

David Freeman Jackson

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Education

Ed.D., University of Michigan, Ann Arbor, 1990.

School of Education, Program in Curriculum, Teaching, and Psychological Studies.

Major field: Science Education. Minor field: Educational Technology.

Dissertation: Semi-automated Data Analysis using Sequence Comparison Algorithms:
Computer-assisted Problem Solving with Graphs.

Advisor and Dissertation Chair: Prof. Carl F. Berger.

A.B., *cum laude* in general studies, Harvard University, Cambridge, MA, 1982

Field of concentration: Geological Sciences.

Advisor: Prof. Stephen Jay Gould.

Westhill High School, Stamford, CT, graduated 1977.

Experience

Associate Professor, 1996-present. Date of appointment: Sept. 18, 1996.

Graduate Coordinator for Science Education, 2002-2012, 2014-2018

Associate Department Head, 2012-2014

Program Coordinator for Science Education, 2012-2014

Assistant Professor, 1990-1996.

Mary Frances Early College of Education, University of Georgia, Athens, 2020-present.
College of Education, 1990-2020.

Department of Mathematics, Science, and Social Studies Education, 2021-present.

Department of Mathematics and Science Education, 2004-2021.

Science Education Department, 1990-2004.

Courses taught (in approximate decreasing order of frequency):

ESCI 4440/6440 Science Teaching Methods in the Middle Grades

ESCI 4430/6430 Science Curriculum for the Middle Grades

ESCI 6990/6990E Introduction to Research in Science Education

ESCI 4480/6480 Technological Capabilities for Science Teaching

ESCI 5460/7460 Science Education School-Based Internship (Student Teaching)

ESCI 4410/6410 Physical Science for Middle School Teachers

ESCI 6200/6200E Science, Technology and Society (special focus: STEM Integration)

ESCI 7040/7040E Strategies for Middle and Secondary School Science Teachers

ESCI 8990 Research Seminar in Science Education

ESCI 9020 History and Theory of Science Education

ESCI 7080/7080E Curriculum Planning in Science Education
ESCI 4420/6420 Science for Early Childhood Education
ESCI 9630 Critique of Educational Literature in Science Education
ESCI 9080 Science Curriculum Theory and Practice
ESCI 7060 (now 8400) Innovative Technology in Mathematics and Science Education

Teaching Assistant, 1987-1989.

School of Education, University of Michigan, Ann Arbor.

Courses assisted:

ED 695 Research and Educational Practice

Supervisors: Profs. Valerie Lee, Carl Berger.

ED 701-702 Intellectual History of Education I and II

Supervisors: Profs. David Angus, Frederick Goodman, Samuel Meisels.

Research and Teaching Assistant, 1986-1990.

Office of Instructional Technology, University of Michigan, Ann Arbor.

Computer Applications Program, Detroit Public Schools.

Supervisors: Prof. Carl Berger (UM), Ms. Billie Jean Edwards (DPS)

Computer Curriculum Coordinator, 1985-1986.

Science Department, The Agnes Irwin School, Rosemont, PA.

Joseph Klingenstein Fellow, summer 1985.

Teachers College, Columbia University, New York, NY.

Science Teacher, 1983-1986.

The Agnes Irwin School, Rosemont, PA.

General Science, Earth Science, Physical Science, Geology; Grades 5, 7, 9, 11 & 12.

Coach, High School Soccer Club.

Middle School Teacher, 1982-1983.

Breck School, Minneapolis, MN.

General Science, American History, Grade 5 & 6.

Coach, High School Girls Junior Varsity Soccer, Middle School Intramural Program.

Research Assistant, 1979-1981.

Department of Invertebrate Paleontology, Museum of Comparative Zoology,

Harvard University, Cambridge, MA.

Supervisor: Prof. Stephen Jay Gould.

Undergraduate Research Fellow, 1979.

Department of Invertebrates, American Museum of Natural History, New York, NY.

Supervisor: Dr. Niles Eldredge

Tutor, 1977-1980.

Harvard-Roxbury Schools Program, Roxbury High School, Boston, MA.

Publications

Manuscripts in Preparation

- Jackson, D., McCann, S., & Mosley, D., with Flanagan, K., Skinner, M., Myers, K., Zwald, L. *Creating, sustaining, and iteratively improving a “third space” for science methods courses based at a professional development middle school.*
- Jackson, D. F., Pavez, J. M., & Krishnan, S. *Themes in prospective middle school teachers’ personal and professional views about evolution and its teaching.*

Refereed Publications

- Zhai, X., & Jackson, D. F. (2022). A Pedagogical Framework for Mobile Learning in Science Education. In X. Liu (Ed.) *International encyclopedia of education* (pp. xxx-xxx). Elsevier. Accepted May 16, 2021.
- Sauer, K. A., Capps, D. K., Jackson, D. F., & Capps, K. A. (2021) Six minutes to promote change: People, not facts, alter students' perceptions on climate change. *Ecology and Evolution*, 11, 5790-5802. DOI: [10.1002/ece3.7553](https://doi.org/10.1002/ece3.7553)
- Conner, A., Crawford, B., Foutz, T., Hill, R. B., Jackson, D. F., Kim, C., Thompson, S. A. (2020). Argumentation in Primary Grades STEM Instruction. In J. Anderson & Y. Li (Eds.), *Integrated approaches to STEM education: An international perspective* (pp. 427-446). New York: Springer. DOI: [10.1007/978-3-030-52229-2_23](https://doi.org/10.1007/978-3-030-52229-2_23)
- Governor, D., Jackson, D. F., & Hall, J. N. (2013). Teaching and learning science through song: Exploring the experiences of students and teachers. *International Journal of Science Education*, 35, 3117-3140.
- Shen, J., & Jackson, D. F. (2013). Measure the Volume of a Tree: A transformative modeling lesson on measurement for prospective middle school science teachers. *Journal of Science Teacher Education*, 24, 225-247.
- Alvermann, D. E., Rezak, A. T., Mallozzi, C. A., Boatright, M. D., and Jackson, D. F. (2011). Reflective practice in an online literacy course: Lessons learned from attempts to fuse reading and science instruction. *Teachers College Record*, 113, 27-56.
- Jackson, D. F. (2007). The personal and the professional in the teaching of evolution. In L. S. Jones & M. J. Reiss (Eds.), *Teaching about scientific origins: Taking account of creationism* (pp. 159-178). New York: Peter Lang.
- Jackson, D. F. (2002). The computer as formalizer of inquiry: Valuable tool, oppressive limitation, or all in the hands of the teacher?. In D. J. Tippins, T. R. Koballa, Jr., & B. D. Payne (Eds.), *Learning from cases: Unraveling the complexities of elementary science teaching* (pp. 155-156). Boston: Allyn and Bacon.

- Oliver, J. S., Jackson, D. F., Chun, S., & Kemp, A. (2001). The concept of scientific literacy: A view of the current debate as an outgrowth of the past two centuries. *Electronic Journal of Literacy through Science*, 1(1). http://ejlts.ucdavis.edu/archives/scientific_literacy/oliver.htm.
- Kim, T.-K., Jackson, D. F., Yarger, D. N., & Boysen, P. J. (2000). Principles for the design and use of simulations in science learning as exemplified by a prototype microworld. *Journal of Computers in Mathematics and Science Teaching*, 19, 237-252.
- Jackson, D. F. (2000). Thomas Kuhn's formative impact at a personal, academic, and professional level on a science educator. *Science and Education*, 9, 208-209.
- Meadows, L., Doster, E. C., & Jackson, D. F. (2000). Managing the conflict between evolution and religion. *The American Biology Teacher*, 62, 102-107.
- Jackson, D. F. (2000). With a little technology, can at-risk students succeed?. In T. R. Koballa, Jr. & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas* (p. 207) Columbus, OH: Prentice-Hall.
- Jackson, D. F. (2000). Making the most of limited computer technology with at-risk middle school students. In T. R. Koballa, Jr. & D. J. Tippins (Eds.), *Cases in middle and secondary science education: The promise and dilemmas* (pp. 201-206) Columbus, OH: Prentice-Hall.
- Doster, E. C., Jackson, D. F., & Smith, D. W. (1997). Modeling pedagogical content knowledge in physical science for prospective middle school teachers: Problems and possibilities. *Teacher Education Quarterly*, 24(4), 51-65.
- Jackson, D. F. (1997). Case studies of microcomputer and interactive video simulations in middle school earth science teaching. *Journal of Science Education and Technology*, 6, 127-141.
- Jackson, D. F., Bourdeau, G., Sampson, A., & Hagen, T. J. (1997). Internet resources for middle school science: Golden opportunity or silicon snake oil? *Journal of Science Education and Technology*, 6, 49-57.
- Butts, D. P., Jackson, D. F., Oliver, J. S., Bellamy, M. L., & Frame, K. (1997). An evaluation study of the teaching of hands-on investigative biology in high schools "On a Shoestring," *Education*, 118(1), 133-144.
- Jackson, D. F., Doster, E. C., Meadows, L., & Wood, T. (1995). Hearts and minds in the science classroom: The education of a confirmed evolutionist. *Journal of Research in Science Teaching*, 32, 585-611.
- Koballa, T. R., Meadows, L., Doster, L., & Jackson, D. F. (1995). Hot peppers to hurricanes: New ways to measure. *Science Scope*, 18(11), 37-41.
- Jackson, D. F., Doster, E. C., Tippins, D. J., & Rutledge, M. L. (1994). Implementing "real science" through microcomputers and telecommunications in project-based elementary classrooms. *Journal of Science Education and Technology*, 3, 17-26.

- Tippins, D. J., Kagan, D., & Jackson, D. F. (1993). How teachers translate learning theory into instruction: A study of group problem solving by prospective secondary science teachers. In P. A. Rubba, L. M. Campbell, & T. M. Dana (Eds.), *Excellence in educating teachers of science* (pp. 55-68). Columbus, OH: ERIC Clearinghouse for Science, Mathematics and Environmental Education.
- Tippins, D. J., Adams, E., & Jackson, D. F. (1993). Sea turtles and strategies for language skills. *Science Scope*, 16(4), 45-49.
- Jackson, D. F. (1993). The scientist as cracker-barrel philosopher: Implications for the concept of scientific literacy. *Interchange*, 24(1-2), 1-19.
- Jackson, D. F., Edwards, B. J., & Berger, C. F. (1993). Teaching the design and interpretation of graphs through computer-assisted graphical data analysis. *Journal of Research in Science Teaching*, 30, 483-501.
- Jackson, D. F., Edwards, B. J., & Berger, C. F. (1993). The design of software tools for meaningful learning by experience: Flexibility and feedback. *Journal of Educational Computing Research*, 9, 247-277.
- Jackson, D. F., Berger, C. F., & Edwards, B. J. (1992). Computer-assisted thinking tools: Problem solving in graphical data analysis. *Journal of Educational Computing Research*, 8(1), 43-67.
- Jackson, D. F., Henderson, J., Berger, C. F., Jr., Berger, C. F., & Estell, J. K. (1988). Hardware and software for interfacing voltage-output instruments with Apple II series microcomputers. *Journal of Chemical Education*, 65(6), A150-151,154.

Other publications

- Jackson, D. F. (2022). Summary/introduction to Section 3 (Initial teacher preparation: Situated aspects). In Luft, J. A., & Jones, M. G. (Eds.) *Handbook of research on science teacher education*. Philadelphia: Routledge.
- Jackson, D. F., & Bloch, L. (2012). Review of Berkman, M. & Plutzer, E. (2011). *Evolution, creationism, and the battle to control America's classrooms*. *Science Education*, 96, 757-759.
- Jackson, D. F. (1999). Issues (and non-issues?) in gendered interactions among students and instructors in preservice science teacher education courses. *Gazing into the future: Proceedings of the International Gender and Science Education (GASE) Colloquium* (pp. 30-35). Parkville, Victoria, Australia: University of Melbourne.
- Jackson, D. F. (1996). Equity issues in the use of computer and telecommunications technologies in science teaching. *Illinois Science Teachers' Association Spectrum*, 22(4), 10-12.
- Veal, W. R., Jackson, D. F., Finnegan, B., Tippins, D. J., & Crockett, D. (1995). Alternative and supplemental definitions of "technology:" Science educators' answers to "So what?" In F. Finley, D. Allchin, D. Rhees, & S. Fifield (Eds.), *Proceedings of the Third International*

Conference on the History and Philosophy of Science and Science Teaching (pp. 1238-1248). Minneapolis: University of Minnesota.

Jackson, D. F., McGinnis, J. R., Radzik-Marsh, K., & Pyle, E. (1993). *Resource guide for grade 8 earth science*. Atlanta: Georgia Department of Education.

Jackson, D. F., & Ewald, J. (1993). Software Reviews [Review of *The Newtonian Sandbox*]. *School Science and Mathematics*, 93, 281.

Jackson, D. F. (1993). Software Reviews [Review of *Biology Explorer: Genetics*]. *School Science and Mathematics*, 93, 105-106.

Tippins, D. J., Jackson, D. F., & Simmons, P. E. (1992). Ethical dilemmas in life science teaching: The whale experience. *The Georgia Science Teacher*, 32(2), 11-12.

Jackson, D. F., & Tippins, D. J. (1991). Reviews: Software [Review of *Dance of the Planets*]. *The Science Teacher*, 58(9), 60-62.

Major National and International Conference Presentations

Mosley, D., McCann, S., & Jackson, D. F. (2023, April) *Implementation of site-based middle grades physical science methods courses: Lessons learned over a 6-year period*. Poster session accepted for presentation at the Annual Meeting of the National Association for Research in Science Teaching, Chicago, IL.

Luft, J. A., Jones, M. G., Carrier, S., Jackson, D. F., Park, S., Madden, L., & Mamlok, R. (2022, March). *The handbook of research on science teacher education: Current and future directions for research*. Symposium presented at the Annual Meeting of the National Association for Research in Science Teaching, Vancouver, BC.

Jackson, D. F. (2020, June). *Enlightenment Now? Or are Contingency, Irony, and Solidarity the best we can hope for?* Presentation at the conference of the Learning About Science and Religion group, Oxford, UK.

Green, K., Foster, B., Lucero, M., Pavez, J., Krishnan, S., Jackson, D. F., & Glaze, A. (2019, April). *Ways of thinking influencing the teaching and learning of evolution*. Symposium presented at the Annual Meeting of the National Association for Research in Science Teaching, Baltimore, MD.

Crawford, B. A., Conner, A., Kim, C., Schneider, A., Hill, R., Foutz, T., Thompson, S., & Jackson, D. (2019, March) *Learning to Teach Coding Using Collective Argumentation in Elementary Classrooms*. Poster presented at the annual meeting of the National Association of Research in Science Teaching, Baltimore, MD.

Jackson, D. F., Skinner, M., McCann, S., & Flanagan, K. (2019, January) *Creating, Sustaining, and Iteratively Improving a "Third Space" for Science Methods Courses Based at a*

Professional Development Middle School. Themed paper set presented at the Annual Meeting of the Association for Science Teacher Education, Savannah, GA.

Pavez, J., Krishnan, S., & Jackson, D. F. (2019, January). *Themes in prospective middle school teachers' personal and professional views about evolution and its teaching*. Paper presented at the Annual Meeting of the Association for Science Teacher Education, Savannah, GA.

Jeong, S. K., King, G. P., Pauli, D. L., Sell, C. W., Steele, D. P., Capps, D. K., Jackson, D. F., Leslie, L. M., Oliver, J. S., & Tippins, D. J. (2018, April). *Creating a polyphonic and dialogic process to address the issue of science mistrust and misunderstanding*. Symposium presented at the annual meeting of the National Association of Research in Science Teaching, Atlanta, GA.

Skinner, M., Jackson, D. F., Coll, E., McCann, S., Andrews, G., & Naughton, C. (2018, March). *Preparing middle grades science teachers: Integrating pedagogical content knowledge in a PDS partnership*. Presentation at the annual conference of the National Association for Professional Development Schools, Jacksonville, FL.

Jackson, D. F., Meadows, L., Governor, D., Pauli, D. L. (2018, January). *Lessons learned and issues identified from the online teaching experience of science teacher educators*. Roundtable presentation at the Annual Meeting of the Association for Science Teacher Education, Baltimore, MD.

Pauli, D. L., & Jackson, D. F. (2017, April). *Restate, Answer, Cite, and Explain (RACE) paragraphs as written argumentation in eighth grade physical science*. Paper presented at the annual meeting of the National Association of Research in Science Teaching, San Antonio, TX.

Mendicino, M. A., & Jackson, D. F. (2017, April). *Exploring the gender gap in STEM career participation*. Poster presentation made at the Annual Meeting of the National Association for Research in Science Teaching, San Antonio.

Kim, E., Oliver, J. S., & Jackson, D. F. (2016, April). *Connecting the imperatives of STEM, NGSS, deep learning and assessment: A conceptual paper*. Poster presentation at the annual meeting of the National Association for Research in Science Teaching, Baltimore.

Nye, W. H., & Jackson, D. F. (2014, April) *Creationism vs. evolution: A study of the opinions of Georgia biology teachers*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Pittsburgh.

Wenner, J., & Jackson, D. F. (2012, January). *Oral interviews as a final exam format for a science methods course*. Paper presentation at the Annual Meeting of the Association for Science Teacher Education, Clearwater, FL.

Jackson, D. F., Shen, J., Wenner, J., & Britton, S. (2011, January). *Collaborative activities for science content courses and methods courses for preservice middle school science*

teachers. Roundtable session conducted at the Annual Meeting of the Association for Science Teacher Education, Minneapolis, MN.

Jackson, D. F., & Shen, J. (2011, January). *Syllabus sharing: Paired, team-taught, content-specific methods and science courses for prospective middle school teachers*. Poster presentation at the Annual Meeting of the Association for Science Teacher Education, Minneapolis, MN.

Jackson, D. F., & Dike, J. (2009, April). *An ordinal, three-dimensional model for the interaction of evolution, creationism and their teaching*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Thomson, N. F., Adams, J., O'Dell, S., Chapman, S., Jackson, D. F., & Magner, J. (2008, April). *Hominid evolution: Theory, facts, and "tales" from the field*. Special symposium presented at the Annual Meeting of the National Association for Research in Science Teaching, Baltimore, MD.

Jackson, D., Jones, L., Thomson, N., Dike, J., & O'Dell, S. (2007, April). *The "other" literature of evolution/creationism and a serious attempt at its application*. Special symposium presented at the Annual Meeting of the National Association for Research in Science Teaching, New Orleans, LA.

Thomson, N., Koopman, R., Chapman, S., & Jackson, D. (2006, April). *Scaffolding students' knowledge of inquiry through use of Virtual Gorilla Modeling*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.

Hembree, P., Jackson, D., & Thomson, N. (2006, January). *Alvarez' T. Rex and the Crater of Doom: Potential for integrating narrative history of science into teacher education*. Book discussion session conducted at the annual meeting of the Association for the Education of Teachers in Science, Portland, OR.

Wheeler-Toppen, J., Wallace, C., & Jackson, D. (2005, April). *Measuring scientific literacy in undergraduate biology students*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.

Kim, T.-K., & Jackson, D. F. (2004, April). *Scientific understanding through reading college science textbooks: A self-study*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Vancouver, BC.

Jackson, D. F. (2004, January). Oral interviews as a final examination format for a science methods course. In Wieseman, K., *Assessment practices that put the preservice teacher in the driver's seat*. Interactive discussion session presented at the annual meeting of the Association for the Education of Teachers in Science, Nashville, TN.

Jackson, D. F. (2003, April). The Shipman/Jordan model for introducing the relationship between science and religion: Commentary from one perspective and possible extensions. In Kittleson, J., *Science and religion in the context of science education*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

Jackson, D. F. (2003, April). Beyond evolution and creationism: Critically considering the claims of scientific and religious ways of knowing in educating the "whole child." In Jones, L.,

Rethinking the evolution/creation controversy: Epistemological alternatives. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

Peiffer, B., Jackson, D. F., & Tsoi, M. (2003, January). *Inservice teacher education in technology: An entire high school faculty as a three-year case study.* Presentation at the annual meeting of the Association for the Education of Teachers in Science, St. Louis, MO.

Jackson, D. F. (2002, January). *Science teacher education in electronic technologies: Addressing our "Failure to Connect" in many senses.* Paper presented at the annual meeting of the Association for Education of Teachers in Science, Charlotte, NC.

Jackson, D. F. (2000, April). *Sifting the relationship between personal and professional beliefs and practices with regard to evolution and religion: Three years of feedback from prospective middle school science teachers.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.

Jackson, D. F. (2000, January). *Issues (and non-issues?) in gender equity in preservice science teacher education.* Interactive session held at the annual meeting of the Association for Education of Teachers in Science, Akron, OH.

Jackson, D. F. (1999, April). *Issues (and non-issues?) in gendered interactions among students and instructors in preservice science teacher education courses.* Paper presented at the International Gender and Science Education Conference, Boston, MA.

Chun, S., Oliver, J. S., Jackson, D. F., & Kemp, A. (1999, March). *Scientific literacy: An educational goal of the past two centuries.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Li, H., Oliver, J. S., Jackson, D. F., and Tippins, D. (1999, March). *A technique for the identification of an operational definition for scientific literacy.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Kim, T.-K., & Jackson, D. F. (1999, March). *Principles for the design and use of simulations in science learning as exemplified by a prototype microworld.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Jackson, D. F. (1999, March). *Teaching about evolution and historical geology in the context of middle school teacher education: Sifting the relationship between personal and professional beliefs and practices.* Contribution to an interactive symposium presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Meadows, L., Jackson, D. F., & Doster, E. C. (1998, November). *Talking about evolution so fundamentalist students will listen.* Paper presented at the Southern Area Convention of the National Science Teachers Association, Birmingham, AL.

- Clark, S. A., & Jackson, D. F. (1998, April). *Laboratory technology and student motivation in a conceptual physics classroom: A year-long case study*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Diego, CA.
- Jackson, D. F., Mewborn, D. S., & Wieseman, K. C. (1998, April). *Issues in the development of an approach to gender equity in middle school science teacher education*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Diego, CA.
- Jackson, D. F. (1997, April). *The Internet as a science resource for rural middle schools: A critical evaluation*. Paper presented at the annual meeting of the National Science Teachers Association, New Orleans, LA.
- Jackson, D. F., Meadows, L., & Doster, E. C. (1997, April). *Talking about evolution so fundamentalist students will listen*. Paper presented at the annual meeting of the National Science Teachers Association, New Orleans, LA.
- Doster, E. C., Jackson, D. F., & Oliver, J. S. (1997, March). *Moving toward a richer understanding of students' interactions with dissection: Implications from an interpretive study*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Oak Brook, IL.
- Jackson, D., Baird, W., & Peters, J. (1997, January). *"Technological Literacy" for science teachers: Toward a theoretical grounding that holds up in practice*. Interactive panel discussion presented at the annual meeting of the Association for Education of Teachers in Science, Cincinnati, OH.
- Doster, E. C., Jackson, D. F., Oliver, J.S., crockett, D. K., & Emory, A. L. (1997, January). *Values, dissection and school science: An inquiry into students' construction of meaning*. Paper presented at the annual meeting of the Association for Education of Teachers in Science, Cincinnati, OH.
- Tippins, D., Nichols, S., Staver, J., Abell, S., & Jackson, D. (1997, January). *Thinking like a teacher: A conversation on considering the professional development of science teacher educators within a climate of reform*. Interactive panel discussion presented at the annual meeting of the Association for Education of Teachers in Science, Cincinnati, OH.
- Jackson, D. F., Bourdeau, G., & Hagen, T. J. (1996, April). *Internet resources for middle school science: Golden opportunity or silicon snake oil?* Paper presented at the annual meeting of the National Association for Research in Science Teaching, St. Louis, MO.
- Veal, W. R., Jackson, D. F., Tippins, D. J., & Crockett, D. (1995, November). *Alternative and supplemental definitions of "technology:" Science educators' answers to "So what?"* Paper presented at the Third International Conference on the History and Philosophy of Science and Science Teaching, Minneapolis, MN.

- Jackson, D. F. (1995, April). *Case studies of microcomputer and interactive video simulations in middle school earth science teaching*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Jackson, D. F. (1994, April). *Analyzing computer-recorded instructional events: A summary of strengths and weaknesses of techniques*. Contribution to symposium presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Doster, E. C., Oliver, J. S., & Jackson, D. F. (1994, April). *Approaches to teaching evolution to fundamentalist students: Insights from interviews with fundamentalist scientists and science teachers*. Paper presented at the annual meeting of the National Science Teachers Association, Anaheim, CA.
- Berger, C. F., Krajcik, J. S., Jackson, D. F., & Fisher, K. M. (1994, March). *The use of microcomputers in science education research: Data gathering, analysis, and display of results*. Research training course conducted at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Jackson, D. F., Doster, E. C., Meadows, L., & Wood, T. (1994, March). *Hearts and minds in the science classroom: The education of a confirmed evolutionist*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Sherwood, R. D., Lemke, J., Berger, C. F., Hodas, S., Jackson, D. F., Klapper, M., & Baird, W. (1994, March). *Visions of science education in the new century: Issues related to the uses of technology*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Calvert, R., & Jackson, D. F. (1994, March). *Using technology to facilitate development of interdisciplinary units*. Paper presented at the annual meeting of the National Science Teachers Association, Anaheim, CA.
- Deru, D. B., Jackson, D. F., Atwater, M. M., & Oliver, J. P. (1994, March). *Professional development in multicultural education for middle school science and mathematics teachers: Possibilities and problems*. Poster session presented at the annual meeting of the National Association for Research in Science Teaching, Anaheim, CA.
- Doster, E. C., Jackson, D. F., & Smith, D. W. (1994, January). *Modeling Pedagogical Content Knowledge in Physical Science for Prospective Middle School Teachers: Problems and Possibilities*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, El Paso, TX.
- Calvert, R., Pyle E., & Jackson, D. F. (1994, January). *Immediate Effects of the Georgia Statewide Systemic Initiative on Professional Development Schools*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science, El Paso, TX.
- Meadows, L., Jackson, D. F., Griffin, A., & Howeth, T. (1993, April). *Foxfire grows up, and a teacher educator with it*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Jackson, D. F., Koballa, T. R., Padilla, M. J., & McGinnis, J. R. (1993, April). *The role of action research in curriculum development for a preservice science teacher education program*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Doster, E., Rutledge, M., Jackson, D. F., & Tippins, D. J. (1993, April). *Teacher learning in a project-centered, technology-rich elementary classroom environment*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Jackson, D. F., Baird, W. E., Beichner, R. J., Berger, C. F., Sherwood, R. D., White, A. L. (1993, April). *Microcomputer Simulations in Science Classrooms: Cases of Perceived, Operational and Experiential Curriculum*. Roundtable discussion presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Simmons, P. E., McGinnis, J. R., Jackson, D. F., Aikenhead, G., & Tippins, D. J. (1993, April). *Science/Technology/Society: Multiple research perspectives*. Roundtable discussion presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Atwater, M. M., Jackson, D. F., Wiggins, J., Hale, M. & Simmons, P. E. (1993, April). *The uses of technology with teachers to improve science learning in the classroom*. Symposium presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

French, D., Koballa, T. R., Jackson, D. F., Meadows, L., Tippins, D. J., Hook, K., & Roth, W.-M. (1993, April). *Critical issues in action research*. Alternative format session presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Jackson, D. F., Tippins, D. J., Doster, E., & Rutledge, M. (1993, April). *Teacher learning in a project-centered, technology-rich environment: The role of imagery and metonymy*. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Meadows, L., French, D., Jackson, D. F., & Koballa, T. R. (1993, April). *Approaches to personal empowerment of preservice teachers: Action research in science education classrooms*. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Jackson, D. F., Meadows, L., & Settle, G. (1993, April). *Teacher as curriculum-maker for at-risk middle school students: A case study of content integration and the use of computer technology*. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Atwater, M. M., Jackson, D. F., Wiggins, J., Hale, M. & Simmons, P. E. (1993, January). *Methods and outcomes of various approaches to inservice teacher education in the application of microcomputer technology*. Symposium presented at the annual meeting of the Association for the Education of Teachers in Science, Charleston, SC.

- Jackson, D. F. (1992, October). *Microcomputer Simulations in Science Classrooms: The Designer's Intended Curriculum Versus the Students' Experienced Curriculum*. Paper presented at the annual meeting of the North American Simulation and Gaming Association, Ann Arbor, MI.
- Jackson, D. F., & Butts, D. P. (1992, May). *In the spirit of natural history: Towards science education research informed by the non-experimental sciences*. Paper presented at the Second International Conference on the History and Philosophy of Science and Science Teaching, Kingston, ON.
- Jackson, D. F., Meadows, L., & Scoates, G. (1992, March). *Science and mathematics curriculum renewal through microcomputer infusion: An experienced teacher's planning processes in a novel situation*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Cambridge, MA.
- Jackson, D. F., Edwards, B. J., & Berger, C. F. (1992, March). *Using microcomputers to teach graphing*. Paper presented at the annual meeting of the National Science Teachers Association, Boston, MA.
- Jackson, D. F., & Meadows, L. (1992, March). *Microcomputer simulations in science classrooms: What are the kids really doing and thinking?* Paper presented at the annual meeting of the National Science Teachers Association, Boston, GA.
- Jackson, D. F., Berger, C. F., & Simmons, P. E. (1991, April). *Student use of software in science and technology: Perspectives on the role of the computer in research*. Symposium presented at the annual meeting of the Special Interest Group for Education in Science and Technology, American Educational Research Association, Chicago, IL.
- Jackson, D. F. (1991, April). *The scientist as cracker-barrel philosopher: Implications for the concept of scientific literacy*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Jackson, D. F. (1991, April). *Methodological perspectives on the role of technology in research on student use of science software*. Symposium organized for the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Jackson, D. F. (1991, April). *Exploratory problem solving with a graphing application: Semiautomated analysis of student performance data*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Dershimer, C., Berger, C. F., & Jackson, D. F. (1991, April). *Designing hypermedia for concept development: Formative evaluation through analysis of log files*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Fontana, WI.
- Edwards, B. J., Jackson, D. F., & Berger, C. F. (1990, April). *Teaching the design and interpretation of graphs through computer-aided graphical data analysis* (ERIC Document

Reproduction Service No. ED 319 594, part 1). Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Jackson, D. F., Berger, C. F., & Edwards, B. J. (1990, April). *The design of software tools for meaningful learning by experience: Flexibility and feedback* (ERIC Document Reproduction Service No. ED 319 594, part 2). Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Berger, C. F., & Jackson, D. F. (1990, April). *Using technology to interpret large-scale complexity: The use of scientific sequence analysis algorithms in research on computer-assisted problem solving* (ERIC Document Reproduction Service No. ED 319 594, part 3). Paper presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.

Jackson, D. F., & Berger, C. F. (1990, April). *The use of sequence analysis algorithms in research on computer-assisted problem solving strategies*. Paper presented at a joint session of the annual meetings of the American Educational Research Association and the National Council for Measurement in Education, Boston, MA.

Jackson, D. F., & Goodman, F. L. (1989, October). *Bungle in the Jungle: A simulation of selective attention in situations of information overload*. Paper presented at the annual conference of the North American Simulation and Gaming Association, Indianapolis, IN.

Jackson, D. F., & Berger, C. F., & Edwards, B. J. (1989, March). *The student as grapher: Computer-assisted thinking skills*. Paper presented at a joint session of the annual meetings of the American Educational Research Association and the International Association for Computing in Education, San Francisco, CA.

Jackson, D. F., & Lee, V. E. (1989, March). *Student characteristics and advanced science course-taking: Evidence from a national sample*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Jackson, D. F. (1988, October). *Games of statistical intuition: High-tech to low-tech*. Paper presented at the annual conference of the North American Simulation and Gaming Association, Asheville, NC.

Grants Awarded

Title: Development of a Graduate Level STEM Integration Course Using A Hybrid Delivery Model

(Coauthored and administered by Steve Oliver)

Description: Instructional Innovation Grant, College of Education, University of Georgia

Award Date: February 4, 2014

Amount Awarded: \$6000

Duration: Summer 2014

Title: Collaborative Activities for Science Content, Science Methods, and General Methods

Courses for Preservice Middle School Science Teachers

(Coauthored and administered by Ji Shen)

Description: MATH + SCIENCE = SUCCESS Small Grants Program, Office of STEM Education, University of Georgia

Award Date: October 9, 2009

Amount Awarded: \$7986

Duration: Fall 2009 through Spring 2010

Title: Virtual Science Projects for Middle School Teachers and Students

(Coauthored and administered by Thomas J. Hagen, Microbiology Dept.)

Description: Model Technology Grant, State of Georgia Dept. of Education

Award Date: April 15, 1995

Amount Awarded: \$40,416

Duration: Summer 1995 through Spring 1997

Title: A Project-centered, Technology-rich, Environmentally-oriented Approach to Middlegrades

Science Education: Extension to Higher and Lower Technology

(Coauthored and co-administered by Deborah Tippins)

Description: Eisenhower Act Title II Grant (Type C -- Special Project).

Award Date: Feb. 15, 1993

Amount Awarded: \$18,817

Duration: academic year 1993-94

Title: Hands-on, Minds-on Mathematics and Science Instruction as the Initiator of Reform at a

Professional Development School

Description: Eisenhower Act Title II Grant (Type D -- Sustained Contact).

Award Date: Feb. 15, 1993

Amount Awarded: \$17,350

Duration: Summer-Fall Quarters, 1993

Title: Multicultural Mathematics and Science Education as a Foundation for Reform at a

Professional Development School

Description: Eisenhower Act Title II Grant (Type D -- Sustained Contact).

Award Date: Feb. 15, 1993

Amount Awarded: \$14,919

Duration: Winter-Spring Quarters, 1994

Title: A Project-based, Technology-rich, Environmentally-oriented Approach to Middle-grades

Science Education

(Coauthored and co-administered by Deborah Tippins)

Description: Eisenhower Act Title II Grant (Type C -- Special Project).

Award Date: March 25, 1992

Amount Awarded: \$29,979

Duration: academic year 1992-93

Title: Microcomputer Integration for Student Teaching in Science

(Coauthored and co-administered by Patricia Simmons and Deborah Tippins) Description:
Eisenhower Act Title II Grant (Type C -- Special Project).

Award Date: Feb. 15, 1991

Amount Awarded: \$23,035

Duration: Winter-Spring Quarters, 1992

Title: Georgia Science, Technology, and Environmental Problem Solving Update Project, Phase I (1991), Sustained Contact Component

(Coauthored and co-administered by Patricia Simmons and Deborah Tippins) Description:
Eisenhower Act Title II Grant (Type D -- Sustained Contact).

Award Date: Feb. 15, 1991

Amount Awarded: \$18,006

Duration: Fall Quarter, 1991

Title: Georgia Science, Technology, and Environmental Problem Solving Update Project, Phase I (1991), Workshop and Directed Study Component

(Coauthored and co-administered by Patricia Simmons and Deborah Tippins) Description:
Eisenhower Act Title II Grant (Type B -- Course Offering).

Award Date: Feb. 15, 1991

Amount Awarded: \$20,385

Duration: Summer Quarter, 1991

Title: Georgia Science, Technology, and Environmental Problem Solving Update Project, Phase I (1991), Curriculum Development Component

(Coauthored and co-administered by Patricia Simmons and Deborah Tippins) Description:
Eisenhower Act Title II Grant (Type C -- Special Project).

Award Date: Feb. 15, 1991

Amount Awarded: \$12,590

Duration: Summer Quarter, 1991

Honors and Awards

University of Georgia Teaching Academy, 2019.

Faculty Senate D. Keith Osborn Award for Teaching Excellence, College of Education,
University of Georgia, 2001.

Outstanding Teaching Award, College of Education, University of Georgia, 1999.

Journal of Research in Science Teaching Award, National Association for Research in Science
Teaching, 1996.

Gustav Ohaus Award for Innovations in Science Teaching (College Level), National Science
Teachers Association, 1996.

Practical Applications Award, National Association for Research in Science Teaching, 1991.

Merit Scholarship, School of Education, University of Michigan, Ann Arbor, 1986-1987.

Harvard College Scholarship, Harvard University, Cambridge, MA, 1978-80, 1981-82.

Service to Professional Organizations

American Educational Research Association

Secretary/Treasurer, Special Interest Group for Education in Science and Technology

Secretary/Treasurer, Special Interest Group for Advanced Technologies in Education

Proposal reviewer, Annual Meeting

American Educational Research Journal, Manuscript reviewer

Association for Science Teacher Education (formerly Association for the Education of Teachers in Science)

Proposal reviewer, Annual Meeting

Mentor-Mentee Program

Cultural Studies of Science Education, Manuscript reviewer

Electronic Journal of Science Education, Manuscript reviewer

International Journal of Science Education, Manuscript reviewer

Journal of Educational Computing Research, Manuscript reviewer

Journal of Research in Science Teaching, Manuscript reviewer

Journal of Science Education and Technology, Manuscript reviewer

National Association for Research in Science Teaching

Organization of Annual Meeting

Strand coordinator

Local arrangements chair

Data processing coordinator

Proposal reviewer

Committee memberships

Annual Meeting Program

Equity

Outstanding Paper Award

Outstanding Doctoral Dissertation Award

NARST-Net

National Institutes of Health

Grant proposal reviewer

National Science Foundation

Grant proposal reviewer

National Science Teachers Association

Proposal reviewer, Annual Meeting

Curriculum materials reviewer, *NSTA Recommends*

School Science and Mathematics Association

Proposal reviewer, Annual Meeting

School Science and Mathematics, Manuscript reviewer, Software reviewer, Book reviewer

Science and Education, Manuscript reviewer

Science Education, Manuscript reviewer, Book reviewer

The Science Teacher, Software reviewer