James D. Ellis

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Formal Education

Ph.D. Curriculum and Instruction. The University of Kansas, Lawrence (1979)
M.A. Curriculum and Instruction. The University of Kansas, Lawrence (1974)
B.A. Zoology. The University of Kansas, Lawrence (1970)

Professional Experience

1997- **Associate Professor,** The University of Kansas
1995-97 **Program officer**, The National Science Foundation
1993-95 **Chair, professional development group**, The Biological Sciences Curriculum Study
1992-95 **Adjunct professor,** Adams State College and University of Southern Colorado
1990-95 **Science education associate,** The Colorado College
1987-95 **Senior staff associate,** The Biological Sciences Curriculum Study
1982-95 **Honorarium faculty,** University of Colorado, Colorado Springs
1982-86 **Staff associate,** The Biological Sciences Curriculum Study
1979-82 **Visiting Assistant Professor,** Science Education Center, University of Texas at Austin
1975-77 **Science department chair,** Abe Hubert Junior High, Garden City, Kansas
1974-77 **Science teacher,** Abe Hubert Junior High, Garden City, Kansas

Awards and Honors

Chair of Committee. Outstanding Master's Thesis in the School of Education. Awarded to Mike Ryan. 2004.

Commissioned paper. *Influence of National Science Education Standards on the Science Curriculum. For the National Academy of Sciences.* 2001-2002.

Chair of Committee. *Outstanding Master's Thesis in the School of Education.* Awarded to Justin Lonsbury. 2002

IDS Spotlight. University recognition for excellence in use of educational technology in teaching. 1999.

Fellow. *American Association for the Advancement of Science*. 1998.

Directors Award for Collaborative Integration. Learning and Intelligent Systems Work Group. National Science Foundation. 1997.

Pyramid Award from the Teachers Academy for Science and Mathematics in Chicago for distinguished service to the Teachers Academy and Chicago Schools, April 1995.

AETS Award for Best Paper on Implications of Research for Educational Practice for *Teacher Development in Advanced Educational Technology*. Award presented at the meeting of the Association for Education of Teachers in Science in Boston, March 1992.

Award for *ENLIST Micros* curriculum. "Software's Greatest Hits, 1989." American Library Association. *Booklist*, 86(9), 1990.

Outstanding Paper Emphasizing Classroom Applications of Science Education Research *A Model for Implementing Microcomputers in Science Teaching.* Presented at the 61st meeting of National Association for Research in Science Teaching at Lake of the Ozarks, MO. March 1988.

Outstanding Contributions to the Improvement of Computer Technology in Colorado. Presented at the annual meeting of the Rocky Mountain Educational Computing Consortium at Colorado Springs, CO. September 1988.

International Activities

Keynote Address at Advanced Study Institute on Advanced Educational Technology in Technology Education for NATO International Scientific Exchange Program.
University of Salford, Salford, United Kingdom. 16-28 August 1992.

Ellis, J.D., Bybee, R.W., Giese, J.R., and Parisi, L.S. Teaching about the history and nature of science and technology: Issues in teacher development. A paper presented at the International Conference of the History and Philosophy of Science and Science Teaching at Kingston, Ontario, 11-15 May 1992.

Ellis, J.D. Models for teacher development in the uses of technology. A seminar at the third East/West Invitational Seminar on New Technologies in Education. Prague, Czechoslovakia. 18-24 August 1991.

Bybee, R.W., Powell, J.C., Ellis, J.D., Giese, J., and Parisi, L. A Rationale for integrating the history and nature of science in school science and social studies programs. Paper presented at the First International Conference on the History and Nature of Science in Science Teaching. Florida State University, November 1989.

Ellis, J.D. Microcomputer-based laboratories for biology education. An invited presentation at the annual meeting of the Commission for Biology Education of the International Union of Biological Sciences at Hanasaari, Epsoo, Finland. September 1986.

Crovello, T.J. and Ellis, J.D. Computers in biology education: The United States. An invited presentation at the annual meeting of the Commission for Biology Education of the International Union of Biological Sciences at Hanasaari, Epsoo, Finland. September 1986.

Ellis, J.D. Summer workshop for energy education teachers in Texas. International Conference on Energy Education. Providence, RI, August 1981.

Ellis, J.D. The Texas home energy auditor training program. International Conference on Energy Education. Knoxville, TN, November 1981.

Funded Research and Development Activities

2011-2013	Principal Investigator. EXP: Learning Cloud for Design-Based Science: 21st Century Skills and Web2.0 Capability to Support Design-Based Science in Elementary Instruction. Proposal submitted to NSF Cyberlearning: Transforming Ed initiative. $494,927 (in review)
2011-2016	Senior personnel. Kansas MSP: Scientist Engagement with K-12 Students and Teachers through Ecology. Submitted to MSP program of NSF. $9,937,901 (in review)
2010-2013	**Co-Principal Investigator**. Evidence Game. NSF grant from DR-K12 educational research program . $1,500,000.
2006-2010	**Co-Principal Investigator**. *Professional Development Materials to Develop Student Knowledge and Skills of Scientific Argumentation*. NSF grant from Teacher Professional Continuum (TPC) program. $351,684.
2002-2008	**Co-Principal Investigator**, *Supplemental grant for Noyce Scholarships for the Kansas Collaborative for Excellence in Teacher Preparation*. ($500,000)
2003-2005	**Co-Principal Investigator.** No Child Left Behind: Science and Technology Critical Problem Solving. Funded by Kansas Board of Regents with U.S. Dept. of Educastion funds. ($47,295)
2002-2003	**Faculty leader.** Peer mentoring among early career science teachers. (Mini-grant from Kansas Collaboration for Excellence in Teacher Preparation).
2001-2003	**Member of faculty study group**. State Improvement Grant
2002-2003	**Member of SOE faculty cohort.** Palm study group. Mike Neal, Principal Investigator **(budget)**
2001	**Instructor.** Workshop on Creative Problem Solving in Science Education See web site at

http://www.soe.ku.edu/sites/science_ed/CPS.htm

2000-01 **Project Evaluator,** *Project ICAN: Inquiry, Context, and Nature of Science*. A teacher enhancement grant to Oregon State University supported by the National Science Foundation ($1,889,914).

2000 **Co-Principal Investigator.** Technology grant from University to School of Education to technologically enhance science education classroom ($50,000)

1999-03 **Co-Principal Investigator,** *The Kansas Collaborative for Excellence in Teacher Preparation*, supported by NSF ($2,400,000)

1998-99 **Co-Principal Investigator,** *Authentic Student Science Inquiry Teaching*. KU Research Development Fund ($32,000)

1998-01 **Project Evaluator,** A Paradigm Redesign of the Laboratory Experience, supported by the William and Flora Hewlett Foundation. ($150,000)

1998 **Principal Investigator,** New Faculty Research Program. ($5,000)

1997 **Project Evaluator.** Colorado Science Teacher Enhancement Project, a BSCS project supported by NSF ($1,493,957).

1995-97 **Program Officer**, National Science Foundation

1995 **Principal Investigator**, *NASA Science Teacher Enhancement Program* ($46,000)

1995 **External Evaluator,** Bozeman Local Systemic Initiative supported by NSF ($80,000).

1994-97 **External evaluator**. NSF-funded project by to Poway Schools in San Diego, California. 1994-97.

1994-95 **External Evaluator**, The Teachers Academy for Math and Science, Chicago, IL. ($100,000)

1993-96 **Principal Investigator**, *Teacher Development Modules for K-6 Science*, supported by NSF ($1,065,053)

1992-97 **Principal Investigator**, Colorado Science Teacher Enhancement Project, a BSCS project supported by NSF ($1,493,957).

1992-93 **Principal Investigator**, *Implementing an Innovative Elementary School Science, Technology, and Health Program in Colorado*, by the Gates Foundation ($96,020)

1991-92 **Co-Principal Investigator**, *Instructional Improvement Project for Secondary Life Science and Biology Teachers*, supported by Eisenhower funds ($69,920).

1989-93 **Principal Investigator,** Teacher Enhancement Project, *ENLIST Micros Phase III: Models for Replicating a Teacher-Enhancement Project*, supported by NSF ($809,147).

1989-90 **Project Director**, *Integrating the History and Nature of Science in School Science and Social Studies Programs*, supported by the National Science Foundation ($342,768).

1989-90 **Director,** *Star Schools Center*, for Technical Education Research Centers, supported by the U.S. Department of Education ($65,805).

1987-91 **Educational computing specialist,** *BSCS Project to Develop an Integrated Science, Technology, and Health Curriculum for Grades K-6*, supported by NSF.

1986-87 **Educational computing specialist,** *Design Study for Elementary Science and Health*, supported by IBM.

1986-89 **Principal Investigator,** *A Model for Teacher Enhancement in Educational Computing in the Sciences*, supported by NSF ($361,446).

1985-86 **Co-Principal Investigator,** *ENLIST Micros*, supported by NSF ($161,209).

1983-86 **Principal Investigator,** *BSCS Middle School Health Education Project*, supported by Gates, Piton, Helen K. and Arthur E. Johnson, and Coors Foundations ($750,000).

1982-83 **Evaluator,** *Genes and Surroundings Implementation Project*, supported by Health Services Administration.

1982-83 **Principal Investigator,** *Visual Analysis in General Biology*, supported by the Apple Education Foundation.

1981-82 **Principal Investigator,** *Faculty Development Program for Middle School Science Teachers,* supported by the U.S. Department of Energy ($50,000).

1981-82 **Co-Principal Investigator,** Home Energy *Auditor Training Project,* supported by Texas Energy and Natural Resources Advisory Council.

1980-81 **Co-Principal Investigator,** *Faculty Development Program for Community College Science Teachers,* supported by U.S. Department of Energy ($35,000).

Books, Monographs, and Policy Statements

Science Teaching Standards (2002). Contributing author to project by NSTA to develop NCATE standards for science teachers.

Kansas Science Teaching Standards (2001). The Kansas State Department of Education. http://www.ksde.org

Report of the Task Force on Science Education (2000) Submitted to the Chancellor of the University of Kansas (http://www.ukans.edu/~scitask/report.html) May 15, 2000.

TED Curriculum Committee (2000) Curriculum Framework for the Teacher Education Program [http://www.soe.ukans.edu/]

National Science Teachers Association (1998) NSTA Standards for Science Teacher Preparation. Professional standards for National Council for Accreditation of Teacher Education.

National Board of Professional Teaching Standards. (1998) *Middle Childhood Science: Standards for National Board Certification.* Washington, D.C.: NBPTS

_____ (1998). Program Announcement and Guidelines for Elementary, Secondary, and informal Education. Washington, DC: National Science Foundation.

_____ (1997). Review of Instructional Materials for Middle School Science (monograph of the Division of Elementary, Secondary, and Informal Education). Washington, DC: NSF.

Bybee, R.W., Ellis, J.D., and Matthews, M.R. (eds.) (1992). *Journal of Research in Science Teaching* (special issue on teaching the history and nature of science and technology). 29(4).

BSCS *(1992). Teaching About the History and Nature of Science and Technology: Background Papers*. Colorado Springs, CO: BSCS.

BSCS (1992). *Teaching About the History and Nature of Science and Technology: A Curriculum Framework*. Colorado Springs, CO: BSCS.

BSCS (1989). *New Designs for Elementary School Science and Health.* A cooperative project of BSCS and IBM. Dubuque, IA: Kendall/Hunt Publishing Company.

Ellis, J.D. (ed.) (1989). *Information Technology and Science Education: 1988 Yearbook of the Association for the Education of Teachers in Science*. Columbus, OH: SMEAC Information Reference Center, The Ohio State University. ED307114

Articles

Otto, W.H.; Larive, C.K.; Mason, S.L.; Robinson, J.B.; Heppert, J.A.; Ellis, J.D. Using Visible Spectrophotometers to Study Speciation in an Inquiry Laboratory Environment. *Journal of Chemical Education***;** v82 n10 p1552-1554 Oct 2005

Ellis, J.D. (2003) Influence of National Science Education Standards on the Science Curriculum. In *What Is the Influence of the National Science Education Standards?: Reviewing the Evidence, A Workshop Summary*. Washington, D.C: National Academy Press.

Lonsbury, J. G., & Ellis, J. D. (2003, March). Science history as a means to teach nature of science concepts: Using the development of understanding related to mechanisms of inheritance. Electronic Journal of Science Education, 7(3).

Heppert, Joseph; Ellis, James; and Robinson, Janet; Wofer, Adam; Mason, Susan. (2002). A problem-solving approach to the laboratory for an undergraduate course in introductory chemistry. *Journal of College Science Teaching.* 31(5*),* pp. 322-326.

Ellis, J.D. (2001). A dilemma in reforming science teacher education: Responding to students' concerns or striving for high standards. *Journal of Science Teacher Education*. 12(3), pp. 253-276.

Ellis, J.D. (1995). Fostering change in science education. In *Innovating and Evaluating Science Education: NSF Evaluation Forums 1992-94* (NSF 95-162). Washington, DC: National Science Foundation.

Ellis, J.D. (1993). Constructing sustainable reform in science and technology education. In *Advanced Technology in Technology Education*. Gordon, A., Hacker, M., and de Vries, M. (eds). New York: Springer/Verlag.

Enochs, L.G., Riggs, I.M. and Ellis, J.D. (1993). The development and partial validation of microcomputer utilization in teaching efficacy beliefs instrument in a science setting. *School Science and Mathematics*. 93(4): 257-263.

Ellis, J.D. and Kuerbis, P.J. (1992). Implementing microcomputers in science teaching. *Journal of Science Teacher Education*. 3(3): 65-75. EJ466018

Ellis, J.D. (1992). Teacher development in advanced educational technology. *Journal of Science and Technology Education*. 1(1): 49-66.

Bybee, R.W., Ellis, J.D., and Matthews, M.R. (1992). Teaching about the history and nature of science and technology. *Journal of Research in Science Teaching* 29(4): 327-330.

Ellis, J.D. (1991). ENLIST Micros Phase III: Models for Establishing ENLIST Micros Teacher Centers. *Journal of Computing in Teacher Education*. (8)2: 3-14.

Ellis, J.D., Pereversev, L., and Staupe, A. (1991). Environmental literacy: A global challenge. *Technology's Role in Nurturing Educational and Societal Innovation: A Report of the East/West Invitational Seminar on New Technologies in Education*. Schaffer, M. and Charp, S. (eds.) Bloomfield, CT: International Technologies Exchange.

Ellis, J.D. (1991). The BSCS perspective on preparing science teachers to use educational technology. *SIGCUE Outlook*. (21)1: 17-32.

Ellis, J.D., and Kuerbis, P.J. (1991). A curriculum for preparing science teachers to use microcomputers. *School Science and Mathematics*. (91)6: 247-254. EJ438372

Bybee, R.W., Powell, J.C., Ellis, J.D., Giese, J.R., Parisi, L., and Singleton, L. (1991). Integrating the history and nature of science and technology in science and social studies curriculum. *Science Education*. (71)1: 143-155.

Ellis, J.D. (1990). Preparing science teachers for the information age. *Journal of Computers in Mathematics and Science Teaching*, 9(4): 55-70. EJ415641

Ellis, J.D. (1989). An evaluation of a project for preparing science teachers to use micro- computers. *Journal of Computers in Mathematics and Science Teaching*, 9(1): 51-64. EJ404350

Baird, W.E., Ellis, J.D., and Kuerbis, P.J. (1989). ENLIST Micros: Training science teachers to use microcomputers. *Journal of Research in Science Teaching*, 26 (7), 587-598.

Ellis, J.D. (1988, Fall). Improving science instruction with microcomputers. *Florida Science Teacher*, 4 (1), 14-15.

Crovello, T.J., and Ellis, J.D. (1988). Computers in biology education: The United States. *Computers and Biology Education: The Expanding Universe.* T.J. Crovello (ed.) Paris, France: ICSU press, 81-104.

Ellis, J.D. (1988). Microcomputer-based laboratories in biology education. *Computers and Biology Education: The Expanding Universe.* T.J. Crovello (ed.) Paris, France: ICSU press, 43-60.

Ellis, J.D. (1987). Improving science instruction with microcomputers. *Research Matters...To the Science Teacher*, National Association for Research in Science Teaching.

Ellis, J.D., and Landes, N.M. (1987). Integrating biology education and health education: The BSCS perspective. *New Trends in Biology Teaching, Volume V.* W.V. Mayer (ed.), UNESCO.

Ellis, J.D. (1986, February). The BSCS and educational computing in the sciences. *The American Biology Teacher*, 48 (2).

Ellis, J.D., and Kuerbis, P.J. (1986). Computer literacy for science teachers. In L.W. Trowbridge and R.W. Bybee, *Becoming a Secondary School Science Teacher, Fourth Edition.* Columbus: Merrill Publishing Company, 150-153.

Ellis, J.D. (1986). Building the S/T/S curriculum: The BSCS experience and perspective. *1985 AETS Yearbook.* R.K. James (ed.), Columbus, OH: SMEAC Information Reference Center, The Ohio State University.

Ellis, J.D. (1984). A comparison of methods for measuring the degree of implementation of an innovative science program. *Research and Curriculum Development in Science Education.* L.J. Bethel, (ed.), Austin: Science Education Center, University of Texas.

Ellis, J.D. (1984). A rationale for using computers in science education. *The American Biology Teacher,* 46 (4). EJ300326

Ellis, J.D., and Kuerbis, P.J. (1984). Educational technology: A force for change. *1984 NSTA Yearbook: Redesigning Science and Technology Education.* R.W. Bybee, et al (eds.), Washington, D.C.: NSTA.

Bethel, L.J., Ellis, J.D., and Barufaldi, J.P. (1982, July). The effects of an NSF institute on inservice teachers views of science and attitudes toward environmental science education. *Science Education.* 66 (4).

LaShier, W.S., and Ellis, J.D. (1979, Spring). Expanded abstract and analysis of: Jaus, Harold H. The effects of integrated science process skill instruction on changing teacher achievement and planning practices. *Investigation in Science Education.* National Association for Research in Science Teaching.

Book Reviews

Ellis, J.D. (1992). [Review of *The Computer in the Science Curriculum*]. *School Science and Mathematics*. 92(5): 287-288.

Ellis, J.D. (1990). [Review of *Assessing the Impact of Computer-Based Instruction*]. *Journal of Computing in Teacher Education*. 7(2): 23-24.

Curriculum Materials

BSCS (2000). *Making Health Decisions: Family Life 1 (Student Book).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Family Life 1 (Teacher Guide).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Family Life 2 (Student Book).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Family Life 2 (Teacher Guide).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Alcohol, Tobacco, and Other Drugs 1 (Student Book).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Alcohol, Tobacco, and Other Drugs 1 (Teacher Guide).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Alcohol, Tobacco, and Other Drugs 2 (Student Book).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (2000). *Making Health Decisions: Alcohol, Tobacco, and Other Drugs 2 (Teacher Guide).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS (1998). *Decisions in Teaching Elementary School Science.* Bloomington, IN: *Agency for Instructional Technology.*

BSCS. (1997). *Making Healthy Decision: Fitness 1 (Student Book).* Kendall/Hunt Publishing Company; Dubuque, Iowa.

BSCS. (1997). *Making Healthy Decision: Fitness 1 (Teacher Guide).* Kendall/Hunt Publishing

Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Fitness 2 (Student Book*) . Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Fitness 2 (Teacher Guide)* . Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Injury Prevention 1 (Student Book)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Injury Prevention 1 (Teacher Guide)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Injury Prevention 2 (Student Book)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Injury Prevention 2 (Teacher Guide)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Nutrition 1 (Student Book)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Nutrition 1 (Teacher Guide)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Nutrition 2 (Student Book)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS. (1997). *Making Healthy Decision: Nutrition 2 (Teacher Guide)*. Kendall/Hunt Publishing Company; Dubuque, Iowa.
BSCS (1991). *Science for Life and Living: Integrating Science, Technology, and Health* (grades K-6). Dubuque, IA: Kendall/Hunt Publishing Company.
Ellis, J.D. and Kuerbis, P.J. (eds.). (1989). *ENLIST Micros.* Danbury, CT: EME Corporation.
Ellis, J.D. (revision editor). (1983). *Computers and Privacy. Innovations: The Social Consequences of Science and Technology Program.* Dubuque, IA: Kendall/Hunt Publishing Company.
Ellis, J.D. (revision editor). (1983). *Science, Technology, and Society. Innovations: The Social Consequences of Science and Technology Program.* Dubuque, IA: Kendall/Hunt Publishing.
Ellis, J.D. (revision editor). (1983). *Television. Innovations: The Social Consequences of Science and Technology Program.* Dubuque, IA: Kendall/Hunt Publishing Company.
Ellis, J.D. (revision editor). (1983). *Human Reproduction: Social and Technological Aspects. Innovations: The Social Consequences of Science and Technology Program.* Dubuque, IA: Kendall/Hunt Publishing Company.
Ellis, J.D. (revision editor). (1983). *Biomedical Technology. Innovations: The Social Consequences of Science and Technology Program.* Dubuque, IA: Kendall/Hunt Publishing Company.
Ellis, J.D. (ed.). (1982). *Home Energy Analysis Training Audio-Visual Program.* Austin, TX: Texas Energy and Natural Resources Advisory Council.
Ellis, J.D. (ed.). (1981). *Home Energy Analysis Training Independent Study Guide.* Austin, TX: Texas Energy and Natural Resources Advisory Council.

Computer Software, Video, and Course Web Sites

Ellis, J.D.; Freidman-Nimz, R., and Harnden, R. Critical Problem Solving in Science and Technology. http://www.soe.ku.edu/sites/science_ed/CPS.htm
Ellis, J.D. and Martens, Lynn. Teaching Science in Middle/Secondary School. KU Blackboard site at http://courseware.ku.edu
Ellis, J.D. Issues in Science Instruction. KU Blackboard site at http://courseware.ku.edu
Ellis, J.D. and Booher, Janifer. Student Teaching in Middle/Secondary Science. KU Blackboard site at http://courseware.ku.edu
Ellis, J.D. Educational Technology in Science and Mathematics. KU Blackboard site at http://courseware.ku.edu

BSCS. (1998). *Decisions in Teaching Elementary School Science. (three video discs).* Agency for Instructional Technology.

Ellis, J.D. and Kuerbis, P.J. (eds.). (1989). *ENLIST Micros: Computer Software Programs.* Danbury, CT: EME.

Ellis, J.D. and Kuerbis, P.J. (eds.). (1989). *ENLIST Micros: Video Programs.* Danbury, CT: EME.

Ellis, J.D. (ed.). (1984). Paper chromatography: computer simulation (experimental edition). Colorado Springs, CO: BSCS.

Ellis, J.D. (ed.). (1984). Plant and animal physiology: computer simulation (experimental edition). Colorado Springs, CO: BSCS.

Ellis, J.D. (ed.). (1984). Genetic resistance to pesticides: computer simulation (experimental edition). Colorado Springs, CO: BSCS.

Ellis, J.D. (ed.). (1984). Light and plant growth: computer simulation (experimental edition). Colorado Springs, CO: BSCS.

Project Reports

Ellis, J.D. and Bulgren, Janis. (2010) Final report for *Professional Development Materials to Develop Student Knowledge and Skills of Scientific Argumentation*. NSF grant from Teacher Professional Continuum (TPC) program.

Ellis, J.D. and Bulgren, Janis. (2008) Annual report for *Professional Development Materials to Develop Student Knowledge and Skills of Scientific Argumentation*. NSF grant from Teacher Professional Continuum (TPC) program.

Heppert, Joseph; Ellis, J.D.; Gay, Susan (2008) Annual report for Noyce Scholarship Project. NSF grant from Division of Undergraduate Education.

Ellis, J.D. and Bulgren, Janis. (2007) Annual report for *Professional Development Materials to Develop Student Knowledge and Skills of Scientific Argumentation*. NSF grant from Teacher Professional Continuum (TPC) program.

Heppert, Joseph; Haack, Constance, Gay, Susan; Staver, John, Shroyer, Gail; Zollman, Dean; and Ellis, James. (2000) Report to the KCETP National Visiting Committee. Interim report to NSF.

Heppert, Joseph; Robinson, Janet; Ellis, James. (2000) Interim report for A Paradigm Redesign of the Laboratory Experience, supported by the William and Flora Hewlett Foundation.

Ellis, J.D. and Maxwell, D.E. (1999) Colorado Science Teacher Enhancement Project (CO-STEP). Final report to NSF.

Ellis, J.D. and Backe, K.A. (1993). Teacher development modules (TDM) for elementary school science. Interim report to the National Science Foundation.

Ellis, J.D. and Maxwell, D.E. (1993). Colorado Science Teacher Enhancement Project (CO-STEP). Interim report to the National Science Foundation.

Ellis, J.D. and Goulding, P.G. (1991) Evaluation of ENLIST Micros III: Teacher centers for improving the use of microcomputers in science instruction. Interim report to the National Science Foundation.

Ellis, J.D. (1989). An evaluation of a teacher-enhancement project on educational computing. Interim report to the National Science Foundation. ED305251.

Ellis, J.D. and Kuerbis, P.J. (1987). Encourage literacy of science teachers in the use of microcomputers (ENLIST Micros): Final report. Submitted to Materials Development for Precollege Science and Mathematics, National Science Foundation. August. ED 287732.

BSCS (1987) Science and health in the elementary school. Software review report: Part one—software for student use.

BSCS (1987) Science and health in the elementary school. Software review report: Part two—software for teacher use.

BSCS (1987) Science and health in the elementary school. A technology-oriented educational program. Part one: The design project

BSCS (1987) Science and health in the elementary school. Requirements specifications for educational

technology: Part II – specifications for a curriculum.

BSCS (1987) Science and health in the elementary school. Requirements specifications for educational technology. Part III – specifications for courseware.

BSCS (1987) Science and health in the elementary school. Requirements specifications for educational technology. Part IV – specifications for video.

Ellis, J.D. (1982, August). Summer workshop for energy education teachers in Texas (middle school): Final report. Submitted to U.S. Department of Energy.

Ellis, J.D. (1981, August). Summer workshop for energy education teachers in Texas (community college): Final report. Submitted to U.S. Department of Energy.

Unpublished Research

Ellis, J.D. (1979). The construct validation of the degree of implementation of an innovation. Unpublished doctoral dissertation. Lawrence, KS: University of Kansas.

Ellis, J.D. (1974). A study of wait time and questioning techniques as performance-based teacher education skills for preservice elementary science teachers. Master's thesis. University of Kansas.

Publications in Development

Bulgren, Jan; Ellis, James. (accepted for publication, but in revision). Argumentation and Evaluation in Science Classes: Analyzing Experimentts and Socio-Scientific Issues. Chapter to be included in Perspectives on Scientific Argumentation: Theory, Practice and Research (Editor, Myint Khine)

Bulgren, Jan; Ellis, James (article in development) Evaluation of Professional Development Materials on Scientific Argumentation in Middle School Science.

Papers and Presentations

Bulgren, J.; Ault, M.; Ellis, J.; Frey, B.; Hare, J. Craig. (2010) The Evidence Games: Collaborative Games Engaging Middle School Students in the Evaluation of Scientific Evidence. Poster presentation at National Science Foundation DR K-12 PI Meeting, December 1, 2010. Washington, DC: NSF.

Ellis, James D. (2010) ASTE Session: Professional Development Materials to Teach Scientific Argumentation in Middle School Science. A paper presented at the regional meeting of the National Science Teachers Association at Kansas City, Missouri. October 28, 2010.

Ellis, James D.; Bulgren, Janis. (2010) Evaluation of Professional Development Materials on Scientific Argumentation in Middle School Science. A paper presented at the annual meeting for the Association for Science Teacher Education, Sacramento, CA, January 14-16, 2010.

Ellis, James D.; Bulgren, Janis; and Carlsen, KC. (2009) Design study methodology to develop an intervention to enhance scientific argumentation skills of middle school students. A paper presented at the annual meeting of the National Association for Research in Science Teaching, Garden Grove, CA. April 18, 2009.

Ellis, James D.; Bulgren, Janis. (2009) Improving teaching of scientific argumentation skills. A paper presented at the annual meeting of the Association for Science Teacher Educators at Hartford, Conneticut. January 8, 2009.

Bulgren, J. A., Ellis, J. D., & Carlsen, K. (2008, July). Poster: The Development of the Argumentation and Evaluation Routine in Inclusive Science Classes. Presentation at the 2008 International SIM Trainers[1] Conference, Lawrence, KS.

Ellis, Jim and Jan Bulgren.(2007) A design study to develop professional development materials for improving teaching and learning of scientific argumentation skills. Presentation at regional conference of Southwest Region of Association of Science Teacher Educators. Forth Worth, Texas. October 12-14.

Ellis, Jim and Jan Bulgren. (2007) Materials to Develop Student Knowledge and Skills of Scientific

Argumentation. Presentation at NSF DR-K12 PI Conference. Arlington, VA. September 9-11, 2007

Ellis, James D. (2006) Teaching students scientific argumentation skills. A presentation at the annual meeting of the Southwest Association for Science Teacher Education. Wichita, Kansas. September 30, 2006.

Ellis, James D. (2006) Professional Development for Teachers of Low Achieving Urban Students. A presentation at the annual meeting of the Association of Science Teacher Educators. Portland, Oregon, January 11, 2006

Ellis, James D. (2005) Connecting science education with special education. A presentation at the annual meeting of the Association for Science Teacher Educators. Colorado Springs, CO. January 20,, 2005.

Ellis, J.D. (2004) Teaching science to students with high incidence disabilities. A paper presented at the annual meeting of the Kansas Association for Teachers of Science. April, Junction City, Kansas.

Lonsbury, Justin and Ellis, James D. (2003) Science history as a means to teach nature of science concepts: Using Mendel and the shift from blending to particulate inheritance. A paper presented at the annual meeting of the National Association for Research on Science Teaching. April 7-10, New Orleans, LA.

Ellis, J..D. (2002) Helping students with disabilities learn science. A presentation at the annual meeting of the Kansas Association of Teachers of Science. April 27, 2002. Rock Springs 4-H Camp, Kansas.

Robinson, Janet; Ellis, James; Heppert, Joseph (2001) The development of pedagogical content knowledge gained in implementing inquiry. A paper presented at the annual meeting of the National Association for Research on Science Teaching. March 26-28, St. Louis, MO.

Mason, Susan; Wolfer, Adam; Robinson, Janet; Heppert, Joseph; Ellis, James; Doyle, Robert. (2001) Implementation and assessment of collaborative learning in problem-based laboratories. A paper presented at the annual meeting of the National Association for Research on Science Teaching. March 26-28, St. Louis, MO.

Wolfer, Adam; Robinson, Janet; Mason, Susan; Heppert, Joseph; Ellis, James. (2001) The effect of problem-based inquiry laboratory experiences on general chemistry students' understandings of the nature of science. A paper presented at the annual meeting of the National Association for Research on Science Teaching. March 26-28, St. Louis, MO

Ellis, James; Robinson, Janet; Heppert, Joseph; Wolfer, Adam; Mason, Susan. (2001) The impact of a problem-centered inquiry course on student self-efficacy in the undergraduate chemistry laboratory. A paper presented at the annual meeting of the National Association for Research on Science Teaching. March 26-28, St. Louis, MO

Ellis, James. (2001) An overview of the draft Kansas Science Teaching Standards. A presentation at a meeting of the Kansas Collaborative for Excellence in Science Teaching. January 26, 2001 in Topeka, Kansas

Heppert, Joseph; Mason, Susan; Robinson, Janet; Wolfer, Adam; Ellis, James; Doyle, Robert. (2001). Evaluating the effect of inquiry-based experiments on the learning environment in an introductory course for science majors. A paper presented at the Gordon Conference on Innovations in College Chemistry Teaching, Ventura, CA, Jan 6, 2001.

Robinson, Janet; Heppert, Joseph; Wolfer, A; Ellis, James. (2000) Collaborative learning in problem-based laboratories. A paper presented at the ACS National Meeting, San Francisco, CA, , March 28, 2000.

Ellis, James; Heppert, Joseph; Robinson, Janet; and Omar, Hafidz. Development of a College Chemistry Efficacy Beliefs Instrument. (2000) A paper presentation at the annual meeting of the National Association for Research in Science Teaching, April, in New Orleans, LA.

Heppert, Joseph; Ellis, James; and Robinson, Janet. (2000). A problem-solving approach to the laboratory for an undergraduate course in introductory chemistry. Paper presentation at the Association for the Education of Teachers in Science. January 2000 in Akron, Ohio.

Ellis, J.D. (1999) Preparing elementary science teachers: Whose concerns do we address? A paper

presented at the regional meeting of the National Science Teachers Association. November 18-20, 1999. Tulsa, OK.

Ellis, J.D. (1999) Teaching standards: What are they? How might they impact science teachers?. A paper presented at the annual meeting of the Kansas Association for Science Teachers. April 23-25, 1999. Rock Springs, KS.

Ellis, J.D. (1999) A dilemma in reforming science teacher education: Responding to students' concerns or striving for high standards. A paper presented at the annual meeting of the Association for Education of Teachers in Science. January 14-17 1999. Austin, TX.

Gitomer, D.; Lynch, S.; Collins, A.; Duschl, R.A.; Ellis, J.D.; Loving, C.C. (1999) The National Board of Professional Teaching Standards and secondary science teachers: A discussion of the results of the first year and their implications for science educators. A paper presented at the annual meeting of the National Association for Research in Science Teaching. March 28-31, 1999. Boston.

Gilbert, S.; Lederman, N.; Flick, L.; Staver, J. Spector, B., and Ellis, J. (1998) NSTA standards for science teacher education: Content, nature of science, inquiry, context, and pedagogy standards. A paper presented at the annual meeting of the National Association for Research in Science Teaching. April 19-22, 1998. San Diego, CA.

Ellis, James D. and Pickard, Dawn. (1998) NSF Programs: Opportunities for Funding. A presentation at the Association for the Education of Teachers in Science. January 8-11, 1998. Minneapolis, MN.

Maxwell, Don; Ellis, James, Jones, Christine, and Kuerbis, Paul. (1998) CO-STEP: Colorado's Elementary Science Teacher Staff Development Project… The Results. A presentation at the Association for the Education of Teachers in Science. January 8-11, 1998. Minneapolis, MN.

Ellis, J.D. and Tramill, Jeannie. (1997) Overview of Third International Mathematics and Science Study. A presentation to the Kansas Policy Board for NCTAF. Overland Park, Kansas

Ellis, J.D. and Earle, J. A Review of NSF programs. A paper presented at the annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL: 24 March 1997.

Ellis, J.D. and Earle, J. A Review of NSF programs. A paper presented at the annual meeting of the Association for the Education of Teachers in Science, Cincinnati, OH: 10 January 1997.

Ellis, J.D and Woodin, T. A Review of NSF programs. A paper presented at the annual meeting of the National Association of Biology Teachers: Charlotte, NC: 19 October 1996

Maxwell, D., Kuerbis, P., Jones, C., and Ellis, J. COSTEP: Colorado's successful professional development project for teacher leadership: Taking science reform to heart. A presentation at the Denver Regional Meeting of the National Science Teachers Association. November, 1997.

Ellis, J.D. and Earle, J. Review of instructional material for middle school science. A paper presented at the annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL: 23 March 1997.

Ellis, J.D. Issues for curriculum analysis. A presentation at an AAAS/NSF Invitational Conference on Middle School Science. Washington, DC: 8 February 1997.

Ellis, J.D. and Earle, J. Review of instructional material for middle school science. A paper presented at the annual meeting of the Association for the Education of Teachers in Science, Cincinnati, OH: 12 January 1997.

Ellis, J.D. Review of instructional material for middle school science. A paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO: 31 March 1996.

Ellis, J.D. and Maxwell, D.E. Intervening in the professional development of science teachers: The Colorado Science Teacher Enhancement Program. A paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. 19 April 1995.

Ellis, J.D. and Backe, K.A. Using video to evoke reflections on science teaching: BSCS teacher development modules for elementary school science. A paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. 20 April 1995.

Ellis, J.D. and Maxwell, D.E. Intervening in the professional development of science teachers: The Colorado Science Teacher Enhancement Program. A paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA. 23 April 1995.

Ellis, J.D. and Backe, K.A. Using video to evoke reflections on science teaching: BSCS teacher development modules for elementary school science. A paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA. 22 April 1995.

Backe, K.A. and Ellis, J.D. A teacher enhancement project for elementary school science. A paper presented at the annual meeting of the National Science Teachers Association, Anaheim, California. 2 April 1994.

Gallagher, J. Roseman, J. Ellis, J.D. Project 2061 Blueprint for teacher education. A paper presented at the annual meeting of the Association for the Education of Teachers in Science. Charleston, WV, 6 January 1995.

Ellis, J.D. and Backe, K.A. Teacher development modules for elementary school science. A paper presented at the annual meeting of the Association for the Education of Teachers in Science. Charleston, WV, 6 January 1995.

Ellis, J.D., Maxwell, D.E., Kuerbis, P.J. The Colorado Science Teacher Enhancement Program (CO-STEP). A paper presented at the annual meeting of the Association for the Education of Teachers in Science, Charleston, WV, 7 January 1995.

Maxwell, D. E. and Ellis, J.D. Working together for better elementary science instruction through project CO-STEP. A paper presented at the annual meeting of the National Science Teachers Association, Anaheim, California. 31 March 1994.

Ellis, J.D., Enochs, L.G., and Mattheis, F.E. Needed! Quality evaluation of teacher enhancement projects. A symposium at the annual meeting of the National Association for Research in Science Teaching. Anaheim, CA. 21-29 March 1994.

Ellis, J.D. and Kuerbis, P.J. The new round of BSCS curricular materials. Preconference workshop at annual meeting of the Association for the Education of Teachers in Science. El Paso, TX. 6-9 January 1994.

Ellis, J.D. and Backe, K.A. Teacher development modules for elementary school science. A paper presented at the meeting of the Association for the Education of Teachers in Science. 6-9 Jan 1994.

Ellis, J.D. and Kuerbis, P.J. The Colorado Science Teaching Enhancement Project (CO-STEP). A paper presented at the annual meeting of the Association for the Education of Teachers in Science. 6-9 January 1994.

Ellis, J.D. Fostering Change in Science Education. A paper the national conference "Connecting Resources for Reform" at the Ohio State University, 3 December 1993.

Maxwell, D.E.; Kuerbis, P.J.; and Ellis, J.D. Colorado College CO-STEP & BSCS: Overcoming obstacles that affect elementary science instruction. Paper presented at the annual meeting of the Association of Independent Liberal Arts Colleges for Teacher Education. Colorado Springs, CO, 12-14 November 1993.

Maxwell, D.E.; Beller, C.; Kottenstette, T.; Kuerbis, P.J.; Jones, C.; Edwards, D.; Hall, M.; McCallister, G.; Welsh, M.; Ellis, J.D. Building a better science program through teacher enhancement: The Colorado Elementary Science Teacher Enhancement Project (CO-STEP). A panel presentation at the regional meeting of the National Science Teachers Association, Denver, CO. 28 October 1993.

Backe, K.A. and Ellis, J.D. Teacher development modules for elementary science. A presentation at the regional meeting of the National Science Teachers Association, Denver, CO. 28 October 1993.

Ellis, J.D. Fostering change in science education. Keynote address at NSF invitational forum on elementary and secondary teacher enhancement in science and mathematics: Status, issues, and problems. Academy for Educational Development, Washington, DC. 29 July 1993.

Ellis, J.D. Changing school perspectives. An invited presentation at the NSF conference *Beyond National Standards and Goals: Excellence in Mathematics and Science Education K-16*. Washington, DC. 9-11 February 1993

Ellis, J.D. and Goulding, P.G. ENLIST Micros III: models for establishing ENLIST Micros Teacher Centers. A project report at the National Educational Computing Conference in Dallas, Texas, 17 June 1992.

Ellis, J.D. and Goulding, P.G. A model project for helping science/mathematics teachers use microcomputers. A six-hour workshop at the National Educational Computing Conference in Dallas, Texas 14 June 1992.

Ellis, J.D., Enochs, L.G., Kuerbis, P.J., and Goulding, P.G. Mixing paradigms in evaluating teacher enhancement projects. A symposium at the annual meeting of the National Association for Research in Science Teaching in Boston, Massachusetts. 23 March 1992.

Lavoie, D.R., Ellis, J.D., LaShier, W.S., Lederman, N.G., Flick, L., and Oliver, S. Developing and using NARST-NET: a proposed telecommunications network. A panel discussion at the annual meeting of the National Association for Research in Science Teaching in Boston, Mass. 22 March 1992.

Ellis, J.D. and Goulding, P.G. Seminar for trainers from ENLIST Micros Teacher Centers. Presented at the annual meeting of the National Science Teachers Association in Boston, Massachusetts. 28 March 1992.

Ellis, J.D., Baird, W.E., Enochs, L.G., Goulding, P.G., and Spector, B. Teacher centers for promoting educational technology use. A panel presentation at the meeting of the National Science Teachers Association in Boston, Massachusetts. 28 March 1992.

Maxwell, D.E. and Ellis, J. D. The Colorado Science Teacher Enhancement Project. A workshop presented at the annual convention of the Colorado Association of Science Teachers in Denver, Colorado. 13 March 1992.

Ellis, J.D. and Kuerbis, P.J. Implementing problem-centered investigations in science. A paper presented at the conference of the Southwest Region-Association for the Education of Teachers of Science. Tulsa, Oklahoma. 10 January 1992.

Ellis, J.D. and Goulding, P.G. A seminar for trainers from *ENLIST Micros* Teacher Centers. A seminar at the area convention of the National Science Teachers Association. New Orleans, Louisiana. 14 December 1991.

Ellis, J.D.; Enochs, L.G.; Baird, W.E. and Barker, K. Teacher centers for enhancing the use of microcomputers by K-12 science teachers. A panel session presented at the area convention of the National Science Teachers Association. New Orleans, Louisiana. 15 December 1991.

Ellis, J.D. and Goulding, P.G. A model project for preparing science teachers to use microcomputers. A short course at the area convention of the National Science Teachers Association. New Orleans, Louisiana. 13 December 1991.

Ellis, J.D. Implementing problem-centered investigations in environmental science. Paper at the National Association of Biology Teachers. Nashville, Tennessee. 9 November 1991.

Ellis, J.D. Helping science teachers improve microcomputer use. A short course at the National Association of Biology Teachers. Nashville, Tennessee. 7 November 1991.

Ellis, J.D. *ENLIST Micros*: Improving use of educational technology. A short course at the National Science Supervisors Association Science Leadership Institute. Southern Illinois University, Edwardsville, Illinois. 1 August 1991.

Ellis, J.D.; Enochs, L.G. and Riggs, I.M. The development and partial validation of the microcomputer utilization in teaching efficacy beliefs instrument. A paper presented at the annual meeting of the National Association for Research in Science Teaching. Fontana, Wisconsin. 9 April 1991.

Ellis, J.D. and Goulding, P.G. An evaluation of *ENLIST Micros III:* Teacher centers for improving the

use of microcomputers in science instruction. A poster session presented at the annual meeting of the National Association for Research in Science Teaching. Fontana, Wisconsin. 9 April 1991.

Ellis, J.D. and Goulding, P.G. A seminar for trainers from *ENLIST Micros* Teacher Centers. A seminar at the convention of the National Science Teachers Association. Houston, Texas. 30 March 1991.

Ellis, J.D. and Bybee, R.W. Integrating the history and nature of science and technology into science teaching. A workshop presented at the national convention of the National Science Teachers Association. Houston, Texas. 30 March 1991.

Ellis, J.D.; Harter, M.; Liao, T.; Enochs, L.G., and Baird, W.E. Teacher centers for enhancing the use of microcomputers by K-12. A panel session at the national convention of the National Science Teachers Association. Houston, Texas. 29 March 1991.

Ellis, J.D. and Bybee, R.W. Integrating the history and nature of science and technology into science teaching. A presentation at the regional conference of the National Science Teachers Association. Long Beach, California. 2 November 1990.

Ellis, J.D. and Goulding, P.G. A model program for preparing science teachers to use microcomputers. A short course presented at the annual meeting of the National Association of Biology Teachers. Houston, Texas. 7 November 1990.

Ellis, J.D. and Goulding, P.G. A seminar for trainers from *ENLIST Micros* Teacher Centers. A seminar at the regional conference of the National Science Teachers Association. Long Beach, California. 3 November 1990.

Ellis, J.D. and Goulding, P.G. A model program for preparing science teachers to use microcomputers. A short course at the regional conference of the National Science Teachers Association. Long Beach, California. 2 November 1990.

Bybee, R.W. and Ellis, J.D. Integrating the history and nature of science into school science programs. A presentation at the annual meeting of School Science and Mathematics Association. Cincinnati, Ohio. 12 October 1990.

Ellis, J.D. A model program for preparing science teachers to use microcomputers. A presentation at a conference of the National Science Teachers Association. Kansas City, Kansas. 18 Oct 1990.

Ellis, J.D. and Bybee, R.W. Integrating the history and nature of science into school science programs. A presentation at the regional conference of the National Science Teachers Association. Kansas City, Kansas. 19 October 1990.

Ellis, J.D. and Goulding, P.G. Preparing science teachers to use educational computing. A workshop presented at the annual meeting of the Southwestern and Rocky Mountain Division of the American Association for the Advancement of Science. Colorado Springs, Colorado. 18 May 1990.

Ellis, J.D.; Goulding, P.G.; Powell, J.C.; Hannigan, M.; and Lenk, C. Establishing training centers for inservice science teachers. A symposium at the meeting of the National Association for Research in Science Teaching. Atlanta, Georgia. 9 April 1990.

Ellis, J.D. and Goulding, P.G.. *ENLIST Micros* – A model program for preparing science teachers to use microcomputers. A short course presented at the annual meeting of the National Science Teachers Association. Atlanta, Georgia. 6 April 1990.

Bybee, R.W.; Ellis, J.D.; Giese, J.; and Parisi, L. Teaching the history and nature of science in science courses: A framework. A paper presented at the meeting of the National Association for Research in Science Teaching. Atlanta, Georgia. 11 April 1990.

Ellis, J.D. ENLIST Micros: Phase III -- models for establishing ENLIST Micros training centers. A paper presented at the meeting of the National Association for Research in Science Teaching. Atlanta, Georgia. April 1990. ED 341548

Ellis, J.D. Research on preparing science teachers to use microcomputers. A presentation at meeting of the National Science Teachers Association. Atlanta, Georgia. 8 April 1990.

Ellis, J.D. Teacher centers: leaders for implementing educational innovations. A presentation at the annual meeting of the Southwest Region - Association for the Education of Teachers in Science. Kansas City, Kansas. 14 January 1990.

Ellis, J.D. Preparing science teachers to use microcomputers. A presentation at the annual meeting of the Southwest Region - Association for the Education of Teachers in Science. Kansas City, Kansas. 14 January 1990.

Ellis, J.D. A model program for preparing science teachers to use microcomputers. A short course at the annual meeting of the National Science Teachers Association. Atlantic City, NJ, December 1989.

Ellis, J.D. A model program for preparing science teachers to use microcomputers. A short course at the annual meeting of the National Association for Biology Teachers. San Diego, CA, October 1989.

Ellis, J.D. ENLIST Micros II: Implementing microcomputers in science teaching. A special session at meeting of the National Educational Computing Conference. Boston, June 1989.

Ellis, J.D. Information technology and science education: The 1988 AETS yearbook. A symposium at the National Educational Computing Conference. Boston, June 1989.

Ellis, J.D. A curriculum for preparing science teachers to use microcomputers. A presentation at the annual meeting of the National Science Teachers Association. Seattle, WA, April 1989.

Ellis, J.D., and Kuerbis, P.J. A model for implementing microcomputers in science teaching. Invited presentation of outstanding paper on practical applications for 1988 NARST meeting at the annual meeting of the National Association for Research in Science Teaching. San Francisco, CA. March 1989.

Ellis, J.D. An evaluation of a teacher enhancement project on educational computing. A poster presentation at the annual meeting of the National Association for Research in Science Teaching. San Francisco, CA, March 1989.

Ellis, J.D. Information technologies and science education. A symposium at the meeting of the National Association for Research in Science Teaching. San Francisco, CA, March 1989.

Ellis, J.D. An overview of computer software for biology education. A presentation at round table on software for biology education for BIOSIS. Philadelphia, PA, March 1989.

Ellis, J.D., and Goulding, P. Collaborating to train science teachers to use microcomputers. Presentation at Colorado Science Teachers Association. Greeley, CO, February 1989.

Ellis, J.D. Preparing science teachers to use microcomputers. A presentation at the annual meeting of the Southwestern Region - Association for the Education of Teachers in Science. Wichita, KS, January 1989.

Ellis, J.D. The BSCS model for training science teacher to use microcomputers. A presentation at meeting of the School Science and Mathematics Association. Austin, TX, December 1988.

Ellis, J.D. Activities for building concepts and skills in science, technology, and health with elementary children. A presentation at the annual meeting of the School Science and Mathematics Association. Austin, TX, December 1988.

Ellis, J.D. Implementing microcomputers in science teaching. A short course at the annual meeting of the National Association for Biology Teachers. Chicago, November 1988.

Ellis, J.D. A curriculum for preparing science teachers to use microcomputers. A presentation at the meeting of the National Science Teachers Association. Portland, ME, October 1988.

Ellis, J.D. A curriculum for preparing science teachers to use microcomputers. A presentation at the meeting of the National Science Teachers Association. Columbus, OH, October 1988.

Ellis, J.D. Improving science instruction with microcomputers. A presentation at the regional meeting of the National Science Teachers Association. Columbus, OH, October 1988.

Ellis, J.D. A model for training science teachers to use microcomputers. A report at the meeting of the National Educational Computing Conference. Dallas, TX, June 1988.

Ellis, J.D. A curriculum for preparing science teachers to use microcomputers. A presentation at the meeting of the TIE Education Technology Conference. Breckenridge, CO, June 1988.

Ellis, J.D. Microcomputer-based laboratory in science. A presentation at the annual meeting of the TIE

Education Technology Conference. Breckenridge, CO, June 1988.

Ellis, J.D. Using computers in science teaching. A presentation at the annual meeting of the TIE Conference. Rapid City, SD, April 1988.

Ellis, J.D. A curriculum for training science teachers to use microcomputers. A presentation at the annual meeting of the TIE Conference. Rapid City, SD, April 1988.

Robertson, W.C., Ellis, J.D., Bybee, R.W., and, Muscella, D. New designs for elementary school science. A symposium at the annual meeting of the National Association for Research in Science Teaching. Lake Ozark, MO, March 1988.

Ulerick, S.; Bybee, R.W.; and Ellis, J.D. Research on computers in schools: From PLATO to LOGO and beyond. A paper presented at the annual meeting of the National Association for Research in Science Teaching. Lake Ozark, MO, March 1988.

Ellis, J.D. Applications of microcomputers for science teaching. A short course at the annual meeting of the Colorado Science Teachers Association. Denver, CO, March 1988.

Ellis, J.D. and Kuerbis, P.J. A model for implementing microcomputers in science teaching. A paper presented at the annual meeting of the National Association for Research in Science Teaching. Lake Ozark, MO, March 1988. ED 292655.

Ellis, J.D. Preparing science teachers to use microcomputers. A presentation at the annual meeting of the Southwestern Region - Association for the Education of Teachers in Science. Oklahoma City, OK, January, 1988.

Ellis, J.D. Preparing science teachers to use microcomputers in the classroom. Short course at the meeting of the National Science Teachers Association. San Antonio, TX, November 1987.

Ellis, J.D. Preparing science teachers to use microcomputers in the classroom. Short course at the meeting of the National Science Teachers Association. Pittsburgh, PA, November 1987.

Ellis, J.D. Preparing biology teachers to use microcomputers in the classroom. Short course at the meeting of the National Association of Biology Teachers. Cincinnati, OH, October 1987.

Ellis, J.D. Research matters...to the science teacher: Improving science teaching with computers. Invited session for the National Association of Research in Science Teaching at the regional meeting of the National Science Teachers Association. Salt Lake City, UT, September 1987.

Ellis, J.D. Encourage the literacy of science teachers in the use of microcomputers. A project report at the annual meeting of the National Educational Computing Conference. Philadelphia, PA, June 1987.

Ellis, J.D., and Bybee, R.W. Appropriate applications of educational computing for elementary school science and health. Project report presented at the 8th National Educational Computing Conference. Philadelphia, PA, June 1987.

Ellis, J.D., and Kuerbis, P.J. Computers in science: Micro-based software for labs. Short course at the meeting of Colorado Association of Science Teachers. Colorado Springs, CO, May, 1987.

Baird, W.E.; Ellis, J.D.; and Kuerbis, P.J. ENLIST Micros: Training science teachers to use microcomputers. A paper presented at the 60th annual meeting of the National Association for Research in Science Teaching. Washington, D.C., April 1987.

Ellis, J.D. Using the computer to enhance science teaching. Short course at the meeting of the National Science Teachers Association. Washington, D.C., March 1987.

Ellis, J.D. Microcomputer applications in the sciences. College course at the University of Colorado. Colorado Springs, CO, Spring 1987.

Ellis, J.D., and Kuerbis, P.J. Using the computer to enhance science teaching. Short course at the meeting of the National Science Teachers Association. Las Vegas, NV, November 1986.

Ellis, J.D., and Kuerbis, P.J. Using the computer to enhance science teaching. Short course at the meeting of the National Science Teachers Association. Indianapolis, IN, October 1986.

Ellis, J.D., and Kuerbis, P.J. Computer literacy for science teachers. Short course at the annual meeting of the National Science Teachers Association. San Francisco, CA, March 1986.

Ellis, J.D. Microcomputer applications in the sciences. College course at the University of Colorado. Colorado Springs, CO, Spring 1986.

Ellis, J.D., and Kuerbis, P.J. The development of a test of computer literacy of science teachers in grades K-12. Paper presented at the annual meeting of the National Association for Research in Science Teaching. San Francisco, CA, March 1986, ED 266952.

Ellis, J.D., and Kuerbis, P.J. ENLIST Micros: Encouraging the literacy of science teachers in the use of microcomputers. A presentation at the annual meeting of the Southwestern Region – Association for the Education of Teachers of Science. Wichita, KS, October, 1985.

Ellis, J.D. Computer literacy for science teachers: The BSCS ENLIST Micros project. Short course at meeting of National Association of Biology Teachers. Orlando, FL, October 1985.

Ellis, J.D. Microcomputer applications in the sciences. College course at the University of Colorado. Colorado Springs, CO, Fall 1985.

Ellis, J.D., and Kuerbis, P.J. Development and validation of essential computer literacies for science teachers. A paper presented at the annual 1985 National Association for Research in Science Teaching meeting. French Lick, IN, April 1985, ED 255373.

Ellis, J.D., and Donovan, E. Using microcomputers in science education. Short course at meeting of the Colorado Association of Science Teachers. Colorado Springs, CO, February 1985.

Ellis, J.D., and Kuerbis, P.J. Essential computer literacy competencies for science teachers and implications for teacher training. Presentation at the annual meeting of the Southwestern Region – Association for the Education of Teachers of Science. Denton, TX, January, 1985.

Ellis, J.D., and McInerney, J.D. The Biological Sciences Curriculum Study: Reforming biology education. Association for the Education of Teachers of Science. Cincinnati, OH, April 1985.

Ellis, J.D. Health - A focus for education in science, technology, and society. Southwestern Region – Association for the Education of Teachers of Science. Denton, TX, January 1985.

Ellis, J.D. Uses of computers in biology education. National Association of Biology Teachers. Purdue University, November 1984.

Ellis, J.D. Evaluation of bioeducation software. National Association of Biology Teachers. Purdue University, November 1984.

Ellis, J.D. Educational technology in science education. Invited address. Phi Delta Kappa Chapter. Manhattan, KS, July 1984.

Ellis, J.D. Using microcomputers in science teaching. Graduate seminar at Kansas State University. Lawrence, KS, Summer 1984.

Ellis, J.D. and Kuerbis, P.J. Infusing computer literacy into science teacher training. Association for the Education of Teachers of Science. Boston, MA, April, 1984.

Ellis, J.D. BSCS: Appropriate uses of the computer in the science class. National Science Teachers Association Convention. Boston, MA, April 1984.

Ellis, J.D. Seminar on computer instruction in biology education. National Association of Biology Teachers. Philadelphia, PA, October 1983.

Ellis, J.D. BSCS: Developing appropriate educational software for biology. National Association of Biology Teachers. Philadelphia, PA, October, 1983.

Ellis, J.D. Using the microcomputer in science education. National Science Teachers Association. Stony Brook, NY, October 1983.

Ellis, J.D. Using the microcomputer in science classrooms. Inservice workshop for Colorado Springs School District 11. Colorado Springs, CO, October 1983.

Ellis, J.D. Educational uses of the computer in science. Colorado Association of Science Teachers. Estes Park, CO, June 1983.

Ellis, J.D., and Zielinski, E. Effects of a summer institute on middle school science teachers' energy knowledge and attitude and energy education implementation. National Association for Research in Science Teaching. Dallas, TX, April 1983.

Ellis, J.D. A needs assessment survey of home energy analysis training. National Association for Research in Science Teaching. Lake Geneva, NY, April 1982.

Ellis, J.D., Shaw, T., and Mills, T. The water resource management simulator: A powerful tool for

teaching water topics. National Science Teachers Association. Chicago, IL, April 1982.

Ellis, J.D. An evaluation of a community college faculty development project on energy education. Association for the Education of Teachers of Science. Chicago, IL, April 1982.

Ellis, J.D. Summer workshop for energy educating teachers in Texas: Final report. Austin: Science Education Center, University of Texas at Austin. Austin, TX, 1982.

Ellis, J.D. Texas community college energy program. Conference for the Advancement of Science Teaching. Dallas, TX, November 1981.

Ellis, J.D. Energy education program for Texas utility companies. COMGOT (Texas Utilities). Corpus Christi, TX, December 1981.

Ellis, J.D. Evaluating science curricula: Relating educational process to product. National Association for Research in Science Education. New York, April 1981.

Ellis, J.D. Construct validation of the procedures for measuring the degree of implementation of an innovation. Southwestern Region – Association for the Education of Teachers in Science. New Orleans, LA, January 1980.

Service to University

NCATE Coordinator. School of Education. August 2008 to present.

Member. Advisory Council. MSP planning grant from National Science Foundation. 2009-2010

Member. Curriculum Planning Committee. MSP planning grant from National Science Foundation. 2009-2010.

Member. Curriculum Committee for C&T Department 2010-2012

Chair. Curriculum Committee for C&T Department. 2009-2010.

Member. Ad Hoc Committee on redesign of teacher education program 2009-2011.

Member. Executive Committee for C&T Department. 2008-2010.

Member, Steering Committee for UKanTeach Program**.** 2007- present.

Member. Teacher Education Committee. School of Education. 2004-present

Chair. Secondary Education Committee. 2007 to 2009.

Member. LRC Advisory Committee. School of Education. 2006-2008.

Member. Task force for program review of proposal for new Bioinformatics Program at KU. 2008.

Associate Director. Center for Science Education. 2000-2008

Member. Advisory Committee of Transition to Teaching Project. 2003-2007.

Member. Curriculum Committee of Transition to Teaching Project. 2003-2007.

Member. Graduate Curriculum Committee of T&L Department. 2003-2006.

Member. Task Force for the Review of the Institute for Educational Research and Public Service. 2001-2002

Member. Teacher Education Group. 2001-2005.

Member. Curriculum committee of Teacher Education Division. 1998-2000.

Member. University Task Force on Science Education. 1999-2000

Member. PDS Council (1998-2001)

Member. Executive Council for the School of Education's Institute for Educational Research and Public Service; 1997-2000.

Member. Committee to developing design specifications for science/math lab/classroom facility in new SOE building; 1998

Member. Operations Committee of T&L Department. 1999-2002.

Member. Personnel Committee for T&L Department. (1997-98)

Service to the Profession

Judge (April 2010). Greater Kansas City Science Fair.

Vice President (2010-2011). Kansas Association of Science Teachers.

Member of the Board of Directors (2008-2011). Kansas Association for Teachers of Science.
Member of editorial board. (2009-2012**).** *Journal of Science Teacher Education.*
Member of the equity committee (2009-2012). National Association for Reseasrch in Science Teaching
Member of Publications Committee (2008 – 2011). Association for Science Teacher Educators.
Member and Reviewer. (2008-2011) NCATE program reports for NSTA for secondary science education programs
Guest Instructor. (2009) NSF-supported summer institute at The Colorado College for Middle School Science Teachers on Scientific Argumentation.
Judge (April 2009). Greater Kansas City Science Fair.
Member of Board of Examiners for KSDE Accreditation of Teacher Education Institutions. Completed training June 2008.
Judge (April 2008). Greater Kansas City Science Fair.
Member and Reviewer. (2007) NCATE program reports for NSTA for secondary science education programs
Reviewer. (2004) Panel review of proposals submitted to the Teacher Preparation Continuum Program at the National Science Foundation.
Reviewer. (2002) Preliminary proposals submitted to the Instructional Materials Development Program at the National Science Foundation.
Associate Chair. (2001) Committee for Kansas Licensure Standards for Science Teaching.
Member of review panel. (2000) Preliminary proposals submitted to the Instructional Materials Development Program of the National Science Foundation May 15-17, 2000 in Washington, D.C.
Participant. Department of Education's 2000 Teacher Quality Summer Institute. 2000
Member of National NSTA/NCATE Folio Review Panel. (2000).
Reviewer. (2000**)** ToolKit 98. A review of teacher enhancement materials for the National Science Foundation.
Reviewer. (2000) Inventing Science Education for the New Millennium. A review of teacher enhancement materials for the National Science Foundation.
Reviewer. (2000) Astrobiology: The Search for Life. A review of prospectus and material for Kendall/Hunt Publishing Company.
Member of the Editorial Board. *Science Education: Science Teacher Education Section.* 1999-2001.
Member of Editorial Board. *Journal of Science and Technology Education.*1991-present.
Member of the Editorial Board. *Journal of Biological Education* 1998-present.
Member of the Board of Directors. *Kansas Association for Teachers of Science.* 1999-2002.
Member of the Executive Board. Kansas Mathematics and Science Education Coalition. 1999-present.
Judge. The Greater Kansas City Science Fair. 1998-present.
Member of review panel. Proposals submitted to Division of Human Resource Development of the National Science Foundation for small experimental projects in gender equity. June 16-17, 1999.
Manuscript reviewer. *BioScience.* 1999.
Chair of program committee. *Association for Education of Teachers in Science.* At the regional meeting of the National Science Teachers Association in Tulsa, Oklahoma November, 1999.
Manuscript reviewer. *BioScience.* 1998.
Manuscript reviewer. *Journal of Research in Science Teaching*, 1998.
Manuscript reviewer. *Models for Science Teacher Preparation: Bridging the Gap Between Research and Practice.* Kluwer publishing. 1998.

Member of review panel. Proposals submitted to the Division of Elementary, Secondary, and Informal Education of the National Science Foundation for Instructional Materials Development Program. October 15-17, 1998.

Expert reviewer. Mail review of proposals submitted to the Division of Elementary, Secondary, and Informal Education of the National Science Foundation. 1998.

Expert reviewer. Mail review of proposals submitted to the Division of Human Resource Development of the National Science Foundation. 1998.

Member of National Advisory Committee. *Kit and Kaboodle*. Instructional Materials Development Project supported by NSF. 1997-1999.

Member of Board of Directors. National Association for Research in Science Teaching. 1996-99.

Chair of Finance Committee. National Association for Research in Science Teaching. 1996-99.

Chair of the Award Committee for Outstanding Masters Thesis. National Association for Research in Science Teaching. 1996-99.

Member of NCA/QPA site visit team. Olathe East High School 1997-98.

Member of the Long-Range Planning Committee. Association for the Education of Teachers in Science. 1996-98

Member of the Board of Directors. National Science Teachers Association. 1995.

President. Association for the Education of Teachers in Science. 1995.

Chair of section Q (education). American Association for the Advancement of Science. 1995.

Member of teacher education committee. National Science Teachers Association. 1995-97 .

Member of NCATE subcommittee. National Science Teachers Association. 1995-98 .

Member of AETS review committee. National Science Education Standards. 1995.

Chair of education committee. National Association of Biology Teachers. 1994-97 .

Consultant. The Teachers' Academy of Mathematics and Science in Chicago, Illinois. 1994-96.

Reviewer. *Program and System Standards*: NRC National Science Education Standards. 1994.

Reviewer. *Blueprint for the Education of Science Teachers*: AAAS Project 2061. 1994.

Reviewer. *Blueprint on Educational Technology*: AAAS Project 2061. 1994.

Panel reviewer. National Eisenhower Program for Science and Mathematics, U.S. Department of Education. 1994.

Reviewer. Proposals for 1995 annual meeting of the American Educational Research Association for section on research on learning and instruction in science.

Member of mission planning committee. Association for the Education of Teachers in Science. 1993.

Chair of nominating committee. National Association for Biology Teachers. 1993.

Member of nominating committee. National Association for Research in Science Teaching. 1993.

Chair of program committee. Association for the Education of Teachers in Science section of regional meeting of the National Science Teachers Meeting in Denver, Colorado, 1993.

Member of advisory committee. Research project on microcomputer-based laboratory conducted by Architectural Energy Corporation with small business grant from the National Science Foundation, 1993-95.

Member. NSF panel review for the Division of Teacher Preparation and Enhancement. 1993.

Member of advisory committee. NSF planning grant for Bozeman schools in Bozeman, Montana. 1993-94.

Member. NSF panel review for the Division of Teacher Preparation and Enhancement. 1992.

Reviewer. NSF mail review of proposal for Teacher Preparation and Enhancement. 1992.

Member of middle childhood science committee. National Board for Professional Teaching Standards. 1991-.

Chair. NSF panel review for proposal submitted to the Division of Teacher Preparation and Enhancement. 1991.

Member of editorial review board. *Journal of Research in Science Teaching.* 1989-98.

Member of editorial review board. *Journal of Computers in Mathematics and Science Teaching*. 1991-93.

Member of nominating committee. National Association of Biology Teachers. 1991-93.**Chair of the nominating committee for section Q (education)**. American Association for the Advancement of Science. 1990-91.

Consultant. On educational technology to U.S. Space Foundation, 1990.

Chair. NSF panel for review of proposals submitted to the Division of Teacher Preparation and Enhancement. 1990.

Chair of subcommittee of Association of Computing Machinery. Developed guidelines for courses on educational technology for preservice science teachers. 1990.

Consultant. United States Space Foundation on educational technology. 1989-90.

Consultant. Project by Emerging Technology Consultants Inc. to produce a series of videodiscs, *Modular Investigations Into Science and Technology*, for elementary school science. 1989.

Consultant. IBM/TERC project to develop software for the *Personal Science Laboratory*. 1989.

Member of advisory committee. Star Schools Project of Technical Education Research enters, 1988-89.

Member electorate Q (education) nominating societies committee. American Association for the Advancement of Science. 1988-91.

Conference chair. NABT/Fisher Scientific Bulletin Board System. 1987-1989.

Member of telecommunications committee. National Association of Biology Teachers. 1987-1989.

Member of elementary/middle school committee. National Association of Biology Teachers. 1987-1988.

Member of publications committee. National Association for Research in Science Teaching. 1987-1990.

Member of board of directors. Pikes Peak Chapter of the Cystic Fibrosis Foundation. 1987-1990.

NSF panel member. Precollege Science and Mathematics Education. Review of proposals for Teacher Enhancement Program. Washington, D.C., 1987.

Member of board of directors. Rocky Mountain Educational Computing Consortium. 1986-89.

Regional director. Colorado Association of Biology Teachers. 1984-87.

Member of awards committee. National Association for Research in Science Teaching. 1984-87.

Director. Southwestern Region – Association for the Education of Teachers in Science. 1986.

Member of convention committee. Colorado Association of Science Teachers. 1985.

Conference chair. Colorado Association of Biology Teachers. 1985.

Member of computer committee. National Association of Biology Teachers. 1984.

Conference co-chair. The Colorado Science, Technology, and Education Forum. Summer 1983.

Program chair. Association for the Education of Teachers in Science. National convention. Dallas, TX, April 1983.