Leonard A. Annetta, Ph.D.

Educational History

University of Missouri-St. Louis; St. Louis, MO
Degree: Ph. D., 2003
Major: Science Education
Minor: Educational Technology

Dissertation: *A Comparative Study of Three Distance Education Strategies on the Attitudes and Learning of Elementary School Teachers Engaged in a Professional Development Project* (Chairperson: James A. Shymansky, Ph.D.)

Salisbury University; Salisbury, MD
Degree: Master of Arts in Teaching; 1997
Major: Secondary Science

Degree: Bachelor of Science; 1994
Major: Physical Science (Chemistry & Physics)

Professional Positions

Dean, Zucker Family School of Education-The Citadel College (2024-present)

- Serve as Zucker Chair of Entrepreneurial Education Leadership
- Serve as the ranking administrator of an academic school, reporting to the Provost.
- Act as the official spokesperson for the academic school, supporting the College's mission and decisions from CHE and The Board of Visitors.
- Collaborate with other College officials to strengthen the overall effectiveness of the College.
- Evaluate the effectiveness of the school's programs, policies, administration, faculty, and staff.
- Articulate the vision for the School in alignment with the College's strategic plan.
- Serve as a role model for faculty by wearing the uniform
- Advance The Citadel's mission and goals through strategic planning and future initiatives.
- Nurture growth and development, upholding high standards for faculty, staff, cadets, and students.
- Create a positive work and learning environment.
- Advocate for the school's interests to the Provost and Associate Provost. Academic/Scholarly Leadership • Lead educational, research, scholarly, and service activities through planning, implementation, and evaluation.
- Mentorship of faculty related to their scholarship and service agenda.
- Advocate for cadets and students, increasing recruitment, retention, and graduation rates.
- Actively participate in program reviews, faculty credentialling, and program assessment.
- Ensure compliance with accreditation standards for accredited programs and institutional accreditation.
- Mentor department chairs and other academic leaders.
- Collaborate with the Provost on recruitment, appointment, and retention of academic staff and faculty.
- Develop hiring plans as part of the overall Faculty Hiring Plan.

- Review faculty applications for promotion/tenure and provide recommendations.
- Ensure meaningful performance evaluations are conducted for faculty and staff.
- Manage financial resources effectively, adhering to the College's policies and practices.
- Utilize financial and material resources effectively and efficiently.
- Foster a culture of collaboration within the school.
- Coordinate efficient course scheduling and planning across departments and schools.
- Review low enrolled program and coordinate decisions with department heads.
- Ensure adherence to College policies and procedures.
- Coordinating with the Provost Office, manage the allocation of space within school facilities.
- Promote a culture of inclusive excellence.
- Oversight of faculty service for consistency and to ensure that the needs of the school are met.
- Conduct regular consultations and engagements with faculty, students, and staff. Engagement with Alumni, Donors, and External Community
- Engage with external stakeholders to solicit input and support.
- Foster meaningful interactions with stakeholders to enhance pride, advocacy, and support.
- Enhance the professional standing of the school among peers and relevant constituencies.
- Participate actively in Academic Leadership meetings and other activities.
- Lead and participate in College committees to advance the mission and goals.
- Participate in Faculty Senate.
- Collaborate with other academic leaders on college-wide and interdisciplinary initiatives.
- Ensure that faculty are adhering to the College's policies and procedures related to course modality.
- Led creation of schoolwide Mission, Vision, Core Values and first Strategic Plan
- Served on College Strategic Planning Committee
- Oversaw counselor education program to #1 ranking in the state of SC (2026)

National Medal of Honor Center for Leadership- National Advisory Board (2025-present)

- Advisor

Tri-County Cradle to Career Board of Directors Executive Committee (2024-25)

- Serve as member for digital inclusion
- Connect industry and education for workforce development strategies
- South Carolina Digital Resource Alliance member

Regional Innovation Officer-East Carolina University (2023-2024)

- Led overall innovation strategy for a Tech Hub consortium
- Organized consortium development with higher education, community colleges, economic and workforce development, state, regional and town governments, industry, and military
- Articulated focus for external funding
- Developed and led meeting agendas
- Worked closely with university upper administration toward coherence of goals
- Provided clear and effective governance and leadership for the consortium

Taft Distinguished Professor of Science Education-East Carolina University (2016-2024)

- Instructor SCIE 2123 (Early Experiences for the Prospective Teacher)
- Instructor SCIE 3216 (Teaching Science in Elementary School)
- Instructor SCIE 3602 (Investigations in Physical Science)

- Instructor SCIE 3604 (Investigations in Life and Environmental Science)
- Instructor SCIE 6004 (Advanced Studies in Physical Science Teaching)
- Instructor SCIE 6030 (Technology in Science Teaching, Learning and Professional Development)
- Instructor SCIE 6310 (Advanced Methods in Science Teaching and Learning)
- Instructor SCIE 6320 (Advanced Assessment in Science Education)
- Instructor SCIE 6500 (Understanding and Engaging in Educational Research)
- Instructor SCIE 6600 (Teacher Research in Science Education)
- Developed Educator Residency Model for Science teachers
- Developed online International MaED
- Created MOU with National Changhua University of Education (Taiwan)

Senior Editor-International Journal of Science and Mathematics Education (2018-present)
- Assigned and organized review process of manuscript submission
- Created recommendations for acceptance or rejection from reviews
- Facilitated ScholarOne & Manuscript Central management process for reviewers

Chancellor's Leadership Development Academy Fellow (2021)
- Framed leadership concepts in the context of higher education organizations and develop their application to personal and professional leadership development
- Fostered and created campus networks of innovative leadership practice and communities of learning
- Developed an understanding of and commitment to fostering a culture of leadership and cultural diversity at East Carolina University

Director, Big Data & Analytics Center (2017-2018)
- Inaugural leader of pan university research cluster
- Developed university-wide data analytics capabilities by leveraging state-of-the-art Big Data technologies
- Led building data collection, storage, analysis, and visualization infrastructure in support of ECU missions
- Initiated economic development partnerships
- Led design and construction of Decision theater collision space
- Cultivated partnership with SAS, Inc. to include seamless analytics and visualization software solutions across campus
- Developed rural data visualization plan through augmented reality technologies

Associate Editor- Eurasia Journal of Mathematics, Science and Technology Education (2017-2018)
- Assigned and organized review process of manuscript submissions
- Created final recommendations for acceptance or rejection of manuscripts
- Facilitated ScholarOne manuscript management process for reviewers

Executive Director, Institute for Modeling, Simulations, and Serious Game Research (2014)
- Directed cross-disciplinary teams on large external grant proposals
- Collaborated with Vice President for Research on extramural research activities

Professor of Science Education-George Mason University (2013-2016)
- Director of Science Education Research doctoral program
- Instructor of EDCI 573 (Teaching Science in the Secondary School I)
- Instructor of EDCI 670 (Advanced Science Teaching Methods)
- Instructor of EDCI 671 (Innovations in Science Teaching)
- Instructor of EDCI 673 (Teaching Science in the Secondary School II)
- Instructor of EDCI 810 (Foundation of Science Education Research)

- Student teacher supervision

Secondary Education Academic Program Coordinator-George Mason University (2011-2013)
- Oversaw scheduling
- Hired and evaluated faculty; including adjuncts
- Led accreditation activities and wrote reports
- Mentored program faculty
- Supervised support staff
- Organized and led meetings
- Represented secondary education in the college, on campus, and in the community
- Balanced advising loads
- Supervised new student recruitment

Associate Professor of Science Education-George Mason University (2010-2013)
- Instructor of EDCI 573 (Teaching Science in the Secondary School I)
- Instructor of EDCI 673 (Teaching Science in the Secondary School II)
- Instructor of EDCI 810 (Foundation of Science Education Research)

Assistant/Associate Professor of Science Education-North Carolina State University (July 2003-2010)
- Instructor of EMS 203 (Introduction to Science Teaching)
- Instructor of EMS 373 (Undergraduate Technology Tools)
- Instructor of EMS 375 (Science Teaching Methods I)
- Instructor of EMS 495 (Senior Seminar in Science Education)
- Instructor of EMS 521 (Graduate Science Teaching Methods I)
- Instructor of EMS 573 (Graduate Technology Tools)
- Instructor of EMS 594 (Introduction to 3D Multiuser Online Role-Playing Games)
- Instructor of EMS 730 (Trends and Issues in Science Education)
- Instructor of EMS 731 (Fundamentals of Research in Science Education: Quantitative & Qualitative Inquiry)
- Student teacher supervision
- Undergraduate advisor of chemistry, physics, and earth science
- Graduate advisor in M.S. and PhD programs

Research/Teaching Assistant-University of Missouri-St. Louis (June 2000-June 2003)
- Science Co-op Project Researched bi-state interactive television component of NSF project.
- Designed an online ed tech/science ed grad course
- Taught 2 semesters of elementary science methods
- Organized kit transfers and data collection for 40 districts in Missouri and Iowa
- Taught a session on microscopy over the ITV
- Taught education technology applications class
- Taught Distance course on Education Research and Assessment
- Taught Distance course on Education Curriculum, Instruction and Reform
- Webmaster for Science Co-op Project web site

High School Science Teacher (August 1997-June 2000)
Stephen Decatur High School (Berlin, MD) & Calvert High School (Prince Frederick, MD)
- Taught biology, chemistry, chemistry in the community, physical science, applied science

Funded Research Projects

Internal

Annetta, L.A. (PI), Aiman-Smith, L., Storberg-Walker, J., Chapman, D. & Kimbrough, C. (co-PIs) (2007-2009). LITRE Phase II: VOLT: Virtual Online Learning & Teaching. $60,034

Annetta, L.A. (PI) (2006-2007). Friday Institute Research Grant. $10,000

Annetta, L.A. (PI) (2005-2006). DELTA IDEA: IGNITE (Integrating Gaming Networks In Teacher Education). $16,096

Annetta, L.A. (PI) (2004-2005). DELTA IDEA. $9,649

Annetta, L.A. (PI) (2004-2005). Faculty Research and Professional Development Grant. $4,000

External

Summers, K. & Annetta, L.A. (2022). Teaching Evolution and Behavior using Virtual Games. National Science Foundation IUSE. $298,117

Annetta, L.A. (2019). Mixed reality for improved science reading comprehension. National Science Foundation EAGER. $250,000.

Militello, M., Annetta, L.A., & Cayton, C. (2018-2023). Igniting the Power of Network Improvement Communities to Enhance Professional Learning. U.S. Department of Education. $9,344,646.

Berkeley, S. (PI) & Annetta, L.A. (2015-2016). STEM UP for undergraduates. National Science Foundation. Research for Undergraduate Education [REU]. $11,534

Berkeley, S. (PI), Annetta, L.A., & King-Sears, M. (co-PIs) (2014-2017). Science, Technology, Engineering, and Mathematics: Untapped Potential (STEM-UP). National Science Foundation. Research on Education and Learning [REAL-DRL1420448]. $813,329

Nelson, M (PI), Edwards, C., Annetta, L.A., & Schwebach, J.R. (co-PIs) (2012-2017). Noyce in NoVA. National Science Foundation. [Noyce] $1,450,000

Deluca, W. (PI), Annetta, L.A., Clark, A., & Carpenter, P. (co-PIs). (2009-2012). GRIC-C II. National Science Foundation [CCLI-0920268] $400,000

Annetta, L.A. (PI), Deluca, W., Gerler, E., Fusarelli, B., & Schild, V. (co-PIs) (2008-2011). GRADUATE: Games Requiring Advanced Developmental Understanding and Achievement in Technological Endeavors. National Science Foundation [ITEST-0833452]. $1,500,000

Annetta, L.A. (PI), Penick, J., Minogue, J. & Wang, K. (co-PIs). (2008-2010). STIMULATE: Science Training Immersive Modules for University Learning Around Teacher Education. National Science Foundation [CCLI-0737206]. $200,000

Sadler, T. (PI), Annetta, L.A., Ferdig, R., & Karoly, M. (co-PIs). (2008-2011). OUTBREAK: Opportunities to Use immersive Technologies to Explore Biotechnology Resources, career Education and Knowledge. National Science Foundation [ITEST-0833521]. $1,500,000

Deluca, W. (PI), Annetta, L.A., Clark, A., & Carpenter, P. (co-PIs). (2008-2010). GRIC-C. National Science Foundation [CCLI-0737180] $200,000

Dede, C. (PI), & Annetta, L.A., (co-PI). (2007-2008). Exploring Sophisticated Data Mining Analytics as a Strategy for Diagnostic Assessment. National Science Foundation [SGER]. $100,000

Annetta, L.A. (PI), Park, J.C., Young, M., Schild, V., & Miller, T. (co-PIs). (2005-2009). HI FIVES: Highly Interactive Fun Internet Virtual Environments in Science National Science. Foundation Information Technology Experiences for Students and Teachers. National Science Foundation [ITEST-052515]. $1,199,000

Annetta, L.A. (PI) & Oppewal, T. (co-PI). (2005-2006). Growing Teachers in Rural North Carolina. North Carolina Office of the President e-Learning Initiative. $75,349

Fund Raising Totals (2024-present)

Scholarships-$70,000

Targeted Gifts-$27,000
Individual Giving-$181,831.40

Books

4. Annetta, L.A., and Minogue, J. (2016). *Connecting Science and Engineering Education Practices in Meaningful Ways-Building Bridges*. The Netherlands, Springer.
3. Annetta, L.A., and Bronack, S. (2010). *Serious Educational Game Assessment: Practical Methods and Models for Educational Games, Simulations and Virtual Worlds*. Amsterdam, The Netherlands. Sense Publishers. pp. 286.
2. Annetta, L.A., Folta, E., & Klesath, M. J. (2010). *V-Learning: Distance Education in the 21st Century Through 3D Virtual Learning Environments*. The Netherlands, Springer. pp. 160.
1. Annetta, L. A., (2008). *Serious Educational Games: From Theory to Practice*. Amsterdam, The Netherlands: Sense Publishers. pp. 83.

Book Sections & Editorials

26. Annetta, L.A., (2026). *FSEM 101-12: Mixed Reality Serious Educational Games*. In R. Ferdig, E. Baumgartner, & E. Gandolfi (Eds.) *Teaching the Game*. Play Story Press.
25. Billingsly, B., Grzes, M., & Annetta. L.A. (2025). *The Future of Knowledge: Conversations About Artificial Intelligence and Epistemic Insight.* Science & Education (editorial)
24. Annetta, L.A. (2024). *My younger self would have thanked me.* In D. Anderson (Eds). *The Intentional Life: Crafting Your Legacy. One Day at a Time.* Routledge, Prufrock Press. UK
23. Annetta, L.A. (2021). *Competition and the essence of nature (Preface).* In U. Bakan & S. Berkeley (Eds). *Gamification and Social Networks in Education.* Macro World Publishing. UK.
22. Berkeley, S., Whitehead, A., Mischel, J., Kurz, L.A., Larsen, A., & Annetta, L. (2021). *Student engagement while creating serious educational games in collaborative learning environments.* In U. Bakan & S. Berkeley (Eds). *Gamification and Social Networks in Education.* Macro World Publishing. UK.
21. Miles, R., Annetta, L.A., Moore, S., & Miles, G. (2021). *Teaching multicultural science education…* In M. Atwater (Ed.). *International Handbook of Research on Multicultural Science Education.* Singapore: Springer.
20. Annetta, L., & Shapiro, M. (2019). *Augmented Reality Applications Across the K-20 Curriculum for Teaching Chemistry.* In TICER… ACS Symposium Series 1318. Washington, DC.
19. Annetta, L.A., Keaton, W., Shapiro, M., & Burch, J.L. (2019). *Competency-based instruction in science teacher education…* In M. Shelley (Ed.). *Education Research Highlights…* ISRES Publishing.
18. Annetta, L.A., & Shapiro, M. (2019). *Teaching Technology Design: Practicing Teachers Designing Serious Educational Games.* In Díaz et al. (Eds.). *Learning in a Digital World.* Springer.
17. Annetta, L.A., Shapiro, M., & Abbasi, S. (2018). *Critical perspectives on implementing serious educational games.* In Ferdig & Kennedy (Eds.). *Handbook of Research on K–12 Online and Blended Learning.* Carnegie Mellon ETC Press.
16. Annetta, L.A., Lamb, R., Vallett, D., & Shapiro, M. (2017). *Project based learning progressions…* In Adescope & Rud (Eds.). *Contemporary Technologies in Education.* Palgrave Macmillan.
15. Nelson, D. & Annetta, L.A. (2016). *Creating disruptive innovators…* In Annetta & Minogue (Eds.). *Connecting Science and Engineering Education Practices…* Springer.
14. Annetta, L.A., Shapiro, M., & Matthews, B. (2016). *Serious Educational Game Design…* In Lamb & McMahon (Eds.). *Educational and Learning Games: New Research.* Nova Science.
13. Sadler, T. D., Eastwood, J. L., Romine, W., & Annetta, L.A. (2014). *Mission Biotech…* In Yager (Ed.). *Exemplary STEM Programs.* NSTA Press.
12. Annetta, L.A. (2014). *Technologies in science education.* In Spector (Ed.). *Encyclopedia of Educational Technology.* Sage.

11. Annetta, L.A., Holmes, S.Y., Vallett, D., Fee, M., Cheng, R., & Lamb, R. (2013). *Cognitive aspects of creativity.* In Gregerson et al. (Eds.). *Teaching Creatively and Teaching Creativity.* Springer.

10. Annetta, L.A. (2013). *Technological Pedagogical Content Knowledge.* In McComas (Ed.). *The Language of Science Education.* Sense Publishers.

9. Holmes, S.Y., Thurmond, B., Annetta, L.A., & Sears, M. (2012). *Serious educational games (SEGs) and student learning and engagement with scientific concepts*. In Lennex & Nettleton (Eds.). *Cases on Inquiry Through Instructional Technology…* IGI Global.

8. Yore, L.A., Shymansky, J.A., Annetta, L.A., & Everett, S.A. (2011). *Science cooperatives in Missouri and Iowa…* In Johnson (Ed.). *Secondary STEM Educational Reform.* Palgrave.

7. Annetta, L.A., Minogue, J., Cook, M., Shymansky, J., & Thurmond (2011). *Rural Elementary School Teacher Attitudes…* In Fund & Yip (Eds.). *Evidence-Based Education.* Nova Science.

6. Annetta, L.A., Lamb, R., Bowling, B., & Cheng, R. (2011). *Assessing engagement in serious educational games…* In Williamson & Sandford (Eds.). *Handbook of Research on Improving and Motivation…* IGI Global.

5. Annetta, L.A., Lamb, R., & Stone, M. (2010). *Assessing Serious Educational Games: The Development of a Scoring Rubric.* In Annetta & Bronack (Eds.). *Serious Educational Game Assessment.* Sense Publishers.

4. Cheng, M.T., & Annetta, L.A. (2010). *Are they self-regulated learners?* In Annetta & Bronack (Eds.). *Serious Educational Game Assessment.* Sense Publishers.

3. Annetta, L.A., Minogue, J., Holmes, S., Folta, E., Cheng, M.T., & Klesath, M. (2008). *Using Case Studies as the Narrative…* In Gibson & Baek (Eds.). *Digital Simulations for Improving Education.* IGI Global.

2. Annetta, L.A., & Cheng, M.T. (2008). *Why Educational Video Games?* In Annetta (Ed.). *Serious Educational Games: From Theory to Practice.* Sense Publishers.

1. Annetta, L.A., & Holmes, S. (2007). *V-Learning: Redefining Community and Presence Through 3D Virtual Learning Environments.* In Morales (Ed.). *Distance Education Issues and Challenges.* Nova Science.

Journal Articles

89. Newton, M.H., Annetta, L.A., & Cacace, R.M. (in press). Reasoning in mixed reality serious education games for place-based climate instruction. Journal of Science Education and Technology. https://doi.org/10.1007/s10956-026-10358-w

88. Annetta, L.A., Bressler, D.M., Newton, M.H., & Summers, K. (2026). Exploring the Evolutionary Process in Undergraduate Biology through Serious Educational Games. Journal of Education and Learning Technology. 7(4), pp. 411-422. ISSN 2720-7730

87. Annetta, L.A., Newton, M.H., & Schumann, K. (2025). The Intersection of Socioscientific Issues, Computational Thinking, and Design Thinking: Toward a Framework of Inquiry Driven Disruptive Pedagogy. International Journal of Education in Mathematics, Science and Technology. 13(3), 791-811. https://doi.org/10.46328/ijemst.4875

86. Annetta, L.A., Berry, C., & Newton, M. (2025) Connecting Visuospatial Self-Efficacy and Design Thinking in Science Teacher Mixed Reality Serious Educational Game Development. Journal of Interactive Learning Research. *36*(3), 249-268

85. Annetta, L.A., Johnson, A., Newton, M.H., & Franco, Y. (2024). Immersive Spatial Computing: How Technology Can Improve Science Content Reading and Vocabulary in Elementary Schools. *Education Sciences. 14(12), 1355*; https://doi.org/10.3390/educsci14121355

84. Annetta, L.A., Newton, M.H., Johnson, A., Franco, Y, & Bressler, D. (2024). Examining Reading Proficiency and Science Learning Using Mixed Reality in Elementary School Science. Computers & Education: X Reality.

83. Newton, M.H. & Annetta, L.A. (2024). The Influence of Extended Reality on Climate Change Education. *Science & Education. https://doi.org/10.1007/s11191-024-00518-y*

82. Annetta, L. & Newton, M. (2024). Perceived Cognitive Load of Extended Reality Serious Educational Games about Climate Change. *Emerging Trends in Education, 7, 25-43*

81. Newton, M.H., Annetta, L.A., & Bressler, D. (2023). Using extended reality technology in traditional and place-based environments to study climate change. *Journal of Science Education and Technology*
80. Bressler, D., Annetta, L., Johnson-Holder, A., Dunekack, A., & Tutwiler, M. S. (2023). Increasing interest with mixed reality science reading: A mixed methods case study of low fluency readers. *Journal of Interactive Learning Research*, 34(1), 37-58
79. Bressler, D. & Annetta, L. (2022). How mixed reality glasses can help struggling readers. eSchoolNews. https://www.eschoolnews.com/2022/05/09/how-mixed-reality-glasses-can-help-struggling-readers/
78. Bressler, D. M., Tutwiler, M. S., Siebert-Evenstone, A., Annetta, L. A., & Chen, J. A. (2022). "What if We Explore…" Promoting Engaged Learning and Collaboration with MOUNTAIN RESCUE. *Simulation & Gaming*, *53*(5), 564–576. https://doi.org/10.1177/10468781221120690
77. Lamb, R. L., Fortus, D., Sadler, T., Neumann, K., Kavner, A., & Annetta, L. (2022). Exploration of teacher-student neural coupling occurring during the teaching and learning of science. *Educational Innovations and Emerging Technologies*, *1*, 15–31.
76. Lamb, R., Crowe, A., Stone, J., Annetta, L.A., Zambone, A., & Owens, T. (2022). Virtual Reality Enhanced Dialectical Behavioral Therapy. *British Journal of Counseling & Development*. DOI: 10.1080/03069885.2022.2040006
75. Bressler, D., Annetta, L.A., Dunekack, A., Lamb, R., & Vallett, D. (2021). What's in their words? How STEM game design participants discuss their projects, motivation, and success differently. *Educational Innovations and Emerging Technologies*. 1(1). 32-47
74. Bressler, D.M, & Annetta, L.A. (2021). Using game design to increase teachers' familiarity with design thinking. *International Journal of Technology and Design Education*.32(8). 1-13
73. Annetta, L.A., Lamb, R., Bressler, D., & Vallett, D. (2020). Cognitive modeling of learning using big data from a science-based game development environment. *International Journal of Game Based Learning*. 10(4). 22-39
72. Holmes, S., Annetta, L.A., & Crumb, L. (2019). Investigating Preservice Science Teacher Ethical Sensitivity through Computer Game and Video. Journal of Education in Science, Environment and Health. 5(1). 55-69
71. Vallett, D., Lamb, R., & Annetta, L.A. (2018). After-school and informal STEM projects: The effect of participant self-selection. Journal of Science Education and Technology. 25 (1). pp. 1-15
70. Lamb, R., Annetta, L.A., Vallett, D., Firestone, J., Schmitter-Edgecomb, M., Walker, H., Devilerr, N., & Hoston, D. (2017). Psychosocial factors impacting STEM career selection. Journal of Educational Research. pp. 446-458
69. Lamb, R., Annetta, L., Hoston, D., Shapiro, M., & Matthews, B., (2018). Examining Human Behavior in Video Games: The Development of a Computational Model to Measure Aggression. Social Neuroscience. 13 (3), pp. 301-317
68. Lamb, R., Annetta, L., & Firestone, J. (2018). Serious educational games, serious games, and simulations in the science classroom: A meta-analysis. Journal of Computers in Human Behavior. 80, pp. 158-167
67. Lamb, R., Vallett, D.B., Takacs-Pence, S., Harrison-Coleman, J., & Annetta, L.A. (2017). Ethical Dilemmas of Social Promotion. Journal of Cases in Educational Leadership
66. Lamb, R., Annetta, L, & Hoston, D. (2017). Virtual reality a means to promote STEM discipline selection and perseverance. Nature: Science of Learning. https://npjscilearncommunity.nature.com/users/22151-richard-lamb/posts/15337-virtual-reality-as-a-tool-for-engaging-students
65. Pytash, K.,Annetta, L.A., & Ferdig, R. (2016). The use of apps to integrate writing into science education. Science Scope. pp.21-26

64. Lamb, R., Ackmal, T., Annetta, L.A., & Petrie, K. (2015). Development of a Cognition-Priming Model Describing Learning in a STEM Classroom. Journal of Research in Science Teaching. 52 (3), pp. 410-437
63. Lamb, R., Annetta, L., & Vallett, D. (2015). The interface of creativity, fluency, lateral thinking and technology while designing Serious Educational Games in a science classroom. Electronic Journal of Research in Educational Psychology 13(2), 219-242 doi:10.14204/ejrep.36.14110.
62. Sadler, T., Romine, W., Menon, D., Ferdig, R., & Annetta, L.A. (2015). Learning biology through innovative curricula: A comparison of game-and-nongame based approached. Science Education. 99 (4), 696-720
61. Cheng, M-T. She, H-S, & Annetta, L.A. (2015). Game immersion experience: Its hierarchical structure and impact on science learning through serious educational game play. Journal of Computer Assisted Learning. 31 (3), p. 232 – 253
60. Vallett, D., Annetta, L.A., Lamb, R., & Bowling, B. (2014). Diffusing innovations: Adoption of SEGs by k-12 science teachers. Contemporary Issues in Technology and Teacher Education (science), 14(3). http://www.citejournal.org/vol14/iss3/science/article1.cfm
59. Lamb, R., Vallett, D.B., & Annetta, L. A. (2014). Development of a short form measure of science and technology self-efficacy. Journal of Science Education and Technology. 23(5). 641-657
58. Annetta, L.A., Vallett, D., Fusarelli, B., Lamb, R., Cheng, M.T., Holmes, S.Y., Folta, E., & Thurmond, B. (2014). Investigating science interest in a game-based learning project. Journal of Computers in Mathematics and Science Teaching. 33 (4). 381-407
57. Vallett, D. & Annetta, L.A. (2014). Re-visioning k-12 education: Learning through failure-Not social promotion. Psychology of Popular Media Culture, 3 (3), Jul 2014, 174-188. doi: 10.1037/a0033651
56. Annetta, L.A., Lamb, R., Minogue, J., Folta, E., Holmes, S.Y., Vallett, D.B., & Cheng, R. (2014). Safe science classrooms: Teacher training through serious educational games. Information Sciences. 264 (20). 61-74
55. Lamb, R., Annetta, L.A., Vallett, D., & Sadler, T. (2014). Cognitive diagnostic-like approaches using neural network analysis of serious educational games. Computers & Education. 70 (1). 92-104
54. Shymansky, J.A., Annetta, L.A., Yore, L.D., Wang, T.L., & Everett, S.A. (2013). The impact of a multi-year systemic reform project on elementary school students' achievement in science. School Science and Mathematics Journal. 113 (2). 69-79
53. Shymansky, J.A., Annetta, L.A., Wang, T.L., Yore, L., & Everett, S.A. (2013). The Impact of a Multi-Year, Multi-School District K-6 Professional Development Programme Designed to Integrate Science Inquiry and Language Arts on Students' High Stakes Test Scores. International Journal of Science Education. 35 (6). 956-979
52. Annetta, L.A., Frazier, W.M., Folta, E., Holmes, S.Y., Lamb, R., & Cheng, M.T. (2013). Science teacher efficacy toward professional development using video games in a design-based research model: The next generation of STEM Learning. Journal of Science Education and Technology. 22 (1). 47-61
51. Vallett, D.B., Lamb, R., & Annetta, L.A. (2013). The gorilla in the room: the impacts of video game play on visual attention. Computers in Human Behavior. 29. 2183-2187
50. Cheng, M.T., & Annetta, L.A. (2012). Investigating student's learning outcomes and the self-regulated learning experiences through playing a serious game. Journal of Biological Education 46 (4). 203-213
49. Annetta, L.A., Peters-Burton, E., Frazier, W., Cheng, R., & Chmiel, M. (2012). Augmented reality games: Using technology on a budget. Science Scope. 36 (3). November. 54-60

48. Cheng, R., Annetta, L.A., & Vallett, D. B. (2012). Research framework for Serious Educational Games: Understanding computational thinking in Pasteur's Quadrant. Journal of Information Technology and Application in Education. 1 (4). 143-151
47. Lamb, R., & Annetta, L.A. (2012). The use of online modules and the effect on student outcomes in a high school chemistry class. Journal of Science Education and Technology. 22 (5). 603-613
46. Annetta, L.A. (2012). A critical review of learning science through video games and simulations. Science Education, 96(3), pp. 566-568.
45. Shymansky, J.A., Wang, T.L., Annetta, L.A., Yore, L., & Everett, S. (2012). How much professional development is needed to effect positive gains in K-6 student achievement on high stakes science tests? International Journal of Science and Mathematics Education, 10 (1). 1-19
44. Lamb, R., Annetta, L.A., Meldrum, J., & Vallett, D. (2011). Measuring science interest: Rasch validation of the science interest survey. International Journal of Science and Mathematics Education. 10 (3), 643-668
43. Lamb, R. & Annetta, L.A. (2011). Review of leading school turnaround: How successful leaders transform low performing schools. Southeast Review. http://southeastreview.org/
42. Cheng, M.T., Annetta, L.A., & Folta, E. (2011). Drugs and the brain: Learning the impact of methamphetamine abuse on the brain through virtual brain exhibit in the museum. International Journal of Science Education. 299-319
41 Peters-Burton, E., Frazier, W., Annetta, L.A., Lamb, R., Cheng, R., & Chmiel, M. (2011). Modeling augmented reality games with preservice elementary and secondary science teachers. Journal of Technology and Teacher Education, 19(3), 303-329.
40. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (2011). In-service teachers' perceptions of online learning environments. Quarterly Review of Distance Education, 12 (2). p. 73
39. Lamb, R., & Annetta, L.A. (2010). A case study of an urban-minority female's conceptions of science and scientists based in critical ethnography. The High School Journal.
38. Lamb, R. & Annetta, L.A. (2010). Influences of gender on computer simulation outcomes. Meridian. 13 (1) http://www.ncsu.edu/meridian/winter2010/lamb/04.htm
37. Annetta, L.A., Holmes, S.Y., Cheng, M.T., Folta, E., & Holmes, S.Y. (2010). Measuring student perceptions: Designing an evidenced centered activity model for a serious educational game development software. International Journal of Gaming and Computer-Mediated Simulations, 2 (3), 24-42. July-September.
36. Hsiang-Ping Chen, Chi-Jui Lien, Annetta, L.A., & Yu-Ling Lu. (2010). The Influence of an Educational Computer Game on Children's Cultural Identities. Educational Technology & Society, 13 (1). 94-105
35. Lamb R., & Annetta L. A. (2010). Book Review of, The Formation of Scholars, Rethinking Doctoral Education for the Twenty-First Century. Education Review, a Journal of Book Reviews, http://edrev.asu.edu/
34. Blanchard, M., Southerland, S., Osborne, J.W., Sampson, V. Annetta, L.A., & Granger, E. (2010). Investigating the Effectiveness of Inquiry vs. Deductive Laboratory Instruction: Is Inquiry Possible in Light of Accountability? Science Education. pp. 578-616
33. Annetta, L.A. (2010). Building Community in 21st Century Graduate Classes Through Synchronous Online Research Presentations: A Case for 3-Dimensional Learning Environments. International Journal of Web Based Communities. pp. 206-217
32. Annetta, L.A. (2010). The "I's" have it: A framework for educational game design. Review of General Psychology. 14 (2), 105-112
31. Annetta, L.A., Cheng, M.T., & Holmes, S. (2010). Assessing 21st century skills through a teacher created video game for high school biology students. Research In Science and Technological Education. 28 (2), 101-114

30. Annetta, L.A., Minogue, J.A., Holmes, S., & Cheng, M.T. (2009) Investigating the Impact of Video Games on High School Students' Engagement and Learning about Genetics. Computers & Education doi:10.1016/j.compedu.2008.12.020; 54 (1), 74-85
29. Lamb, R. & Annetta, L.A. (2009). A pilot study of online simulations and problem-based learning in a chemistry classroom. Journal of Virginia Science Education, 3(2)
28. Annetta, L.A., Klesath, M., & Meyer, J. (2009). Taking Science Online: Evaluating Presence Through A Laboratory Experience in A Virtual Learning Environment for Entomology Students. Journal of College Science Teaching, September/October. 27-33
27. Annetta, L.A., Mangrum, J., Holmes, S., Collazo, K., & Cheng, M. (2009). Bridging reality to virtual reality: Investigating gender effect and student engagement on learning through video game play in an elementary school classroom. International Journal of Science Education, 31 (8), 1091-1113
26. Annetta, L.A. (2008). Designing and evaluating educational video games. Learning & Leading with Technology, 36 (2) September/October (Invited)
25. Annetta, L.A. (2008) Why and how video games should be used in education. Theory Into Practice, 47 (3). 229-239. (Invited)
24. Shymansky, J.A., Yore, L.D., Annetta, L.A., & Everett, S.A. (2008). Missouri-Iowa Cooperative (Science Co-op): Rural school-Urban universities collaborative project. The Rural Educator, 29 (2), 1-3
23. Wiebe, E.N., & Annetta, L.A. (2008). Influences on Visual Attentional Distribution in Multimedia Instruction. Journal of Educational Multimedia and Hypermedia,17 (2), 259-277
22. Annetta, L.A., Klesath, M.J., & Holmes, S. (2008). How gaming and avatars are engaging online students. Innovate, 4 (3). http://innovateonline.info/index.php?view=article&id=485&action=synopsis
21. Annetta, L.A., & Shymansky, J.A. (2008) Rural Elementary School Teacher Attitudes Toward Three Modes of Distance Education in A Science Professional Development Setting. Journal of Science Teacher Education, 19 (3), 255-267
20. Annetta, L.A., Cook, M.P., & Schultz, M. (2007). Video Games and Universal Design: A Vehicle for Problem-Based Learning. Journal of Instructional Science and Technology, 10 (1). http://www.usq.edu.au/electpub/e-jist/docs/vol10_no1/papers/current_practice/annetta_cook_schultz.htm
19. Dickerson, D.L., Dawkins, K.R., & Annetta, L.A. (2007). Scientific fieldwork: An opportunity for pedagogical-content knowledge development. Journal of Geoscience Education. 55 (5), 371-376
18. Annetta, L.A., Slykhuis, D.A., & Wiebe, E. (2007). Evaluating Gender Differences of Attitudes and Perceptions Toward PowerPoint™ for Preservice Science Teachers. Eurasian Journal of Mathematics, Science and Technology Education, 3 (4), 297-304
17. Annetta, L.A. (2007). Virtually A New Way of Learning: Video Games and Simulations as Teaching Tools. November/December. Multimedia & The Internet @ Schools. [Cover Story] (Invited)
16. Annetta, L.A., Murray, M., Gull-Laird, S., Bohr, S., Park, J.C. (2007). Investigating Student Attitudes Toward a Synchronous, Online Graduate Course In A Multi-User Virtual Learning Environment. Journal of Technology and Teacher Education, 16 (1), 5-34
15. Annetta, L.A., Slykhuis, D.A., & Wiebe, E. (2007) Evaluating the Effectiveness of Scientific Visualization in Two PowerPoint™ Delivery Strategies on Science Learning for Preservice Science Teachers. The International Journal of Science and Mathematics Education, 5 (2), 329-348
14. Annetta, L.A. & Kuschke, R. (2006) Addressing No Child Left Behind Through Released Middle Grades Test Items. Meridian, 9, (2). http://www.ncsu.edu/meridian/sum2006/NCLB/print.html

13. Annetta, L.A., & Holmes, S. (2006) Creating Presence and Community in a Synchronous Virtual Learning Environment Using Avatars. International Journal of Instructional Technology and Distance Learning 3 (8), 27-43, http://www.itdl.org/Journal/Aug_06/index.htm
12. Annetta, L.A., & Dotger, S. (2006) Aligning Preservice Teacher Earth Science Knowledge with INTASC I and NSTA Core Content Standards. Eurasian Journal of Mathematics, Science, and Technology Education, 2 (2), 40-58
11. Annetta, L.A. (2006) iChat™ Do You? Using Desktop Web Conferencing In Education. School Science and Mathematics, 105(8), 48-50.
10. Annetta, L.A., & Dickerson, D. (2006) Integrating Point-to-Point Videoconferencing into Professional Development of Rural Elementary Science Teachers. Contemporary Issues in Technology and Teacher Education, Science Education Edition, 6 (4), 399-413
9. Annetta, L.A., Murray, M., Gull-Laird, S., Bohr, S., Park, J.C. (2006). Serious Games: Incorporating video games in the classroom. Educause Quarterly, 29, (3), 16-22, July-September
8. Annetta, L.A., & Shymansky, J.A. (2006) The Effect Three Distance Education Strategies have on Science Learning for Rural Elementary School Teachers In A Professional Development Project. Journal of Research in Science Teaching, 43 (10), 1019-1039
7. Slykhuis, D.A., Wiebe, E., & Annetta, L.A. (2005) Eye-Tracking Students' Attention to PowerPoint Photographs in a Science Education Setting. Journal of Science Education and Technology, 13 (5-6), 509-520
6. Annetta, L.A., & Minogue, J. (2004) The Effect Teaching Experience has on Perceived Effectiveness of Interactive Television as a Distance Education Model for Elementary Science Teacher's Professional Development: Another Digital Divide? Journal of Science Education and Technology, 13 (4), 485-494
5. Annetta, L. A. (2004). CTLSilhouette: An online tool for assessment and evaluation. School Science and Mathematics, 104(4), 179-1983
4. Annetta, L. A., & Matus, J.C. (2004). Analysis of satisfaction and perceived learning of science in different distance education delivery modes for rural elementary school teachers involved in a professional development project. International Journal of Science and Mathematics Education, 1(3), 283-309
3. Annetta, L.A. (2004). Options for science teacher professional development through distance education. Electronic Journal of Science Education, 9 (1).http://unr.edu/homepage/jcannon/ejse/ejse.html
2. Annetta, L.A. (2004) Investigating the Relationship Between Cost, Reach, and Richness in Distance Education. Online Journal of Distance Learning Administration, 7(4). http://www.westga.edu/~distance/ojdla/winter74/anetta74.htm
1. Shymansky, J.A., & Annetta, L.A. (2001) Science Time: A Chance to Teach Reading! National Geographic

Peer Reviewed International Presentations

9. Annetta, L.A., & Newton, M.H. (September 22, 2023). Comparing Perceived Cognitive Load While Playing Extended Reality Games about Climate Change. Paper presented at the Eurasia Teaching and Education Research Association conference. Athens, Greece.
8. Annetta, L.A., & Newton, M.H. (September 21, 2022). Investigating mixed reality's influence on climate change in an undergraduate science education course. Paper presented at the 4th International Conference on Higher Education Learning Methodologies and Technologies Online. Palermo, Sicily.

7. Militello, M., Annetta, L.A., & Dickerson, D. (March 31, 2017). Innovative University: The advance degree programs international educators need and deserve. Presented at the Association of American Schools in South America Educators Conference. Rio de Janeiro, Brazil
6. Deluca, W., Annetta, L.A., Deluca, C., & Annetta, J. L. (January 7, 2011). The GRIDc Project: Using a Data-Rich Learning Environment to Develop Higher-Order Thinking and Metacognitive Skills. Paper presented at the annual Hawaii International Conference on Education. Honolulu, HI
5. Annetta, L.A., Deluca, W., Annetta, J.L., Deluca, C., Peterman, K., & Vallett, D. (January 5, 2011). Investigating High School Students' Spatial Visualization and Mental Rotation Ability in a Technology Focused Project Based Learning Science Program. Paper presented at the annual Hawaii International Conference on Education. Honolulu, HI
4. Cheng, M.T., Annetta, L.A., Folta, E., & Holmes S.Y. (August 5, 2009). Teaching and learning the impact of amphetamine use on the brain from a neuroscience perspective through Serious Game play. Presented at the annual meeting of the European Science Education Research Association. Istanbul, Turkey
3. Holmes, S. Y., Annetta, L.A., & Reiman, A., (July 2, 2009). Ethical Sensitivity Computer-simulated Intervention for Preservice and Inservice Science Educators, Association for Moral Education. Utrecht, The Netherlands
2. Wiebe, E. N. & Annetta, L.A. (August 9, 2007). The Influence of Information Relevancy, Animation and Narration on Visual Attention Distribution: Results from an Eye-tracking Study. Presented at the Annual meeting of the European Association for Research on Learning and Instruction. Budapest, Hungary
1. Park, J., & Annetta, L.A. (March 10, 2006). Re-Dimensional Thinking Using Google Earth and QuickTime VR Panoramas. Paper presented at the International Consortium for Research in Science and Mathematics Education (ICRSME). Nassau, Bahamas

Peer Reviewed National Presentations

147. Newton, M.H., & Annetta, L.A. (March 19, 2024). Comparing two iterations of a place-based socioscientific issues course embedded with different extended reality applications. Paper presented and the annual conference of the National Association of Research in Science Teaching (NARST) Annual Conference. Denver, CO
146. Newton, M.H., & Annetta, L.A. (January 11, 2024). Comparing two iterations of a place-based socioscientific issues course embedded with different augmented reality applications. Paper presented and the annual conference of the Association of Science Teacher Education (ASTE). New Orleans, LA
145. Bressler, D.M., Annetta, L.A., & Tutwiler, M.S. (April 20, 2023). Untethering science interest from reading proficiency: Pilot results from a Microsoft Hololens science reading intervention. Paper Presented at the National Association of Research in Science Teaching (NARST) Annual Conference. Chicago, IL
144. Newton, M., Annetta, L.A., & Bressler, D. (April 19, 2023). Using extended reality technologies within a socioscientifc issues unit on climate change. Paper Presented at the National Association of Research in Science Teaching (NARST) Annual Conference. Chicago, IL
143. Newton, M., Annetta, L.A., & Bressler, D. (January 12, 2023). Climate change on the Outer Banks: Embedding low-cost mobile technology in socioscientific instruction. Paper presented and the annual conference of the Association of Science Teacher Education (ASTE). Salt Lake City, Utah.
142. Annetta, L.A., Militello, M., Tredway, L., Hodgkins, L., Simon, K, & Argent, J. (March 29, 2022). School Leaders Learning How to Observe Science Teachers Using Equitable Discourse

Through Virtual Reality. Paper Presented at the National Association of Research in Science Teaching (NARST) Annual Conference. Vancouver, BC, CAN

141. Bressler, D., Tutwiler, M.S., Seibert-Evenstone, A., Annetta, L.A., & Chen, J. (March 29, 2022). What if we explore...Using Mountain Rescue to Promote Engaged Learning and Collaboration. Paper Presented at the National Association of Research in Science Teaching (NARST) Annual Conference. Vancouver, BC, CAN
140. Bressler, D., Annetta, L., Dunekack, A., Lamb, R., & Vallett, D. (2022). How STEM game design participants discuss their project goals and their success differently. In B Wasson & S. Zörgő (Eds.), ICQE 2021, CCIS 1522 (pp. 176-190). Switzerland, Springer Nature. https://doi.org/10.1007/978-3-030-93859-8_12
139. Bressler, D., Tutwiler, M.S., & Annetta, L.A. (January 8, 2022). Low-Tech…Love or Loathe? Exploring How Tabletop Games Can Benefit Science Education. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Greenville, SC
138. Lamb, R., Fortus, D., Sadler, T., Neumann, K., Kavner, A., Annetta, L.A. & Hosten, D. (January 7, 2022). Exploration of Teacher-Student Neural Coupling Occurring During the Teaching and Learning of Science. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Greenville, SC
137. Annetta, L.A., Bressler, D., Holder, A., & Dunekack, A. (January 6, 2022). Reading Science Text with Mixed Reality: Magic Leap vs. Microsoft HoloLens. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Greenville, SC
136. Lamb, R., Fortus, D., Sadler, T., Neumann, K., Kavner, A., Annetta, L.A. & Hosten, D. (April 7, 2022). Neural coupling as a measure of teacher-student understanding. Paper presented at the annual meeting of the American Educational Research Association (AERA). San Diego, CA
135. Bressler, D., & Annetta, L. (April 2021). “Switching to Online Education: Understanding K-12 Teaching Challenges During a Pandemic.” Presentation given at Online Education: Teaching in a Time of Change (Virtual Conference coordinated by Routledge, AMPS, and PARADE).
134. Bressler, D., Annetta, L.A., Lamb, R., and Dunekack, A. (April 9, 2021). In their own words: Ho students discuss motivation, Success, and learning after designing STEM video Games. Paper Presented at the National Association of Research in Science Teaching (NARST) Annual Conference. Virtual.
133. Tutwiler, S., Bressler, D. and Annetta, L.A. (April 10, 2021). Working as intended? How procedural fidelity and flow impact learning in a game-based science curriculum. Paper Presented at the National Association of Research in Science Teaching Annual Conference (NARST)
132. Annetta, L.A., Bressler, D., Holder, A., and Dunekack, A. (April 10, 2021). A study of mixed reality technology on elementary school student reading of science expository text. Paper Presented at the National Association of Research in Science Teaching Annual Conference (NARST).
131. Annetta, L.A., Bressler, D., Holder, A., & Dunekak, A. (January 15, 2021). Investigating the influence of mixed reality on elementary school students' science reading performance. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Salt Lake City, UT
130. Lamb, R., Hoston, D., Annetta, L.A., Bressler, D., & Crowe, A. (January 14, 2021). Persistence, Grit, and Perseverance in STEM Education. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Salt Lake City, UT
129. Lamb, R., Crowe, A.L., Annetta, L.A., Brewster, D., Owens, T.L., & Zambone, A. (April 10, 2021). Virtual reality to promote socio-emotional wellbeing in high needs urban high schools. Paper presented at the annual meeting of the American Educational Research Association (AERA). Orlando, FL

128. Bressler, D.M., Annetta, L.A., & Shapiro, M. (March 14, 2020). Preservice science teachers' perceptions of teaching and learning after using augmented reality applications. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Portland, OR (Online)
127. Annetta, L.A. & Shapiro, M. (January 3, 2019). The Effects of Augmented Reality Applications in an Elementary Science Methods Class. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Savannah, GA
126. Shapiro, M., & Annetta, L.A. (July 30, 2018). Investigating the Effect of Augmented Reality Applications in an Elementary Science Methods Class. Paper presented at the Biennial Conference on Chemical Education (BCCE). South Bend, IN.
125. Lamb, R., Etopio, E., Annetta, L.A., Shanahan, L., Lamb, R., & Schwab, J. (March 13, 2018). Clinical Experiences Using Virtual Reality to Train Pre-service Science Teachers. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Atlanta, GA
124. Annetta, L.A., Shapiro, M., Lamb, R., Vallett, D., Luh, A., & Cheng, R. (March 11, 2018). Capturing Gender Differences on Creativity in High School Students Participating in a Serious Educational Game Design and Development Project: How A Technological Project-Based Learning Approach Affects Creative Endeavors. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Atlanta, GA
123. Lamb, R., Etopio, E., Lamb, R., Annetta, L.A., Shannahan, L., & Schwaub, J. (January 5, 2018). Virtual reality as a means to train preservice science teachers. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Baltimore, MD
122. Cox-Petersen, A., Huang, J., Nair, P., Case, K., Jackson, J., & Annetta, L.A. (January 4, 2018). STEM Readiness: Connecting Science, Engineering and Business Entrepreneurship with Middle School Teachers and Students. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Baltimore, MD
121. Lamb, R., Annetta, L.A., & Lamb, R.E. (2017). Cognitive dynamics: Comparison of virtual reality and hands on activities in science education via fNIRs. Paper presented at the Virtual Worlds Education Conference, Melbourne, FL.
120. Berkeley, S., Whitehead, A., Mischell, J., Menditto, A., Kurz, L., & Annetta, L. (2017, April). Science engagement and knowledge application of middle-school students with learning disabilities through student-created serious educational games. Paper presented at the Annual Meeting of the American Education Research Association (AERA), San Antonio, TX.
119. Berkeley, S., Basham, J.D., Marino, M.T., Vasquez, E., Whitehead, A., Luh, A., Gallegos, B., Israel, M., & Annetta, L.A. (April 24, 2017). Lessons from a Decade of Video Game Research for Students with Disabilities in Science Education. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). San Antonio, TX
118. Shapiro, M., & Annetta, L.A. (April 23, 2017). Learning Chemistry Concepts through Serious Game Play. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). San Antonio, TX
117. Annetta, L.A., Shapiro, M., & Lamb, R. (April 23, 2017). Entrepreneurial Thinking: Cross Cutting Concepts for Science Teachers. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). San Antonio, TX
116. Lamb, R., Annetta, L.A., Firestone, J., Antonenko, P.D., Schmitter-Edgecombe, M., Liu, X., & Lie, R. (April 23, 2017). Cognitive Demand and Dynamics: Comparison of Virtual and Real Laboratories in Science Education via fNIRs. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). San Antonio, TX

115. Lamb, R., Annetta, L.A., Firestone, J., Liu, X., & Liu, R. (January 12, 2017). Examination of cognitive demand and cognitive dynamics: A comparison of pedagogical approaches in science teaching and learning using Functional Near Infrared Spectroscopy. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Des Moines, IA
114. Shapiro, M., Annetta, L.A. (August 3, 2016). Learning Chemistry via Serious Educational Games. Paper presented at the Biennial Conference on Chemical Education (BCCE). Greeley, CO
113. Shapiro, M., Merkebu, J., Annetta, L.A., Kitsantas, A. (August 3, 2016). The Effect of Game Design on Chemistry Students' Metacognitive Processes. Paper presented at the Biennial Conference on Chemical Education (BCCE). Greeley, CO.
112. Annetta, L.A., Shapiro, M., Stribling, S., Menditto, A., Kurz, L.A., Berkeley, S., & Luh, A. (April 15, 2016). Developing a Project Based Learning Progression in a Serious Educational Game Design and Development Project. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Baltimore, MD
111. Vallett, D., Lamb, R., Annetta, L.A., & Shapiro, M. (April 15, 2016). Intersection of Creativity and the Design Process in SEG Design-Based Research. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Baltimore, MD
110. Lamb, R., Annetta, L.A., Firestone, J., Vallett, D., & Cunningham, R. (April 15, 2016). Psychosocial Factors Affecting STEM Career Selection in Computer Science and Engineering. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Baltimore, MD
109. Lamb, R., Annetta, L.A., Firestone, J., Vallet, D., Shapiro, M, & Matthews, B. (January 8, 2016). Examination of moderators of student cognition, affect, and learning outcomes using Serious Educational games, Serious Games and Simulations in the science classroom. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Reno, NV
108. Annetta, L.A., Lamb, R., Vallett, D., Shapiro, M. & MAtthews B. (January 7, 2016). Developing a Project Based Learning Progression in a Technology Rich Environment. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Reno, NV
107. Berkeley, S., Annetta, L.A., & Stribling, S. (October 2, 2015). Understanding how students with learning disabilities self-regulate learning of science. Paper presented at 37th International Conference on Learning Disabilities, Las Vegas, NV.
106. Shapiro, M., Luh, A., & Annetta. L.A. (October 3, 2015). Learning progression in science: Implications for students with learning disabilities. Poster presented at 37th International Conference on Learning Disabilities, Las Vegas, NV.
105. Bressler, D.M., Bodzin, A.M., Slota, S., Zimmerman, H.T., Land, S.M., Atwood-Blaine, D., Huffman, D.W., & Annetta, L.A. (April 14, 2015). Science Needs a Marketing Make-Over: Playful Learning in Formal and Informal Science Education. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Chicago, IL
104. Lamb, R., Vallett, D., Annetta, L.A., Petri, K.B., Cheng, R., Shapiro, M., & Matthews, B. (April 12, 2015). Examination of Latent Class Profile Transition Analysis of K-12 students STEM Career Selection Moderated via Serious Educational Games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Chicago, IL
103. Vallett, D., Lamb, R., Annetta, L.A., Cheng, R., Shapiro, M, & Matthews, B. (April 12, 2015). The Influence of Serious Educational Game Design on Student Interest in STEM. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Chicago, IL
102. Petrie, K.B., Lamb, R., Vallett, D., Annetta L.A., Cheng, R., Shapiro, M., & Matthews, B. (April 12, 2015). Individual Differences/Moderators of Science Content via 21st Century Skill Acquisition

using Serious Educational Games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Chicago, IL

101. Petrie, K.B., Lamb, R., Vallett, D., Annetta L.A., & Cheng, R. (January 9, 2015). Examination of Individual Differences and Moderators of Science Content and 21st Century Skill Acquisition. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Portland, OR
100. Lamb, R., Vallett, D., Annetta, L.A., Petri, K.B., & Cheng, R. (January 9, 2015). Latent Class Profile Transition Analysis of Student STEM Career Selection using Serious Educational Games. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Portland, OR
99. Vallett, D., Lamb, R., Annetta, L.A., & Cheng, R. (January 8, 2015). Effects of Serious Educational Game Design Process on Student Content Knowledge and Interest. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Portland, OR
98. Sadler, T.D., Romine, W.L., Menon, D., Klosterman, M.L., & Annetta, L.A. (April 2, 2014). Impacts of gaming, teachers, and interest on student science learning associated with innovative biotechnology curricula. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Pittsburgh, PA
97. Annetta, L.A., Lamb, R., Vallett, D., & Cheng, R. (March 30, 2014). Changes in high school science student affect through serious educational game design and development. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Pittsburgh, PA
96. Vallett, D., Lamb, R., Annetta, L.A., Cheng, R., & Peterman, K. (March 30, 2014). After school and informal STEM projects: Self-selecting or self-defeating? Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Pittsburgh, PA
95. Lamb, R., Vallett, D., Annetta, L.A., & Cheng, R. (March 30, 2014). Assessment of student 21st century skills using science based serious educational games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Pittsburgh, PA
94. Vallett, D., Lamb, R., Annetta, L.A., & Peterman, K. (January 17, 2014). After school and informal STEM projects: Self-selecting or self-defeating? Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). San Antonio, TX
93. Annetta, L.A., Lamb, R., Vallett, D., Cheng, R., & Peterman, K. (January 16, 2014). Improving science affect through serious educational game design and development. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). San Antonio, TX
92. Lamb, R., Vallett, D., & Annetta, L.A. (January 16, 2014). Assessment of student 21st century skills using serious educational games in the science classroom. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). San Antonio, TX
91. Annetta, L.A. (June 10, 2013). How visuospatial ability predicts stem career pathways: A study of high school students in a serious educational game project. Paper presented at the bi-annual Gordon Research Conference on Chemistry Education Research and Practice. Newport, RI
90. Lamb, R. Vallett, D.B., & Annetta, L.A. (April 9, 2013). Interface of creativity, fluency, and technology using the design of serious educational games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Rio Grande, Puerto Rico
89. Annetta, L.A., Lamb, R., Vallett, D.B., & Cheng, R. (April 8, 2013). The impact of a serious educational game design and development on high school students. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Rio Grande, Puerto Rico

88. Vallett, D.B., Annetta, L.A., Lamb, R., & Cheng, R. (April 7, 2013). Effects of SEG design on visuospatial ability, 21st century skills, and STEM career selection. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Rio Grande, Puerto Rico
87. Cheng, R., Annetta, L.A., Lamb, R., & Vallett, D.B. (April 7, 2013). Individual differences, flow experience, and science learning in serious educational games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Rio Grande, Puerto Rico
86. Annetta, L.A., Lamb, R., Vallett, D.B., Cheng, R. & Peterman, K. (April 7, 2013). Indicators impacting the STEM career pipeline through serious educational game design and development. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Rio Grande, Puerto Rico
85. Annetta, L.A., Vallett, D., Lamb, R., & Cheng, R. (March 30, 2013). Factors impacting the STEM career pipeline through serious educational game design and development. Paper presented at the annual meeting of the Popular Culture Association. Washington, DC
84. Annetta, L.A., Vallett, D., Lamb, R., Cheng, R., & Peterman, K. (March 27, 2013). Addressing the STEM pipeline through serious educational game design and development. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education International Conference (SITE). New Orleans, LA
83. Yore, L. D., Annetta, L.A., & Tippett, C.D. (January 12, 2013). Moving engineering practices and core ideas into methods courses and professional development workshops. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Charleston, SC
82. Cheng, R., Annetta, L.A., Lamb, R., & Vallett, D. (January 12, 2013). Flow experience and science learning in serious educational games. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Charleston, SC
81. Vallett, D., Lamb, R., Annetta, L.A., & Cheng, R. (January 11, 2013). Interactions of visuospatial ability with 21st century skills and the selection of STEM careers. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Charleston, SC
80. Lamb, R., Annetta, L.A., Vallett, D., & Cheng, R. (January 11, 2013). The interface of creativity, fluency, lateral thinking, and technology using the design of serious educational games in the science classroom. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Charleston, SC
79. Annetta, L.A., Lamb, R., Vallett, D., & Cheng, R. (January 10, 2013). Impacting the STEM career pipeline: How science interest, and self-efficacy, 21st century skills indicate STEM career awareness. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Charleston, SC
78. Lamb, R., & Annetta, L.A. (March 3, 2013) The role of social pressure in rapid attitudinal formation concerning immigrants and immigration. Paper presented at the Eastern Sociological Conference (ESS). Boston, MA
77. Annetta, L.A. (April 14, 2012). Serious educational games: Learning by doing. Paper presented at the annual meeting of American Educational Research Association (AERA). Vancouver, BC, CA
76. Annetta, L.A., Vallett, D., Cheng, R., Lamb, R., & Peterman, K. (April 13, 2012). Enhancing spatial visualization and mental rotation abilities through developing serious educational games. Paper presented at the annual meeting of American Educational Research Association (AERA). Vancouver, BC, CA
75. Lamb, R., Vallett, D.B., Annetta, L.A., & Cheng, R. (March 27, 2012). Developing a short form measure of science and technology self-efficacy using rasch analysis. Paper presented at the

annual meeting of the National Association for the Research in Science Teaching (NARST). Indianapolis, IN

74. Annetta, L.A., Lamb, R., Minogue, J., Cheng, R., Vallett, D.B., Holmes, S.Y. & Folta, E. (March 26, 2012). Immersing preservice science teachers in Serious Educational Games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Indianapolis, IN
73. Annetta, L.A., Change, R., Vallett, D., & Lamb, R. (March 25, 2012). Learning science through serious educational game design: Results from NSF ITEST funding. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Indianapolis, IN
72. Annetta, L.A., Stone, M., Vallett, D., Cheng, R., Lamb, R., & Peterman, K. (March 7, 2012). GRADUATE: Experiences from six years of bridging in school to out of school through game creation. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education International Conference (SITE). Austin, TX
71. Annetta, L.A., Peters-Burton, E., Frazier, W., Cheng, R., R., Lamb, R., & Chmiel, M. (March 5, 2012). Modeling augmented reality games with preservice science teachers. JTATE Special Issue. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education International Conference (SITE). Austin, TX
70. Annetta, L.A., Vallett, D. & Cheng, R. (January 7, 2012). Evaluation of technology interventions within a science classroom. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater Beach, FL
69. Annetta, L.A., Lamb, R., Cheng, R., & Vallett, D. (January 6, 2012). Infusing serious educational games to train science teachers. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater Beach, FL
68. Lamb, R., Annetta, L.A., Vallett, D., & Cheng, R. (January 5, 2012). Development of a diagnostic self-efficacy measure and its implication for teachers. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater Beach, FL
67. Annetta, L.A. (August 6, 2011). Creative science learning through serious educational game development. Paper presented at the annual conference of the American Psychological Association Conference (APA). Washington, D.C.
66. Lamb, R., Annetta, L.A., Cheng, R. & Vallett, D. (April 9, 2011). Development of self-efficacy in science and technology: A measurements tool for training interventions. Paper presented at the annual conference of the Washington Consortium International and Comparative Education. Washington, D.C
65. Thurmond, B., Holmes, S.Y., Annetta, L.A., Folta, E., Sears, M., Cheng, R., & Bowling, B. (April 5, 2011). Student perceptions of learning and engagement with scientific concepts through serious educational game development. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Orlando, FL
64. Shymansky, J.A., Wang, T.L., Annetta, L.A., Yore, L.D., & Everett, S.A. (April 4, 2011). How much professional development is needed to effect positive gains in k-6 student achievement. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Orlando, FL
63. Folta, E., Annetta, L.A., Cheng, R., Lamb, R., & Holmes, S.Y. (April 4, 2011). Investigating the impact of student learning and outdoor science interest through modular serious educational games. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Orlando, FL

62. Annetta, L.A., & Minogue, J. (March 9, 2011). Science teacher training through serious educational games. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Nashville, TN
61. Folta, E., Annetta, L.A., & Cheng, R. (January 21, 2011). Designing mSEGS for environmental literacy. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Minneapolis, MN
60. Shymansky, J.A., Wang, T.L., Annetta, L.A., Yore, L., & Everett, S. (January 20, 2011). The impact of a multi-year, multi-school district k-6 professional development program designed to integrate science inquiry and language arts on students' high stakes test scores. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Minneapolis, MN
59. Annetta, L.A., Stone, M., & Lamb, R. (April 1, 2010). Assessment in serious educational games, simulations and virtual worlds. (Symposium chair). Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). San Diego, CA
58. Holmes, S.Y, Annetta, L.A., & Cheng, M.T. (April 1, 2010). Hazelton high at REST: A simulation unmasking ethical behavior in science education. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). San Diego, CA
57. Annetta, L.A., Klesath, M., Holmes, S.Y., Cheng, M.T., & Folta, E. (March 23, 2010). Racing into the 21st century: Usability testing results from a serious educational game. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Philadelphia, PA
56. Holmes, S.Y., Annetta, L.A., Cheng, M.T., & Folta, E. (March 23, 2010). Embedding assessment in serious educational games: Impacting the hawthorne effect. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Philadelphia, PA
55. Cheng, M.T., Folta, E., Annetta, L.A., & Holmes, S.Y. (March 23, 2010). Assessing post serious educational game attitudes through naturalistic inquiry. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Philadelphia, PA
54. Cheng, M.T., Annetta, L.A., Holmes, S.Y., Folta, E., & Cheng, W.K. (January 15, 2010). Virtual reality learning environment for drug use education. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Sacramento, CA
53. Annetta, L.A., Holmes, S.Y., Cheng, M.T., Folta, E., & Cheng, W.K. (January 14, 2010). Testing usability of a serious educational physics game. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Sacramento, CA
52. Holmes, S.Y., Annetta, L.A., & Cheng, M.T. (January 14, 2010). Hazelton High at REST: A simulation unmasking ethical behavior in science educators. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Sacramento, CA
51. Holmes, S.Y., Annetta, L.A., Cheng, M.T., & Folta, E. (April 20, 2009). Virtual environment for ethical sensitivity assessment and its impact on science educators. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Garden Grove, CA
50. Annetta, L.A., Holmes, S.Y., Cheng, M.T., Folta, E., Shymansky, J.A., & Lamb, R. (April 19, 2009). Analyzing predictors of learning through self-efficacy in a technology-based project. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Garden Grove, CA
49. Abrams, E., Annetta, L.A., Boone, W., Buck, G., Glasson, G., Nelson, T.H., & Nilsson, P. (April 18, 2009). Presidential Invited Sessions. Simple Participatory Accelerated Research Kick-offs. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Garden Grove, CA

48. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (April 18, 2009). Students' perceptions of online learning environments. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Garden Grove, CA
47. Cheng, M.T., Annetta, L.A., & Folta, E. (April 19, 2009). Learning the effects of Drug abuse on the brain by a virtual exhibit and video games in a museum. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST). Garden Grove, CA
46. Holmes, S.Y., Annetta, L.A., & Cheng, M.T. (March 5, 2009). Construction of a simulation from a video case: An ethical sensitivity assessment and its impact on science education. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Charleston, SC
45. Annetta, L.A., Holmes, S.Y., Cheng, M.T., & Folta, E. (March 3, 2009). Student created video games: Stories from the ITEST HI FIVES project. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Charleston, SC
44. Annetta, L.A., Holmes, S.Y., Cheng, M.T., & Folta, E. (March 3, 2009). Assessment of learning with games and simulations. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Charleston, SC
43. Annetta, L.A., Folta, E., Cheng, M.T., & Holmes, S.Y. (January 10, 2009). Virtual Online Learning in Science Education: Investigating Graduate Student Perceptions for Using Competing Delivery Strategies. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Hartford, CT
42. Cheng, M.T., Annetta, L.A., & Folta, E. (January 8, 2009). Drugs and the Brain: An Interesting Way to Learn the Effects of Drug Abuse on the Brain. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Hartford, CT
41. Folta, E., Annetta, L.A., Cheng, M.T., & Holmes, S.Y. (January 8, 2009). Virtual Brain Museum Exhibit: A Learning Experience for Designers and Visitors Alike. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Hartford, CT
40. Minogue, J., & Annetta, L.A. (January 8, 2009). Getting a "Feel" for Serious Games. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Hartford, CT
39. Holmes, S.Y, Annetta, L.A., Cheng, M.T., & Folta, E. (January 8, 2009). From Video to Computer Simulation: Influencing science teacher ethical sensitivity. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Hartford, CT
38. Holmes, S. Y., Annetta, L. A., & Reiman, A. J. (November 15, 2008). Creating a computer simulated ethical sensitivity assessment for science teacher education. Paper presented at the annual meeting of the Association of Moral Education. South Bend, IN
37. Shymansky, J.A., Annetta, L.A., Everett, S.A., Yore, L., & Matus, J. (April 2, 2008). The impact of a five-year, K-6 systemic reform effort on elementary school students' achievement in science. Presented at the annual meeting of the National Association for Research In Science Teaching (NARST). Baltimore, MD
36. Blanchard, M.R., Annetta, L.A., & Sutherland, S.A. (April 1, 2008). Investigating the effectiveness of inquiry-based versus traditional science teaching methods in middle and high school laboratory settings. Presented at the Annual meeting of the National Association for Research In Science Teaching (NARST). Baltimore, MD
35. Annetta, L.A., Holmes, S.Y., Minogue, J., Cheng, M.T., Sears, M., & Allen, K. (March 30, 2008). Learning science through video games. Presented at the Annual meeting of the National Association for Research In Science Teaching (NARST). Baltimore, MD
34. Gut, D.M. & Squire, K.D. (Chairs), Langer, A., Knelfelkamp, L.L., Robin, B.R., Annetta, L.A., Devane, B.M., Durga, S., Lee, H., Templeton, R.A., Dani, D.E., Koenig, K., Ma, J., Lu, E., Seo, K.K., & Wan, G. (Discussant). (March 28, 2008). New media and instruction in the 21st century. Paper

presented at the annual meeting of the American Educational Research Association (AERA). New York, NY

33. Annetta, L.A. (Chair), Graesser, A., Chipman, P., McQuiggan, S., Lester, J., Spires, H.A., Turner, K., Clark, J., Dede, C., & Mayer, R. (Discussant). (March 28, 2008). Motivation, Affect and Engagement in Game-Based Learning Environments. Paper presented at the annual meeting of the American Educational Research Association (AERA). New York, NY
32. Blanchard, M.R., Annetta, L.A., & Southerland, S.A. (March 26, 2008). Student learning in a laboratory setting: Comparing the effectiveness of inquiry-based versus deductive science teaching methods. Paper presented at the annual meeting of the American Educational Research Association (AERA). New York, NY
31. Annetta, L.A., Bean, S., Talaiver, M., Gibson, D. Minogue, J., Tagliarini, G., Michelson, K. (March 5, 2008). Creating Video Games and Simulations for Science and Mathematics: Perspectives from ITEST Projects. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Las Vegas, NV
30. Chelberg, D., Perry, J., Annetta, L.A., Searson, M. (March 4, 2008). Enriching STEM Education through Games and Simulations. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Las Vegas, NV
29. Annetta, L.A., Holmes, S.Y., Cheng, M., Sears, M., Ogren, C., & Simmons, P. (January 12, 2008). Engaging Teachers and Students in Science through Video Games: Experiences from the HI FIVES Project. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). St. Louis, MO
28. Shymansky, J.A., Annetta, L.A., Everett, S., & Yore, L.D. (January 11, 2008). The Impact of a Five-Year, K-6 Systemic Reform Effort on Rural Elementary School Students' Achievement in Science. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). St. Louis, MO
27. Cheng, M., Annetta, L.A., & Holmes, S.Y. (January 10, 2008). Students learning science through modifying video games made by their teachers. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). St. Louis, MO
26. Annetta, L.A., Holmes, S., & Park, J.C. (April 16, 2007). Middle Grades Teacher Self-Efficacy Toward Learning Science and Integrating Video Games into The Curriculum. Presented at the Annual meeting of the National Association for Research In Science Teaching (NARST). New Orleans, LA
25. Wiebe, E. N. & Annetta, L.A. (April 12, 2007). Animation and Narration: Using Eye Tracking to Understand Visual Attention Distribution. Presented at the Annual meeting of the American Educational Research Association (AERA). Chicago, IL
24. Annetta, L.A., Holmes, S., Park, J.C., Collazo, K., & Merritt, M. (January 6, 2007). Science In Video Games: Experiences In From Elementary School, High School, and Teacher Professional Development. (Themed paper set.doc) Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater, FL
22. Shymansky, J.A., Annetta, L.A., Yore, L.D., & Everett, S.A. (January 6, 2007). How much professional development is enough to impact science achievement? Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater, FL
21. Slykhuis, D., & Annetta, L.A. (January 4, 2007). Creating Visually Appealing and Relevant Research-Based PowerPoint Presentations. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater, FL
20. Yore, L.D., Czerniak, C., Shymansky, J.A., Kuerbis, P., Roehrig, G., Anthony, R., Anderson, J., Tillitson, J., Annetta, L.A., & Beltyukova, S. (January 4, 2007). Making Sense of Professional Development, Teacher Enhancement, and Local Systemic Projects: Issues Arising from Complex

Long-Term, Mixed Methods, Multiple Measures and Multiple Traits Data Sets. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Clearwater, FL

19. Park, J. C., Riggs, L. E., & Annetta, L.A. (October 27, 2006). Developing a Library of Synchronized Video and Collected Data from Physical Events. Paper presented at the annual meeting of The School Science and Mathematics Association (SSMA). Missoula, MT
18. Wiebe, E.N., & Annetta, L.A. (April 7, 2006). The Influence of Narration on Attentional Distribution in Multimedia Instructional Materials. Paper presented at the American Association of Educational Research (AERA). San Francisco, CA
17. Wiebe, E.N., & Annetta, L.A. (April 4, 2006). Narrational and Attentional Distribution in Multimedia Science Instruction. Paper presented at the National Association for Research In Science Teaching (NARST). San Francisco, CA
16. Annetta, L.A., & Park, J. (March 23, 2006). Video Games in Science: A Model for Students and Teachers Creating 3D Role Playing Games. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Orlando, FL
15. Park, J., & Annetta, L.A. (March 22, 2006). Assessing Student Understanding of Contour Maps Using Non-Immersive Virtual Reality Panoramas and 3-D Modeling. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Orlando, FL
14. Annetta, L.A., & Park, J. (January 14, 2006). Game On: Graduate Students Creating Role Playing Video Games in a 3-D Virtual Environment through Synchronous Online Instruction. Paper presented at the Association for Science Teacher Education (ASTE). Portland, OR
13. Park, J., & Annetta, L.A. (January 13, 2006). Development and Testing of Non-immersive Virtual Reality and Interactive Modeling to Enhance the Understanding of Contour Maps. Paper presented at the Association for Science Teacher Education (ASTE). Portland, OR
12. Shymansky, J.A., Annetta, L.A., & Yore, L. (January 12, 2006). The Impact of a five-year Professional Development Project on Elementary school Student Achievement in 36 rural districts in the Midwest. Paper presented at the Association for Science Teacher Education (ASTE). Portland, OR
11. Annetta, L.A. (April 7, 2005). Exploring Elementary School Teacher Attitudes Toward Varying Science Teacher Professional Development. Paper presented at the National Association for Research in Science Teaching (NARST). Dallas, TX
10. Slykhuis, D.A., Wiebe, E., & Annetta, L.A. (April 6, 2005). Eye-Tracking Students' use of Science Related PowerPoint Presentations. Paper presented at the National Association for Research in Science Teaching (NARST). Dallas, TX
9. Annetta, L.A., & Slykhuis, D.A. (March 3, 2005). What Are You Looking At? An Investigation into the Relationship of Text, Graphics, and Audio of a PowerPoint Presentation, Student Eye Movements, and Science Learning. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Phoenix, AZ
8. Annetta, L.A., & Slykhuis, D.A. (January 22, 2005). What Are You Looking At? Tracking Eye Movement on PowerPoint. Paper presented at the Association for Science Teacher Education (ASTE). Colorado Springs, CO
7. Dotger, S., & Annetta, L.A. (January 22, 2005). Addressing the INTASC Standards in an Introduction to Science Teaching Course at N.C. State University. Paper presented at the Association for Science Teacher Education (ASTE). Colorado Springs, CO
6. Annetta, L.A., (April 1, 2004). Reaching Isolated Teachers Through Information Technologies for Science Professional Development. Paper presented at the National Association for Research in Science Teaching (NARST). Vancouver, British Columbia, Canada

5. Annetta, L.A., (March 2, 2004). A Cost Analysis of Distance Education: Are We Getting the Most Bang for the Buck? Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE). Atlanta, GA
4. Annetta, L.A. (January 2004). Using Point-to-Point Videoconferencing for Professional Development of Rural Teachers. Paper presented at the Association for the Education of Teaching Science (AETS). Nashville, TN
3. Annetta, L.A. (January 2003). An Interactive Discussion of Distance Learning Technologies and Methods. Paper presented at the Association for the Education of Teaching Science (AETS), St. Louis, MO
2. Annetta, L.A. (April 2002). Evaluating Electronic Components in professional Development. Paper presented at the National Association for research in Science Teaching (NARST). New Orleans, LA
1. Annetta, L.A. (January 2002). De-centralizing Profession Development: Distance Science Learning Across State Lines Through Interactive Television. Paper presented at the Association for the Education of Science Teachers (AETS). Charlotte, NC.

Peer Reviewed State/Regional/local Presentations

19. Lamb, R., & Annetta, L.A. (April 20, 2017). A Neuroimaging Study Comparing Pedagogical Approaches in Science Teaching and Learning Using Virtual Reality Based Serious Educational Games. East Coast Games Conference. Raleigh, NC.
18. Annetta, L.A. & Lamb, R. (April 19, 2017). How Serious Educational Design and Development Affect Creativity on High School Students. East Cost Games Conference. Raleigh, NC
17. Annetta, L.A. (April 18, 2017). Games Enhancing Cognition and Creativity in K-12 Science. East Coast Games Conference Education Summit. Raleigh, NC.
16. Lamb, R., Annetta, L., Vallett, D., Firestone, J., Petrie, K., Shapiro, M., Matthews, B., Lamb, R. E., Cunningham, K.R., Hilikeri, H. (April 3, 2015). Factors Influencing STEM Major and Career Selection. Presented at Washington State University Academic Showcase. Pullman, WA.
15. Lamb, R., Annetta, L.A., Baldwin, K., & Akmal, T. (March 1, 2014), Computational modeling in education: An examination of student critical reasoning. Washington State University Academic Showcase 2014. Pullman, WA
14. Annetta, L.A., Peterman, K., & Lamb, R (March 12, 2013). Designing serious educational games: How science interest, self-efficacy & 21st century skills indicate potential STEM career awareness. Presented at the Scaling STEM conference. Durham, NC
13. Annetta, L.A., Peterman, K., & Brown, E. (April 17, 2012). Experiences from the GRADUATE project: A look into the NC graduation requirement. Presented at the Scaling STEM Transforming Education Matters conference. Durham, NC
12. Annetta, L.A., Cheng, R., & Lamb, R. (February 7, 2011). Investigating spatial visualization and mental rotation abilities in high school students. Presented at the annual George Mason University College of Education and Human Development Faculty Research Symposium. Fairfax, VA
11. Annetta, L.A., Elmayan, M.M., Haischer, N.C., Lee, T., Thurmond, B., Vallett, D.B., Weaver, M., & Wheeler, S. (April 8, 2010). Graduate Student Attitudes Toward the Current and Future Direction of Online Learning. Presented at the annual meeting of the North Carolina Distance Learning Association. New Bern, NC
10. Simmons, P., Annetta, L.A., Holmes, S.Y., and Park, J.C. (November 19, 2009). Discrepant Events Share-A-Thon. Presented at the Annual Meeting of the North Carolina Science Teachers Association. Greensboro, NC

9. Annetta, L.A., & Minogue, J. (October 31, 2008). Engaging fifth-grade students through haptically enhanced video games. Paper presented at the annual meeting of the National Science Teachers Association Regional Conference. Charlotte, NC
8. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (October 14, 2008). In-Service Teachers' Perceptions of Online Learning Experiences. Presented at the Annual Meeting of the Association for Science Teacher Education Southeastern (SASTE) Region. Columbia, SC
7. Annetta, L.A., & Klesath, M. (March 18, 2008). The new virtual field trip: A perspective from NC State's Entomology Bug World. Paper presented at the Educause Learning Initiative Spring Focus. Raleigh, NC
6. Annetta, L.A., Beichner, R., Raubenheimer, D., Soni, G., Cheng, M.T. (March 13, 2008). Learning in a Technology Rich Environment (LITRE) – Researching Innovative Technologies to Promote Student Learning. Paper presented at the annual conference for the University of North Carolina Teaching and Learning with Technology Collaborative. Raleigh, NC
5. Annetta, L.A., Holmes, S., Collazo, K., Ogran, C, & Cooper, K. (November 9, 2006). Game On: Teachers Designing Computer Games to Use as Teaching Tools. Paper presented at the annual meeting of the North Carolina Science Teachers Association. Greensboro, NC
4. Park, J.C., Sandhu, M., & Annetta, L.A. (October 6, 2006) Landforms and contours using Google Earth and QuickTime VR Panoramas. Paper presented at the annual meeting of the Association of Science Teacher Education Mid-Atlantic. Hungry Mother State Park, VA
3. Annetta, L.A., & Collazo, K. (November 30, 2005). HI FIVES: Highly Interactive Fun Internet Virtual Environments in Science. North Carolina Educational Technology Conference. Greensboro, NC
2. Annetta, L.A., (March 10, 2004). Assessing Science Achievement of Rural Elementary Teachers in a Professional Development Project. Paper presented at the North Carolina Distance Learning Association Conference (NCDLA). Fayetteville, NC
1. Annetta, L.A. (October 2001). Collecting Data in a Flash. Paper presented at the Southeaster Association for the Education of Science Teachers (SAETS). Tampa, FL

Keynote Addresses

9. Annetta, L.A. (June 6, 2017). Getting Serious About Science Education: The Evolution of Serious Educational Games. Keynote Address at the Virtual Worlds Education Conference, Florida Institute of Technology, Melbourne, FL
8. Annetta, L.A. (October 1, 2015). Practical implications of serious educational games: Thinking like a designer and understanding like a learner. Keynote address at the TECH Ed conference, Washington State University. Pullman, WA
7. Annetta, L.A. (April 25, 2014). The impact of 10 years of serious educational game design and development on student affect and learning. Keynote address at the National Changua University of Education. Changhua, Taiwan
6. Annetta, L.A. (August 29, 2012). Creating next generation scientists. Keynote address to the Arlington County faculty at the annual school year kickoff meeting. Arlington, VA
5. Annetta, L.A. (February 27, 2012). Constructionist science learning: Bridging out of school time within school time through serious educational games. Keynote address at the Boeing Corporation and California State University/Informal Science Institutions Collaborative Symposium to Promote Science Education. Fullerton, CA
4. Annetta, L.A., (June 4, 2011). Cultivating 21st century teachers: TPCK through serious educational games. Keynote address at the Conference on Improving Science Graduate Student Abilities in TPCK and LPCK, National Pingtung University. Pingtung City, Taiwan

3. Annetta, L.A. (February 20, 2011). The 21st century student: Immersive real-world learning in digital worlds. Keynote address at the Conference on Technology Based Learning Environments and Professional Development, National Hsinchu University of Education. Hsinchu, Taiwan
2. Annetta, L.A. (February 19, 2011). Serious educational games in science class. Keynote address at the Conference on Technology Based Learning Environments and Professional Development, National Hsinchu University of Education. Hsinchu, Taiwan
1. Annetta, L.A. (March 27, 2010). The educational revolution: Technology and teaching. Keynote address at the High School Journal annual conference. Chapel Hill, NC

Invited Presentations/Talks

55. Annetta, L. (2023, November). *Cognitive load differences in extended reality serious educational games*. National Changhua University of Education.
54. Annetta, L.A. (October 27, 2022). Innovation through socio-scientific technologies. Presented to the science education graduate cohort. University of South Florida
53. Annetta, L.A., (October 13, 2022). The Association of Science Teacher Education Awards Webinar.
52. Annetta, L.A., (January 31, 2022). Data in mixed reality. Presented at the Student Engagement and Enrichment in Data Science at the Center for Black Studies Research. University of California-Santa Barbara
51. Annetta, L.A. (January 8, 2022). A Fireside Chat with the Association for Science Teacher Education Award Winners. Presented at the annual meeting of the Association for Science Teacher Education (ASTE). Greenville, SC
50. Annetta, L.A. (December 3, 2019). Mixed Reality in Science Teacher Education. National Changhua University of Education. Changhua, Taiwan
48. Annetta, L.A. (March 27, 2019). Augmented reality in elementary science teacher education. UNC System Digital Learning Initiative Conference. Chapel Hill, NC
47. Annetta, L.A., (September 11, 2018). Make education great again: Transdisciplinary scholarship impacting future citizens. UNC Institute of the Environment
46. Annetta, L.A. (January 17, 2018). Innovations, games, STEM and Online learning: How to educate in the digital era. Intellitek Coderz Webcast.
45. Annetta, L.A. (April 4, 2017). The evolution of serious educational games: 15+ years of research and development and a look toward the next 15. The Intersection: Arts@Science, ECU College of Fine Arts and Communication
44. Annetta. L.A. (March 27, 2018). Experiences from the national iCorps program. Presented at the university Innovation, Entrepreneurship, and Engagement Symposium
43. Annetta, L.A. (November 17, 2016). Winning at the grant game. Joint ECU College of Education/College of Health and Human Performance Lunch and Learn series
42. Annetta, L.A. (June 30, 2015). Project based learning progressions: Designing Serious Educational Games for STEM learning. Center for Educational Excellence, Tysons Corner, VA
41. Annetta, L.A. (August 25, 2014). Creating next generation scientists through screen literacy. Manassas City Schools, Manassas, VA
40. Annetta, L.A. (April 24, 2014). Mashing up instructional design with video game design. National Central University. Taoyuang, Taiwan
39. Annetta, L.A. (April 22, 2014). Design to learn: Results from two U.S. national science foundation project on serious educational games. National Taipei University of Education. Taipei, Taiwan
38. Annetta, L.A. (April 18, 2014). Science learning and serious educational game design: Infusing technology...or not. National Taiwan University of Science and Technology. Taipei, Taiwan

37. Annetta, L.A. (September 27, 2012). Edutainment: Serious Educational Games in science class. The Italian National Agency for the Development of Education. Florence, IT
36. Annetta, L.A. (May 21, 2012). Gaming K-12 Education. Interdisciplinary Computing Research Symposium. George Mason University. Fairfax, VA
35. Annetta, L.A., Cheng, R., Vallett, D., Lamb, R., & Fee, M. (May 6, 2012). Using video games in the K-12 classroom. Learning & the Brain Conference. Arlington, VA
34. Annetta, L.A. (April 24, 2012). The education revolution. George Mason University Computer Science GRAND Seminar Series. Fairfax, VA
33. Lamb, R. & Annetta, L.A. (March 5, 2012). Affective measures in science education. Carnegie Institute STEM Stakeholder Summit. Washington, D.C.
32. Annetta, L.A. (February 28, 2012). Constructionist science learning: Bridging out of school time within school time through serious educational games. California State University-Fullerton. Fullerton, CA
31. Annetta, L.A. (February 21, 2011). Flattening the geographic world through 3D gaming worlds. National Taipei University of Education. Taipei, Taiwan
30. Annetta, L.A. (February 18, 2011). Border crossing: Collaboration between U.S. and Taiwan through serious educational games. National Hsinchu University. Hsinchu, Taiwan
29. Annetta, L.A. (February 17, 2011). Next generation serious educational games. National Chiayi University. Chiayi, Taiwan
28. Annetta, L.A. (February 16, 2011). Getting serious about educational games. National Changua University. Changua, Taiwan
27. Annetta, L.A. (January 27, 2011). Science Training Immersive Modules for Undergraduate Learning Around Teacher Education: A Serious Educational Game. (National Science Foundation-TUES). Washington, D.C.
26. Annetta, L.A. (January 12, 2011). Methods of Evaluating Games and Simulations. National Oceanic and Atmospheric Administration Games and Simulation Summit. Silver Spring, MD
25. Annetta, L.A. (May 18, 2010). V-Learning in Serious Educational Games. IMS Global Learning Impact Conference. Long Beach, CA
24. Annetta, L.A. (May 14, 2010). Serious educational games: A look into the rabbit hole. National Science Foundation. Arlington, VA
23. Annetta, L.A., & Peterman, K. (February 25, 2010). A multi-pronged approach to embedded assessment: Research and evaluation of the GRADUATE project. National Science Foundation. Washington, D.C.
22. Annetta, L.A. (moderator), Boinodiris, P., Daughtry, R., & Heneghan, J. (February 18, 2010). Serious teaching and learning in serious games. Collaborations, Humanities, Arts & Technology Festival. Chapel Hill, NC
21. Annetta, L.A., Klesath, M., & Folta, E. (February 13, 2010). Exploring the use of 3D virtual environments in higher education courses. Strategies for Success Workshop. Raleigh, NC
20. Annetta, L.A. & Deluca, W. (October 20, 2009). Designing OST STEM programs for sustainability. National Science Foundation Out of School Time AYS meeting. Arlington, VA
19. Annetta, L.A., Holmes, S.Y., Cheng, M.T., & Folta, E. (February 7, 2009). Serious Educational Games. Carolina Games Summit. Goldsboro, NC
18. Annetta, L.A., & Holmes, S.Y. (June 21, 2008). Creating A Serious Educational Game. Presented at the Southeastern Digital Game Xpo. Raleigh, NC
17. Barab, S., Annetta, L.A., & Kirkley, S. (May 14, 2008). Case studies from education. Presented at the North Carolina Advanced Learning Technologies summit (NCALTA). Cary, NC
16. Annetta, L.A. (March 10, 2008). Educational games and how librarians can play. Paper presented at the annual Launch NC conference, Chapel Hill, NC

15. Annetta, L.A. (February 19, 2008). V-Learning: How gaming and avatars are engaging online students. Innovate Online Webcast.
14. Annetta, L.A., & Brown-Schild, V. (February 5, 2008). Impacting students and teachers through video game creation. (National Science Foundation). Arlington, VA
13. Annetta, L.A., Craig, A., Soni, G., Cheng, M, & Folta, B. (January 30, 2008). LITRE: Investigating the effectiveness of technology in improving student learning. Paper presented at the annual meeting of the Educause Learning Initiative. San Antonio, TX
12. Annetta, L.A. (October 3, 2007). Learning in the 21st Century: Are You Game? Presented at the Games4Learning Symposium. Chapel Hill, NC
11. Annetta, L.A., Minogue, J., & Hudnutt, B.A. (September 12, 2007). Scientific & Mathematical Knowledge Acquisition: Professional Development in Interactive Learning Environments. Presented at the NASA ModSim World Conference, Virginia Beach, VA
10. Annetta, L.A. (September 5, 2007). Engaging K-20 Students in Immersive Virtual Learning Environments. Presented at the meeting of the IMS Global Learning Consortium. College Park, MD
9. Annetta, L.A. (February 8, 2007). Technology as a cross-project data sharing and collaboration tool (National Science Foundation). Arlington, VA
8. Annetta, L.A. (February 7, 2007) Evaluating teacher and student attitudes in HI FIVES. (National Science Foundation). Arlington, VA
7. Annetta, L.A. (June 24, 2006). Developing Science Curriculum Around Game Theory: HI FIVES. Southeastern Digital Game Xpo. Raleigh, NC
6. Annetta, L.A. (May 2, 2006). Integrating K-12 Into the Serious Games Movement Through HI FIVES. North Carolina Serious Games Workshop. Raleigh, NC
5. Annetta, L.A., & Young, R.M. (February 7, 2006). HI FIVES: Creating Computer-Based Video Games for Middle Grades Teachers and Students- An ITEST Cohort 3 Project. (National Science Foundation). Washington, D.C.
4. Annetta, L.A. (February 2, 2006). HI FIVES: Virtual Environments for Synchronous Distance Learning and Gaming. (MEGA). Raleigh, NC
3. Annetta, L.A., & Collazo, K. (October 25, 2005). HI FIVES: Teaching Science in A Virtual Space. Paper presented at the World View Symposium. Chapel Hill, NC
2. Annetta, L.A. (November 2002). A Project-Based Approach to GIS for High School Students. Paper presented at the First Annual GIS Day. St. Louis, MO
1. Shymansky, J.A., & Annetta, L.A. (2002) Developing Children's Content Reading Skills During Hands-on Science, LSC-Net, National Science Foundation. Arlington, VA

International Service

- Grant proposal reviewer for the Israel Science Foundation (2013)
- Grant proposal reviewer for Social Sciences and Humanities Research Council of Canada (SSHRC) (2013)

National Service

- Special Guest Editor, Science & Education-Artificial Intelligence's Impact on Sociopolitical science
- NARST Social Media, Website, & Communications Committee co-Chair (2020-2023)
- AISL Program Reviewer for the National Science Foundation (2017)
- IGE Program Reviewer for the National Science Foundation (2016)

- Panelist for U.S. Department of Education sponsored Games for Learning Summit (New York, NY) (2015)
- NARST Doctoral Dissertation Award Committee (2014-2017)
- Association for Science Teacher Education Equity Committee (2011-2014)
- National Science Foundation Information Technology Experiences for Students and Teachers Summit Planning Committee (2006; 2008; 2010)
- National Science Foundation Committee of Visitors for the Division of Research on Learning in Formal and Informal Settings (2015)
- SBIR Program reviewer for the National Institute of Health (2015)
- Content expert for American Council on Education 2Revolutions Competition (2014)
- Group Facilitator and final discussant at the Radical Innovation Summit in Washington, DC (2013)
- Chair of SITE Games and Simulation Special Interest Group (2012-2013)
- Race to the Top Reviewer for Department of Education (2012)
- Co-chair of SITE Games and Simulation Special Interest Group (2009-2012)
- Association of Science Teacher Education Equity Committee (2012-2015)
- Grant application assessor for the Social Sciences and Humanities Research Council of Canada (2012)
- NARST Strand 12-Education Technology co-chair (2011-2013)
- NARST Publications Committee (2008-2011)
- Educause Advisory Board (2007-2009)
- National Aeronautics & Space Administration ModSim World Conference K-12 Professional Development Panel Leader (2007)
- ITEST program reviewer for the National Science Foundation (2010) [Panel chair]
- ATE program reviewer for the National Science Foundation (2008)
- ISE program reviewer for the National Science Foundation (2007, 2008, 2009)
- SBIR Program reviewer for the National Science Foundation (2006, 2007)
- Association of Science Teacher Education Annual Program Chair (2007)
- Briefed Congressman Miller and Senator Dole on the state of NSF Funding and HI FIVES (2006)
- Association for Science Teacher Education, Technology Committee Technology award sub-committee (2004)
- Association for Science Teacher Education, Technology Committee, (2004-present)

State Service

- Director of the West Millbrook Middle School Gaming Academy (2008, 2009)
- Ravenscroft School Information and Instructional Technology Advisory Board (2008)
- Volunteer at Lincoln Heights Elementary School (2006-2008)
- North Carolina Serious Games Initiative (2006)
- North Carolina Advanced Learning Technology Group (2007-2010)
- Mentor, Kenan Institute of Science and Technology Fellow (2005-2007)
- Consultant, Kenan Fellows summer institute on inquiry and cross-curricular instruction (2004)
- Consultant, North Carolina assistance team, summer science strand leader (2005, 2006)
- UNC World View 21st Century Education Seminar (2009)
- UNC Tomorrow Educational Focus Group (2008)
- UNC General Administration 2+2 Planning Committee (2006-2007)
- University Service President's University Research Vision Task Force (2012)
- STEM Collaborative Institute Working Group (2010-2011)
- Rehabilitation Science Search Committee (2011)
- University SATELLITE Group (2008, 2009)
- Beyond Academic Support Excellence Technology Applications Subcommittee (2008-2010)
- Presenter for Teaching & Learning Technology Roundtable (February 4, 2009)
- University Athletic Council (2007-present)
- Chair of Student life, Equity & Sportsmanship sub-committee (2008-2009)

- Student-Athlete mentor (2006-2010)
- University Council on Teacher Education (2006-2009)
- The University Learning and Games Group, co-organizer (2005)
- University Consortium for GIS (2005-2010)
- University Liquid Narrative Group (2005)
- Co-created Entomology Virtual online field trip/lab (2007)
- Co-Organizer of The University Learning and Games Group (2005)
- University Council on Teacher Education (2006-2009)
- ITEST Grant Co-PI's from MSTE, Computer Science, Kenan Institute, DELTA
- ISE Grant Co-PI's from MSTE, Computer Science, Graphic Design Committees

University/College Service

- College Vanguard group (2025-present)
- FERPA Complaint Task Force (Chair) (2025)
- Financial Review Board (2025-2028)
- College of Education Technology Committee (2022-2024)
- Phoebe Moore Dail Endowed Professor Search Committee (2022)
- MSITE Department Chair 5-year Review Committee (2022)
- Distance Education and Learning Technologies Committee (2019-2020)
- Success to Significance Committee (2020-2021)
- Dean's Advisory Council (2017-2019)-Chair (2018-2019)
- Executive Director of Innovation & New Ventures search committee (2018)
- Director of Research Partnerships search committee (2018)
- College of Education PhD Ad hoc Committee (2017-2018)
- College of Education Global Affairs Committee (2017-Present)
- Graduate Recruitment, Retention, and Matriculation Ad Hoc Committee (2016)
- Created a collaborative Geo-Environmental Science Pedagogy graduate certificate with College of Science (2015)
- Dean's Five-year review council (2013-2014)
- Secondary Education Math Education search (2012)
- CEHD Tier One Tenure Review Committee for two candidates (2012)
- CEHD Dean's Scholarship Task Force (2012)
- College of Education and Human Development Promotion and Tenure Committee (2011-Present)
- GMU/FCPS Lab School Governance (2012)
- College of Education & Human Development Doctoral Committee (2011-Present)
- College of Education & Human Development Doctoral Portfolio Ad Hoc Committee (2011-2012)
- VISTA Director Search Committee (2011)
- College of Education & Human Development Research Committee (2010-Present)
- Education Leadership Search Committee (2010-2011)
- College of Education Council on Multicultural Issues and Diversity (2009-2010)
- College of Education 1:1 Laptop initiative committee (2009)
- College of Education Core Courses Ad Hoc committee (2008)
- College of Education 2+2 Planning Committee (2005-2010)
- College of Education MAT preparation Committee (2003-2005)
- Friday Institute Strategic Planning Committee (2006-2008)
- College of Education Compact/Strategic Planning Committee (2006-2010)
- Elementary Education Faculty Search (2006-2007)
- College of Education Conceptual Framework Committee (2006)
- College NCATE Standard III Committee (2005-2007)
- College Committee on Professional Education (2004-2005)
- Teacher Education Task Force (2004)

- Technology Education faculty Search (2004)
- Training and Development faculty Search (2004)
- College of Education Teacher Education Committee (2004-2005)
- MSTE-Friday Institute Collaboratory (2003-2005)
- IT-Friday Institute Collaboratory (2003-2005)

Department/Division Service

- MSITE Website committee
- Science Education course development team
- Associate Director of the Center for Restructuring Education in Science and Technology (2010-2016)
- Science Education Director of Graduate Programs (2009-present)
- Science Education Undergraduate co-coordinator (2009)
- Science Education Search Committee Chair (2009)
- MSTE Department Head/Chair Search (2007-2008)
- Mathematics Education Faculty Search (2006)
- Science Education Faculty Search (2005-2006)
- Faculty Advisor for NC State NSTA Student Chapter (2004-2006)

Editorial Boards

Journals

- International Journal of Science and Mathematics Education (2004-present)
- Journal of Research in Educational Neuroscience (2017-present)
- The Global e-Learning Journal (2011-2014)
- African Journal of Research in Mathematics, Science and Technology Education (2007)
- Journal of Research in Science Teaching (2008-2011)
- Computers & Education (2009-2012)
- Electronic Journal of Science Education (2004-2010)
- Journal of Science Teacher Education (2005-2012)
- International Journal of Science Education (2007-2011)
- Innovate (2007-2011)
- International Journal of Environmental and Science Education (2008-present)
- Journal of Science Education and Technology (2008-present)

Conferences

- Co-coordinator of Technologies in STEM Teaching & Learning Conference (2011)
- ASTE Conference Proposal Reviewer for Education Technology Strand (2004-present)
- NARST Conference Proposal Reviewer for Educational Technology Strand (2005-present)
- SITE Conference Proposal Reviewer for Science Education Strand (2005-present)
- AERA Conference Proposal Reviewer for Informal Learning Environments Strand (2007)
- AERA Conference Proposal Reviewer for Science Strand (2008, 2009)
- League of Worlds Conference Proposal Reviewer (2005)
- NSTA Regional Conference Reviewer (2008)

Professional Organization Memberships

- American Association of Colleges of Teacher Education (AACTE)
- Virginia Science Education Leadership Association (VSELA)
- American Educational Research Association (AERA)
- Association for the Advancement of Computing in Education (AACE)
- Association for Science Teacher Education (ASTE-Formally AETS)
- The National Association of Research in Science Teaching (NARST)
- The National Science Teachers Association (NSTA)
- Society for Information Technology and Teacher Education (SITE)
- School Science and Mathematics Association (SSMA)
- North Carolina Association for Advanced Learning Technologies (NCALTA)
- North Carolina Science Teachers Association (NCSTA)
- North Carolina Science Leaders Association (NCSLA)

Student Impact

Doctoral Chair

Marina Shapiro (2016). Evaluating the Efficacy of a Chemistry Video Game.

Wai Ki (Rebecca) Cheng (2014). Relationship Between Visual Attention and Flow Experience In a Serious Educational Game: An Eye-tracking Analysis

Richard Lamb (2013). The Application of Cognitive Diagnostic Approaches Via Neural Network Analysis of Serious Educational Games

David B. Vallett (2013). Factors Influencing Learner Conceptions of Force: Exploring the Interaction Among Visuospatial Ability, Motivation, and Conceptions of Newtonian Mechanics in University Undergraduates from an Evolutionary Perspective

Elizabeth Folta (2010). Investigating the Impact on Student Learning and Outdoor Science Interest through Modular Serious Educational Games: A Design-Based Research Study

Meng-Tzu Cheng (2009). Middle School Students' Learning of the Impact of Methamphetamine Abuse on the Brain through Serious Game Play

Shawn Holmes (2009). Ethical Sensitivity Intervention in Teacher Education: Using Computer-based Simulations and Professional Codes of Ethics to Affect Perspective-taking

Wilyetta Brown-Mitchell (2009). Physics Instructors Are Not Blank Slates Either

Terrence Maher (2009). A Study of the Influence of a Preservice Science Teacher Education Program over Time

Masters Chair

Richard Lamb (2008). Review of the Efficacy of SAS in School Curriculum Pathways on Student Understanding in Chemistry

Jennette Meldrum (2006). Factors Contributing to Student Pursuit of Advanced Science.

External Committee

Tammy Brown (2010). Learning in Massively Multiplayer Online Role-Playing Games: The Development of Government Leadership Competencies and Performance Elements. Fielding Graduate University

Sophia Stone (2009). Faculty Members' Perceptions of Three-Dimensional (3D) Virtual Worlds: Instructional Use, Implementation and Benefits for Adult Learners. North Carolina State University Department of Adult and High Education

Geoff Lewis (2009). Direct Insight into Electronic Exchange Coupling Through Magnetostructural and Spectroscopic Properties of Donor-Bridge-Acceptor Biradicals. North Carolina State University Department of Chemistry

Geordie Dukas (2008). Using Data Mining Techniques to Explore Data Generated from Educational Multiuser Virtual Environments. Harvard University Graduate School of Education

Adam Carriker (2009). Effectiveness of 3D input on Spatial Abilities. North Carolina State University Technology, Engineering and Design (Master's Thesis)

Student Awards

Holmes, S.Y. (2008). Creating a computer simulated ethical sensitivity assessment for science teacher education. Best Paper Award at the annual meeting of the Association of Moral Education, South Bend, IN

Honors

- 2025 All Southern Conference (SoCon) Faculty Award
- 2025 Springer Nature Editor of Distinction-Editorial Contribution Award
- 2025 Springer Nature Editor Distinction- Author Service Award
- 2024 Association for Child and Adolescent Mental Health Research on Digital Impact Best Paper Award.
- 2023 Eurasia Research EduCon Athens Best Paper
- 2023 Association for Science Teacher Education Best Paper
- 2022 Association for Science Teacher Education Outstanding Mentor of the Year award recipient
- 2020 Sigma Xi Fellow
- 2011, 2012, 2014, 2015 USA Science and Engineering Festival Nifty Fifty Speaker--Chosen from over 4500 nominations
- NTLI Fellowship in Science Education and Technology for the ASTE paper: Holmes, S.Y., Annetta, L.A., & Cheng, M.T. (2010). Hazelton High at REST: A Simulation Unmasking Ethical Behavior in Science Educators.
- NC State College of Education Outstanding Extension Service Award (2008)
- Inducted into the Academy of Outstanding Faculty Engaged in Extension (2008)
- NC State University Distinguished Alumni Engaged in Extension & Outreach (2008)
- Who's Who in America recipient (2006)
- NTLI Fellowship in Science Education and Technology for the ASTE paper: Annetta, L.A., & Park, J.C. (2006) Game On: Graduate Students Creating Role Playing Video Games in a 3-D Virtual Environment through Synchronous Online Instruction--The NTLI award recognizes an exemplary paper related to technology in science teacher preparation
- Outstanding Paper Award nomination" Exploring Elementary School Teacher Attitudes Toward Varying Science Teacher Professional Development" (NARST, 2005)
- Outstanding Dissertation Award finalist (NARST, 2003)
- Innovation in Teaching Science Teachers Paper nomination "De-Centralizing Professional Development: Distance Science Learning Across State Lines Through Interactive Television" (AETS, 2002)