

Curriculum Vitae

Name: Roxana Moreno
Appointments: Associate Professor in Educational Psychology
Affiliated Professor in Psychology
Office Address: Educational Psychology Program
123 Simpson Hall, University of New Mexico
Albuquerque, NM 87131
Telephone, Fax, and Email: (505) 277-3960, (505) 277-8361, moreno@unm.edu
Website: www.unm.edu/~moreno
Languages: English, Spanish, Italian, Portuguese, French

Education

Ph. D. (Psychology with an emphasis in Cognitive Science). University of California, Santa Barbara, August 1999. *Dissertation: Introducing Social Cues in Multimedia Environments: The Role of Pedagogic Agents' Image and Language in a Scientific Lesson.* (Advisor: Prof. Richard E. Mayer).
M. A. (Cognitive and Perceptual Sciences). University of California, Santa Barbara, March 1998. *Thesis: Multimedia Aids to Mathematics Learning* (Advisor: Prof. Richard E. Mayer).
Jurisprudence Doctor. Buenos Aires Law School, Argentina, 1985.
Attorney and Counselor at Law. Supreme Court of the State of California, 1995.
B. S. in Economics with Highest Honors. University of Buenos Aires, Argentina, 1984.
Computer Science. Coursework in Artificial Intelligence. University of California at Berkeley, 1992-1994.

Fellowships and Honors

2009 Ranked one of the twenty most prolific individual scholars conducting educational psychology research (Jones et al., 2009).
2009 Marquis Who's Who in the World.
2009 Outstanding Paper Award, Society for Information Technology and Teacher Education.
2009 Invited Cognitive Scientist for the National Science Foundation Media Advisory on Research in Science, Technology, Engineering, and Math Education.
2008 Recipient of the University of New Mexico Regent's Lecturer Award.
2007 Admitted in the Fulbright Senior Specialists Program as an expert in the areas of Education and Instructional Media Design.
2007 Recipient of the Visiting Researcher Fellowship Award granted by the Educational Technology Expertise Center (OTEC) at the Open University of the Netherlands.
2004 Recipient of the APA Division 15, Richard E. Snow Award for Early Contributions.
2004 Recipient of the Presidential Early Career Award in Science and Engineering (PECASE), to honor the extraordinary achievements of young professionals at the outset of their independent research careers in the fields of science and technology.
2003 Recipient of the University of New Mexico Regent's Lecturer Award.
2003 Ranked one of the twenty most prolific individual scholars conducting educational psychology research (Smith et al., 2003).

- 2002 Outstanding Paper Award, World Conference on Educational Multimedia, Hypermedia and Telecommunications.
- 2000 Outstanding Paper Award, World Conference on Educational Multimedia, Hypermedia, & Telecommunications.
- 2000 Outstanding Paper Award. Interactive Multimedia Electronic Journal of Computer Enhanced Learning.
- 1999 NSF Post-Doctoral Fellowship in Science, Engineering, Mathematics, and Technology Education.
- 1998 Graduate Research Mentorship Program Award. University of California, Santa Barbara.
- 1997 Graduate Opportunity Fellowship. University of California, Santa Barbara.
- 1985 Honors Graduation Diploma. Highest GPA in the Economics Department. University of Buenos Aires, Argentina.
- 1985 Honors Graduation Diploma. Argentina's Women's University Foundation.
- 1982/4 Highest Grade Point Average: Prominent Student. University of Buenos Aires, Argentina.
- 1980 Bunge & Born Foundation Scholarship. Recognition of Worthy Dedication to Studies.

Professional Experience

Teaching Experience

<u>Associate Professor</u>	Educational Psychology Program, University of New Mexico, 2006-Present.
<u>Assistant Professor</u>	Educational Psychology Program, University of New Mexico, 2000-2005.
<u>Statistics Instructor</u>	Psychology Department, University of California, Santa Barbara, 1995-1997.
<u>Teaching Assistant</u>	Psychology Department, University of California, Santa Barbara, 1996-1997.

Other Academic Appointments

<u>Professor</u>	Economics Department, U.A.D.E. (Argentinean Business University), Buenos Aires, Argentina 1987-1990. Economics and MBA Program, E.S.E.A.D.E. (Economics and Business Administration College), Buenos Aires, Argentina, 1985-1986.
<u>Chief of Instructors</u>	Economics Department, University of Buenos Aires. Buenos Aires, Argentina, 1989-1990.
<u>Instructor</u>	Financial Management, Foundation Tucuman, Tucuman, Argentina, 1986. Computerized Banking Program, Ministry of Education, National Education for Adults, Buenos Aires, Argentina, 1985.

Computer and Programming Experience

Multimedia Programmer, Consultant, and Instructor: Software development and training in multimedia products. Development of kiosks and commercial titles: Sound control, movies, interactivity, and management of interfaces, CD ROM editing, formatting and optimization. Multimedia Workshop, Los Angeles, CA, 1994-1996.

Graduate and Postdoctoral Research Experience

Research Scientist and Multimedia/Virtual Reality Programmer. Worked on the “Experiential and Reflective Environments for Learning Project”. Research supported by the National Science Foundation. University of California, Santa Barbara, 1999-2000.

Research Scientist and Virtual Reality Programmer. Worked on the “Knowledge and Distributed Intelligence” project at the Research Center for Virtual Environments and Behavior. Research supported by a grant from the National Science Foundation. University of California, Santa Barbara, 1999-2000.

Research Assistant and Multimedia Programmer. Worked on the “Design-a-Plant” project. Research supported by a grant from the National Science Foundation. University of California, Santa Barbara, 1998-2000.

Research Assistant and Multimedia Programmer. Worked on the “Designing and Authoring Hypermedia Manuals for Optimal Comprehension of Complex Machines” project. Research supported by a grant from the Office of Naval Research. University of California, Santa Barbara, 1996-1999.

Research Assistant. Worked on the “Fifth Dimension After School Program”. Research supported by a grant from the Andrew W. Mellon Foundation. University of California, Santa Barbara, 1995-1998.

Lab Technician and Programmer. Worked on the "Couples Alcoholism Treatment" project. Research supported by a grant from the National Institute on Alcohol Abuse and Alcoholism. Graduate School of Education, University of California, Santa Barbara, Summer 1995.

Scholarship

Refereed Articles

Moreno, R. (in press). Learning from animated classroom exemplars: The case for guiding student teachers’ observations with metacognitive prompts. *Journal of Educational Research and Evaluation*.

Moreno, R., & Abercrombie, S. (2010). Promoting awareness of learner diversity in prospective teachers: Signaling individual and group differences within virtual classroom cases. *Journal of Technology and Teacher Education*, 18(3), xx-xx.

Moreno, R., Reisslein, M., & Ozogul, G. (2010). What problem-solving practice methods more effectively promote the transfer of electrical engineering principles? *Annals of Research in Engineering Education*, 4(3), xx-xx.

Moreno, R. (2009). Constructing knowledge with an agent-based instructional program: A comparison of cooperative and individual meaning making. *Learning and Instruction*, 19, 433-444.

- Moreno, R., Reisslein, M., & Ozogul, G. (2009). Optimizing worked-example instruction in electrical engineering: The role of fading and feedback during problem-solving practice. *Journal of Engineering Education*, 98, 83-92.
- Moreno, R., & Morales, M. (2008). Studying master paintings to promote painting skills: The role of visualization, copying from memory, and spatial ability. *Empirical Studies of the Arts*, 27(2), 131-154.
- Moreno, R. & Ortegano-Layne, L. (2008). Using cases as thinking tools in teacher education: The role of presentation format. *Educational Technology Research and Development*, 56, 449-465.
- Moreno, R. (2007). Optimizing learning from animations by minimizing cognitive load: Cognitive and affective consequences of signaling and segmentation methods. *Applied Cognitive Psychology*, 21, 765-781.
- Moreno, R., & Mayer, R. E. (2007). Interactive multimodal learning environments. *Educational Psychology Review*, 19, 309-326.
- Moreno, R. & Valdez, A. (2007). Immediate and delayed learning effects of presenting classroom cases in teacher education: Are video cases or case narratives more effective? *Journal of Educational Psychology*, 99, 194-206.
- Moreno, R. (2006). Learning with high tech and multimedia environments. *Current Directions in Psychological Science*, 15, 63-67.
- Moreno, R. & Flowerday, T. (2006). Students' choice of animated pedagogical agents in science learning: A test of the similarity attraction hypothesis on gender and ethnicity. *Contemporary Educational Psychology*, 31, 186-207.
- Moreno, R. (2006). Does the modality principle hold for different media? A test of the method affects learning hypothesis. *Journal of Computer Assisted Learning*, 22, 149-158.
- Moreno, R. (2006). When worked examples don't work: Is cognitive load theory at an impasse? *Learning and Instruction*, 16, 170-181.
- Moreno, R. & Mayer, R. E. (2005). Role of guidance, reflection, and interactivity in an agent-based multimedia game. *Journal of Educational Psychology*, 97, 117-128.
- Moreno, R., & Valdez, F. (2005). Cognitive load and learning effects of having students organize pictures and words in multimedia environments: The role of student interactivity and feedback. *Educational Technology Research and Development*, 53, 35-45.
- Moreno, R. (2004). Decreasing cognitive load for novice students: Effects of explanatory versus corrective feedback on discovery-based multimedia. *Instructional Science*, 32, 99-113.

- Moreno, R. (2004). Animated pedagogical agents in educational technology. *Educational Technology, 44* (6), 23-30.
- Moreno, R. & Durán, R. (2004). Do multiple representations need explanations? The role of verbal guidance and individual differences in multimedia mathematics learning. *Journal of Educational Psychology, 96*, 492-503.
- Moreno, R. & Mayer, R. E. (2004). Personalized messages that promote science learning in virtual environments. *Journal of Educational Psychology, 96*, 165-173.
- Mayer, R. E. & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist, 38*, 43-52.
- Moreno, R. & Mayer, R. E. (2002). Learning science in virtual reality multimedia environments: Role of methods and media. *Journal of Educational Psychology, 94*, 598-610.
- Moreno, R. & Mayer, R. E. (2002). Verbal redundancy in multimedia learning: When reading helps listening. *Journal of Educational Psychology, 94*, 156-163.
- Mayer, R. E. & Moreno, R. (2002). Aids to computer-based multimedia learning. *Learning and Instruction, 12*, 107-119.
- Mayer, R. E., & Moreno, R. (2002). Animation as an aid to multimedia learning. *Educational Psychology Review, 14*, 87-99.
- Moreno, R., Mayer, R. E., Spiers, H. & Lester, J. (2001). The case for social agency in computer-based teaching: Do students learn more deeply when they interact with animated pedagogical agents? *Cognition and Instruction, 19*, 177-213.
- Moreno, R. & Mayer, R. E. (2000). A coherence effect in multimedia learning: The case for minimizing irrelevant sounds in the design of multimedia instructional messages. *Journal of Educational Psychology, 92*, 117-125.
- Moreno, R. & Mayer, R. E. (2000). Engaging students in active learning: The case for personalized multimedia messages. *Journal of Educational Psychology, 92*, 724-733.
- Moreno, R. & Mayer, R. E. (2000). A learner-centered approach to multimedia explanations: Deriving instructional design principles from cognitive theory. *Interactive Multimedia Electronic Journal of Computer Enhanced Learning*, <http://imej.wfu.edu>.
- Moreno, R. & Mayer, R. E. (1999). Multimedia-supported metaphors for meaning making in mathematics. *Cognition and Instruction, 17*, 215-248.
- Moreno, R. & Mayer, R. E. (1999). Cognitive principles of multimedia learning: The role of modality and contiguity. *Journal of Educational Psychology, 91*, 358-368.
- Moreno, R. & Mayer, R. E. (1999). Gender differences in responding to open-ended problem-solving questions. *Individual Differences and Learning, 11*, 355-364.

- Mayer, R. E., Moreno, R., Boire M., & Vagge S. (1999). Maximizing constructivist learning from multimedia communications by minimizing cognitive load. *Journal of Educational Psychology, 91*, 638-643.
- Mayer, R. E., Quilici, J. H., & Moreno, R. (1999). What is learned in an after-school computer club? *Journal of Educational Computing Research, 20*, 215-227.
- Hegarty, M., Quilici, J., Narayan, H., Holmquist, S., & Moreno, R., (1999). Multimedia instruction: Lessons from evaluation of a theory-based design. *Journal of Educational Multimedia and Hypermedia, 8*, 119-150.
- Mayer, R. E. & Moreno, R. (1998). A split-attention effect in multimedia learning: Evidence for dual information processing systems in working memory. *Journal of Educational Psychology, 90*, 312-320.
- Mayer, R. E., Quilici, J. H., Moreno, R., Duran, R., Woodbridge, S., Simon, R., Sanchez, D., & Lavezzo, A. (1997). Cognitive consequences of participation in a “Fifth Dimension” after-school computer club. *Journal of Educational Computing Research, 16*, 352-369.

Refereed Proceedings

- Moreno, R., Reisslein, M., & Ozogul, G. (in press). Learning from contextualized versus abstract representations of worked-out problems: Implications for engineering education. In *Proceedings of the 11th International Conference on Education* (pp. XX-XX). Athens, Greece: Athens Institute for Education and Research.
- Moreno, R., Reisslein, M., & Ozogul, G. (in press). Pre-college electrical engineering instruction: Do abstract or contextualized representations promote better learning? In *Proceedings of IEEE/American Society of Engineering Education, Frontiers in Education (FIE) Conference* (pp. XX-XX). Piscataway, NJ: IEEE Press.
- Moreno, R., Abercrombie, S., & Hushman, C. (2009). Using virtual classroom cases as thinking tools in teacher education. In *Proceedings of the 2009 Society for Information Technology and Teacher Education (SITE) International Conference*, (pp. 2615-2622). New York, NY: Association for the Advancement of Computers in Education.
- Reisslein, M. & Moreno, R. (2007). Instructional strategies for pre-college engineering education. In *Proceedings of IEEE/American Society of Engineering Education, Frontiers in Education (FIE) Conference* (pp. F1B-1--F1B-2). Piscataway, NJ: IEEE Press.
- Moreno, R. & Plass, J. (2006). Individual differences in learning with verbal and visual representations. In *Proceedings of the 2006 Steinhardt Technology and Learning Symposium*. <http://create.alt.ed.nyu.edu/symposium2006/proceedings.html>.
- Moreno, R., Reisslein, M., & Delgoda, G. M. (2006). Toward a fundamental understanding of worked example instruction: Impact of means-ends practice, backward/forward fading, and adaptivity. In *Proceedings of IEEE/American Society of Engineering Education, Frontiers in Education (FIE) Conference* (pp. S3D-5–S3D-10). Piscataway, NJ: IEEE Press.

- Reisslein, M., Moreno, R., & Reisslein, J. (2005). WIP: Bridging cognitive and motivational psychology to combat shortage of engineers. In *Proceedings of IEEE/ASEE Frontiers in Education (FIE) Conference* (pp. F1E-30-F1E-31). Piscataway, NJ: IEEE Press.
- Moreno, R. (2003). Assessing the effectiveness of multimedia environments: Empirically-based guidelines for teachers. In *Proceedings of the Society for Information Technology and Teacher Education (SITE) 2003 International Conference* (pp. 3716-3719). Charlottesville, VA: Association for the Advancement of Computers in Education.
- Moreno, R. (2002). Who learns best with multiple representations? Cognitive theory implications for individual differences in multimedia learning. In *ED-MEDIA 2002 Proceedings* (pp. 1380-1385). Charlottesville, VA: Association for the Advancement of Computers in Education.
- Moreno, R. (2002). Pedagogical agents in virtual reality environments: Do multimedia principles still apply? In *ED-MEDIA 2002 Proceedings* (pp. 1374-1379) Charlottesville, VA: Association for the Advancement of Computers in Education.
- Moreno, R. (2001). Cognitive and motivational consequences of adapting an agent metaphor in multimedia learning: Do the benefits outweigh the costs? In *Proceedings of WebNet 2001*, (pp. 873-878). Charlottesville, VA: Association for the Advancement of Computers in Education.
- Moreno, R. (2001). Designing for understanding: A learner-centered approach to multimedia learning. In *Human-Computer Interaction Proceedings* (pp. 248-250), Mahwah, NJ: Lawrence Erlbaum Associates.
- Moreno, R. (2001). Virtual reality and learning: Cognitive and motivational effects of students' sense of presence. In *Human-Computer Interaction Proceedings* (pp. 65-67), Mahwah, NJ: Lawrence Erlbaum Associates.
- Moreno, R. (2001). Software agents in multimedia: An experimental study of their contributions to students' learning. In *Human-Computer Interaction Proceedings* (pp. 275-277), Mahwah, NJ: Lawrence Erlbaum Associates.
- Moreno, R. (2001). Contributions to learning in an agent-based multimedia environment: A methods-media distinction. In *IEEE International Conference on Advanced Learning Technology Proceedings* (pp. 464-465), Los Alamitos, CA: IEEE Computer Society.
- Moreno, R. & Mayer, R. E. (2000). Meaningful design for meaningful learning: Applying cognitive theory to multimedia explanations. In *ED-MEDIA 2000 Proceedings* (pp. 747-752) Charlottesville, VA: Association for the Advancement of Computers in Education.
- Moreno, R., Mayer, R. E., & Lester, J. C. (2000). Life-like pedagogical agents in constructivist multimedia environments: Cognitive consequences of their interaction. In *ED-MEDIA 2000 Proceedings* (pp. 741-746). Charlottesville, VA: Association for the Advancement of Computers in Education.

Moreno, R. & Mayer, R. E. (1999). Designing multimedia presentations with animation: What does the research say? In *Proceedings of IEEE Multimedia Systems 1999*, (pp. 720-725). Florence, Italy: IEEE Press.

Books

Moreno, R. (2009). *Educational psychology*. Hoboken, NJ: Wiley.

Plass, J., Moreno, R., & Brünken, R. (Eds.) (in press). *Cognitive load theory*. New York: Cambridge University Press.

Book Chapters

Moreno, R. (in preparation). The split-attention effect. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. xx-xx). New York: Springer.

Moreno, R. (in preparation). Case-based learning. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. xx-xx). New York: Springer.

Moreno, R. (in preparation). Interactive learning environments. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. xx-xx). New York: Springer.

Moreno, R., & Mayer, R. E. (in press). Techniques that increase generative processing in multimedia learning: Open questions for cognitive-load research. In J. Plass, R. Moreno, & R. Brünken (Eds), *Cognitive load theory* (pp. xx-xx). New York: Cambridge University Press.

Moreno, R., & Park, B. (in press). Cognitive load theory: Historical development and relation to other theories. In J. Plass, R. Moreno, & R. Brünken (Eds), *Cognitive load theory* (pp. xx-xx). New York: Cambridge University Press.

Mayer, R., & Moreno, R. (in press). Techniques that reduce extraneous cognitive load and manage intrinsic cognitive load during online multimedia learning. In J. Plass, R. Moreno, & R. Brünken (Eds), *Cognitive load theory* (pp. xx-xx). New York: Cambridge University Press.

Plass, J., Moreno, R., & Brünken, R., (in press). Cognitive load theory and research in educational psychology. In J. Plass, R. Moreno, & R. Brünken (Eds), *Cognitive load theory* (pp. xx-xx). New York: Cambridge University Press.

Moreno, R., Abercrombie, S., & Hushman, C. (2009). Using virtual classroom cases as thinking tools in teacher education. In I.Gibson et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2009* (pp. 2615-2622). Chesapeake, VA: Association for the Advancement of Computing in Education.

Moreno, R. (2007). Animated software pedagogical agents: How do they help students construct knowledge from interactive multimedia games? In R. Lowe & W. Schnotz (Eds), *Learning with animation* (pp. 183-207). New York: Cambridge University Press.

Moreno, R. (2005). Multimedia learning with animated pedagogical agents. In R. Mayer (Ed.), *Cambridge handbook of multimedia learning* (pp. 507-524). New York: Cambridge University Press.

Moreno, R. (2005). Instructional technology: Promise and pitfalls. In L. PytlikZillig, M. Bodvarsson, & R. Bruning (Eds.), *Technology-based education: Bringing researchers and practitioners together* (pp. 1-19). Greenwich, CT: Information Age Publishing.

Moreno, R. (2004). Immersive agent-based multimedia environments: Identifying social features for enhanced learning. In H. M. Niegemann, F. D. Leutner, & R. Brünen (Eds.), *Instructional design for multimedia learning* (pp. 9-18). Münster: Waxmann.

Mayer, R. E. & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. In Bruning, R., Horn, C. A., & PytlikZillig, L. M. (Eds.), *Web-based learning: What do we know? Where do we go?* (pp. 23-44). Greenwich, CT: Information Age Publishing.

Moreno, R. & Mayer, R. E., (1999). Visual presentations in multimedia learning: Conditions that overload visual working memory. In D. P. Huijsmans & A. W. M. Smeulders (Eds.), *Lecture Notes in Computer Science: Visual Information and Information Systems* (pp. 793-800). Berlin: Springer Verlag.

Encyclopedia Articles

Moreno, R. (2007). Gardner, Howard Earl. In M. Noren (Ed.), *World book encyclopedia (online)*. Chicago, IL: World Book Inc.

Moreno, R. (2007). Bloom, Benjamin. In M. Noren (Ed.), *World book encyclopedia (online)*. Chicago, IL: World Book Inc.

Grant Writing

Principal Investigator, National Science Foundation CAREER Program. Supplement proposal to grant: "Bridging the Gap between Theory and Practice in Teacher Education: Guided Interactive Virtual Environments for Case-Based Learning," \$70,020, January, 2009-December 2009.

Co-Principal Investigator, National Science Foundation Engineering Education Program (EEP), "Empirically-Based Instructional Tools for Fostering Engineering Problem Solving and Cognitive Flexibility in Pre-college Students" \$1,249,634, January 2007-December 2011.

Co-Principal Investigator, University of New Mexico RAC Grant Program, "Scientific Misconceptions and Their Remediation through Multimedia Simulation Strategies," \$4,000, December 2006-September 2007.

Principal Investigator, National Science Foundation Research on Learning Environments Program (ROLE), Supplement proposal to grant: "Assessing Cognitive Diversity: Implications for Hispanic, Native American, and White Children's Mathematics Learning," \$100,000, February, 2006-December 2007.

- Principal Investigator, National Science Foundation Research Experiences for Undergraduates Program (REU), \$10,000, January 2006-December 2007.
- Co-Principal Investigator, University of New Mexico RAC Grant Program, "Scientific Misconceptions and Their Remediation through Multimedia Simulation Strategies," \$6,420, December 2005-September 2006.
- Principal Investigator, National Science Foundation Research Experiences for Undergraduates Program (REU), \$10,000, September 2005-December 2006.
- Principal Investigator, National Science Foundation Faculty Early Career Development Program (CAREER), "Bridging the Gap between Theory and Practice in Teacher Education: Guided Interactive Virtual Environments for Case-Based Learning," \$894,538, January 2003-January 2008.
- Principal Investigator, National Science Foundation Research on Learning Environments Program (ROLE), Final proposal: "Assessing Cognitive Diversity: Implications for Hispanic, Native American, and White Children's Mathematics Learning," \$1,468,730, January 2003-January 2006.
- Principal Investigator, National Science Foundation Starter Grant: "Promoting Experiential and Reflective Cognition in Education," \$50,000, February 2001-February 2002.
- Principal Investigator, University of New Mexico RAC Grant Program, "Case-Based Multimedia Environments for Teacher Training: Bridging the Theory and Practice of Educational Psychology," \$ 7,500, February 2002.
- Principal Investigator, Center for Teaching Excellence, Eastern New Mexico University, "Testing Dual-processing Theory of Multimedia during Classroom Instruction," \$3,500, January 2002.
- Principal Investigator, National Science Foundation Faculty Early Career Development Program (CAREER), Preliminary proposal: "Natural and Artificial Agents for Complex Problem Solving: The Case of Guided Interactive Virtual Environments (GIVEs)," \$650,000, July 2001 (final proposal awarded).
- Principal Investigator, National Science Foundation Research on Learning Environments Program (ROLE), Preliminary Proposal: "Assessing Cognitive Diversity: Implications for Hispanic, Native American, and White Children's Mathematics Learning," \$1,331,907, March 2002 (final proposal awarded).

International Conference Presentations (refereed)

- Moreno, R. (2009, August). *Promoting meaningful learning from visual representations with strategy instruction*. Paper presented at the 2009 European Association for Research on Learning and Instruction (EARLI) Conference, Amsterdam, The Netherlands.

- Moreno, R. (2009, August). *Enseñando en el mundo avatar: Una evaluación de la contribución de los agentes pedagógicos animados*. Paper presented at the Fifth Encounter of Psychology Investigators in the MERCOSUR. Buenos Aires, Argentina.
- Moreno, R., Reisslein, M., & Ozogul, G. (2009, May). *Learning from contextualized versus abstract representations of worked-out problems: Implications for engineering education*. Paper presented at the 2009 International Conference in Education, Athens, Greece.
- Moreno, R., & Marley, S., & Helak, J. (2008, June). *How strategic are students when they learn science with static and dynamic visual representations?* Paper presented at the 2008 International Conference for the Learning Sciences, Utrecht, The Netherlands.
- Moreno, R. (2008, March). *Technology: Friend or foe? A synthesis of the pros and cons of contemporary technological trends for education*. Paper presented at the Third Interamerican Conference on Mental Health, Buenos Aires, Argentina.
- Moreno, R. (2008, February). *A longitudinal study examining the influence of worked example instruction on prospective teacher's problem solving and learning attitudes*. Paper presented at the 2008 Cognitive Load Theory Conference, Wollongong, Australia.
- Moreno, R., & Marley, S. (2007, August). *Do students' verbal and visual abilities and preferences affect their learning and perceptions about learning astronomy with static and animated graphics?* Paper presented at the European Association for Research on Learning and Instruction (EARLI) Annual Conference, Budapest, Hungary.
- Moreno, R. (2007, August). *Focusing prospective teachers' attention on relevant procedural knowledge: The effects of signaling and segmenting instructional videos and animations*. Paper presented at the European Association for Research on Learning and Instruction (EARLI) Conference, Budapest, Hungary.
- Moreno, R. (2005, August). *Does the modality principle hold for different media? A test of the method-affects-learning hypothesis*. Paper presented at the European Association for Research on Learning and Instruction (EARLI) Conference, Nicosia, Cyprus.
- Moreno, R. (2005, August). *Using dynamic classroom visualizations for teacher education*. Paper presented at the European Association for Research on Learning and Instruction (EARLI) Conference, Nicosia, Cyprus.
- Moreno, R. (2005, June). *Distinguishing between the role of methods and media in instructional technology*. Paper presented at the Interamerican Congress of Psychology, Buenos Aires, Argentina.
- Moreno, R. (2005, June). *The role of classroom visualizations in teacher education*. Paper presented at the Interamerican Congress of Psychology, Buenos Aires, Argentina.
- Moreno, R. (2005, June). *Reducing cognitive load in discovery-based multimedia games: A test of the guided feedback hypothesis*. Paper presented at the Interamerican Congress of Psychology, Buenos Aires, Argentina.

Moreno, R. (2003, August). *The role of software agents in multimedia learning environments: When do they help students reduce cognitive load?* Paper presented at the European Association for Research on Learning and Instruction (EARLI) Conference, Padova, Italy.

Moreno, R. (2003, August). *Animated pedagogical agents: How do they help students construct knowledge from interactive multimedia environments?* Paper presented at the European Association for Research on Learning and Instruction (EARLI) Conference, Padova, Italy.

Moreno, R. (2001, July). *Guided discovery with software pedagogical agents: Cognitive and motivational effects of a social-agency multimedia learning environment.* Paper presented at the XXVIII Interamerican Congress of Psychology, Santiago, Chile.

Moreno, R. (2001, July). *A learner-centered approach to instructional technology: Applying cognitive theory to multimedia learning.* Paper presented at the XXVIII Interamerican Congress of Psychology, Santiago, Chile.

Moreno, R. & Mayer, R. E., Lester, J. (2000, June). *Life-like pedagogical agents in constructivist multimedia environments: Cognitive consequences of their interaction.* Paper presented at the annual meeting of the World Conference on Educational Multimedia, Hypermedia and Telecommunications, Montreal, Canada.

Moreno, R. & Mayer, R. E. (2000, June). *Meaningful design for meaningful learning: Applying cognitive theory to multimedia explanations.* Paper presented at the annual meeting of the World Conference on Educational Multimedia, Hypermedia and Telecommunications, Montreal, Canada.

Moreno, R. & Mayer, R. E. (1999, June). *Designing multimedia presentations with animation: What does the research say?* Paper presented at the Sixth International Conference on Multimedia Computing and Systems, Florence, Italy.

Moreno, R. & Mayer, R. E. (1999, June). *Visual presentations in multimedia learning: Conditions that overload visual working memory.* Paper presented at the Third International Conference on Visual Information Systems, Amsterdam, The Netherlands.

National Conference Presentations (refereed)

Moreno, R. (2009, December). *Influence of culture on children's mathematics learning.* Paper to be presented at the 2009 meeting of the Southwest Consortium for Innovations in Psychology in Education (SCIPIE), Las Vegas, NV.

Moreno, R., Reisslein, M., & Ozogul, G. (2009, October). *Pre-college electrical engineering instruction: Do abstract or contextualized representations promote better learning?* Paper to be presented at the 2009 IEEE/American Society of Engineering Education, Frontiers in Education (FIE) Annual Conference, San Antonio, TX.

- Moreno, R., Booker, D., & Abercrombie, S. (2009, April). *Learning from virtual classroom cases in teacher education: The case for guiding attention and thinking in worked-example instruction*. Paper presented at the 2009 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moreno, R., Marley, S., Hushman, C., & Biazak, J. (2009, April). *The role of prior knowledge in learning from animations and imagination*. Paper presented at the 2009 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Reisslein, M., Moreno, R., & Ozogul, G. (2009, April). *Fading and feedback in worked-example engineering education*. Paper presented at the 2009 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moreno, R., Abercrombie, S., & Hushman, C. (2009, March). *Using virtual classroom cases as thinking tools in teacher education*. Paper presented at the 2009 Society for Information Technology and Teacher Education (SITE) International Conference, Charleston, SC.
- Ockey, G. J., Abercrombie, S., & Moreno, R. (2008, September). *Academic self-concept measurement invariance across a diverse sample of preadolescents*. Paper presented at the 2008 annual meeting of the American Psychological Association (APA), Boston, MA.
- Moreno, R. & Abercrombie, S. (2008, April). *Promoting diversity awareness in teacher education: Signaling group, individual, and instructional diversity within classroom cases*. Paper presented at the 2008 annual meeting of the American Educational Research Association (AERA), New York, NY.
- Moreno, R., Abercrombie, S., & Booker, D. (2008, April). *A longitudinal study examining the influence of worked example instruction on prospective teacher's problem solving and learning attitudes*. Paper presented at the 2008 annual meeting of the American Educational Research Association (AERA), New York, NY.
- Reisslein, M. & Moreno, R. (2007, October). *Instructional strategies for pre-college engineering education*. Paper presented at the 2007 IEEE/ American Society of Engineering Education, Frontiers in Education (FIE) Annual Conference, Milwaukee, WI.
- Flowerday, T., Moreno, R., & Farley, M. (2007, April). *The role of situational interest and choice on reader engagement and attitude*. Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R., (2007, April). *Do signaling and segmentation methods help prospective teachers learn from instructional videos and animations?* Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R. (2007, April). *Using a computer-based assessment to personalize NAEP math word problems: Does personalization promote problem solving?* Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.

- Moreno, R., & Abercrombie, S. (2007). *Using symbolic modeling to bridge conceptual and procedural knowledge in teacher education*. Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R., & Plass, J. (2007, April). *Relationship of cognitive abilities, cognitive styles, and learning preferences and their effect on multimedia learning*. Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R., Marley, S., & Helak, J. (2007, April). *Cognitive and affective consequences of learning astronomy with and without static and dynamic visual representations*. Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R., Shell, D., & Pirritano, M. (2007, April). *Factors predictive of mathematics performance: Diversity between and within White, Hispanic, and Native American children*. Paper presented at the 2007 annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Moreno, R., Reisslein, M. & Delgoda, G. M. (2006, October). *Towards a fundamental understanding of worked example instruction: Impact of means-ends practice, backward/forward fading, and adaptivity*. Paper presented at the 2006 IEEE/ American Society of Engineering Education, Frontiers in Education (FIE) Annual Conference, San Diego, CA.
- Moreno, R. & Plass, J. (2006, April). *Individual differences in learning with verbal and visual representations*. Paper presented at the 2006 Workshop on Technology and Learning. New York University, New York.
- Moreno, R. & Ortegado-Layne, L. (2006, April). *Cognitive and affective consequences of learning educational psychology with real and virtual classroom visualizations*. Paper presented at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.
- Moreno, R., Allred, C., & Pirritano, M. (2006, April). *Linguistic simplification of math word problems: Does language load affect English language learners' performance, metacognition, and anxiety?* Paper presented at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.
- Moreno, R., Allred, C., Pirritano, M. & McCormick, C. (2006, April). *Examining the validity of linguistic simplification as an accommodation for English language learners*. Paper presented at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.
- Moreno, R., Allred, C., Finch, B., & Pirritano, M. (2006, April). *The effects of auditory and pictorial aids on English language learners' mathematics performance*. Paper presented at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

- Moreno, R., & Livne, N. (2006, April). *Using an empirically-based taxonomy of diversity factors to improve prospective teachers' problem solving*. Paper presented at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.
- Moreno, R. & Pirritano, M. (2005, December). *Predicting math performance: The diagnostic value of cognitive-affective profiles versus ethnicity*. Paper presented at the 2005 Principal Investigator meeting of the National Science Foundation, Washington, DC.
- Moreno, R., Calvert, D., & Pirritano, M. (2005, November). *Using students' personal information to contextualize NAEP word problems*. Paper presented at the Southwest Consortium for Innovations in Psychology in Education (SCIPIE), Las Vegas, NV.
- Reisslein, M., Moreno, R., & Reisslein, J. (2005, October). *WIP: Bridging cognitive and motivational psychology to combat shortage of engineers*. Paper presented at the American Society for Engineering Education, Frontiers in Education conference, Indianapolis, IN.
- Moreno, R. (2005, April). *The role of feedback in discovery-based multimedia*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- Moreno, R. & Ortegado-Layne, L. (2005, April). *Learning science with a multimedia game: A comparison of cooperative, collaborative, and individual meaning making*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- Moreno, R., Ortegado-Layne, L., & Livne, N. (2005, April). *Using cases as thinking tools in teacher education: The role of presentation format*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- Moreno, R., Flowerday, T., & Frechette, C. (2005, April). *Does the choice of animated pedagogical agents help students learn science from a multimedia game?* Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- Moreno, R., Pirritano, M., Finch, B., & Vogenthaler, I. (2005, April). *Factors related to math performance of Hispanic, Native and Anglo-American children: The role of opportunity to learn, language proficiency, and beliefs*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- McCormick, C., Moreno, R., & Stevens, J. (2005, April). *A study of the development of metacognitive knowledge and processes related to mathematics performance*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.

- Pirritano, M. & Moreno, R. (2005, April). *The structure of self-concept across age and cultural group*. Paper presented at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.
- Moreno, R. & Frechette, C. (2004, November). *Effects of social and physical presence in virtual reality learning environments: A cognitive load perspective*. Paper presented at the 2004 annual meeting of the Psychonomic Society, Minneapolis, MN.
- Moreno, R. & Frechette, C. (2004, November). *What do we know about learning with animated pedagogical agents? Implications of the research for educational technology theory and practice*. Paper presented at the 2004 annual meeting of the Society for Computers in Psychology, Minneapolis, MN.
- Moreno, R. & Pirritano, M. (2004, October). *Assessing cognitive diversity: Attitudinal and cognitive predictors of mathematics performance*. Paper presented at the 2004 Principal Investigator meeting of the National Science Foundation, Washington, DC.
- Moreno, R. (2004, April). *Agent-based methods for multimedia learning environments: What works and why?* Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moreno, R. & Mayer, R. E. (2004, April). *Inducing social and physical presence in agent-based multimedia environments: Effects on extraneous and germane cognitive load*. Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moreno, R. & Mayer, R. E. (2004, April). *The interactivity hypothesis: How does behavioral and cognitive activity affect learning from multimedia environments?* Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Moreno, R., Estrada, S., & Ahonen, P. (2004, April). *What do teachers in preparation remember and transfer from video cases presented during class instruction?* Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Mayer, R. E. & Moreno, R. (2004, April). *How to reduce cognitive load for multimedia messages*. Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Mayer, R. E., Moreno, R., Moutone, P., Quilici, J., Dow, G. (2004, April). *What works with educational games?* Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.
- Stevens, J. J. & Moreno, R. (2004, April). *A multilevel, longitudinal analysis of ethnic differences in children's mathematics achievement*. Paper presented at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.

- Moreno, R. (2003, October). *How do pedagogical agents influence learning in educational technology? An empirically-based answer*. Paper presented at the Association for Educational Communications and Technology (AECT) Annual Conference, Anaheim, CA.
- Moreno, R. (2003, March). *When does computer technology help students learn? Guidelines to assess the effectiveness of multimedia environments*. Paper presented at the Society for Information Technology and Teacher Education (SITE) International Conference, Albuquerque, NM.
- Moreno, R. & Morales, M. (2003, April). *Applying dual code theory to art education: The effects of copying from masterpieces on portrait learning*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Moreno, R. (2003, April). *New technologies for constructivist learning: Cognitive theory implications for the design of software agents in virtual reality multimedia environments*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Moreno, R. & Stevens, J. (2003, January). *Factors of cognitive diversity in children's mathematics performance: A theoretical framework*. Paper presented at the RACE 2003 Conference on Relevance of Assessment and Culture in Evaluation, Tempe, AZ.
- Moreno, R. (2002, June). *Who learns best with multiple representations? Cognitive theory implications for individual differences in multimedia learning*. Paper presented at the annual meeting of the World Conference on Educational Multimedia, Hypermedia and Telecommunications, Denver, CO.
- Moreno, R. (2002, June). *Pedagogical agents in virtual reality environments: Do multimedia principles still apply?* Paper presented at the annual meeting of the World Conference on Educational Multimedia, Hypermedia and Telecommunications, Denver, CO.
- Moreno, R. (2002, April). *Auditory cues for multimedia learning: Which bells and whistles work and why?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Moreno, R. (2002, April). *Interactive multimedia for math learning: Individual differences that count*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Moreno, R. & Mayer, R. (2002, April). *The role of immersion in virtual reality environments: How does media affect students' learning?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Moreno, R. (2001, October). *Cognitive and motivational consequences of adapting an agent metaphor in multimedia learning: Do the benefits outweigh the costs?* Paper presented at the World Conference on E-Learning in Corporate, Government, Health Care, and Higher Education, Orlando, FL.

- Moreno, R. (2001, August). *Designing for understanding: A learner-centered approach to multimedia learning*. Paper presented at the Ninth International Conference on Human-Computer Interaction, New Orleans, LA.
- Moreno, R. (2001, August). *Virtual reality and learning: Cognitive and motivational effects of students' sense of presence*. Paper presented at the Ninth International Conference on Human-Computer Interaction, New Orleans, LA.
- Moreno, R. (2001, August). *Software agents in multimedia: An experimental study of their contributions to students' learning*. Paper presented at the Ninth International Conference on Human-Computer Interaction, New Orleans, LA.
- Moreno, R., & Mayer, R. E. (2001, August). *Virtual reality and learning: Cognitive and motivational effects of students' sense of presence*. Paper presented at the Ninth International Conference on Human-Computer Interaction, New Orleans, LA.
- Moreno, R. (2001, August). *An experimental study of the cognitive implications of software agents' presence*. Paper presented at the at the 2001 American Psychological Association Conference, San Francisco, CA.
- Moreno, R. & Durán, R. (2001, April). *Interactive visual metaphors in multimedia: Aids to math learning among English language learners*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.
- Moreno, R. & Mayer, R. E. (2001, April). *Getting the message across: The role of verbal redundancy in multimedia explanations*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA
- Moreno, R. (2000, April). *Approximating human personae in computer-based instruction: Effects of animated pedagogical agents on constructivist learning*. Paper presented at the annual meeting of the American Educational Research, New Orleans, LA.
- Moreno, R. & Mayer, R. E. (2000, April). *Pedagogical agents in constructivist multimedia environments: The role of image and language in the instructional communication*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Moreno, R. & Mayer, R. E. (1999, April). *Cognitive designs for multimedia learning environments*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
- Mayer, R. E. & Moreno, R. (1999, April). *Maximizing constructivist learning from multimedia communications by minimizing cognitive load*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
- Mayer, R. E. & Moreno, R. (1999, April). *What is learned in an after-school computer club?* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada

Mayer, R. E. & Moreno, R. (1998, April). *Instructional design implications of a split-attention effect in multimedia learning*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Moreno, R. & Mayer, R. E. (1998, April). *Learning from multiple representations in a multimedia environment*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Mayer, R. E. & Moreno, R. (1998, April). *A cognitive theory of multimedia learning: Implications for design principles*. Paper presented at the annual meeting of the ACM SIGCHI Conference on Human Factors in Computing Systems, Los Angeles, CA.

Mayer, R. E. & Moreno, R. (1997, November). *A split-attention effect in multimedia learning: Evidence for a dual channel theory of working memory*. Paper presented at the annual meeting of the Psychonomic Society, Philadelphia, PA.

Mayer, R. E., Quilici, J. H., Moreno, R., Simon, R., Durán, R., Woodbridge, S. (1997, March). *The search for experimental control on evaluating the cognitive consequences of participation in the "Fifth Dimension" after-school program*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Mayer, R. E., Quilici, J. H., Moreno, R., Durán, R., Woodbridge, S., Simon, R., Sanchez, D., & Lavezzo, A. (1996, April). *Cognitive consequences of participation in a "Fifth Dimension" after-school computer club*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

International Invited Talks and Seminars

Invited Seminar Presenter (March, 2010). *Visual metaphors for meaning making in mathematics*. Seminar to be conducted at the Atacama School of Education in Cognitive and Neural Sciences, San Pedro de Atacama, Chile. Sponsored by the James S. McDonnell Foundation and Universidad de Chile.

Invited Seminar Presenter (August, 2009). *Learning with interactive multimedia environments: Exploring future international collaborations*. Graduate talk series conducted at the University of Duisburg-Essen. Essen, Germany.

Invited Seminar Presenter (June, 2009). *Avances de la ciencia de la educación: Implicaciones para la enseñanza y el diseño de la tecnología educativa*. Seminar conducted at the Department of Psychology, University of Cadiz, Cadiz, Spain.

Invited Keynote Speaker (2008, June). *How does minds-on activity affect hands-on activity in technology-based learning? Some answers from empirical studies in interactive and non-interactive learning environments*. Paper presented at the Open University of the Netherlands, Heerlen, The Netherlands.

Invited Seminar Presenter (March, 2008). *A review of the research on learning with interactive and non-interactive multimedia environments*. Seminar conducted at the Research in Interactive Learning Environments (RILE) Center. University of Wollongong, Australia.

Invited Keynote Speaker (2008, March). *Designing interactive learning environments that work: Combining minds-on and hands-on activity in multimedia instruction*. Paper presented at the Research in Interactive Learning Environments (RILE) Center, Wollongong, Australia.

Invited Seminar Presenter (May, 2008). *Aplicando principios de la ciencia cognitiva para el diseño de la tecnología educativa*. Seminar conducted at the Department of Psychology, University of Cadiz, Cadiz, Spain.

Invited Keynote Speaker (October, 2006). *Investigating the role of virtual reality and agents in interactive multimedia learning*. Paper presented at the Catholic University of the Sacred Heart, Milan, Italy.

Invited Keynote Speaker (June, 2002). *Understanding meaningful learning from technology: When media enables instructional methods*. Paper presented at the Instructional Design for Multimedia Learning Convention, sponsored by the SIG 6 Instructional Design of the European Association for Research on Learning and Instruction, Erfurt, Germany.

Invited Speaker (August, 2001). *Agents, believability and embodiment in advanced learning environments*. Paper presented at the International Conference on Advanced Learning Technologies, Madison, WI.

National Invited Talks

Invited Faculty Lecturer (November, 2009). *Case based learning in educational psychology*. Virtual lecture to be presented at the Wiley Faculty Network. Hoboken, NJ: Wiley.

Invited Distinguished Lecturer (October, 2009). *The case for empirically validated knowledge and practices in educational technology*. Lecture to be presented at the Meadows Center for Preventing Educational Risk. University of Texas, Austin, Austin, TX.

Invited Lecturer (October, 2009). *Instructional technology as a thinking tool for STEM and teacher education*. Lecture to be presented at the Educational Psychology and Learning Systems Department. Florida State University. Tallahassee, FL.

Invited Lecturer (May, 2009). *Technology as a vehicle for transforming science, engineering, and math education*. Lecture presented at the Science, Technology, Engineering, and Mathematics (STEM) Lecture Series. University of Illinois, Urbana-Champaign. Champaign, IL.

Invited Keynote Speaker (February, 2009). *Bridging the gap between theory and practice in teacher education with virtual classroom cases*. Paper presented at the National Science Foundation's Center for Advancing Research and Communication in Science, Technology, Engineering, and Mathematics (ARC). Washington, DC.

- Invited Keynote Speaker (July, 2007). *The relationship between minds-on and hands-on activity in instructional design: Evidence from learning with interactive and non-interactive multimedia environments*. Paper presented at the 13th International Conference on Artificial Intelligence in Education (AIED 2007). Los Angeles, CA.
- Invited Speaker (March, 2005). *Virtual classrooms as thinking and research tools for teacher education*. Paper presented at the National Center for Information Technology in Education (NCITE), University of Nebraska, Lincoln.
- Invited Speaker (March, 2005). *Reflecting on students' reflections: interactions between minds-on and hands-on computer activities*. Paper presented at the National Center for Information Technology in Education (NCITE), University of Nebraska, Lincoln.
- Invited Speaker (February, 2005). *The role of method, media, and diversity in promoting high-order cognition*. Paper presented at the Human Computer Interaction Department. Carnegie Mellon University, Pittsburgh, PA.
- Invited Speaker (July, 2004). *Let's talk about your research: Hashing out conceptual issues*. Division 15 Doctoral Research Seminar of the American Psychological Association Annual Convention, Honolulu, HI.
- Invited Speaker (July, 2004). *Making a difference in educational technology research*. Paper presented at the American Psychological Association Annual Convention, Honolulu, HI.
- Invited Plenary Speaker (June, 2004). *Instructional technology: Promise and pitfalls*. Paper presented at the National Center for Information Technology in Education (NCITE), University of Nebraska, Lincoln.
- Invited Speaker (April, 2004). *Instructional technology for engaged learning: Reflections on the role of methods, media, motivation, and diversity*. Paper presented at the Rossier School of Education, University of Southern California, Los Angeles, CA.
- Invited Speaker (October, 2003). *When technology makes us smart*. Paper presented at the Academic Technology Group and Center for Teaching Excellence, Loyola Marymount University, Los Angeles, CA.
- Invited Speaker (September, 2003). *Extending principles of multimedia design to new instructional technologies: A cognitive load perspective*. Paper presented at the Consortium for Research and Evaluation of Advanced Technologies in Education, New York University, New York, NY. <http://create.alt.ed.nyu.edu/create/news.htm>.
- Invited Speaker (August, 2003). *Developing the rational mind*. Paper presented at the Expert Forum for Cluster A of the American Psychological Association, Toronto, Canada.
- Invited Speaker (February, 2003). *Supporting improved mathematics assessment in New Mexico: A research agenda*. Paper presented at the College of Education Research Spotlight, University of New Mexico, Albuquerque, NM.

Invited Speaker (October, 2002). *New technologies for knowledge construction: The instructional value of software agents, virtual reality, and interactive multimedia learning*. Paper presented at the College of Education Research Spotlight, University of New Mexico, Albuquerque, NM.

Invited Speaker (October, 2001). *Thinking, learning, and cognitive styles*. Paper presented at the Psychology Department, University of New Mexico, Albuquerque, NM.

Invited Speaker (February, 2001). *Implications of cognitive psychology for the design of agent-based instruction*. Paper presented at the Cognitive Science Research Program, University of California, Los Angeles, CA.

Invited Speaker (December, 2000). *The role of experiential and reflective cognition in multimedia learning*. Paper presented at the National Science Foundation, Arlington, VA.

Invited Speaker (November, 2000). *Instructional design for understanding: Two multimedia learning scenarios*. Paper presented at the Educational Psychology Program, University of New Mexico, Albuquerque, NM.

Invited Speaker (April, 2000). *Learning math and science with multimedia: The search for cognitive principles of instructional design*. Paper presented at the Educational Psychology Program, University of New Mexico, Albuquerque, NM.

Invited Speaker (May, 1999). *Creating agency in multimedia environments: a review and evaluation of software pedagogical agents for science learning*. Paper presented at the Cognitive Science Seminar, University of California, Santa Barbara, CA.

Invited Speaker (March, 1999). *Visualization and modeling program*. Paper presented at the NSF young scholar for the Conference on Innovative Learning Technologies, San Jose, CA.

Symposiums

Discussant (2009, November). *Media, culture, and epistemological beliefs*. Symposium to be conducted at the 2009 meeting of the Southwest Consortium for Innovations in Psychology in Education (SCIPIE), Las Vegas, NV.

Discussant (2009, August). *Investigating perceptual and cognitive processes during knowledge acquisition by animation*. Symposium conducted at the 2009 European Association for Research on Learning and Instruction Annual Conference, Amsterdam, The Netherlands.

Organizer (2009, April). *Can technology support problem solving in worked-example instruction? An empirical answer from four research programs*. Symposium conducted at the 2009 annual meeting of the American Educational Research Association (AERA), San Diego, CA.

Discussant (2007, August). *Recent developments in the design of computer supported inquiry learning environments*. Symposium conducted at the 2007 European Association for Research on Learning and Instruction Annual Conference, Budapest, Hungary.

Discussant (2007, April). *In-depth technology, instruction, cognition & learning discussion in honor of Bill Winn*. Interactive symposium conducted at the 2007 American Educational Research Association (AERA), Chicago, IL.

Organizer (2006, April). *What do we know about assessment accommodations for English language learners? Research review and future directions*. Symposium conducted at the 2006 annual meeting of the American Educational Research Association (AERA), San Francisco, CA.

Discussant (2005, August). *Recent worked examples research: Innovative ways to increase germane cognitive load and foster learning and understanding*. Symposium conducted at the 2005 European Association for Research on Learning and Instruction Annual Conference, Nicosia, Cyprus.

Organizer and Chair (2005, April). *Factors predictive of mathematics achievement of culturally and linguistically diverse children*. Symposium conducted at the 2005 annual meeting of the American Educational Research Association (AERA), Montreal, Canada.

Organizer and Chair (2004, October). *Culturally relevant assessment and evaluation*. Symposium conducted at the 2004 Principal Investigator meeting of the National Science Foundation, Washington, DC.

Organizer and Chair (2004, April). *Scaffolds and aids for effective learning with multimedia and the web*. Symposium conducted at the 2004 annual meeting of the American Educational Research Association (AERA), San Diego, CA.

Organizer and Chair (2003, April). *Effective learning with multimedia and the web: schema acquisition and cognitive load*. Symposium conducted at the annual meeting of the American Educational Research Association, Chicago, IL.

Organizer and Chair (2003, April). *Effective learning with multimedia and the web: cognitive load and multiple modalities of information*. Symposium conducted at the annual meeting of the American Educational Research Association. Chicago, IL.

Computer Software and Programs

Moreno, R., Reisslein, M., & Ozogul, G. (2009). Development of an agent-based instructional program on electrical circuit analysis for pre-college students. University of New Mexico, Albuquerque, NM and Arizona State University, Phoenix, AZ.

Moreno, R., Reisslein, M., & Ozogul, G. (2008). Development of an interactive educational program for engineering freshman using worked-example instruction methods. University of New Mexico, Albuquerque, NM and Arizona State University, Phoenix, AZ.

- Moreno, R. (2007). Development of an interactive environmental science program for learning individually or in jigsaw and cooperative groups. University of New Mexico, Albuquerque, NM.
- Moreno, R. (2006). Development of a problem-based learning program for teacher preparation including instruction in learner diversity and educational psychology principles and classroom cases from local, in-service teachers. University of New Mexico, Albuquerque, NM.
- Moreno, R. & Marley, S. (2005). Development of an astronomy multimedia program to teach college freshman about the seasons of the earth and the moon phases. University of New Mexico, Albuquerque, NM.
- Moreno, R. (2004). Development of a multimedia educational program where students construct knowledge about the process of lightning formation with guided discovery methods. University of New Mexico, Albuquerque, NM.
- Moreno, R. (2003). Development of a computerized battery of verbal and spatial ability tests as an alternative to the paper and pencil tests in the Ekstrom, French, Harman, and Dermen (1976) *Kit of factor-referenced cognitive tests*. University of New Mexico, Albuquerque, NM.
- Moreno, R. (2002). Development of an interactive mathematics program to teach addition and subtraction of integers in middle school using multiple knowledge representations and guidance in students' home language. University of New Mexico, Albuquerque, NM.
- Moreno, R. (2000). Development of a computerized word match test as an alternative to the paper matching familiar figures test as a measure of impulsivity-reflectivity. University of New Mexico, Albuquerque, NM.
- Moreno, R. (1999). Hypermedia manual for optimal comprehension of complex machines. University of California, Santa Barbara, CA.

Professional Service

Memberships in Professional Organizations

American Psychological Association
 American Psychological Society
 American Educational Research Association
 Psychonomic Society
 International Society of the Learning Sciences
 Southwest Consortium for Innovative Psychology in Education

Editorial Board Member

Educational Psychologist
 Educational Psychology Review
 Educational Researcher
 Encyclopedia of the Sciences of Learning

Reviewer for Professional Journals

Journal of Educational Psychology
Cognition and Instruction
Journal of Educational Computing Research
Journal of Educational Psychology: Applied
Learning and Instruction
Learning and Individual Differences
Instructional Science
Journal of Educational Research and Evaluation
Computers in Human Behavior
British Journal of Educational Psychology

Reviewer for National and International Organizations

American Psychological Association
American Educational Research Association
American Association for Computing Machinery
International Society for the Learning Sciences
European Association for Research on Learning and Instruction

Service for National Organizations

2010-2011. Appointed Faculty Advisor for the American Educational Research Association Division C (Learning and Instruction) Graduate Student Committee
2009 Appointed Chair for the American Educational Research Association Division C
2007-Present. Mentor for the American Educational Research Association Division C New Faculty
2007-Present. Appointed Research Scientist for the U.S. Department of Education
2004-Present. Grant Panel Reviewer for the National Science Foundation

Advisory Board Member

National Science Foundation Grant Project *Visualization in biology education* (2006-2010), Principal Investigator Phil McClean, North Dakota State University, Fargo, ND.
National Science Foundation Grant Project *A technology exemplar: Post-textbook universal design learning materials* (2007-2011). Principal Investigator Robert Tinker, The Concord Consortium, Concord, MA.
Educational Technology Expertise Center (OTEC) Grant *Using the mirror-neuron system to design effective dynamic visualizations: An interdisciplinary venture between education research and neuroscience* (2007-2009). Principal Investigator: Dr. Fred Paas, Open University of the Netherlands.