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EDUCATION

Stanford University	1987	Ph.D. Ph.D. Minor	Educational Psychology Psychology
California State University, Stanislaus	1984	M.A.	Educational Administration
University of California, Davis	1978	B.S.	Biological Sciences

PROFESSIONAL EXPERIENCE

- 2007- Professor, Department of Education, University of California, Irvine
- Co-Director, UCI-CSU Joint Doctoral Program, 2004 –
 - Vice Chair/Academic Programs, January 2006 –
- 2002-07 Associate Professor, Department of Education, University of California, Irvine
- Interim Chair of Department, July – December 2005
- 2001-02 Program Manager, Interagency Educational Research Initiative (IERI)
Division of Research, Evaluation, and Communication
Education and Human Resources Directorate
National Science Foundation, Arlington, VA
- 1994-01 Associate Professor, Department of Education, University of California, Irvine
- Acting Chair of Department, 1995 – 96
- 1994-95 Fulbright Scholar in Educational Assessment
Institute of Education, The University of the South Pacific, Suva, Fiji Islands
- 1992-94 Assistant Professor, Department of Education, University of California, Irvine
- Vice Chair of Department, 1993 – 94
- 1988-92 Research Scientist, Division of Cognitive and Assessment Research
Educational Testing Service, Princeton, New Jersey
- Postdoctoral Fellow: National Assessment of Educational Progress, 1987 – 88
- 1979-84 Science Teacher, Los Banos High School, Los Banos, California
- Fulbright Exchange Teacher, 1982 – 83
The Samuel Whitbread Upper School, Clifton, Bedfordshire, England

BOOKS

Martinez, M. E. (2010). *Learning and cognition: The design of the mind*. Upper Saddle River, NJ: Merrill.

Martinez, M. E. (2000). *Education as the cultivation of intelligence*. Mahwah, NJ: Lawrence Erlbaum Associates.

JOURNAL ARTICLES / BOOK CHAPTERS

Martinez, M. E. & Townsend, D. R. (in preparation). *Specific language as constituents of intelligence*.

Martinez, M. E. (in press). *Triple symmetry: Intelligence, education, and human effectiveness*. In H. Varenne, E. W. Gordon, & L. Lin & (Eds.), *Theoretical perspectives on comprehensive education: The way forward* (pp. 83-103). The Edwin Mellen Press.

Martinez, M. E., & Kalbfleisch, M. L. (in press). Spanning mathematics education research and cognitive neuroscience: Conceptual and epistemological divergences. In A. E. Kelly, S. Jensen, J. Baek, & L. Kalbfleisch (Eds.), *Neuroscience and mathematics education*. New York: Cambridge University Press.

Martinez, M. E., Peterson, M., Bodner, M. Coulson, A., Vuong, S., Hu, W., Earl, T., & Shaw G. L. (2008). Music training and mathematics achievement: A multiyear iterative project designed to enhance students' learning. In A. E. Kelly, R. A. Lesh, & J. Y. Baek (Eds.), *Handbook of design research methods in education: Innovations in science, technology, engineering, and mathematics learning and teaching* (pp. 396-409). New York: Routledge.

Martinez, M. E. (2006). Foreword. In E. W. Gordon & B. L. Bridglall (Eds.), *The affirmative development of academic ability* (pp. ix-xi). Lanham, MD: Rowman and Littlefield.

Martinez, M. E. (2006). What is metacognition? *Phi Delta Kappan*, 87, 696-699.

Martinez, M. E., & Townsend, D. (2006). The brain and IQ. In S. Feinstein (Ed.), *The Praeger handbook of learning and the brain* (pp. 262-268). Westport, CT: Greenwood Press.

Martinez, M. E. (2004). Differential achievement: Seeking causes, cures, and construct validity. In R. Zwick (Ed.), *Rethinking the SAT: The future of standardized testing in university admissions* (pp. 235-243). New York: RoutledgeFalmer.

National Research Council. (2002). *Learning and understanding: Improving advanced study of mathematics and science in U.S. high schools*. Washington, DC: Author. [Drafted chapters on principles of learning and on the evaluation of current science education in light of cognitive theory]

Martinez, M. E. (2002). Teachers' epistemologies/Teaching practice: Is there a system? *Issues in Education: Contributions from Educational Psychology*, 8, 175-179.

National Research Council. (1999). *Global perspectives for local action: Using TIMSS to improve U.S. mathematics and science education*. Washington, DC: Author. [Contributed to identifying implications of TIMSS findings and integrating those findings with cognitive theory].

Martinez, M. E. (1999). Cognition and the question of test item format. *Educational Psychologist*, 34, 207-218.

Beck, R. J., Martinez, M. E., & Lires, V. (1999). The application of an expert model of interpretive skill to a multicultural-multimedia system on ethnic dance. *Studies in Art Education*, 20, 162-179.

- Martinez, M. E. (1999). Cognitive representations: Distinctions, implications, and elaborations. In I. E. Sigel (Ed.), *Development of mental representation: Theories and applications* (pp. 13-31). Mahwah, NJ: Lawrence Erlbaum Associates.
- Katz, I. R., Martinez, M. E., Sheehan, K., & Tatsuoka, K. K. (1999). Extending the rule space methodology to a semantically-rich domain: Diagnostic assessment in architecture. *Journal of Educational and Behavioral Statistics, 24*, 254-278.
- Martinez, M. E. (1998). What is problem solving? *Phi Delta Kappan, 79*, 605-609.
- National Research Council. (1996). Mathematics and science education around the world: What can we learn from the Survey of Mathematics and Science Opportunities (SMSO) and the Third International Mathematics and Science Study (TIMSS). Washington, DC: Author. [Member of Writing Committee].
- Johnston, I., & Martinez, M. E. (1996). Norm meets Criteria: Can empirical analysis link cognitive development profiles to achievement levels? *Directions, 17*(2), 2-16.
- Martinez, M. E., & Katz, I. R. (1996). Cognitive processing requirements of constructed figural response and multiple-choice items in architecture assessment. *Educational Assessment, 3*, 83-98.
- Martinez, M. E. (1994). Teaching for understanding. *Pacific Curriculum Network, 3*(2) 4-5.
- Martinez, M. E. (1994). Access to information technologies among school-age children: Implications for a democratic society. *Journal of the American Society for Information Science, 6*, 395-400.
- Martinez, M. E. (1993). Item formats and mental abilities in biology assessment. *Journal of Computers in Mathematics and Science Teaching, 12*, 289-301.
- Martinez, M. E. (1993). Problem-solving correlates of new assessment forms in architecture. *Applied Measurement in Education, 6*, 167-180.
- Martinez, M. E., Ferris, J. J., Kraft, W., & Manning, W. H. (1992). Automated scoring of paper-and-pencil figural responses. *Journal of Educational Technology Systems, 20*, 251-260.
- Martinez, M. E., & Bennett, R. E. (1992). A review of automatically scorable constructed-response item types for large-scale assessment. *Applied Measurement in Education, 5*, 151-169.
- Martinez, M. E. (1992). Interest enhancements to science experiments: Interactions with student gender. *Journal of Research in Science Teaching, 29*, 167-177.
- Martinez, M. E. (1991). Figural response in science and technology testing. In G. Kulm & S. M. Malcom (Eds.), *Science assessment in the service of reform* (pp. 384-390). Washington DC: American Association for the Advancement of Science.
- Martinez, M. E. (1991). A comparison of multiple-choice and constructed figural response items. *Journal of Educational Measurement, 28*, 131-145.
- Martinez, M. E., & Haertel, E. (1991). Components of interesting science experiments. *Science Education, 75*, 471-479.
- Lipson, J. I., Faletti, J., & Martinez, M. E. (1990). Advances in computer-based mathematics assessment. In G. Kulm (Ed.), *Assessing higher order thinking skills* (pp. 121-134). Washington, DC: American Association for the Advancement of Science.

- Collis, B. A., & Martinez, M. E. (1989). Computer education in Canada and the U. S. *NASSP Bulletin*, 73 (519), 5-9.
- Martinez, M. E., & Lipson, J. I. (1989). Assessment for learning. *Educational Leadership*, 7, 73-75.
- Lapointe, A. E., & Martinez, M. E. (1988). Aims, access, and equity in computer education. *Phi Delta Kappan*, 70, 59-61.
- Martinez, M. E., & Mead, N. A. (1988). *Computer competence: The first national assessment*. [NAEP Report]. Princeton, NJ: Educational Testing Service

TECHNICAL REPORTS/ONLINE ARTICLES

- Martinez, M. E. (2008). *Learnable intelligence*. Scirus Topic Page (Amsterdam: Elsevier): http://topics.scirus.com/Learnable_Intelligence.html
- Martinez, M. E. (2000). *The assessment of higher-order thinking*. Commissioned paper for the American Institutes of Research.
- Martinez, M. E., & Simpson, R. S. (1999). *Cognitive-developmental hierarchies: A search for structure using test item statistics*. College Park, MD: Clearinghouse on Assessment and Evaluation. (ERIC Document Reproduction Service No. ED 428 086).
- Martinez, M. E. (1998). *Constructive and pragmatic measurement: Recommendations for the evaluation of the Eisenhower Professional Development Programs in the State of California*. Sacramento, CA: State Department of Education.
- Martinez, M. E. (1998). *A taxonomy of methods for demonstration of proficiency in a figural medium*. College Park, MD: Clearinghouse on Assessment and Evaluation. (ERIC Document Reproduction Service No. ED 423 241).
- Martinez, M. E. (1997). *A model of cognitive enhancement*. Urbana, IL: Clearinghouse on Elementary and Early Childhood Education. (ERIC Document Reproduction Service No. ED 401 018)
- Martinez, M. E., & Simpson, R. S. (1995). *The enhancement of thinking in environmental science*. Working Paper No. Four. UC Latino Eligibility Study.
- Martinez, M. E. (1994). *Understanding student outcomes for an integrated mathematics/science program: an analysis based on teachers' perceptions*. Ohio State University: AIMS Project.
- Martinez, M. E., & Jenkins, J. B. (1993). *Figural response assessment: System development and pilot research in cell and molecular biology*. GRE Board Professional Report No. 89-02P; ETS Research Report 92-50. Princeton, NJ: Educational Testing Service.
- Martinez, M. E. (1992). *College Board prototypes: Figural response assessment in science achievement testing*. Princeton, NJ: Educational Testing Service.
- Martinez, M. E., & Lahart, C. (1990). *Profile: Student background characteristics from the 1986 and 1988 NAEP assessments*. Research Report No. RR-90-20. Princeton, NJ: Educational Testing Service.
- Martinez, M. E., Wong, I. C., & O'Neal, V. (1987). *Interest properties of text*. Stanford University: Text Analysis Project Reference Manual, pp. 62-81.

INVITED BOOK REVIEWS

- Martinez, M. E. (2002). A review of *An Elusive Science* by Ellen Condliffe Lagemann. *Issues in Education*, 8(1).
- Martinez, M. E. (2002, Fall). Breathing excellence: A review of *Permissible Advantage?* by Alan Peshkin. *American Journal of Psychology*, 458-462.
- Martinez, M. E. (2001). A response to Professor Ken Richardson's review of *Education as the Cultivation of Intelligence*. *British Journal of Educational Psychology*, 71, 491-493.
- Martinez, M. E. (2002). A review of *Handbook of Intelligence*, edited by Robert J. Sternberg. *Teachers College Record*, 104(5), 968-971.
- Riel, M., & Martinez, M. E. (2001). Towards a science of learning: A review of *How People Learn*. *Education, Communication, & Information*, 1, 121-125.

RESEARCH GRANTS

- National Science Foundation Award No. EHR-0701867 (\$199,985). *The Role of Experimentation in STEM Education Research Projects*. December 31, 2006 — November 30, 2009. Michael E. Martinez, P.I.

PEER-REVIEWED CONFERENCE PAPERS AND POSTERS

- Martinez, M. E. (2008, October). *Semiotic theory and human intelligence*. Paper presented at the annual meeting of the Semiotic Society of American, Houston. To appear in the SSA Conference Proceedings.
- Kalbfleisch, M. L., & Martinez, M. E. (2007, September). *Spanning mathematics education research and cognitive neuroscience: Conceptual, epistemological, and methodological divergences*. Paper presented at the annual conference of the British Educational Research Association, London.
- Martinez, M. E., & Hughes, B. (2007, March). *Newton's misconceptions: The personal struggle to understand science*. Paper presented at the annual meeting of the American Educational Research Association.
- Martinez, M. E., Townsend, D., & Lohman, D. F. (2006, August). *Specific language as constituents of intelligence*. Paper presented at the annual meeting of the American Psychological Association, New Orleans.
- Martinez, M. E., Peterson, M., Bodner, M. Coulsen, A., Vuong, S., Hu, W., Earl, T., Hansen, J. S. & Shaw G. L. (2005, August). *Music training and mathematics achievement: A multi-year, iterative project designed to enhance student learning*. Paper presented at the annual meeting of the American Psychological Association, Washington, DC.
- Martinez, M. E. (2003, April). *Two views of scaling up: Bird's-eye and "beast's-eye."* Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Martinez, M. E., Whang, K., & Hamilton, E. (2003, April). *ROLE and the controversy of theory versus practice*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- VanderPutten, E., & Martinez, M. E. (2002, April). *Qualities of successful ROLE research grants in science and mathematics education: How Popper's three-world schema may explain important ROLE results*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

- Martinez, M. E. (2002, February). *Reconciling advanced science education with research on learning*. Paper presented at the annual meeting of the American Association for the Advancement of Science, Boston.
- Martinez, M. E. (2001, November). *Triple symmetry: Intelligence, education, and effectiveness*. Paper presented at the Spearman 2001 Conference, University of Sydney, Australia.
- Martinez, M. E. (1998, April). *Cognition and the question of test item format*. Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- Martinez, M. E., Beck, R. J., & Lires, V. (1997, March). *The application of an expert model of interpretive skill to a multicultural-multimedia system on ethnic dance*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Kuerbis, P. J., Martinez, M. E., Moore, P., & Moore, B. (1996, December). *Implications of the National Science Education Standards for science teacher preparation*. Paper presented at the NSTA Global Summit on Science and Science Education, San Francisco.
- Martinez, M. E. (1996, September). *A model of cognitive enhancement*. Poster presented at The Growing Mind, Centennial of Jean Piaget's Birth, Geneva, Switzerland.
- Martinez, M. E. (1996, July). *The direct enhancement of intelligence*. Paper presented at the annual congress of the World Future Society, Washington DC.
- Martinez, M. E. (1996, April). *Using item parameters to find powerful thought forms*. Paper presented at the annual meeting of the National Council for Measurement in Education, New York.
- Johnston, I., & Martinez, M. E. (1995, June). *Norm meets criteria: Can empirical analysis link cognitive development profiles to achievement levels?* Paper presented at the 21st annual conference of the International Association for Educational Assessment, Montreal.
- Martinez, M. E. (1995, April). *Understanding student outcomes for an integrated mathematics/science program: an analysis based on teachers' perceptions*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco.
- Martinez, M. E. (1994, December). *Core assemblies in scientific reasoning*. Paper presented at the annual meeting of the New Zealand Association for Research in Education, Christchurch.
- Martinez, M. E., Simpson, S. Clendenon, M., & Bissell, J. (1994, June). *The enhancement of thinking in environmental science*. Paper presented at the annual symposium of the Jean Piaget Society, Chicago.
- Martinez, M. E., & Katz, I. R. (1993, April). *Cognitive processing requirements of constructed figural response and multiple-choice items in architectural assessment*. Paper presented at the annual meeting of the National Council on Measurement in Education, Atlanta.
- Martinez, M. E. (1992, October). *Computers and social equity: Views from the NAEP assessment*. Paper presented at the meeting of the American Society for Information Science, Pittsburgh.
- Martinez, M. E. (1992). An initial taxonomy of item types for demonstration of proficiency in a figural medium. *Proceedings of the 33rd Annual Conference of the Military Testing Association*, 508-513, San Antonio, TX.
- Martinez, M. E. (1990, April). *A comparison of multiple-choice and constructed figural response items*. Paper presented at the meeting of the American Educational Research Association, Boston, MA.

- Enright, M., & Martinez, M. E. (1989, October). *Implications of research in cognitive psychology for science education*. Paper presented at the convention of the New Jersey Science Teachers Association.
- Martinez, M. E., & Gong, B. (1989, June). *The conceptual development of buoyancy, density, and flotation*. Paper presented at the annual meeting of the Jean Piaget Society, Philadelphia, PA.
- Lipson, J. I., & Martinez, M. E. (1989, March). *The impact of anticipated test format: Conscious and subconscious effects on teachers and students*. Paper presented at the meeting of the American Educational Research Association, San Francisco, CA.
- Martinez, M. E. (1988, May). *Computer literacy and NAEP: Results and implications for integrating computers into the curriculum*. Paper presented at the Computers and Literacy Preconvention Institute of the International Reading Association, Toronto, Ontario.
- Blando, J. B., & Martinez, M. E. (1987, September). *A comparison of microcomputer and print resources for college exploration*. Paper presented at the annual meeting of the American Psychological Association, New York.
- Martinez, M. E., Schneider, B., & Wineburg, S. S. (1986, April). *A qualitative investigation into the nature of anxiety and self-efficacy in mathematics*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Lin, S., & Martinez, M. (1986, April). *Learning through play: Discovery learning from computer activities*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

INVITED ADDRESSES

- Martinez, M. E. (2008, December). *Learnable intelligence*. Invited address: Human diversity and pedagogy lecture series. New York: SUNY Rockland Community College.
- Martinez, M. E. (2008, November). *Preparing the workforce of the future*. Keynote address: HARRT at UCLA Human Resources Roundtable Annual Retreat. Ranch Santa Fe, CA.
- Martinez, M. E. (2008, August). *Triple symmetry: Intelligence, education, and human effectiveness*. Invited address to the Annual Regional Gathering of Orange County MENSA. Costa Mesa, CA.
- Martinez, M. E. (2007, October). *Triple symmetry: Intelligence, education, and human effectiveness*. Invited address to the Study Group on Supplementary Education sponsored by the College Board, Educational Testing Service and Teachers College Columbia University. Princeton, NJ.
- Martinez, M. E. (2007, March). *Learnable intelligence*. Keynote address to the California Association for Postsecondary Education and Disability—Learning Disabilities Interest Group. Orange, CA.
- Martinez, M. E. (2006, July). *What is problem solving?* Seminar presented at the University of the South Pacific, Suva, Fiji Islands.
- Martinez, M. E. (2006, February). *Metacognition: How students reflect on their thinking*. Keynote address to the Assessment Conference of FOCUS! & California Science and Mathematics Projects at Irvine, Newport Beach, CA.
- Martinez, M. E. (2004, October). *Intelligence and complex reasoning*. Invited address to the PRISM Institute of the Georgia Institute of Technology, Atlanta, GA.

- Martinez, M. E. (2004, July). *Learnable intelligence*. Keynote address to the annual convocation of the Austin Independent School District Leadership, Austin, TX.
- Martinez, M. E. (2004, March). *Understanding the principles of learning more deeply*. Math-Science Partnerships Workshops on How People Learn. National Academy of Sciences, Washington, DC. Conferences transcript published on CD-ROM in the National Research Council's MSP Workshop Series, 2004-05.
- Martinez, M. E. (2003, February). *The enhancement of intelligence*. Invited address to the Western Regional Meeting of the College Board, Mesa, AZ.
- Martinez, M. E. (2002, November). *Can intelligence be learned?* Presentation to the Orange County, California, MENSA Society, Orange, CA.
- Martinez, M. E. (2001, November). *Prediction of and preparation for academic success*. Paper presented at the Rethinking the SAT Conference, University of California, Santa Barbara.
- Martinez, M. E. (2001, May). *Closing the achievement gap*. Paper presented at the invitational workshop: The achievement gap in science and mathematics education, Arlington, VA: National Science Foundation.
- Martinez, M. E. (2001, March). *Can we learn intelligence?* Seminar presented to the Academy for Lifelong Learning, University of California, Irvine.
- Martinez, M. E. (1996, February). *From the South Pacific to South Orange County: What is good education?* Seminar presented at the UCI University Forum.
- Martinez, M. E. (1995, June). *A model of intelligence: Implications for Pacific education*. Seminar presented at the University of the South Pacific, Suva, Fiji Islands.
- Martinez, M. E. (1991, January). *Cognitive features of figural response items*. Seminar presented at Princeton University.
- Martinez, M. E. (1990, September). *Figural response testing*. Seminar presented at the University of Illinois, Champaign-Urbana.
- Martinez, M. E. (1990, November). *New thoughts (and questions) on standardized testing*. Invited speaker at the Phi Delta Kappa/IRI Critical Issues Conference on Authentic Assessment, Chicago.
- Martinez, M. E. (1989, April). *Computers in educational assessment*. Invited address to the Michigan Association for Computers Users in Learning, Detroit, MI.

SOFTWARE

- Jenkins, J., & Martinez, M. E. (1992). *Figural Response Authoring and Measurement Environment*. Princeton, NJ: Educational Testing Service.

TEACHING APPOINTMENTS

Education 173 (Psychology and Social Behavior P192T): Cognition and Learning in Educational Settings
Education 176 (Cog Science 142I): Psychology of Learning, Abilities, and Intelligence
Education 203: Advanced Concepts in Learning and Cognition
Education 259A: Perspectives on Learning and Cognition
Education 285: Cognitive Theories and School Learning

HONORS & AWARDS

2003-04 Mellon Foundation Visiting Scholar
 Teachers College, Columbia University, New York, NY

2003 Presidential Commendation for Contributions to Psychology
 American Psychological Association

2002-03 Visiting Scholar
 The College Board, New York, NY

1994-95 Fulbright Scholar
 University of the South Pacific, Suva, Fiji Islands

1987-88 Visiting Fellow: National Assessment of Educational Progress
 Educational Testing Service, Princeton, NJ

PATENTS

1993 Co-inventor of *Computerized Figural Response Testing System and Method*
 [Project Leader]
 U.S. patent No. 5,211,564
 Issue date: May 18, 1993

1991 Co-inventor of *Machine-Interpretable Figural Response Testing*
 [Project Leader]
 U.S. patent No. 5,011,413
 Issue date: April 30, 1991

BOARDS, COMMITTEES, AND ADVISORY PANELS

UNIVERSITY OF CALIFORNIA—CAMPUS AND SYSTEM

- 2007- Research Advisory Committee
Office of the Graduate Dean, UCI
- 2006-08 Graduate Council, UCI
UCI Senate Committee on Graduate Housing
Council of Associate Deans of Deans of Research
- 2005-06 Planning Committee
California Institute for Educational Leadership (CIEL) Annual Conference
- Planning Group
UC/UCI Science-Math Initiative (SMI)/California Teach
- 2004-05 Council on Research, Computing, and Library Resources, UCI
2000-01
- 1998-01 Committee on Rules and Jurisdiction, UCI
[Drafted UCI's Statement on Potential Risks of a Conflict of Interest
<http://www.rgs.uci.edu/ora/coi/potentialrisks.htm>]
- 1997-98 Chair, Senate Ad Hoc Committee on Conflict of Interest and Graduate Education, UCI
- 1995-98 Conflict of Interest Oversight Committee, UCI
- 1995-98,
2000-01 Departmental Representative to the
Representative Assembly of the Academic Senate, UC Irvine
- 1993-94 Task Force on Intercampus Programs and Distance Learning
University of California Office of the President

PROFESSIONAL ORGANIZATIONS

- 2008- Research Review Committee, DECA Project
Program in Advanced Technology Education, National Science Foundation
- 2006- Division 15 (Educational Psychology) Representative to the American Psychological Association
Council of Representatives
Member of Division 15 Executive Committee
Member of Advisory Committee for the Mission, Vision, and Values of the American
Psychological Association (2008)

NATIONAL AND INTERNATIONAL STUDY COMMITTEES AND BOARDS

- 2006 Study Review Committee on the Integration of Neuroscience and Mathematics Learning
Organisation for Economic Co-Operation and Development (OECD) & Learning Lab Denmark
Copenhagen, Denmark
- 2005 Member, Committee of Visitors
National Science Foundation Math-Science Partnerships (MSP) Program
- 1999-01 Committee on Advanced Study in High School Science and Mathematics
National Research Council, Washington, DC
- 1999 Director's Advisory Panel, Division of Elementary, Secondary, and Informal Education
National Science Foundation, Washington, DC
- 1997-00 Committee on Continuing to Learn from TIMSS
National Research Council, Washington, DC
- 1996-99 Advisory Board and Board of Overseers [Charter Member]
Center for Science, Mathematics, and Engineering Education
National Research Council, Washington, DC
- 1994 Technical Review Committee
Assessment Standards, National Science Education Standards
National Research Council, Washington, DC

STATE OF CALIFORNA

- 2000-01 Technical Design Group, Public School Accountability Act
State of California

PRIVATE NON-PROFIT ORGANIZATIONS

- 2000- Educational Advisory Board
The MIND Institute
Costa Mesa, CA
- 1994 Advisory Board
Environment, Resources, Population: Educating Citizens for the 21st Century
Biological Sciences Curriculum Study and Johnson Foundation, Racine, WI
- 1992-95 Advisory Board & Executive Committee
Biological Science: A Human Approach
Biological Sciences Curriculum Study, Colorado Springs
- 1989-90 Advisory Board & Coordinating Committee
Scope, Sequence, and Coordination Project
National Science Teachers Association, Washington, DC

SCHOOL DISTRICTS

1995- Occasional Judge for District Science Fair
Irvine Unified School District

EDITORIAL AND PROPOSAL REVIEW

NATIONAL RESEARCH COUNCIL

Review Coordinator	National Research Council (2007). <i>NASA's elementary and secondary education program: Review and critique</i> . Washington DC: Author.
Review Coordinator	National Research Council (2005). <i>America's lab report: Investigations in high school science</i> . Washington, DC: Author.
Technical Reviewer	National Research Council (2000). <i>Inquiry and the National Science Education Standards</i> . Washington, DC: Author.
Technical Reviewer	National Research Council (1999). <i>Final report to the U. S. Department of Defense on the Defense Reinvestment Initiative</i> . Washington, DC: Author.
Review Coordinator	National Research Council. (1999). <i>BICSE letter report on evaluating the effects of TIMSS</i> . Washington, DC: Author.
Review Coordinator	National Research Council. (1999). <i>How people learn: Bridging research and practice</i> . Washington, DC: Author.
Technical Reviewer	National Research Council. (1999). <i>How people learn: Brain, mind, experience, and school</i> . Washington, DC: Author.
Technical Reviewer	National Research Council. (1999). <i>The Science of assessment meets the assessment of science: Summary of a workshop</i> . Washington, DC: Author.
Technical Reviewer	National Research Council. (1997). <i>Science teacher preparation in an era of standards-based reform</i> . Washington, DC: Author.

JOURNALS

Educational Assessment, Editorial Review Board
Journal of Applied Developmental Psychology, Editorial Review Board
Journal of Experimental Education, Editorial Review Board
Journal for Research in Mathematics Education, Manuscript Reviewer
Educational Psychologist, Manuscript Reviewer
Journal of Research in Mathematics Education, Manuscript Reviewer
American Educational Research Journal, Manuscript Reviewer
Educational Researcher, Manuscript Reviewer
Educational Measurement: Issues and Practice, Manuscript Reviewer
Teaching and Learning in Medicine, Manuscript Reviewer

CONFERENCES

American Psychological Association, Proposal Referee
National Council for Measurement in Education, Proposal Referee

AGENCIES

The Ford Foundation
National Research Council
National Science Foundation
U.S. Department of Education
 National Institute on Student Achievement, Curriculum & Assessment

ADVISORY BOARDS, CONSULTING, AND TRAINING

Austin, Texas, Independent School District
Government of Fiji
Government of Papua New Guinea
Government of Solomon Islands
Government of Samoa
Kingdom of Tonga
National Research Council
National Science Foundation
 Assessing Youths' Interest in STEM: What Do We Need to Know?
 Research Review Committee, Advanced Technologies in Education
Organization of Economically Developed Countries (OECD/Paris)
Republic of Kiribati Office of the President
State of California Department of Education
U.S. Department of Education

PROFESSIONAL AFFILIATIONS

American Educational Research Association
American Psychological Association, Division 15 (Educational Psychology)
 Executive Committee
Semiotic Society of America