, KSU (November 2, 2001).
- Televised Commentary, Science in the State of Kansas, KTWU Public Television, Topeka, KS (September, 2001).
- Manuscript Review (with John Staver), Secondary school teachers' views on teaching evolutionary theory (September, 2001).
- Expert Testimony, Pratt, KS, regarding science standards revised by Pratt Board of Education to integrate "evidence against evolution" (November 21, 2000).
- Radio Interview, KKSU (Manhattan, KS) regarding the nature of theories and teaching and learning of biological evolution (October 13, 2000).
- Radio Interview, KIUL (Garden City, KS) regarding the nature of theories and the teaching and learning of biological evolution (August 25, 2000).
- Radio Interview, KSU Media Relations (Manhattan, KS) regarding the teaching of evolution in secondary schools (radio report available August 24-September 1, 2000); accessed by thirteen (13) radio stations.
- Radio Interview, KSU Media Relations (Manhattan, KS) regarding changes in teaching science in secondary schools (radio report available August 3-11, 2000); accessed by ten (10) radio stations.
- Radio Interview, KIUL (Garden City, KS) regarding Kansas's primary election results, Kansas science standards, and secondary school science teacher preparation (August 3, 2000).
- Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 31, 2000).
- Televised Commentary, Sunflower Journeys (Science in the State of Kansas), KTWU Public Television (air dates: April 13, 15-16, 2000).
- Public Commentary, Redesign of Licensure for Kansas Educators. Supplied written comments in relation to public hearing of February 16, 2000, Manhattan, KS.
- Presider, Our Water Heritage Curriculum: Comparison of Water-Related Environmental Issues in Kansas and Voronezh (Russia). Rural and Small Schools Conference (Manhattan, KS, October 25, 1999).
- On-line Interview, Cyberradiotv (Los Angeles) regarding the teaching and learning of evolutionary theory. Appeared on the Paul Garson Show; www://cyberradiotv.com/ (October 20, 1999).
- Radio Interview, KJCK (Junction City, KS) regarding Kansas Science Standards. Appeared with Scott Hill (Kansas State Board of Education) and Carol Arjona (USD 475 Science Curriculum Director) (September 13, 1999).

SERVICE - GENERAL (continued)

- Manuscript Review (authors Ron Good & Catherine Cummins), Nature of Science a la Benchmarks and Standards. (February 10, 1999).
- Integrating a Vision for Reform: Secondary Education at Kansas State University. Poster presented at the first Academic Majors Fair (Manhattan, KS, February 3, 1999).
- Speaker, Kansas State Board of Education public hearing on "Proposed State Standards for Science," (Topeka, KS, January 28, 1999).
- Perspectives on Content Area Reading (Science). Presented for two sections of "Reading in the Content Area" (EDSEC 477), Manhattan, KS, September 28-29, 1998.
- Presider, Electronic Fences of Free-Range Students: Should Schools Use Internet Filtering Software? Rural and Small Schools Conference (Manhattan, KS, October 26, 1998).
- Guest Speaker, Curriculum and Instruction Professional Development Seminar. Topic: The Tenure and Promotion Process (October 13, 1998).
- Manuscript Review, (author, John Staver), Truth as Coherence and Constructivist Epistemology: A Resolution of the Discord between Science and Religion? (July 14, 1998).
- Folio Review Training, Kansas State Department of Education, Topeka, KS, June 8, 1998.
- Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 27, 1998).
- Curriculum Review Committee for NCATE Partnership. Kansas State Department of Education, Topeka, KS, April 27, 1998.
- Discussant/Presider, four papers presented in the Students' Conceptions and Conceptual Change Strand, 71st Annual Meeting of the National Association for Research in Science Teaching (NARST), San Diego, CA, April 19-22, 1998.
- External Examiner, "School Science and Religion - World Views of Students, Teachers and Clergy." Masters Thesis candidate Robert Fysh, Queensland University of Technology, Brisbane, AUSTRALIA (December, 1997).
- Presider, Rural and Small Schools Conference (Manhattan, KS, October 27, 1997).
- Manuscript Review, "Effects of a Science Teaching Methods Course with a Field Experience on Preservice Teachers' Attitudes toward Teaching Science." Author/Address: Dr. Jonas Okeagu, Assistant Professor of Biology, Fayetteville State University, Fayetteville, NC (May 30, 1997).
- Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 28, 1997).
- Discussant/Presider, Four papers presented in the Teacher Education Strand, 70th Annual Meeting of the National Association for Research in Science Teaching (NARST), Oak Brook, IL, March 21-24, 1997.

SERVICE - GENERAL (continued)

Judge, 2nd Annual City of Manhattan Sci. & Engineering Fair, Manhattan, KS, February 28, 1997.

Ad Hoc Reviewer, Educational Psychology Review, January, 1997.

Guest Speaker, National Trends in Science Education: Targeting the National Science Education Standards, Manhattan High School, Manhattan, KS, November 7, 1996.

Presider, Targeting the New Science Education Standards With Science Literacy, 18th Annual Rural & Small Schools Conference, Manhattan, KS, October 28, 1996.

Reviewer, Kansas State Board of Education - Science Folios from the University of Kansas (Topeka, KS, July 18, 1996).

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (May 29, 1996).

Presider, Feminist Perspectives on Science Teacher Education, 69th Annual Meeting of the National Association for Research in Science Teaching (NARST), St. Louis, MO, March 31 - April 3, 1996.

Presider, Conceptions of Technology Held by Children and Adults, 69th Annual Meeting of NARST, St. Louis, MO, March 31 - April 3, 1996.

Speaker, Kansas State Board of Education public hearing on "Proposed Changes in State Standards for Teacher Licensure" (Manhattan, KS, March 13, 1996).

Guest Speaker, Manhattan High School Career Day, Manhattan, KS (October 31, 1995).

Ad Hoc Reviewer, Educational Psychology Review, June, 1995.

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (June 1, 1995).

Presider, Science Self-Efficacy Beliefs Research, 68th Annual Meeting of the National Association for Research in Science Teaching (NARST), San Francisco, CA, April 22-25, 1995).

PROFESSIONAL SERVICE/ACTIVITY (cont.)

Judge, 28th Annual Regional Intl. Science Fair (Wamego, KS, March 10, 1995).

Statistical Consultant, District II, Kansas Junior Academy of Sciences, March-April, 1995.

Guest Speaker, Science & Religion, United Methodist Faculty/Staff Lunch, Kansas State University, Manhattan, KS (November 2, 1994).

Guest Speaker, Science & Religion, two-part session for the University Sunday School Class, First United Methodist Church, Manhattan, Kansas (October 9, October 23, 1994).

Reviewer, Science for the Elementary School (7th ed.). Merrill Publishing Company (November, 1994).

SERVICE - GENERAL (continued)

Participant, Kansas State Board of Education Training Session, Certification in Biology Education, Manhattan, Kansas (July 14, 1994).

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (June 1, 1994).

Guest Speaker, Science and Religion -- at Odds?, four part session conducted for First United Methodist Church, Manhattan, Kansas (April 17, April 24, May 1, and May 8, 1994).

Judge, Kansas Junior Academy of Science, District II Meeting, Sabetha High School (Sabetha, KS, April 16, 1994).

Judge, 27th Annual Regional Science Fair (Wamego, KS, April 5, 1994).

Statistical Consultant, District II, Kansas Junior Academy of Sciences, March-April, 1994.

Presider, Rural & Small Schools Conference, Kansas State University, Manhattan, Kansas (October 25-26, 1993).

Consultant, State of Kansas State Science Assessment. Administered by the University of Kansas (October 4-20, 1993).

Guest Lecturer, Evolution & Creation -- a Conflict Resolved. Presented for Blue Valley United Methodist Church, Manhattan, Kansas (September 12, 1993).

Judge, Agriscience Poster Contest, Kansas State University, Manhattan, KS (June 2, 1993).

Guest Speaker, Science Education Symposium. A Discussion of "Learning from Asian Schools," by Harold Stevenson, which appeared in Scientific American (December, 1992), May 5, 1993.

Guest Lecturer, A Constructive Approach to Teaching Evolution, presented for the Teacher Education Graduate Students (T.E.G.S.), College of Education, KSU, April 29, 1993.

Presider/Co-Chair, Science Education Section, 1993 Joint Meeting of the Kansas and Missouri Academy of Sciences, April 24, 1993.

Presider, An Agenda for Evolution Education Research, Annual Meeting of the National Association for Research in Science Teaching, April 15-19, 1993.

Statistical Consultant, District II, Kansas Junior Academy of Sciences, April 12-13, 1993.

Presider, National Sci. Teachers Assoc. National Meeting, April 1-4, 1993.

Reviewer, Exploring the Children's Conceptual World in Science, Merrill Publishing Company, April, 1993.

Guest Lecturer, Considerations for Planning Quality Science Instruction, presented for the Physics Department (PHYS 452/PHYS 515), February 4, 1993.

SERVICE - GENERAL (continued)

- Guest Lecturer, Science and Religion -- at Odds?, four part session conducted for First United Methodist Church, Manhattan, Kansas (Jan. 24,31, Feb. 7, 14, 1993)
- Reviewer, Majors' General Biology, HarperCollins, January, 1993.
- Consultant, Concerns about QPA: Quality Performance Accreditation, presented at Manhattan High School, Science Faculty Meeting, November 18, 1992.
- Presider, Rural & Small Schools Conference, Kansas State University, Manhattan, Kansas (October 26-27, 1992).
- Discussant, 65th Annual Meeting of the National Association for Research in Science Teaching (Boston, Massachusetts, March 21-25, 1992).
- Presider, Rural & Small Schools Conference, Kansas State University, Manhattan, Kansas (October 28-29, 1991).
- Reviewer, Diving into Elementary Science, Allyn & Bacon, October, 1991.
- Director, 54th Annual Meeting of the Kansas Junior Academy of Science, Kansas State University, Manhattan, Kansas (April 25, 1991).
- Presider, Equity in Science Education (Contributed paper set). 64th Annual NARST Conference, The Abbey at Lake Geneva, Wisconsin, April 7-10, 1991).
- Judge, 24th Annual Regional Science Fair (Wamego, KS, April 5, 1991).
- Reviewer, General Nonmajors Biology, Harper-Collins Publishers, April, 1991.
- Presider, Rural and Small Schools Conference, Kansas State University, Manhattan, Kansas (October 29-30, 1990).
- Presider, Eisenhower Grant Writing Workshop, Kansas Board of Regents and Center for Science Education, Manhattan, Kansas (Sept. 21, 1990).
- Reviewer, Elementary Science Activities, Allyn & Bacon Pub., May, 1990.
- Director, 53rd Annual Meeting of the Kansas Junior Academy of Science, Emporia State University, Emporia, Kansas (April 26, 1990).
- Judge, 23rd Annual Reg. Science Fair, (Wamego, Kansas), March 30, 1990.
- Reviewer, Teaching Elementary Science: Process and Practice, Harcourt Brace Jovanovich, Inc. (December, 1989).

SERVICE - GENERAL (continued)

Presider, Rural and Small Schools Conference, Kansas State University, Manhattan, Kansas (October 30-31, 1989)

Judge, Science Fair, Manhattan Catholic School, Manhattan, KS, April 21, 1989.

Judge, 22nd Annual Wamego Reg. Science Fair, (Wamego, Kansas) March 3, 1989.

Reviewer, Focus on Excellence: Biology (7-12) (Wright and Powers, editors). Washington, DC: National Science Teachers Association (February, 1989).

Sectional Judge, Pennsylvania Junior Academy of Science. Grove City College, Grove City, Pennsylvania.

General Biology Textbook Review (Holmes and Edwards). New York: McGraw-Hill, June, 1987.

SERVICE - COMMUNITY/SCHOOL-BASED

Member, Board of Directors, Florida State University Schools (FSUS), 2010-2014.

Member, USD 383 PDS Partnership Steering Committee, 2002-2010.

Member, USD 383 Staff Development Committee, 2000-2010.

Member, Long-Range Planning Committee, First United Methodist Church, Jan. 2007-May, 2009.

Teacher, 7th Grade Confirmation Class, First United Methodist Church, Manhattan, KS (2000-2001).

Teacher, Fourth Grade Sunday School, First United Methodist Church, Manhattan, KS (1997-98).

Teacher, 1st Grade Sunday School, First United Methodist Church, Manhattan, KS (1996-1997).

Chair, Education Commission, First United Methodist Church, Manhattan, Kansas: January, 1993 - December, 1995.

CURRENT PROFESSIONAL AFFILIATIONS

American Educational Research Association, 2010-present.

Association of Science Teacher Educators (ASTE), 1988-present.

National Association for Research in Science Teaching (NARST), 1984-present.

National Association of Biology Teachers (NABT), 1984-present.

National Science Teachers Association (NSTA), 1979-present.

Phi Delta Kappa (PDK), 1978-present.

Sigma Xi, the Scientific Research Society of North America, 1997-present.

University of Nebraska Alumni Association (Life Member), 1978-present.

UNIVERSITY & COMMITTEE SERVICE (current/recent) -- Kansas State University

Member, COE Advance Team, 2004-2010.

Member, Program Coordinating Council, 1998-2010.

Member, Vice President's University Environmental Stewardship Committee, 2004-2008.

Member, Vice Provost's Selection Committee for the Presidential Awards for Excellence in Undergraduate Teaching, 2001-2006.

Member, Agricultural Education Advisory Committee, 2001-2010.

Member, Provost's Integrity in Research and Scholarly Activity Committee, 1999-2007.

Member, College of Education "Qualitative Aspects - Student Behavior" Committee, 1998-2010.

Member, Provost's Faculty Exchange for Teaching Excellence Advisory Committee (Ann Stalheim-Smith, Chair), August, 1998 - July, 2005.

Member, University Teaching Scholar - Advisory Committee, Fall, 1997-August, 1998.

Member, Outstanding Science Teacher Award Committee, Sigma Xi, KSU Scientific Research Society, 1996-2010.

Member, Scholarship Committee, College of Education, 1996-2010.

Member, Program Evaluation Committee, College of Education, 1996-2010.

Member, Teacher Education Advisory Committee, College of Education, 1995-2010.