**Richard L. Lamb**

**Department of Physiology and Pharmacology, College of Veterinary Medicine**

**Department of Clinical and Administrative Pharmacy, College of Pharmacy**

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| Research Metrics as of January 30th, 2024: Citations: 2578, h-Index: 25, i10-Index: 52 |

**Richard Lamb, Ph.D.** is a member of the Department of Physiology and Pharmacology and the Department of Clinical and Administrative Pharmacy in the Colleges of Pharmacy and College of Veterinary Medicine. He is currently the director of the Neurocognition Science Laboratory at the University of Georgia. He earned his Ph.D. from George Mason University, College of Education and Human Development in 2013 in Science Education and Measurement. His research focuses on the identification of cognitive markers of learning, increasing efficacy and performance of neural processing and cognition during learning using novel technologies in educational environments. A second area of related research is in the use of psychophysiomeasurement tools and virtual and synthetic environments to provide access to learning opportunities and assessment of mental status and socioemotional health interventions for students at all levels of the P-20 continuum. Using advanced technologies, he seeks to shape the biopsychosocial aspects of learning and mental health, to promote learning and wellbeing across the lifespan. His work is interdisciplinary and draws from computer science, cognitive psychology, behavioral neuroscience, psychometrics. The purpose of Lamb’s research is to translate basic behavioral neuroscience and psychological research into educational and counseling practice. He has taught courses in learning technologies, science education, neuroimaging, psychophysiomeasurement, psychometrics, counseling research, educational measurement, and the science of learning. Additional courses he has taught include advanced quantitative methods such as analysis of sensor signal data, artificial intelligence, machine learning, multilevel modeling, and structural equation modeling.

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|  | **Curriculum Vitae Updated January 2, 2024** |  |
| **EDUCATION** |  |  |
| Ph.D. | Science Education / Educational Measurement*,* George Mason University, Fairfax, Virginia. **Dissertation Summary: Published 06/13.** *The application of cognitive diagnostic approaches via neural network analysis of serious educational games*, illustrates the development and creation of real time cognitive assessments and models using STEM based serious educational games. | 2013 |
|  |  |  |
| M.S. | Mental Health Counseling, East Carolina University, Greenville, North Carolina. **Thesis Summary: TBD.** *Examination of the psychosocial pressures related to cumulative stress and latent trauma in underrepresented groups,* examines the role that technology can play in the treatment trauma. | Estimated 2024 |
| M.S. | Science Education and Instructional Technology North Carolina State University, Raleigh, North Carolina. **Thesis Summary: Published 5/09.** *Review of the efficacy of SAS curriculum pathways on student understanding in chemistry,* outlines and explored the effective integration of technology and online instruction into a traditional science classroom. Developed effective use model based upon statistical analysis of student test scores measuring achievement and learning gains. | 2009 |
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| B.S. | Biochemistry, Canisius College, Buffalo, New York. Dual appointment commission into the United States Army Chemical and Military Intelligence Corps. Recipient of the Veterans of Foreign Wars Military Scholar Award. | 1999 |

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| **EMPLOYMENT** |  |
| **University of Georgia, Athens, Georgia**  |  |
| Department of Physiology and Pharmacology |  |
| Department of Clinical and Administrative Pharmacy |  |
| \*Associate Professor Translational Education | 2024-Current |
| \*\*Director of the Neurocognition Science Laboratory | 2024-Current |
|  |  |
| **East Carolina University, Greenville, North Carolina** |  |
| Department of Special Education Foundations and Research |  |
| \*Professor of Social Science Research Methods | 2022 to 2024 |
| \*\* Director of the East Carolina University Neurocognition Science Laboratory | 2019 to 2024 |
| Associate Professor of Social Science Research Methods | 2019 to 2022 |
|  |  |
| **University at Buffalo, The State University of New York, Buffalo, New York** |  |
| Department of Learning and Instruction |  |
| \*Associate Professor, Science of Learning in Science Education, Graduate School of Education | 2016 to 2019 |
| \*\*Associate Professor, Medical Education, Director for Academic Support, Jacobs School of Medicine, and Biomedical Sciences | 2017 to 2019 |
| \*\*Director Neurocognition Science Laboratory |  |
|  |  |
| **Washington State University, Pullman, Washington** |  |
| Department of Teaching and Learning |  |
| \*Assistant Professor College of Education, Science Education and Measurement | 2016 to 2019 |
| \*Director Neurocognitive Science Laboratory | 2013 to 2016 |
| Associate Washington State Heath Science Education STEM Center | 2014 to 2016 |
| Associate Learning and Performance Research Center | 2014 to 2016 |
| \*\*Assistant Professor College of Education, Special Education | 2013 to 2016 |
| \*\*Assistant Professor College of Veterinary Medicine Neuroscience | 2014 to 2016 |
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| **University of Iowa, Iowa City, Iowa** |  |
| Affiliated Member Child Imaging Laboratory in Developmental Science, Delta Center, Science Educator and Measurement | 2013 to Current |
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| **Duke University, Durham, North Carolina** |  |
| Social Science Research Institute, Statistician and Technical Write, Fast Track Project | 2008 to 2010 |
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| **North Carolina State University, Raleigh, North Carolina** |  |
| Department of Science Education |  |
| Instructor Secondary Science Methods | 2009 to 2013 |
| Research Assistant, NSF Projects GRADUATE & STIMULATE | 2010 to 2012 |
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| **Primary and Secondary P-12** |  |
| North Carolina Public Schools and Virginia Public Schools | 2004 to 2013 |
| District of Colombia Public Schools, STEM Coordinator  | 2010 to 2012 |
| \* Primary Appointment; \*\*Secondary Appointment |  |

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| **LEADERSHIP, PROMINENT AWARDS, AND EDITORIAL BOARDS** |  |
| **Editorial** |  |
| Managing North American Editor: International Journal of Psychology and Neuroscience | 2023 to Current |
| Editorial Board Journal of Psychology and Psychotherapy Research | 2023 to Current |
| Editor Special Issue Information: Cognitive, Emotional, and Neurofunctional Foundations of Game-based Learning | 2022 to 2023 |
| Associate Editor Journal of Research in Science Teaching | 2019 to 2023 |
| Editorial Board Journal of Science Teacher Education | 2016 to 2021 |
| Editorial Board Journal of Research in Science Teaching | 2016 to 2018 |
| Editorial Board Journal of Science Education and Technology | 2013 to Current |
| Editorial Board Journal of Educational Research | 2013 to Current |
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| **Leadership** |  |
| Laboratory for Analytical Sciences National Security Agency Human Computer Interaction Group Director | 2024-2025 |
| The Ministry of Colleges and Universities Science Research Branch CanadaPanel Chair | 2023 |
| Leadership Team Coordinator Frontier Technologies, Society for InformationTechnology in Teacher Education (SITE) | 2021 to 2024 |
| Student Learning Thread Coordinator, Association for Science TeacherEducation (ASTE) | 2018 to 2019 2021 to 2024 |
| Lead Evaluator Liaison Committee on Medication Education (LCME)Accreditation | 2018 to 2020 |
| Founding Member, Institute of Electrical and Electronics Engineers (IEEE) ICICLE Learning Engineers Group on X- Reality for Learning and Performance Augmentation | 2018 to Current |
| Conference Organizer, International Serious Play Conference | 2017 |
| Election Committee Chair, Association for Science Teacher Education (ASTE) | 2017 to 2019 |
| Ad-Hoc Committee Chair, National Association for Research in Science Teaching (NARST) Virtual Colloquium Development | 2016 to 2018 |
| Conference Organizer Argument-Based Inquiry (ABI) | 2015 to 2015 |
| Program Committee Member, Association for Science Teacher Education (ASTE) | 2014 to 2016 |
| Conference Organizer, Tech Ed | 2014 |
| Educational Technology Thread Coordinator, Association for Science Teacher Education (ASTE) | 2014 to 20162022 to 2024 |
| Strand 12 Educational Technology Coordinator, National Association for Research in Science Teaching (NARST) | 2014 to 20162022 to 2024 |
| Research Committee Member, National Association for Research in Science Teaching (NARST) | 2012 to 2014 |
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| **International Awards** |  |
| Best Research Paper Award 3rd International Symposium on Educational ResearchInternational Research Fellow for Educational Technology and Educational | 2023 |
| International Research Fellow for Educational Technology and Educational Neuroscience, The Kingdom of Saudi Arabia | 2023 |
| National High-end Foreign Expert Science Education and Educational Neuroscience, People’s Republic of China | 2020 |
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| **National Awards** |  |
| Fellowship Foundation for Health Leadership & Innovation: Child, Adolescent, Family, and Behavioral Health | 2022 to 2024 |
| ASTE John C. Park National Technology Leadership Initiative Award | 2020 and 2022 |
| AERA Best Paper Award SIG-IT | 2018 |
| NARST Early Career Research Award | 2016 |
| Most Valuable Speaker, Serious Play Conference | 20152016 |
| **PUBLICATIONS** |  |
| **iii Post Doctoral Researcher, ii Graduate Student, i Undergraduate Student or High School Student** |  |
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| **Edited Books** |  |
| **Lamb, R.,** & Firestone, J. (2024). *Neurocognitive Methods for the Learning Science: Bridging Educational Divides*. New York, NY: Routledge. | 2 |
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| **Lamb, R.** & McMahon, D.D**. (**2016**).** *Educational and Learning Games: New Research.* New York, NY: NOVA Publishing | 1 |
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| **Book Chapters** |  |
| Lamb, R., (In Press). Serious Games. In Powers, M. (Ed.) *Oxford Research Encyclopedia of Communication.* New York, NY and Oxford, GB: Oxford University Press.  | 20 |
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| Kavner, A. & **Lamb, R.** (2024). Developing Neural Networks with Neurocognitive Measurements. In *Neurocognition in Science Education.* New York, NY: IGA. | 19 |
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| **Lamb R.,** Hand, B., Yoon, S., & Almusharraf, N. (2023). Writing in Science the Effect of XR Technology. In Fegely, A. & Cherner, T. (Eds.) *Bridging the XR Technology -to Practice Gap.* New York, NY: Elsevier. | 18 |
|  |  |
| **Lamb, R.** (2023). Virtual reality and science, technology, engineering, and mathematics education. In Liu, X & Wang, L. (Eds.) *International Encyclopedia of Education 4th Edition.* New York, NY: Elsevier. | 17 |
|  |  |
| Lee., J., **Lamb, R.,** & Kim, S., (2021). Artificial intelligence and learning. In Anne Hynds (Ed.)*Oxford Bibliographies in Education.* New York, NY: Oxford University Press. | 16 |
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| **Lamb, R.** (2021). Virtual reality as a tool for improvement of hands-on science learning. In L. Leite, E. Oldham, A. Sfonso, F. Viseu, L. Dourado, & H. Martinho (Eds.). *Science and Mathematics Education for 21st Century Citizens: Challenges and Ways Forward.* New York, NY: Nova Science Publishers. | 15 |
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| **Lamb R.** (2021). Virtual reality simulations in science education: Learning science by writing. In G. Akcayir & C. Demmans-Epp (Eds.) [*Designing, Deploying, and Evaluating Virtual and*](https://www.igi-global.com/submission/books/?projectid=1d2a68ca-6a3a-4224-9507-b3b948286d16)[*Augmented Reality in Education*.](https://www.igi-global.com/submission/books/?projectid=1d2a68ca-6a3a-4224-9507-b3b948286d16) Hershey, PA: IGI Global. | 14 |
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| **Lamb, R.** & Etopio, E. (2020). Virtual reality to train preservice teachers. In E. Bradley (Ed.).*Games and Simulations in Teacher Education.* Dordrecht, The Netherlands: Springer Nature. | 13 |
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| **Lamb, R.**, & Etopio, E. (2020). Therapeutic extended reality: The nuts and bolts. In H. Kaduson & C. Schaefer (Eds.). *Play Therapy with Children Modalities for Change.* Oxford, England: American Psychological Association International Association of Scientific, Technical, and Medical Publishers. | 12 |
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| **Lamb, R.** Etopio, E., Firestone, J., & Zederii, J. (2020). Virtual reality simulation: effects on academic performance with the domain of writing. In T. Croce & J. Firestone (Eds.). *Defining Scientific Literacy in the 21st Century.* New York, NY: Springer. | 11 |
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| **Lamb, R.** & Hand, B. (2020). An exploratory neuroimaging study of argumentative and summary writing using near infrared spectroscopy. In V. Prain & B. Hand (Eds.), *Conceptualizing Complexities: Theorizing Futures for Science Education Research.* New York, NY: Springer. | 10 |
|  |  |
| **Lamb, R**., & Etopio, E. (2019). VR has it: A framework for virtual reality integration into therapy. In J. Stone (Ed.), *Integrating Technology into Modern Therapies: A Clinician’s Guide,* New York, NY: Routledge. | 9 |
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| Annetta, L., **Lamb, R.,** Vallett, D., & Shapiro, Mi. (2018). Project based learning progressions: Identifying the nodes of learning in a project-based environment. In O. Adesope & A.G. Rudd (Eds.). *Contemporary Technologies in Education.* New York, NY: Springer. | 8 |
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| **Lamb, R.,** Cavagnetto, A., Adesope, O., Yin, L., French, B., & Taylor, M**.** (2016). Artificially intelligent systems in education a tool for the future. In R. Lamb & D.D. McMahon (Eds.), *Educational and Learning Games: New Research*. New York, NY: NOVA Publishing. | 7 |
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| **Lamb, R,** (2016). Assessment of student learning using cognitive diagnostics and computation models of cognition. In R. Lamb & D.D. McMahon (Eds.), *Educational and Learning Games: New Research*. New York, NY: NOVA Publishing. | 6 |
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| Wong, S.S., Firestone, J.B., **Lamb, R**., & Luft, J.A. (2015). First year secondary science teacher perceived support and retention in the classroom. In. J.A. Luft & S. Dubois (Eds.), *Newly Hired Teachers of Science: A Better Beginning*. New York, NY: Springer. | 5 |
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| **Lamb, R.** (2015) Video games as assessment. In *Encyclopedia of Educational Technology*, Eds. Mike Spector, Thousand Oaks, CA, Sage Publications | 4 |
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| Annetta, L., Holmes, S., Vallett, D., Fee, M. Cheng, R & **Lamb, R.** (2013). Cognitive aspects of creativity: Science learning through serious educational games. In M. Gregerson and J. Kaufman (Eds.), *Teaching Creatively and Teaching Creativity*. New York, NY: Springer. | 3 |
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| Annetta, L., **Lamb, R.,** Bowling B. & Chengi, R., (2011). Assessing engagement in serious educational games: The development of the student engaged learning in a technology rich interactive classroom (SELTIC). In P. Felicia (Ed). *Handbook of Research on Improving and Motivation through Educational Games.* Hershey, PA: IGI Global. | 2 |
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| Annetta, L. **Lamb, R**. & Stoneii, M. (2010). Assessment serious educational games: The development of a scoring rubric, In L. Annetta and S. Bronack (Eds.). *Serious Educational Game Assessment: Practical Methods and Models for Educational Games, Simulations and Virtual Worlds.* Amsterdam, Netherlands: Sense Publishers. | 1 |
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| **Peer Review Journal Articles** |  |
| Rodriguesiii, H., Molina-Fernandez, A. J., **Lamb., R.**, Choi, I, & Owens, T. (2024). Unraveling student learning: Exploring nonlinear dynamics in science education. *International Journal of Psychology and Neuroscience,* 9(3), 118-137: Doi: <https://doi.org/10.56769/ijpn09311> | 66 |
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| **Lamb, R.,** Hasky, A., Pugh, Z., Rathore, S., K. K., Wang, W., & Manmoun, M.T. (2023). Integrating psychological insights into the development of a tailored daily report: A universal design approach. *International Journal of Psychology and Neuroscience.* *9*(2), 85-90. | 65 |
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| Mazzye, D., Duffy, M., & **Lamb, R.**, (2023). Teacher candidate self-efficacy for and ability to teach literacy: A comparison study between residency and traditional teacher preparation models. *Journal of Global Education and Research.*7(*2*), 146-165. | 64 |
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| **Lamb, R.**, & Firestone, J. (2023). The moderating role of Creativity and the Effect of Virtual Reality on Stress and Cognitive Demand during Preservice Teacher Learning. *Computers & Education: X Reality* 1, 1-10. https://doi.org/10.1016/j.cexr.2022.100003. | 63 |
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| **Lamb, R.** & Kavner, A. (2023). Peripheral eye tracking for measurement of military pilot performance. *International Journal of Psychology and Neuroscience.* *9*(2), 110-115. | 62 |
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| Duffy, M., Mazzye, D., Storie, M., & **Lamb, R.** (2023). Professional development and coaching in the Science of Reading: Impacts on oral reading fluency in comparison to national norms *International Journal of Instruction* | 61 |
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| **Lamb, R.,** Choi, I., & Owens, T. (2023). Artificial intelligence and sensor technologies the future of special education for students with intellectual and developmental disabilities. *Journal of Intellectual & Developmental Disabilities.* 11(*3*), 1-3. | 60 |
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| **Lamb, R.,** Choi, I., & Owens, T. (2023). Artificial intelligence and sensor technologies the future of individualized and differentiated education. *International Journal of Psychology and Neuroscience.* *9*(1), 30-36. https://doi: https://doi.org/10.56769/ijpn09102 | 59 |
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| **Lamb, R.,** & Rodrigues, H. (2022). Mathematics cognitive demand for fifth grade students: A functional near-infrared spectroscopy study. *International Journal of Psychology and Neuroscience. 8*(2), 1-24, https://doi: 10.56769/ijpn08201 | 58 |
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| **Lamb, R.,** Neumann, K., & Linder K. (2022). Real-time prediction of science student learning outcomes using machine learning classification of hemodynamics during virtual reality and online learning sessions. *Computers and Education: Artificial Intelligence*. 3, 1-12 | 57 |
|  |  |
| **Lamb, R**., Crowe, A., Stone, J., Annetta, L., Zambone, A., & Owens, T. (2022). Virtual reality enhanced dialectical behavioural therapy. *British Journal of Guidance and Counselling.* 1-22. doi: [10.1080/03069885.2022.2040006](https://doi.org/10.1080/03069885.2022.2040006) | 56 |
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| **Lamb, R.,** Fortus, D. Sadler, T., Neuman, 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(*1*), 15-31. | 55 |
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| Crowe, A., **Lamb, R.,** Avent Harris, J., Crumb, L., & Santos Dietz, S. (2022). The impact of a counseling techniques course on self-efficacy and stigma. *Teaching and Supervision in Counseling*.4(*1*), 1-11. | 54 |
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| Kavner, A., **Lamb, R.,** Antonenko, P., & Koh., D. (2021). Assessing Visual Science Literacy Using Functional Near-Infrared Spectroscopy with an Artificial Neural Network. *Journal of Science Education and Technology*. | 53 |
|  |  |
| Bressler, D., Annetta, L., Dunekack, D., **Lamb, R**., & Vallett, D. (2021). What’s in their words? How STEM game design participants discuss their projects, motivation, and success differently. *Educational Innovation and Emerging Technologies* (EIET). 1(*1*), 1-22. | 52 |
|  |  |
| **Lamb, R.,** Hoston, D., & Lin, J. (2021). Psychological allostatic load: The cost of persistence in STEM disciplines. *Research in Science Education.* 1-20. | 51 |
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| **Lamb, R.,** Miller, D., Firestone, J., Raimondi, S., & Etopio, E. (2021). Fetal alcohol spectrum disorder and cognitive function in children a meta-analysis and computational model. *International Journal of Psychology and Neuroscience.* 6(*3*), 82-117. | 50 |
|  |  |
| **Lamb, R.**, Hand, B., & Kavner A. (2020). Computational modeling of the effects of the Science Writing Heuristic on student critical thinking in science using machine learning. *Journal of Science Educational Technology: Special Issue.* | 49 |
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| **Lamb, R.** & Etopio, E. (2020). Virtual Reality: A tool for preservice science teachers to put theory into practice. *Journal of Science Education and Technology*. 29*(5),* 573-585. | 48 |
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| **Lamb, R.,** Lin, J. & Firestone, J. (2020). Virtual reality laboratories: A way forward for schools?*Eurasia Journal of Mathematics Science and Technology*. 16(*6*) em1856. | 47 |
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| Ebnali, M., **Lamb, R.**, & Fathi, R., (2020). Familiarization tours for first-time users of highly automated cars: Comparing the effects of virtual environments with different levels of interaction fidelity. *Applied Ergonomics* 1-15. | 46 |
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| **Lamb, R.** & Etopio, E. (2019). Virtual reality simulations and writing: A neuroimaging study in science education. *Journal of Science Education and Technology* 28*(5)* 542-552. | 45 |
|  |  |
| **Lamb, R.,** Etopio, E. Hand, B., & Yoon, S. (2019) Virtual reality simulation: Effects on academic performance within two domains of writing in science. *Journal of Science Education and Technology* 28*(4)* 371-381. | 44 |
|  |  |
| Ardasheva, Y., Newcomer, S., Firestone, J., & **Lamb, R.** (2019). Contributions of language specific and metacognitive skills to science reading comprehension of middle school English learners. *Bilingual Research Journal* 42*(2)* 150-163*.* | 43 |
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| **Lamb, R.**, & Etopio, E. (2019). Preservice science teacher preparation using virtual reality.*Proceeding for the Society for Information Technology and Teacher Education 2019* 162-167. | 42 |
|  |  |
| Staus, N., Lesseig, K., **Lamb, R.,** Falk, J., & Dierking, L. (2019). Validation of a Measure of STEM Interest for Adolescents. *International Journal of Science and Mathematics Education* 18**,** 279-293. | 41 |
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| **Lamb, R.** (2019). Successful use of a novel artificial neural network to computationally model cognitive processes in high school students learning science. *Computer Review Journal.* 3, 425- 435. | 40 |
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| **Lamb, R.,** Firestone, J.B., Schmitter-Edgecombe, M., & Akmal, T., & Vallett, D. (2019). A computational model of student cognitive process while solving critical thinking problems in science. *Journal of Educational Research,* 112, 243-254. | 39 |
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| **Lamb, R.,** Miller, D., Lambi, R.E., Akmal, T., & Hsaio, Y. (2019). Meta-analytic Examination of the Picture Exchange Communication System with Moderators. *British Journal of Special Education. 45*(4) 454-472. | 38 |
|  |  |
| Jiai, S., Kohi, D., Secciai, A., Antonenko, P., **Lamb, R.**, Keil, A., Schneps,M., & Poplun, M. (2019). Biometric Recognition through Eye Movements using a Recurrent Neural Network. *IEEE Big Knowledge.* | 37 |
|  |  |
| Vallett, D., **Lamb, R.**, & Annetta, L. (2018). After-School and informal STEM projects: the effects of participant self-selection. *Journal of Science Education and Technology* 25*(1)*1-15. | 36 |
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| **Lamb, R.** Antonenko, P., Etopio, E., & Secciai, A. (2018). Comparison of virtual reality and hands on activities in science education via functional near infrared spectroscopy. *Computers & Education. 124* 14-26. | 35 |
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| **Lamb, R.**, & Firestone, J.B. (2018). Science teacher education as a way forward for medical schools: A case for medical pedagogical content knowledge. *Journal of Science Teacher Education. 29*(3) 173-178. | 34 |
|  |  |
| **Lamb, R.**, Etopio, E., & Lambi, R.E. (2018) Virtual reality play therapy. *International Journal of Play Therapy*. *13*(1), 22-25. | 33 |
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| Premoi, J., **Lamb, R.**, and Cavagnetto, A. (2018). Conditional Cooperation: Prosociality, Enforcement, and Benefit in the Classroom Environment. *Learning Environments Research*. *21*(2) 229-244. | 32 |
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| **Lamb, R.,** Annetta, L., Firestone, J., & Etopio, E. (2018). Serious Educational Games, Serious Games, and Simulations in the Science Classroom A meta-analysis. *Computers and Human Behavior, 80* 158-167. | 31 |
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| Schmitter-Edgecombe, M., **Lamb, R**., McAlisteri, C., Voii, T., & Robertsoni, K., (2017). Development and psychometric properties of the Healthy Brain Aging Engagement Questionnaire Scale (HBAAE). *Aging and Mental Health*. 1-9. | 30 |
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| **Lamb, R.,** Annetta, L., Hostoni, D., Shapiroi, M., & Matthewsi, B. (2017). Examining human behavior in video games: The development of a computational model to measure aggression. *Journal of Social Neuroscience. 13*(3) 301-317. | 29 |
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| **Lamb, R.,** Hand, B., & Yoon, S. (2017). Examinations of cognitive processing of science writing tasks. *Journal of Psychology and Brain Studies 1*(1:3), 1-5. | 28 |
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| **Lamb, R.,** Annetta, L., Vallett, D.B., Firestone, J. B, Schmitter- Edgecombe, M., Matthewsi, B., & Walkeri, H, Devillieri, N., & Hostoni, D. (2017). Psychosocial factors impacting STEM career selection in Computer Science and Engineering. *Journal of Educational Research*. *111*(4) 446- 458. | 27 |
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| **Lamb, R**. & Firestone, J.B. (2017). The application of multiobjective evolutionary algorithms to an educational computational model of science information processing: A computational experiment in science education. *International Journal of Science and Mathematics Education 15*(3), 473-486*.* | 26 |
|  |  |
| Premoi, J. Cavagnetto, A., and **Lamb, R**. (2017). The cooperative Classroom Environment Measure (CCEM): Integrating Environmental Perceptions into Student Prosocial Assessment. *International Journal of Science and Mathematics Education*, 16(4), 677-697. | 25 |
|  |  |
| **Lamb, R.**, Firestone, J., & Ardasheva, Y (2016). Modeling of social pressure in rapid attitudinal formation concerning immigrants and immigration, *Computers and Human Behavior* 63, 179- 188. | 24 |
|  |  |
| Ardasheva, Y., Newcomer, S., Firestone, J., & **Lamb, R.,** (2016)**.** Mediation in the Relationship among EL Status, Vocabulary, and Science Reading Comprehension, *Journal of Educational Research 110*(6), 685-674*.* | 23 |
|  |  |
| McAlister, C**i**, Schmitter-Edgecombe M., & **Lamb, R.** (2016). Cognitive correlates of everyday functioning in individuals with mild cognitive impairment: A meta-analysis. *Archives of Clinical Neuropsychology*, acv089. | 22 |
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| **Lamb, R.** (2016). Examination of the effects of dimensionality on cognitive processing in science: A computational modeling experiment comparing Online Laboratory Simulations and Serious Educational Games. *Journal of Science Education and Technology* 25*(1)*1-15. | 21 |
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| McMahon, D., Wright, R., Cihak, D.F., Moore, T.C., & **Lamb, R.,** (2015). Podcasts on Mobile Devices as a Read Aloud Testing Accommodation in Secondary Science Assessment. *Journal Science Education and Technology*. *25*(2) 1-11. | 20 |
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| **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 Educational Psychology 13*(2), 219-242 doi:10.14204/ejrep.36.14110. | 19 |
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| **Lamb, R.** & Premoi, J (2015). Computational modeling of teaching and learning through application of evolutionary algorithms. *Neural Computation: Special Issue Computational Progress in Cognitive Science and Synthetic Intelligence, 3*(3), 427-443 doi:10.3390/computation3030427. | 18 |
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| **Lamb, R**. Akmal, T. & Petriei, K. (2015). Development of a cognition-priming model of STEM learning, *Journal of Research in Science Teaching, 52*(3), 410-437. | 17 |
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| Vallett, D., Annetta, L., **Lamb, R.,** & Bowlingi B. (2014). Diffusing innovations: Adoption of SEGs by K-12 science teachers, *Contemporary Issues in Technology and Teacher Education, 14*(3), *247-265.* | 16 |
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| Schmitter-Edgecombe, M., Parsey**i**, C., & **Lamb R.** (2014). Scale development and psychometric properties of the instrumental activities of daily living – compensation scale (IADL-C), *Archives of Clinical Neuropsychology,* acu053. | 15 |
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| **Lamb, R**., & Cavagnetto, A., & Akmal, T. (2014). Examination of the nonlinear dynamic systems of science student cognition while engaging in science information processing, *International Journal of Science and Mathematics Education*. 1573-1774. | 14 |
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| **Lamb, R.**, Vallett, D., Akmal, T., & Baldwin, K. (2014). Computational modeling of student cognitive process in science education, *Computers & Education*, 79, 116-125. | 13 |
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| 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). | 12 |
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| **Lamb, R.** (2014). Examination of allostasis and online laboratory simulations in a middle school science classroom, *Computers and Human Behavior,* 39, 224-234. | 11 |
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| Annetta, L.A., **Lamb, R.,** Minogue, J., Folta, E., Holmes, S., Y., Vallett, D. & Chengi, R. (2014). Safe science classrooms: Teacher training through serious educational games. *Information Sciences* 264, 61-74*.* | 10 |
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| **Lamb, R**., Annetta, L., Vallett, D. & Chengi, R. (2014). Development of a short-form measure of Self-Efficacy in Science and Technology, *Journal of Science Education and Technology, 23*(5), 641-657. | 9 |
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| Vallett, D.B., **Lamb, R**., & Annetta, L. (2013). The gorilla in the room: Inattention blindness, video games and education. *Computers in Human Behavior, 29*(6), 2183-2187. | 8 |
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| **Lamb, R**., Vallett, D., Chengi, R. & Peterman, K. (2013). Addressing the STEM pipeline through serious educational game design and development. In R. McBride & M. Searson (Eds.), *Journal of Technology and Teacher Education*: *Association for the Advancement of Computing in Education* (AACE) 2887-2892.Retrieved https://[www.editlib.org/noaccess/48530/.](http://www.editlib.org/noaccess/48530/) | 7 |
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| **Lamb R.** and Annetta L*.* (2013). The use of online modules and the effect on student outcomes in a high school chemistry class, *Journal of Science Education and Technology 22,*603-613. | 6 |
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| Annetta, L.A., Frazier, W.M, Folta, E., Holmes, S., Y., **Lamb, R**., & Cheng, M.T. (2013). Science teacher efficacy and extrinsic factors 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. | 5 |
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| **Lamb, R**., Annetta L**,** Meldrum, J. & Vallett, D.B., (2012). Measuring science interest: Rasch validation of the science interest survey. *International Journal of Science and Mathematics Education,* 10(3), 643-668. | 4 |
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| Peters-Burton, E., Frazier, W., Annetta, L., **Lamb, R**., Cheng, R., & Chmiel, M. (2011). Modeling augmented reality games with preservice elementary and secondary teachers. *Journal of Technology and Teacher Education*, 19(3), 303-329. | 3 |
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| **Lamb, R**. & Annetta L. (2010). Influences of gender on computer simulation outcomes. *Meridian Journal*, 13(*1*). | 2 |
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| **Lamb R.** & Annetta L. (2009). A Pilot Study of online simulations and problem-based learning in a chemistry classroom*, Journal of the Virginia Science Educator,* 3*(*2*).* | 1 |
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| **Invited Publications** |  |
| **Lamb, R.** (2024). The case for the use of neurological data in the evaluation and tuning of summarized test. Department of Defense, National Security Agency. Report No. 022720241432*Department of Defense.* | 8 |
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| **Lamb, R.** (2023). Reassessment of stereotypic behavior in children with autism: A function bases assessment. *Clinical Report*, Wake County Public Schools. Report No. 112820231155. | 7 |
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| **Lamb, R.,** & Kavner, A. (2023). Use of peripheral eye tracking to improve military pilot performance. Department of the Navy, United States Navy. Report No. 080320231119. *Department of Defense.*  | 6 |
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| **Lamb, R.,** & Hoston, D. (2022). Effects of sustained persistence on underrepresented students in STEM disciplines. *Research in Brief*, 1(*1*), 1-5. | 5 |
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| Ebnalii, M., Fathi, R., **Lamb, R.,** Pourfalatoun, S., & Motamedi, S. (2020). Using augmented holographic Uls to communicate automation reliability in partially automated driving. *Proceedings of Computer Science, Information Systems, and Information Technology Central Europe (CEUR)*: *Automation Experience across Domains.* | 4 |
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| Hostoni, D**.** & **Lamb, R**. (2019). Too stressed for academic success. *Public Health Post.* | 3 |
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| **Lamb, R.** (2019). Video games and violence a continuing discussion. *Public Health Post*. | 2 |
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| **Lamb, R.**, Annetta, L, & Hostoni, D. (2017**).** Virtual reality a means to promote STEM discipline selection and perseverance. *Nature: Science of Learning.* | 1 |
|  |  |
| **Other Publications: Non-Refereed Articles and Reports** |  |
| **Lamb, R.** (2022). National Science Foundation External Evaluation, TEaMS-UR Grant, East Caroling University, Greenville, North Carolina. | 20 |
|  |  |
| **Lamb, R.** Wallio, S., & Demott, B.i (2022). Internal Evaluation Report: Project THRIVE, East Carolina University, Greenville, North Carolina. | 19 |
|  |  |
| **Lamb, R.** Wallio, S., & Demott, B.i (2021). Advocated and Allies Summary Report: Project THRIVE, East Carolina University, Greenville, North Carolina. | 18 |
|  |  |
| **Lamb, R.** (2021). National Science Foundation External Evaluation, TEaMS-UR Grant, East Caroling University, Greenville, North Carolina. | 17 |
|  |  |
| **Lamb, R.** (2015). Evaluation of program outcomes Educational Leadership, Sports Studies, and Educational / Counseling Psychology, Washington State University College of Education, Pullman, Washington. | 16 |
|  |  |
| **Lamb, R.** (2012). Evaluation of outcomes for the National Science Foundation grant funded project: GRADUATE, Spotsylvania County Public Schools, Virginia. | 15 |
|  |  |
| **Lamb, R**. (2011). Evaluation of STEM outcomes for the District of Columbia Public Schools Catalysis project, Washington, District of Columbia. | 14 |
|  |  |
| **Lamb, R.** & Akmal, T. (2014). Analysis of edTPA Data Presentation Secondary and Elementary Level, Washington State University: Pullman, Washington. | 13 |
|  |  |
| Iselin, A. R., **Lamb, R.,** & Sandoval, J. (2009). Levenson Psychopathy Inventory (C13BK1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/). | 12 |
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| **Lamb, R.** (2010). Employment Report Form (C11AV1 & C12AV1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/). | 11 |
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| **Lamb, R.** (2010). Income and Employment Survey (C13BF1 - C15BF1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) **(3 Reports)** | 10 |
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| **Lamb, R.** (2010). Brief Symptoms Inventory (C14BJ1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/). | 9 |
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| **Lamb, R.** (2010). Brief Symptoms Inventory (P13AL1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) | 8 |
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| **Lamb, R.** (2010). Education-Grade 12 and Beyond (C13BG1 - C15BG1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) **(3 Reports)** | 7 |
|  |  |
| **Lamb, R.** (2010). Social Health-Fall (T13A1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) | 6 |
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| **Lamb, R.** (2010). Questions Regarding Driving (C13AX1 & C14AX1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) | 5 |
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| **Lamb, R.** (2010). Romantic Relationship Questionnaire (C9AB1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/). | 4 |
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| **Lamb, R.** (2010). Romantic Relationship Questionnaire (C10AB1 - C12AB1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) **(3 Reports)** | 3 |
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| **Lamb, R.** (2010). Romantic Partner Drug Use and Other Behaviors (C14BP1 & C15BP1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/). | 2 |
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| **Lamb, R.** (2010). Tobacco, Alcohol and Drug Survey (TAD8SC1 - TAD13SC1). Duke University, Durham North Carolina: FASTTRACK Project. [http://www.fasttrackproject.org](http://www.fasttrackproject.org/) **(5 Reports)** | 1 |
|  |  |
| **Referred Book Reviews** |  |
| **Lamb, R.** (2022). Applying Artificial Intelligence in STEM Assessments. *Oxford University Press* | 6 |
|  |  |
| **Lamb, R.** (2021). Implementation of STEM-Education: Practical Experience of the National Center: Junior Academy of Science of Ukraine. *Ukrainian Academy of Science.* | 5 |
|  |  |
| **Lamb, R.** (2018). Book Review. Early Childhood and Elementary Science Methods. *Routledge.* | 4 |
|  |  |
| **Lamb R.** and Annetta L. (2011). Book Review. Leading School Turnaround: How Successful Leaders transform Low Performing Schools. *Southeast Review* http://southeastreview.org/. | 3 |
|  |  |
| **Lamb R.** and Annetta L. (2010). Book Review. The Formation of Scholars, Rethinking Doctoral Education for the Twenty-First Century. *Education Review, a Journal of Book Reviews*, [http://edrev.asu.edu](http://edrev.asu.edu/)/. | 2 |
|  |  |
| **Lamb R.** (2009). Book Review. Repair Kit for Broken Grades, 15 Fixes, *Education Review, a Journal of Book Reviews.* <http://edrev.asu.edu/>. | 1 |
|  |  |
| **Non-Refereed Electronic Publication** |  |
| **Lamb, R.** (2016). The reality of virtual reality. *GSEngage* https://ubwp.buffalo.edu/gsengage/2016/09/16/the-reality-of-virtual-reality/ | 1 |
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| **GRANTS Total: $5,744,005** |  |
| **Funded National or International:** $4,846,226 |  |
| **PI: Lamb, R.** *Neurological and sensor-based examination of text summarization produced through artificially intelligent systems.* National Security Agency Laboratory for Analytic Sciences, $55,000. | 2024 to 2025 |
|  |  |
| **PI Lamb, R.** *Application of neurocognitive data to evaluate tailored automatically produces text summaries*. National Security Agency Laboratory for Analytic Sciences, $130,000. | 2024 to 2025 |
| **PI: Lamb, R.** *Human computer interaction using* n*eurological analysis of automated text summarization using artificial intelligence and machine learning.* National Security Agency Laboratory for Analytic Sciences, $55,000. | 2023 to 2024 |
|  |  |
| **PI: Lamb, R.** *Trauma treatment through applications of virtual reality and biofeedback*. HIA Technologies. International Competition, $50,0000. | 2023 to 2025 |
|  |  |
| **PI: Lamb, R.** *Development and classification of psychological state from heart rate variability, galvanic skin response, and pupillary response.* AscendantVR. International Competition, $25,0000. | 2023 to 2024 |
|  |  |
| **Senior Personnel and Internal Evaluator:** *Mitchelson, R., Myers, K., Chambers, C., George, S., Roper, R., Wallio, S., &* ***Lamb, R.*** *ADVANCE Adaption: THRIVE at East Carolina University (ECU): Towards Hiring, Resources, Inclusion, Value, and Excellence*, Division of Undergraduate Education National Science Foundation, $999,074. | 2020 to 2023 |
|  |  |
| **Senior Personnel and Internal Evaluator:** Walker, J., Vance-Chalcraft, Moysey, S., Farwell, M., Sylott, B, & **Lamb, R**. *Team Experiences and Mentoring Strategies for Undergraduate Research*. Division of Undergraduate Education National Science Foundation, $1,632,581. | 2020 to 2024 |
|  |  |
| **PI: Lamb, R**., Lamb, R.E., & Firestone, J. *SpED Data Aggregator* NSF I- CORPS Program. $3000. | 2020 to 2021 |
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| **Co-PI:** Shanahan, L., Yerrick, R., & **Lamb, R.** *Catholic Health Community Benefit Grant Award,* Catholic Health Foundation. *$60,000.* | 2017 to 2020 |
|  |  |
| **PI: Lamb, R**., & Firestone, J. *Self-Monitoring Autonomously Responsive Technologies (SMART), Stubblefield Grant* Stubblefield Foundation, *$5,000.* | 2016 to 2017 |
|  |  |
| **Co-PI:** Antonenko, P., **Lamb, R**., Schneps, M., Pomplun, M., Keil, A., Dawson, K., & Beal, C. *Science of Learning-Cognitive Neuroscience: Project LENS: Leveraging expertise in Neurotechnologies to Study Individual Differences in Multimedia Learning,* Science of Learning National Science Foundation Grant, *$750,000.* | 2016 to 2019 |
|  |  |
| **Co-PI**: Katz, J., Benavides-Vaello, S., Paul, R., Odom-Maryon, T., & **Lamb, R.** *Health Resources and Services Administration (HRSA) Nursing Workforce Diversity,* United States Health and Human Services, *$1,041,571.* | 2013 to 2016 |
|  |  |
| **Co-PI:** Adesope, O., **Lamb, R.,** Rud, A., Egbert, J. Maximizing the Affordances of Contemporary Technologies in Education (MATE), American Educational Research Association (AERA), *$35,000.00*. | 2014 to 2016 |
|  |  |
| **Co-PI**: Egbert, J., Barrio, B., **Lamb, R**., & Skavdahl, *Apply Educational Technology to Teaching and Learning,* Stubblefield Foundation,$5000. | 2014 to 2015 |
|  |  |
| **Funded State and Local:** $897,779 |  |
| **PI: Lamb, R.** *Development of technologies, artificial intelligence and machine learning technologies to assist in the translation of science education to medical education.* State of Georgia, $735,000. | 2024-2026 |
|  |  |
| **PI: Lamb, R.** *Combination applied behavior analysis and cognitive behavioral therapy intervention development for children with autism.* Parent and family development grant, $2000. | 2024-2025 |
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| **PI: Lamb, R.,** Crowe, A., & Owens, T. *Digital Mental Health and Behavior Development,* University of North Carolina System, $10,000. | 2022 to 2023 |
|  |  |
| **Co-PI:** Kearney, E., **Lamb, R.**, & Etopio, E. *Envision Teaching: Developing Perception and Pedagogical Abilities in Pre-Service Teachers through Virtual Reality.* TeachNY Implementation Fund: Teaching and Learning through Laboratories and Technologies, $50,000. | 2018 to 2021 |
|  |  |
| **PI: Lamb, R.,** & Etopio, B., *Teacher education using immersive virtual reality environments.* Innovative Instruction Technology Grant (IITG) Phase II, $20,000. | 2018 to 2019 |
|  |  |
| **Co-PI**: Ardasheva, Y., Firestone, J., & **Lamb, R.,** *Contextual Factors for English Language Learners Science Vocabulary,* State of Washington, $8779.  | 2015 to 2016 |
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| **PI: Lamb, R.,** Erdman, P., & McMahon, D., *Educational Neuropsychology Laboratory.* Department of Teaching and Learning, State of Washington, $3000. | 2015 to 2016 |
|  |  |
| **Co-PI:** Skavdahl, S., **Lamb, R.**, Barrio, B., Egbert, J., *@RISC*, State of Washington, $9000. | 2014 to 2015 |
|  |  |
| **Co-PI**: Ardasheva, Y., Firestone, J., & **Lamb, R**. *English Language Learners Science Vocabulary*. State of Washington, $9000. | 2014 to 2015 |
|  |  |
| **PI: Lamb, R.,** Schmitter-Edgecombe, M., & Annetta, L., *MERCI Model Validation,* State of Washington, $30,000. | 2014 to 2015 |
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| **PI: Lamb, R.,** Schmitter-Edgecombe, M., & Annetta, L., *MERCI Model Validation,* State of Washington, $9,000. | 2013 to 2014 |
|  |  |
| **Co-PI:** Egbert, J., Barrio, B., **Lamb, R.,** & Skavdahl, S. *Helping teachers create research-rich, student-centered flipped learning: Focus on video production,* Washington State University, $3,000. | 2013 to 2014 |
|  |  |
| **Co-PI:** Egbert, J., Barrio, B., **Lamb, R.,** & Skavdahl, S. *Helping teachers create research-rich, student-centered flipped learning: Focus on video production,* Washington State University, $3,000. | 2013 to 2014 |
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| **PI: Lamb, R.** & Akmal, T. *IERA Rubric Design,* Washington State University, $3,000. | 2013 to 2014 |
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| **Co-PI**: Egbert, J., Barrio, B., **Lamb, R.,** & Skavdahl, S. *Provost’s e-learning projects,* Washington State University, $3,000. | 2013 to 2014 |
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| **Grant Submissions Last 3-Years:** |  |
| **PI: Lamb, R.,** & Choi, I. Emerging Sensor Data Technologies for Everyday Examination of STEM Classrooms: Leveraging Secure Big-Data Platforms for Machine Learning-Driven Adaptive Learning. $50,000. National Science Foundation ECR- HER Core Research, 2023-2024. (Pending) | 2022 |
|  |  |
| **PI:** No. 2300900-**Lamb, R.** & Hand, B. Examining the Critical Role of Knowledge Base Use in Writing to Learn Approaches. $983,812. National Science Foundation ECR-HER Core Research, 2023-2026. (Pending) | 2022 |
|  |  |
| **PI:** No. 2300623-**Lamb, R.,** Neumann, K., & Owens, T. Inter-Brain Coupling to Understand Teacher-Student Dyadic Conversational Coordination in the Science Classroom. $499,366. National Science Foundation ECR-HER Core Research, 2023-2026. (Pending) | 2022 |
|  |  |
| **PI:** No:22-0046 – **Lamb, R.,** Owens, T., Crowe, A., & Annetta, L. EVRSTSR: Effects of Virtual Reality on Students' Socioemotional Wellbeing (EVRSW). DoED Institute of Education Sciences (IES): $1,986,200 (Not Funded) | 2021 |
|  |  |
| **PI:** No. 2201443- Lamb, R. Neural Coupling to Understand Student-Teacher Talk Interactions. $499,302 National Science Foundation ECR-HER Core Research, 2021-2024. (Not Funded). | 2021 |
|  |  |
| **PI:** No. 2201444- **Lamb, R.,** Antonenko, P., & Hand, B. Examining the Critical Role of Long-Term-Memory in Writing to learn Approaches. $1,459,228. National Science Foundation ECR-HER Core Research, 2021-2024. (Not Funded). | 2021 |
|  |  |
| **Co-PI:** Nelson, G., Fenwick, M., **Lamb, R.,** Annetta, L., & Young, S. Project ADAPT. $250,000. Department of Defense Small Business Technology Transfer (STTR), 2021-2024. (Not Funded). | 2021 |
|  |  |
| **PI: Lamb, R**., Hoston, D., & Novak, A. Identify the Effects of Latent Stress and Cumulative Trauma on Successful Black Students in STEM Disciplines. $272,823. William T. Grant Foundation, 2021-2025. (Not Funded). | 2021 |
|  |  |
| **Co-PI:** No. 2117644 - Annetta, L., Holder, A., **Lamb, R.,** Lee, T., & Bressler, D. Scaffolding that Adapts within Mixed reality for Uneasy Readers using Artificial Intelligence (SAMURAI), $849,995. National Science Foundation Cyberlearning and Future Learning Technologies. 2022-2025. (Not Funded). | 2021 |

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| **PRESENTATIONS** |  |
| **Keynote Addresses** |  |
| **Lamb, R.,** (2023). Linking machine learning, artificial intelligence and biokinetics to assess student learning outcomes in adaptive testing environments. Keynote address 10th Annual Shareholders Meeting for Quantum Interface. Austin, TX. | 17 |
|  |  |
| **Lamb, R.** (2023). Applications of artificial intelligence, machine learning, and digital environments for assessment of student learning. Keynote address for the 3rd International Symposium on Educational Research (ERL2023). Riyadh, Saudi Arabia. | 16 |
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| **Lamb, R.** (2023). Application of machine learning classifications of neurocognitive data for prediction of student behaviors in online learning systems. Keynote address for the 5th IEEE International Conference on Knowledge, Innovation, and Invention. National Dong Hwa University, Hualien, Taiwan. | 15 |
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| **Lamb, R.** (2023). Regional rural economic development; Neurocognitive assessment and digital transformation as a driver. Keynote address for the Rotary Club of eastern North Carolina, Greenville, NC. | 14 |
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| **Lamb, R.** (2022). Neurocognitive and machine learning techniques to understand product and process data in STEM education research. Keynote address for the University of Southern Mississippi’s STEMed Speaker Series. University of Southern Mississippi, Hattiesburg, MS. | 13 |
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| **Lamb, R.** (2022). Neurocognitive research applications for understanding early childhood development and learning. Keynote address for the International Conference on Brain Science and Early Childhood Development. Nanjing Xiaozhuang University, Nanjing, China. | 12 |
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| **Lamb, R.** (2021). Discussion of cross-disciplinary approaches for understanding education. Keynote address for Wake County Public Schools, Apex, NC. | 11 |
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| **Lamb, R.** (2020). Virtual reality for the training and development of law enforcement personal for crisis response, Keynote address for Regional Law Enforcement Training Academy, Schenectady, NY. **(Online due to COVID-19 pandemic).** | 10 |
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| **Lamb, R.** (2019). Virtual reality as means to promote science writing in the classroom, Keynote address for Chinese Association for the gifted and talented, Xinxiang, China. | 9 |
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| **Lamb, R.** (2019). Innovations with VR: A look at trauma responsiveness, Keynote address for The Newman Center Lecture Series, Buffalo, NY. | 8 |
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| **Lamb, R.** (2019). Capturing learning in virtual spaces, Keynote address for the Light & Sound Interactive, Rochester, NY. | 7 |
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| **Lamb, R.** (2019). The role of educational technology in understanding science literacy. Keynote address for the Alliance for Improving Scientific Literacy International Conference, Beijing, China. | 6 |
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| **Lamb, R.** (2018). Virtual reality as a therapeutic tool for exposure. Keynote address for the Joining Force Colloquium, Buffalo, NY. | 5 |
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| Annetta, L. & **Lamb, R.** (2017). Getting serious about science education: The evolution of serious educational games. Keynote address at the National Science Foundation Virtual Worlds Education Conference (VWE), Melbourne, FL. | 4 |
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| **Lamb, R.** (2017). The relationship between product and process in building scientific literacy. Keynote address at the Korean Association for Science Education International (KASE), Seoul, South Korea. | 3 |
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| **Lamb, R.** (2017). The reality of Virtual Reality. Keynote address at VR Buffalo Showcase, Buffalo, NY. | 2 |
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| **Lamb, R.** (2016). Engaging learners with educational games. Presented at the Kiwanis International Distinguished Speakers Series, Pullman, WA. | 1 |
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| **Peer Reviewed International and National Conferences** |  |
| **Lamb R.,** Owen, T., & Choi, I.(2023). Artificial intelligence, wearable sensors, and their role in assessment and adaptive learning environments. Paper presented at the 3rd International Symposium on Educational Research (ERL2023). Riyadh, Saudi Arabia. **(Awarded Best Research Paper, 3rd International Symposium on Educational Research)** | 109 |
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| **Lamb, R.** (2023). Use of biokinetics to identify the degree of recovery from traumatic brain injury. Paper presented at the United States Army Office of Research, Washington, DC. | 108 |
|  |  |
| **Lamb, R.,** Owens, T., & Choi, I. (2023). Applications of artificial intelligence, machine learning, and digital technologies to the practices of teaching and learning. Paper presented at the Bridging the Gap 2023 Paper presented at the Conference Association for Biomedical Research, Research Triangle Park, NC. | 107 |
|  |  |
| Chambers, C. & **Lamb, R.** (2023). Experiencing discrimination: Replacement theory and faculty perceptions at a southern rural university. Paper presented at the International American Educational Research Associated (AERA) Conference, Chicago, IL. | 106 |
|  |  |
| **Lamb, R.** & Almusharraf, N. (2023). Task cognitive demand in mathematics. Paper presented at the International American Educational Research Associated (AERA) Conference, Chicago, IL. | 105 |
|  |  |
| Walker, J., **Lamb, R.,** & Vance-Chalcraft H. (2023). Measurement of knowledge, attitudes, and skills related to team science in an interdisciplinary CUREs. Paper presented at the International American Educational Research Associated (AERA) Conference, Chicago, IL. | 104 |
|  |  |
| **Lamb, R.,** Hand, B., Suh, J., & Fulmer, G. (2023). Development of epistemic tools using teacher adaptive expertise: A computational model study. Paper presented at the International American Educational Research Associated (AERA) Conference, Chicago, IL. | 103 |
|  |  |
| **Lamb, R.** (2023). Computational models: A means to understand product and process data in science education. Paper presented at the International NARST Conference, Chicago., IL. | 102 |
|  |  |
| Walker, J., **Lamb, R.,** & Vance-Chalcraft H. (2023). Development of a measure of science teams for NSF CUREs. Paper presented at the International NARST Conference, Chicago., IL. | 101 |
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| **Lamb, R.,** Hand, B., Suh, J., & Fulmer, G. (2023). Computational model of teacher adaptive expertise in the development of epistemic tools. Paper presented at the International NARST Conference, Chicago., IL. | 100 |
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| **Lamb, R.,** Neumann, K., & Linder, K., (2023). Machine learning to predict science student outcomes using neurological data. Paper presented at the International NARST Conference, Chicago., IL. | 99 |
|  |  |
| Walker, J., **Lamb, R.,** & Vance-Chalcraft H. (2023). Knowledge, skills, and attitudes related to team science. Paper presented at the International Conference of the Association for Science Teacher Education (ASTE), Salt Lake City, UT. | 98 |
|  |  |
| **Lamb, R.,** Hand, B., Suh, J., Fulmer, G. (2023). Computational model of teacher adaptive expertise in the development of epistemic tools. Paper presented at the International Conference of the Association for Science Teacher Education (ASTE), Salt Lake City, UT. | 97 |
|  |  |
| **Lamb, R.,** Neumann, K., & Linder, Kii. (2022). Analyzing neurocognitive data via machine learning classification to understand science student learning outcomes during online learning sessions. Paper presented at AI Based Assessment in STEM International Conference, National Science Foundation, Athens, GA. | 96 |
|  |  |
| **Lamb, R.**, Lamb, R.E., Lamb, Tii., & Lamb Kii. (2022). Virtual reality, stress, creativity, and preservice science teachers. Paper presented at the International Conference of the Association for Science Teacher Education (ASTE), Greenville, SC. **(Awarded Best Paper, John C. Park National Technology Leadership Initiative Award)** | 95 |
|  |  |
| **Lamb, R.** & Neumann, K. (2022). Real-time prediction of science student learning outcomes using machine learning classification of hemodynamics during online learning sessions. Paper presented at the International Conference of the Association for Science Teacher Education (ASTE), Greenville, SC. | 94 |
|  |  |
| **Lamb, R.,** Fortus, D., Sadler, T., Neumann, K., Kavner, A., Annetta, L., & Hoston D. (2022). Exploration of teacher-student neural coupling occurring during the teaching and learning of science. Paper presented at the International Conference of the Association for Science Teacher Education (ASTE), Greenville, SC. | 93 |
|  |  |
| **Lamb, R.** & Lamb, R.E. (2022). Cognitive and affective factors affecting preservice teachers when using virtual reality. Paper presented at the International Conference of the American Educational Research Association, San Diego, CA. | 92 |
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| **Lamb, R.** & Neumann, K. (2022). Machine learning classification of student learning outcomes used during online learning using functional neuroimaging. Paper presented at the International Conference of the American Educational Research Association, San Diego, CA | 91 |
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| **Lamb, R.,** Fortus, D., Sadler, T., Neumann, K., Kavner, A., Annetta, L., & Hoston, D. (2022). Neural coupling as a measure of teacher-student understanding. Paper presented at the International Conference of the American Educational Research Association, San Diego, CA. | 90 |
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| DeVillier, N., **Lamb, R.**, & Shuyizh, A. (2022). Disproportional Suspension and High School Graduation Rates: A Potential Pedagogical Strategy to Narrow the Gap. Paper presented at the International Conference of the American Educational Research Association, San Diego, CA. | 89 |
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| **Lamb, R.,** Sadler, T., Neumann, K., Fortus, D., Antonenko, P., Kavner, A., & Hostoni, D. (2021). Comparing two Task Analysis Guides in Science: Examination of Cognitive Demand. Paper presented at the International Conference of the American Educational Research Association, Orlando, FL. **(Online due to COVID-19 pandemic)**. | 88 |
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| **Lamb, R.**, Crowe, A., Annette, L., Bressler, D., Owens, T., & Zambone, A. (2021). Virtual Reality to promote socio-emotional wellbeing in high needs urban schools. Paper presented at the International Conference of the American Educational Research Association, Orlando, FL. (**Online due to COVID-19 pandemic**). | 87 |
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| **Lamb, R.**, & Hostoni, D. (2021). The Effects of Persistence, Grit, and Perseverance on Underrepresented Students in STEM Education. Paper presented at the International Conference of the American Educational Research Association, Orlando, FL. **(Online due to COVID-19 pandemic)**. | 86 |
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| **Lamb, R**., Sadler, T., Neumann, K., Fortus, D., Antonenko, P., Kavner, A., & Hostoni, D. (2021). Cognitive Demand and Task Analysis in Science. Paper presented at Annual International Conference of NARST, Orlando, FL. **(Online due to COVID-19 pandemic)**. | 85 |
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| **Lamb, R.**, Hoston, D., Annetta, L., Bressler, D., & Crowe, A. (2021). Persistence, Grit, and Perseverance in STEM Education. Paper presented at the International Conference of Association of Science Teacher Education (ASTE), Salt Lake City, UT. **(Online due to COVID-19 pandemic)**. | 84 |
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| Mazzeye, D., Duffy, M., & **Lamb, R.,** (2020). Self-efficacy for literacy instruction in different models of teacher preparation, including a residency model. Paper presented at Annual International Conference of the American Educational Research Association, San Francisco, CA. **(Online due to COVID-19 pandemic)**. | 83 |
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| **Lamb, R.,** Lin, J., Hand, B., Kavneri, A., & Hostoni, D. (2020). Simulation of argumentative and summary writing in science using virtual reality environments. Paper presented at Annual International Conference of the American Educational Research Association, San Francisco, CA. **(Online due to COVID-19 pandemic)**. | 82 |
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| Lin, J., **Lamb, R.,** Cheng, P., Chen, Y., & Shi, X. (2020). Does STEM education work? A data- driven rethinking of STEM education in China’s basic education. Paper presented at Annual International Conference of NARST, Portland, OR. **(Canceled due to COVID-19 pandemic)**. | 81 |
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| **Lamb, R.,** Lin, J., Hand, B., Kavneri, A., & Hostoni, D. (2020). Textbook and virtual reality as a means to promote scientific writing. Paper presented at Annual International Conference of NARST, Portland, OR. **(Canceled due to COVID-19 pandemic)**. | 80 |
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| **Lamb, R.** (2020). Science learning: Development of student understanding. Administrative symposium: Developing science literacy and the potential for conceptual change. International panel Annual International Conference of NARST, Portland, OR. **(Canceled due to COVID-19 pandemic)**. | 79 |
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| **Lamb, R.** (2020). Virtual reality-based science teacher preparation simulations. Paper presented at the International Society for Information Technology and Teacher Education (SITE), New Orleans, LA. **(Online due to COVID-19 pandemic)**. | 78 |
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| Hostoni, D. & **Lamb, R.** (2020). Physiological examination of allostasis, John Henryism and chronic stress in historically underrepresented post-secondary STEM students. Paper presented at the International Conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 77 |
|  |  |
| **Lamb R.** & Etopio, E., (2020). Measurement of virtual reality-based science teacher preparation simulations. Paper presented at the International Conference of Association of Science Teacher Education (ASTE), San Antonio, TX. **(Awarded Best Paper, John C. Park National Technology Leadership Initiative Award)** | 76 |
|  |  |
| **Lamb, R.,** Firestone, J., and Bodzin, A. (2020). Promoting science writing in the classroom using virtual reality. Symposium presented at the International Conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 75 |
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| **Lamb, R.,** & Kavneri, A. (2019). Application of virtual reality to mitigate the effects of trauma. Paper presented at the meeting of American Psychological Association Technology, Mind, and Society Conference, Washington, DC. | 74 |
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| Kavneri, A. & **Lamb, R.** (2019). Development of an artificial neural network to measure science literacy leveraging neuroscience. Paper presented at the annual meeting of the International Conference of Artificial Intelligence and Education, New York, NY. | 73 |
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| **Lamb, R.** & Etopio, E. (2019). Preservice Science Teacher Preparation Using Virtual Reality. Paper presented at the annual meeting of Society for Information Technology and Teacher Education, Las Vegas, NV. | 72 |
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| Moorei, R. & **Lamb, R.** (2019). Rehumanizing mathematics: Historical and cultural recontextualization. Paper presented at the annual meeting of National Council of Teachers of Mathematics, San Diego, CA. | 71 |
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| Etopio, E., & **Lamb, R.** (2019). Virtual reality a tool for preservice teachers to put theory into practice. Paper presented at the annual meeting of American Association of Colleges for Teacher Education, Louisville, KY. | 70 |
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| Moorei, R. & **Lamb, R.** (2019). Frequency as a proxy for values in secondary mathematics classrooms in Hawai’i. Paper presented at the annual meeting of Hawaii International Conference on Education, Honolulu, HI. | 69 |
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| **Lamb, R.** & Etopio, E. (2018). Virtual environments for teacher training and student engagement. Paper presented at the annual meeting of The International Serious Play Conference, Buffalo, NY. | 68 |
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| Etopio, E., Secciai, A., & **Lamb, R.** (2018). Examination of infant music behaviors during acculturation using function near-infrared spectroscopy: A single case design. Paper presented at the annual meeting of Early Childhood Music and Movement Association (ECMMA), Buffalo, NY. | 67 |
|  |  |
| DeVilleri, N., **Lamb, R.,** Kim, S., & Zhaoi, Y. (2018). Community service and high school graduation: A survival analysis. Paper presented at the annual meeting of American Educational Research Association (AERA), New York, NY. | 66 |
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| **Lamb, R.**, Etopio, E., Annetta, L., Shanahan, L., Lamb, R. E., & Schwab, J. (2018). Clinical experiences using virtual reality to train pre-service science teachers. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 65 |
|  |  |
| Yoon, S., Hand, B., & **Lamb, R.** (2018). College students’ cognitive processes in two writing tasks: Understanding resources and demands for scientific literacy. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 64 |
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| Antonenko, P., Schneps, M., **Lamb, R**., Keil, A., Pomplun, M., Dawson, K., Koh, D., H., Saunders, K., Wang, J., Burgess, A., Cheng, L., Xu, Z., Li, J., Hardy-Pieczarka, K., Okundaye, A. O., Calhoun, C., Stieglitz, K., Miller, S., & Seccia, A. (2018). Sex differences in mental rotation performance using 2D and 3D molecular representations. Paper presented at the 2018 Conference of the American Educational Research Association, New York, NY. **(AERA 2018 Best Paper Award SIG-IT).** | 63 |
|  |  |
| Antonenko, P., Schneps, M., **Lamb, R.,** Keil, A., Pomplun, M., Beal, C., Dawson, K., Koh, D.,H., Saunders, K., Miller, S. Wang, J., Burgess, A., Cheng, L., Xu, Z., Li, J., Hardy-Pieczarka, K., Okundaye, A. O., Calhoun, C., Stieglitz, K. (2018). Cognitive predictors of 2D and 3D molecular model comparison in an authentic Organic Chemistry task. Paper presented at the annual meeting of American Educational Research Association (AERA), New York, NY. | 62 |
|  |  |
| Ardasheva, Y., Firestone, J. B., **Lamb, R.,** & Newcomer, S. N. (2018). Contributions of strategies, self-efficacy, and general and technical vocabulary to science reading comprehension among Paper presented at the annual meeting of American Educational Research Association (AERA), New York, NY. | 61 |
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| **Lamb, R.,** Etopio, E., Lamb, R.E., Annetta, L., Shanahan, L., & Schwab, J. (2018) Virtual reality as means to train preservice teachers. Paper presented at the International Conference of Association of Science Teacher Education (ASTE), Baltimore, MD. | 60 |
|  |  |
| **Lamb, R.** (2017). Functional Near Infrared Spectroscopy and Electroencephalography as a means to understand learning in multimedia and virtual reality-based environments. Paper presented at the MIT/Harvard Learning and the Brain Conference, Boston, MA. | 59 |
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| Wissi, A. & **Lamb, R.** (2017). VR/AR: Challenges of Authentic Context and Emerging Neurocognitive Research Methods. Presented at eduWeb Digital Summit, Virtual Reality and Higher Education Symposium, Boston MA. | 58 |
|  |  |
| **Lamb, R.,** Lambi, R.E., St. George, A. (2017) Functional near infrared spectroscopy as a means to measure cognitive dynamics while engaging with serious educational games and virtual reality. Paper presented at the Serious Play Conference, Manassas, VA. | 57 |
|  |  |
| Firestone, J., **Lamb, R.,** & Hand, B. (2017) Virtual reality simulation and writing complexity: A pilot study. Paper presented at the National Science Foundation Virtual Worlds Education Conference (VWE), Melbourne, FL. | 56 |
| **Lamb, R.,** Annetta, L., & Lambi, R.E. (2017). Cognitive dynamics: Comparison of virtual reality and hands on activities in science education via fNIRS. Paper presented at the National Science Foundation Virtual Worlds Education Conference (VWE), Melbourne, FL | 55 |
|  |  |
| Annetta, L. & **Lamb, R.** (2017). How serious educational game design and development affect creativity on high school students. Paper presented at the East Coast Game Conference, Raleigh, NC. | 54 |
|  |  |
| **Lamb, R**. & Annetta, L. (2017). A neuroimaging study comparing pedagogical approaches in science teaching and learning using virtual reality Based Serious Educational Games. Paper presented at the East Coast Game Conference, Raleigh, NC. | 53 |
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| **Lamb, R.,** Annetta, L., Firestone, J., Antonenko, P., Schmitter-Edgecombe, M., Liu, X., & Liui,R. (2017). Cognitive Demand and Dynamics: Comparison of Virtual and Real Laboratories in Science Education via fNIRs. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST), San Antonio, TX. | 52 |
|  |  |
| Ardasheva, Y., Newcomer, S. N., Firestone, J. B., & **Lamb, R.** (2017). Does Vocabulary Knowledge Mediate the EL Status Effect in Science Reading Comprehension? Roundtable presented at the annual meeting of American Educational Research Association (AERA), San Antonio, TX. | 51 |
|  |  |
| Antonenko, P., Dawson, K., Schneps, M., **Lamb, R.**, Keil, A., Ding, M., & Wan, L. (2017). Using neuroscience methods to study learning: Focus on the process, not just the outcomes. Symposium presented at the annual meeting of American Educational Research Association (AERA), San Antonio, TX. | 50 |
|  |  |
| **Lamb, R.,** Annetta, L., Firestone, J., Liu, X., & Liui, R. (2017). Examination of cognitive demand and cognitive dynamics: A comparison of pedagogical approaches in science teaching and learning using fNIRS. Paper presented at the International Conference of Association of Science Teacher Education (ASTE), Des Moines, IA. | 49 |
|  |  |
| Walkeri, H., Lambi, R.E., Hardardottii, M., **Lamb, R**., & Firestone, J. (2016).Fetal Alcohol Spectrum Disorder and cognitive function in children a meta-analysis and computational model. Paper presented at the Council for Exceptional Children (CEC), Buffalo, NY. | 48 |
|  |  |
| **Lamb, R.,** Hand, B., & Yoon, S., (2016). An exploratory neuroimaging study of argumentative and summary writing. Paper presented at the National Conference on Understanding Knowledge Bases and Learning Environments Conference. Iowa City, IA. | 47 |
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| **Lamb, R.,** Firestone, J. & McManusi, C. (2016). Principles and applications of Functional Near Infrared Spectroscopy. Paper presented at the National Science Foundation Laboratory Collaborative Network. Gainesville, FL & Boston, MA. | 46 |
|  |  |
| Moorei, R., **Lamb, R**., & Carbonneau, K. (2016). Values: Navigating the nepantla of mathematics and culture. Paper presented at the International Group for the Psychology of Mathematics Education (IGPME). Szeged, Hungary. | 45 |
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| Moorei, R., **Lamb, R**., & Carbonneau, K. (2016). Measuring student’s values: What secondary student in Hawai’i value in mathematics learning. Paper presented at the 13th International Congress of Mathematics Education (ICME). Hamburg, Germany. | 44 |
|  |  |
| **Lamb, R.,** Annetta, L., Firestone, J., Vallett, D., & Cunninghamii, R. (2016). Psychosocial factors affecting STEM career selection in computer science and engineering. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST).Baltimore, MD. | 43 |
|  |  |
| Vallett, D., **Lamb, R**., Annetta, L., & Shapiroi, M. (2016). Intersection of creativity and the design process in SEG design-based research. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Baltimore, MD. | 42 |
|  |  |
| Ardasheva, Y., Firestone, J. B., **Lamb, R.**, & Newcomer, S. (2016). Contributions of strategies, self-efficacy, and general and technical vocabulary to science reading comprehension among ELs. Roundtable presentation accepted for the annual meeting of the American Educational Research Association (AERA), Washington, DC. | 41 |
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| **Lamb, R.,** Annetta, L., Firestone, J., Vallett, D., Shapiroi, M., & Matthewsi, B. (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 International Conference of Association of Science Teacher Education (ASTE), Reno, NV. | 40 |
|  |  |
| McManusi, C., **Lamb, R.**, Firestone, J., & Pooleri, S. (2016). Gender bases student experiences in STEM leaning in high school science. Paper presented at the National Science Teacher Association (NSTA), Portland, OR. | 39 |
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| **Lamb, R.** (2015). Computational models as a means to examine complex systems of interactions in a science classroom. Paper presented at the International Argument Based Inquire Conference. Spokane, WA. | 38 |
|  |  |
| Schmitter-Edgecombe, M., & **Lamb, R.** (2015). Individual assessment of daily living skills: a tool for identifying and classifying older adults with mild cognitive impairment. Paper presented at the Science and Engineering Business Association Conference. Seattle, WA. | 37 |
|  |  |
| **Lamb, R.** (2015). Gaming measurement. Paper presented at the International Serious Play Conference. Pittsburgh, PA. | 36 |
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| **Lamb, R.,** Lambi, R.E.**,** & Petriei, K. (2015). STEM program characteristics in an elementary school. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Chicago, IL. | 35 |
|  |  |
| **Lamb, R.,** Vallett, D., Annetta, L., Petriei, K., Chengi, R., Shapiroi, M., & Matthewsi, B. (2015). Examination of latent class profiles transition analysis of K-12 student’s STEM career selection moderated via Serious Educational Games. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Chicago, IL. | 34 |
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| Vallett, D., **Lamb, R**., Annetta, L., Chengi, R. Shapiroi, M., & Matthewsi, B. (2015). The influences of Series Educational Game design on student interest in STEM. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST), Chicago, IL. | 33 |
|  |  |
| Vallett, D., **Lamb, R**., Annetta, L., & Chengi, R. (2015). Effects of serious educational game design process on student content knowledge and interest. Paper presented at the National conference of Association of Science Teacher Education (ASTE), Portland, OR. | 32 |
|  |  |
| Lambi, R.E., **Lamb, R**., & Petrie**i**, K. (2015) Exploration of an elementary STEM program. Paper presented at the National conference of Association of Science Teacher Education (ASTE), Portland, OR. | 31 |
|  |  |
| Petriei, K., **Lamb, R**., Vallett, D., Annetta, L., Cheng**i**, R., Shapiro**i**, M., Matthews**i**, B. (2015). Examination of individual differences and moderators of science content and 21st Century Skill acquisition. Paper presented at the National conference of Association of Science Teacher Education (ASTE), Portland, OR. | 30 |
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| **Lamb, R.** Vallett, D., Annetta, L., Petrie**i**, K., Cheng**i**, R., Shapiro**i**, M., Matthews**i**, B. (2015). Latent class profile transition analysis of student STEM career selection using Serious Educational Games. Paper presented at the National conference of Association of Science Teacher Education (ASTE), Portland, OR. | 29 |
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| Egbert, J., & **Lamb, R**. (2014). Engaging learners with educational games across the disciplines. Paper presented at the National Technology-Enhanced Curricula in Higher Education (Tech-Ed), Pullman, WA. | 28 |
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| **Lamb, R.** (2014). TEDxWSU Presentation: Video games and the future. Presented at the 1st Annual TEDx Conference. Pullman, WA. | 27 |
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| Vallett, D., **Lamb, R**., Annetta, L., Chengi, R., & Peterman, K. (2014). After-School and Informal STEM Projects: Self-Selecting or Self-Defeating? Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Pittsburgh, PA. | 26 |
|  |  |
| Annetta, L., **Lamb, R**., Vallett, D., & Chengi, R. (2014). Changes in High School Science Student Affect Through Serious Educational Game Design and Development. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Pittsburgh, PA. | 25 |
|  |  |
| **Lamb, R**., Vallett, D., & Annetta, L., (2014). Assessment of student 21st Century Skills using science based Serious Educational Games. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST). Pittsburgh, PA. | 24 |
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| Vallett, D., **Lamb, R**., Annetta, L., & Peterman, K. (2014). After school and informal STEM projects: Self-selecting or self-defeating? Presented at the National conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 23 |
|  |  |
| Annetta, L. **Lamb, R**., & Vallett, D. (2014). Improving science affect through Serious Educational Game Design, Presented at the National conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 22 |
| **Lamb, R.,** Vallett, D., & Annetta, L. (2014). Assessment of student 21st Century Skills using Serious Educational Games in the science classroom, Presented at the National conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 21 |
|  |  |
| Annetta, L, Vallett, D., **Lamb, R**., Chengi, R., & Peterman, K. (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. | 20 |
|  |  |
| Annetta, L**.,** Valletta, D., **Lamb, R**. & Chengi, R. (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. | 19 |
|  |  |
| **Lamb, R.** Annetta, L. & Vallett, D. (2013). Interface of creativity, fluency and technology using the design of science serious educational games, Presented at the International Conference of National Association for Research in Science Teaching 2013 (NARST). San Juan, Puerto Rico. | 18 |
|  |  |
| Annetta, L., **Lamb, R**., Vallett, D. & Chengi, R. (2013). The impact of serious educational game design and development project on high school students, Presented at the International Conference of National Association for Research in Science Teaching 2013 (NARST). San Juan, Puerto Rico. | 17 |
|  |  |
| Annetta, L., **Lamb, R**., Vallett, D., Chengi, R. & Annetta, J. (2013). Factors influencing STEM careers through Serious Educational Game design and development. Presented at the CSEDU 2013 5th international Conference on Computer Supported Education. Aachen, Germany. | 16 |
|  |  |
| Chengi, R., Annetta, L., **Lamb, R.**, Vallett, D. (2013). Flow experience and science learning in Serious Educational Games. Presented at the National conference of Association of Science Teacher Education (ASTE), Charleston, SC. | 15 |
|  |  |
| Vallett, D., **Lamb, R.** Annetta, L., & Chengi, R. (2013). Interaction of visiospatial ability with 21st century skills and selection of STEM careers. Presented at the National conference of Association of Science Teacher Education (ASTE), Charleston, SC. | 14 |
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| **Lamb, R.,** Annetta, L. Vallett, D. & Chengi, R. (2013). The interface of creativity, fluency, lateral thinking and technology using the design of Serious Educational Games in the science classroom. Presented at the National conference of Association of Science Teacher Education (ASTE), Charleston, SC. | 13 |
|  |  |
| Annetta, L., **Lamb, R**., Vallett, D. & Chengi, R. (2013). Impacting the STEM career pipeline: how science interest, self-efficacy and 21st century skills indicate STEM career awareness. Presented at the Presented at the National conference of Association of Science Teacher Education (ASTE), Charleston, SC. | 12 |
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| **Lamb, R.,** & Annetta, L. (2013). The role of social pressure in rapid attitudinal formation concerning immigrants and immigration, Presented at the Eastern Sociological Conference (ESS), Boston, MA. | 11 |
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| Annetta, L.A., Vallet, D., Cheng, R., **Lamb, R.** & Fee, M. (2012). A new way of learning: Using videogames in the K-12 classroom, Paper presented at the Learning and Brain Conference, Washington, DC. | 10 |
|  |  |
| **Lamb, R**., Vallett, D.B., Annetta, L, & Cheng, R., (2012), Development of a short form measure of Science and Technology Self-Efficacy using Rasch Analysis, Paper presented at the International Conference of National Association for Research in Science Teaching 2012 (NARST), Indianapolis, IN. | 9 |
|  |  |
| Annetta, L.A., Chang, R., Vallett, D., & **Lamb, R.** (2012). Learning science through serious educational game design: Results from NSF ITEST funding. Paper presented at the International Conference of National Association for Research in Science Teaching 2012 (NARST), Indianapolis, IN. | 8 |
|  |  |
| Annetta, L., **Lamb, R**. Minogue, J., Cheng, R., Vallet, D., Holmes, S., & Folta, E. (2012), Immersing preservice science teachers in Serious Educational Games. Paper presented at the International Conference of National Association for Research in Science Teaching 2012 (NARST), Indianapolis, IN. | 7 |
|  |  |
| **Lamb, R.,** Annetta, L., Cheng, R., Vallett, D. (2012), Development of a diagnostic Self-Efficacy measure and its implication for teachers, Paper presented at the National conference of Association of Science Teacher Education (ASTE), Clearwater, FL. | 6 |
|  |  |
| Annetta, L**, Lamb, R.,** Cheng, R., Vallett, D & Holmes, S. (2012), Infusing serious educational games to train science teachers, Paper presented at the National conference of Association of Science Teacher Education (ASTE), Clearwater, FL. | 5 |
|  |  |
| Annetta, L., Peters-Burton, E., Frazier, W., Cheng, R., **Lamb, R.** & Chmiel, M., (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. | 4 |
|  |  |
| Folta, E., Annetta, L., Cheng, R. & **Lamb, R.** (2011). Investigating the impact of student learning and outdoor science interest through modular serious educational games. Paper presented at the International Conference of the National Association for the Research in Science Teaching (NARST), Orlando, FL. | 3 |
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| Annetta, L.A., Stone, M., & **Lamb, R**. (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. | 2 |
|  |  |
| Annetta, L., Holmes, S., Cheng, M., Folta, E., Shymansky, J & **Lamb, R**. (2009). Analyzing the predictors of Learning through Student Self-Efficacy in Technology-Based Projects. Paper presented at the International Conference of National Association for Research in Science Teaching 2009 (NARST). Anaheim. CA. | 1 |
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| **Peer Reviewed State, Regional, and Local Conferences** |  |
| **Lamb, R.** (2023). Integration of artificial intelligence, machine learning and digital technologies a potential future for teaching and learning. Paper presented at the North Carolina State School Board Association. Greensboro, NC. | 16 |
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| **Lamb, R**., Zhang, G., Owen, T., & Crowe, A. (2022) Development of educator acumen for the mitigation of trauma using a continuum of service from the classroom to the home. Paper presented at the Latham Clinical Teachers’ Conference. Greenville, NC. | 15 |
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| **Lamb, R,** Parks, Mi., & Perry, J. (2022). The Effects of COVID-19 on the experiences of counselors in training. Paper presented at the North Carolina Counseling Association Conference (NCCA), Greenville, NC. | 14 |
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| **Lamb, R,** Crowe, A., Owens, T., & Perry, J. (2022). Dialectical behavioral therapy (DBT) approaches enhanced through virtual reality. Paper presented at the North Carolina Counseling Association Conference (NCCA), Greenville, NC. | 13 |
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| **Lamb, R.** (2019). Cognitive dynamics: Learning science content through virtual reality. Presented at Building and Supporting Augmented and Virtual Reality Makerspaces, University at Buffalo Center for Tomorrow, Buffalo, NY. | 12 |
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| **Lamb, R.** (2019). Applications of research on virtual reality to education. Presented at the Building and Supporting Augmented and Virtual Reality Makerspaces VR Conference, University at Buffalo Center for Tomorrow, Buffalo, NY. | 11 |
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| **Lamb, R.** & Etopio, E. (2018). Virtual reality tools teaching: Learning and research spaces. Presented at the Fact 2 Symposium, Albany, NY. | 10 |
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| Etopio, E. & **Lamb, R.** (2018). Virtual Reality: Connecting theory and practice for preservice teachers as a means to close the opportunity gap. Presented at the New York State Association of Teacher Educators, Saratoga Springs, NY. | 9 |
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| **Lamb, R.** (2018). Examples of virtual reality integration into practice, teaching and learning. Presented at the Virtual Reality Showcase in Faculty Collaboration, Buffalo, NY. | 8 |
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| **Lamb, R.,** & Etopio, E. (2018). Virtual reality in the classroom: Exploring the possibilities Presented at the Conference on Instructional Technology, Cortland, NY. | 7 |
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| Etopio, E. & **Lamb, R.** (2017). Virtual reality teaching environments. Paper presented at Higher Education Trends: The Next 10-Years Helping STEM Students Thrive conference, Ithaca, NY. | 6 |
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| Ramandi, S. & **Lamb, R.** (2017). Let’s get real: The use of virtual simulation in education. Paper presented at the New York Teachers Summit, Buffalo, NY. | 5 |
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| Abramovich, S. & **Lamb, R.** (2017). Play a game to learn about assessment. Paper presented at the New York Teachers Summit, Buffalo, NY. | 4 |
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| Annetta, L., Peterman, K., & **Lamb, R** (2013). Designing serious educational games: How science interest, self-efficacy & 21st century skills indicate potential STEM career awareness. Paper presented at the Scaling STEM conference, Durham, NC. | 3 |
| **Lamb, R**., Annetta, L., Cheng, R. & Vallett, D. (2011), Development of self-efficacy in science and technology: A measurement tool for training interventions. Paper presented at the 2011 Washington Consortium International and Comparative Education conference, Washington, D.C. | 2 |
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| **Lamb, R.** & Annetta, L. (2010). Virtual Learning Using SAS Curriculum Pathways. Paper presented at the High School Journal Education Conference, Chapel Hill, NC. | 1 |
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| **Peer Reviewed Poster Presentations** |  |
| **Lamb, R**., Hoston, D., & Chambers, C. (2021). STEM Education and the Cost of Persistence. Poster presented at the annual National Conference of Association of American Colleges & Universities. **(Online due to COVID-19 pandemic).** | 34 |
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| Bressler, D., Annetta, L., **Lamb, R**., & Dunekack, A., (2021). In Their Words: How Students Discuss Motivation, Success, and Learning After Designing STEM Video Games. Poster presented at annual International Conference of NARST, Orlando, FL. **(Online due to COVID- 19 pandemic).** | 33 |
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| **Lamb, R**., Lin, J., Hand, B., Hostoni, D., Kavneri, A., & Firestone, J.B. (2020). Computational experimentation, a novel approach in educational technology: Analysis of the Science Writing Heuristic. Poster presented at the Annual International Conference of NARST, Portland, OR. **(Canceled due to COVID-19 pandemic).** | 32 |
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| Kavneri, A., & **Lamb, R.** (2019). Development of a Measure for Science Literacy Leveraging Neuroscience and Machine Learning. Poster presented at the meeting of American Psychological Association Technology, Mind, and Society Conference, Washington, DC. | 31 |
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| Etopio, E., Secciai, A., & **Lamb, R.** (2018). Examination of infant music behaviors during acculturation using functional near-infrared spectroscopy: A single case design. Paper presented at the annual meeting of Early Childhood Music and Movement Association (ECMMA), Buffalo, NY. | 30 |
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| Secciai, A., Benowskii, K., Etopio, E., & **Lamb, R.** (2018). Blended instruction: Combining in- person experience and online student interaction. Poster presented at the Online Learning Conference, University at Buffalo, Buffalo, NY. | 29 |
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| Yoon, S., Hand, B., & **Lamb, R.** (2018). College students’ cognitive processes in two writing tasks: understanding resource and demands for scientific literacy. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 28 |
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| Annetta, L., Shapiroi, M., **Lamb, R**., Vallett, D., Luhi, A., & Cheng, R. (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. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 27 |
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| Antonenko, P., Schneps, M., **Lamb, R**., Pomplun, M., Koh, D., Saunder, K., Burgess, A., Chengi, L., Xui, Z., Lii, J. (2018). 2-D or 3-D? Effects of stimulus dimensionality on molecular model comparison in organic chemistry task. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 26 |
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| **Lamb, R.,** Hand, B., Yoon, S., Hostoni, D., Secciai, A. & Trippi, J. (2019). An investigation of science writing tasks. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 25 |
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| Hostoni, D., Kennyi, S., Benowskii, K., **Lamb, R.,** & Hand, B. (2018). Examinations of cognitive processing of science writing tasks. Poster presented at the International Conference of Association of Science Teacher Education (ASTE), Baltimore, MD. | 24 |
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| Annetta, L., Shapiroi, M., & **Lamb, R.** (2017). Entrepreneurial thinking: Cross cutting concepts for science teachers. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), San Antonio, TX. | 23 |
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| Hostoni, D., Etopio, E., & **Lamb, R.** (2017). Comparison of three strategies to promote interactions in online communities. Poster presented at the Online Poster Symposium. Buffalo, NY. | 22 |
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| Hostoni, D., Walkeri, H., Devilleri, N., & **Lamb, R.** (2017). *Neuroimaging to measure cognitive processes while using virtual reality: A fNIR study.* Poster presented at the Virtual Reality Showcase. Buffalo, NY. | 21 |
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| Vo.ii T. T., Sumidai, C. A**., Lamb, R,** & Schmitter-Edgecombe, M. (2017). *Promoting healthy cognitive aging: development and psychometric properties of the Healthy Brain Aging Activity Engagement questionnaire.* Poster presented at the 45th annual meeting of the International Neuropsychological Society, New Orleans, LA. | 20 |
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| Burnsi, H., Lesseig, K., Straus, N. & **Lamb, R.** (2016). STEM Interest, Poster presented at the National Conference of Association of Science Teacher Education (ASTE). Portland, OR. | 19 |
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| Rooi, A. K., Ardasheva, Y., Wangi, Z., Adesope, O., Newcomer, S., Firestone, J. B., & **Lamb, R**. (2016). Contributors to science reading comprehension: Study 1 & Study 2. Poster Presented at Washington State University Academic Showcase. Pullman, WA. | 18 |
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| **Lamb, R.**, Firestone, J., & McManusi, C. (2016). Examination of the Impacts of Dimensionality on the Cognitive Dynamics Associated Educational Video Game Play, Poster Presented at Washington State University Academic Showcase. Pullman, WA. | 17 |
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| **Lamb, R**., Firestone, J., McManusi, C., & Premoi, J. (2016). Effectiveness of mathematics and engineering integration in an elementary STEM program. Poster presented at the National Conference of the National Science Teacher Association (NSTA). Portland, OR. | 16 |
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| **Lamb, R.,** Vallett, D., Akmal, T., Schmitter-Edgecomb, M., & Cunninghamii, R. (2016). A computational modeling of student cognitive processes while solving critical thinking problems in science. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST). Baltimore MD. | 15 |
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| Annetta, L., **Lamb, R**., Vallett, D., Shapirio, M., & Matthewsi, B., (2016). Developing a project- based learning progression in a technology rich environment. Poster presented at the International Conference of Association of Science Teacher Education (ASTE), Reno, NV. | 14 |
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| McAlisteri, C., Schmitter-Edgecombe, M., & **Lamb, R.** (2015). Cognitive correlates of everyday functioning in individuals with mild cognitive impairment: A meta-analysis. Poster presented at the 35th annual meeting of the National Academy of Neuropsychology, Austin, TX. | 13 |
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| Cavagnetto, A., **Lamb, R.,** French, B., Yin, L., Adesope, O., & Taylor, M. (2015). A potential future in education: The application of intelligent systems in teacher education. Presented at the International Conference of National Association for Research in Science Teaching (NARST). Chicago, IL | 12 |
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| Petriei, K., **Lamb, R.**, Vallett, D., Annetta, L., Cheng, R., Shapiroi, M., & Matthewsi, B. (2015). Individual differences/moderators of science content via 21st Century Skill acquisition using Serious Education Games. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST). Chicago, IL. | 11 |
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| **Lamb, R.,** Ardasheva, Y., & Firestone, J. (2015). Modeling of social pressure in rapid attitudinal formation concerning immigrants and immigration. Poster presented at Washington State University Academic Showcase, Pullman, WA. | 10 |
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| **Lamb, R.,** Annetta, L., Vallett, D., Firestone, J., Petriei, K., Shapiro**i**, M., Matthews**i**, B., Lambi,R. E., Cunninghamii, K.R., Hiliker**ii**, H. (2015). Factors Influencing STEM Major and Career Selection, Poster presented at Washington State University Academic Showcase. Pullman, WA. | 9 |
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| Baldwin, K.A., Akmal, T.T., & **Lamb, R**. (2014). Does content matter? The science teaching self-efficacy and content knowledge of pre-service elementary teachers in a revised elementary education program. Poster presented at Washington State University Academic Showcase. Pullman, WA. | 8 |
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| **Lamb, R**., Annetta, L., Baldwin, K., & Akmal, T. (2014), Computational modeling in education: An examination of student critical reasoning, Poster presented at Washington State University Academic Showcase. Pullman, WA. | 7 |
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| Lambi, R.E. & **Lamb, R.** (2014). Effectiveness of an elementary STEM program in raising student content, cognitive and affective outcomes. Poster presented at the International conference of Association of Science Teacher Education (ASTE), San Antonio, TX. | 6 |
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| **Lamb, R.,** Vallett, D., & Annetta L. (2013). Individual differences, flow experiences, and science learning in serious educational games. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), San Juan, PR. | 5 |
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| Annetta, L. **Lamb, R.,** Vallett, D, Chengi, R, & Peterman, K. (2013). Indicators impacting the STEM career pipeline through serious educational game design and development. Poster presented at the International Conference of National Association for Research in Science Teaching (NARST), San Juan, PR. | 4 |
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| **Lamb, R.,** Annetta, L., Cheng, R., Vallett, D. (2012), Evaluation of technology interventions within a science classroom, Poster presented at the National Conference of Association of Science Teacher Education (ASTE), Clearwater, FL. | 3 |
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| Annetta, L.A., Cheng, R **& Lamb, R.** (2011). Investigating spatial visualization and mental rotation abilities in high school students. Poster presented at, George Mason University, Fairfax, VA.  | 2 |
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| **Lamb, R.** (2009). Effect of gender on technology use in a chemistry classroom. North Carolina State University, Poster presented at College of Education, Ph.D. Colloquium, Raleigh, NC. | 1 |
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| **Invited Presentations** |  |
| **Lamb, R.** & Owens, T. (2024). Application of sensors and neurological data for understanding teaching and learning. Presented at East Carolina University College of Education Sip and Learn, Greenville, NC.  | 75 |
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| **Lamb, R.** (2024). Neurological assessment of stress and its role in administrator and teacher decision making. Presented at the North Carolina Principal’ s Forum, Raleigh, NC. | 74 |
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| **Lamb, R.** (2024). Discussion of the Amygdala hijack and its role in the educational process. Presented at the North Carolina Principal’ s Forum, Raleigh, NC. | 73 |
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| **Lamb, R.** (2024). Machine learning, artificial intelligence, and digital avatars in dialectical behavioral therapy. Presented at the Georgia Institute of Technology, Atlanta, GA. | 72 |
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| **Lamb, R.** (2024). Artificial intelligence & Machine learning in education – A Primer. Presented at Washington State University, Pullman, WA. | 71 |
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| **Lamb, R.** (2024). Artificial intelligence, machine learning, and wearable sensors for use in clinical mental health counseling. Presented at the National Area Health Education Centers Organization, Durham, NC. | 70 |
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| **Lamb, R.,** Culver, K., Grant, W., & James, J. (2023). Artificial intelligence, functional behavioral analysis, and neuroscience to better understand students learning states. Presented at Pitt County School Principal’s Forum, Greenville, NC. | 69 |
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| **Lamb R.,** (2023). Function based assessment of head-banging behavior in a child with autism. Presented at the forum on school psychology, Athens, GA.  | 68 |
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| **Lamb, R.,** Culver, K., Grant, W., & James, J. (2023). Development of generative learning environments and their role in persistence, grit, and determination. Presented at Pitt County School Principal’s Forum, Greenville, NC. | 67 |
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| **Lamb, R.,** Culver, K., Grant, W., & James, J. (2023). Applications of biofeedback and psychophysiomeasurement to support culturally responsive pedagogy. Presented at Pitt County School Principal’s Forum, Greenville, NC. | 66 |
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| **Lamb R.,** (2023). Psychophysiomeasurment to understand pharmacy and veterinary medicine student learning. Presented at University of Georgia, Athens, GA. | 65 |
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| **Lamb R., (**2023). Machine learning classification of pharmacy and veterinary medicine student content understanding using real-time prediction. Presented at University of Georgia, Athens, GA. | 64 |
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| **Lamb R.,** (2023). Role of artificial intelligence, machine learning, and biometric data collection in the field of education: Linking neuroscience to educational practice. Presented at the Ontario Ministry of Education, Ontario, Canada. | 63 |
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| **Lamb, R.,** Choi, I., & Owens, T., (2023). Applications of artificial intelligence, machine learning, and digital technologies to the practices of mental health counseling. Presented at Area Health Education Center Conference. Presented at Wrightsville Beach, NC. | 62 |
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| **Lamb, R.,** (2023). Introduction to autonomic nervous system and neurological measurement. Presented at University of Georgia, Athens, GA. | 61 |
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| **Lamb, R.,** (2023). Real-time prediction of student learning outcomes in digital learning environments using machine learning classification. Presented at University of Georgia, Athens, GA. | 60 |
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| **Lamb, R.,** (2023). Discussion of STEM schools of distinction and community outreach. Presented to North Carolina Department of Public Instruction, Raleigh, NC. | 59 |
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| **Lamb, R.** (2023). Artificial Intelligence, and educational practices. Presented at the East Carolina University Distance Educational Panel, Greenville, NC. | 58 |
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| **Lamb R.,** (2023). Educators and neurocognition: A digital transformation of education for regional rural economic development. Presented at Educator Professional Advisory Board, Greenville, NC. | 57 |
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| **Lamb, R.,** (2023). Neurocognitive assessment and K-12 teachers as drivers of rural regional economic development in the defense, advanced manufacturing, and biopharma- medical sectors. Presented to the Office of Senator Thom Tillis, Greenville, NC. | 56 |
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| **Lamb, R.,** (2023). Digital transformation and regional economic development through K-12 teachers in rural regions. Presented at the Vision 2023 Conference, Greenville, NC. | 55 |
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| **Lamb, R.** (2023). Integration of virtual reality and other digital technologies into medical education and clinical simulations. Presented at the Brody School of Medicine, Greenville, NC. | 54 |
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| **Lamb, R.** (2022). Digital transformation using synthetic adaptive learning environments: A means to improve human efficacy and efficiency during the learning of complex technical tasks. Presented at the Department of Defense Research Showcase, Greenville, NC. | 53 |
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| **Lamb, R.,** & Roberts, R. (2022). The potential uses of digital mental health tools in counseling: Development of an artificially intelligent Eye Movement Desensitization and Reprocessing approach. Presented at National Science Foundation I-Corps meeting, Washington, District of Columbia. | 52 |
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| **Lamb R.,** (2022). Education and digital transformation using neurocognitive and physiological data. Presented at East Carolina University College of Education, Greenville, NC. | 51 |
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| **Lamb, R.,** (2022). Using Virtual Reality in the Humanities and Social Sciences. Presented at East Carolina University Research Showcase, Greenville, NC. | 49 |
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| **Lamb, R.,** (2022). Psychophysiomeasurement to develop and optimize human cognition and performance. Presented at North Carolina Center for Optimizing Military Performance, Greenville, NC. | 48 |
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| **Lamb R.** (2022). Objective measure of cognition and physical health status. Presented at University of North Carolina System Office Visit, Greenville, NC. | 47 |
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| **Lamb, R.**, Owens, T., Crowe A., Berger, M., & Perry J. (2022). Child mental health and the role of emotional regulation. Presented at Pitt County Schools, Greenville, NC. | 46 |
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| Antonenko, P. & **Lamb, R.** (2021). State of the field: Virtual reality, augmented reality, and augmented intelligence, Presented at National Science Foundation, Science of Learning and Augmented Intelligence, Washington, District of Columbia. | 45 |
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| **Lamb, R.** (2019). Promotion of writing in science through virtual reality, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Zhuhai, China | 44 |
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| **Lamb, R.** (2019). Visualization of big data using virtual reality, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Zhuhai, China. | 43 |
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| **Lamb, R.** (2019). Electroencephalography principles in educational research, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 42 |
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| **Lamb, R.** (2019). Psychophysiological measurement principles in educational research, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China | 41 |
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| **Lamb, R.** (2019). Functional near infrared spectroscopy as a means to understand learning in science, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 40 |
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| **Lamb, R.** (2019). Computational modeling in education, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 39 |
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| **Lamb, R.** (2019). The neurological basis of learning and memory, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 38 |
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| **Lamb, R.** (2019). Role of psychophysiological measurement in education, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 37 |
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| **Lamb, R.** (2019). Big data in education, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 36 |
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| Lamb, R.E. & **Lamb, R.** (2019). Modification of the educational environment for all, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 35 |
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| **Lamb, R.** & Lamb R.E. (2019). Cognitive assessment in education, Presented at Beijing Normal University, Ministry of Education Center for Assessment of Basic Education Quality, Beijing, China. | 34 |
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| **Lamb, R.** (2019). Virtual reality the case for learning across the spectrum, Presented at the Light & Sound Interactive, Rochester, NY. | 33 |
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| **Lamb R.** (2019). Virtual reality and the treatment of distress in children with autism and other complex medical conditions. Presented at The Center for Discovery a New York Center of Excellence, Harris, NY. | 32 |
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| **Lamb, R. (**2018). The role of integration in our understanding of scientific literacy as measured through neuroimaging. Presented at a joint conference between Taiwan Normal University and Beijing Normal University. Beijing China. | 31 |
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| **Lamb, R.** (2018). Examples of virtual reality integration with clinical implications. Presented at the Graduate School of Social Work Yearly Faculty Meeting, Buffalo, NY. | 30 |
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| **Lamb, R.** (2018). Clinical use, data collection, and analysis in virtual and simulated surgical environments. Presented at the Buffalo General Hospital Department of Surgery Research Colloquium, Buffalo, NY. | 29 |
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| Etopio, E., & **Lamb, R.** (2018). Virtual reality and clinical practice: Exploring possibilities. Presented at the State University of New York (SUNY) Meeting of Deans and Directors, Fredonia, NY. | 28 |
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| **Lamb, R.,** & Etopio, E. (2018). Charting a new reality; Virtual reality studies. Presented at the State University of New York (SUNY) Board of Trustees Meeting, Morrisville, NY. https://livestream.com/vvt/BOTMay2018/videos/174302064 | 27 |
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| **Lamb, R.,** Antonenko, P., Firestone, J., & Seccia, A. (2018). Integration of neuroscience and science education to understand student learning. Workshop presented at the International Conference of National Association for Research in Science Teaching (NARST), Atlanta, GA. | 26 |
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| **Lamb, R.** (2017). Virtual reality and violence. Discussant at Alberti Center for Bullying Abuse Prevention. University at Buffalo, Amherst, NY. | 25 |
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| **Lamb, R.** (2017). Introduction to neurocognition research. Presented at the Learning and Instruction Faculty Research Walk. University at Buffalo, Amherst, NY. | 24 |
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| **Lamb, R**. (2017). Adult learning theory and best practices. Presented at Citywide Grand Rounds for the Department of Medicine. Gates Vascular Institute Clinical and Translational Research Center, Buffalo, NY. | 23 |
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| **Lamb, R.** (2017). An exploration of the educational applications of virtual reality: A fNIRS study. Presented at the Faculty Brown Bag for Cognitive Psychology. University at Buffalo, Amherst, NY. | 22 |
| **Lamb, R.** (2016). Neuroimaging technologies as a means to understand education. Presented at Graduate Student Association Think Tank. University at Buffalo, Amherst, NY. | 21 |
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| **Lamb, R.** (2016). The use of neurotechnologies to assess learning. Presented at the Learning Theories Class (LAI 695). University at Buffalo, Amherst, NY. | 20 |
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| **Lamb, R.** (2016). Computational modeling and neuroimaging: New methods to understand student learning in science. Presented at the University of Iowa Knowledge Bases and Leaning Environments Workshop. University of Iowa, Iowa City, IA. | 19 |
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| Lambi, R. E. & **Lamb, R.** (2016). Response to intervention and clinical manifestations of in school behaviors. Presented at the Neuropsychology Clinic. College of Arts and Sciences, Clinical Psychology. Washington State University, Pullman, WA. | 18 |
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| **Lamb, R.** (2015). Development of smart classroom infrastructure. Presented at The State University of New York at Buffalo, Buffalo, NY. | 17 |
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| **Lamb, R.** (2015). A potential future, video games as a measurement tool to understand cognitive state. Presented at Canisius College Campus Symposium, Canisius College, Buffalo, NY. | 16 |
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| **Lamb, R.** (2015). A computational ablation study, modeling student cognitive processes while solving critical thinking problems in science. Presented at School of Molecular Biosciences, College of Veterinary Medicine, Washington State University, Pullman, WA | 15 |
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| **Lamb, R.** (2015). A computational ablation study, modeling student cognitive processes while solving critical thinking problems in science. Presented at Readings in Cultural Studies and Social Thought in Education (T&L559). Washington State University, Pullman, WA. | 14 |
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| **Lamb, R.**, Ford, M., Klein, P., & Nam, J. (2015). Aspects of student learning which transfer. Panel discussant at the International Argument Based Inquire Conference. Spokane, WA. | 13 |
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| **Lamb, R.** (2015). Completing your dissertating, Presented to Washington State University Graduate Students of Education, Pullman, WA. | 12 |
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| **Lamb, R.** (2015). Survey design and development. Presented to Washington State University McNair Scholars, Pullman, WA. | 11 |
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| **Lamb, R.** (2015). Video games, coding, college, & STEM, Presented at Moscow Middle School, Moscow, ID. | 10 |
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| Frost, J., & **Lamb, R.** (2014). The development, environment, and effects of a STEM high school, Presented at the Department of Teaching and Learning, Pullman, WA. | 9 |
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| **Lamb, R.** (2014). Video games, cognitive growth and cognitive decline, Presented at the Kiwanis International Distinguished Speakers Series, Pullman, WA. | 8 |
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| **Lamb, R.** (2014). Graduate student professional development series: Conferences, Presented at Washington State University College of Education Graduate Meeting, Pullman, WA. | 7 |
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| **Lamb, R.** (2014). The role of the College of Education in research, Presented at the 2014 University Board of Governors Meeting, Cle Elum, WA | 6 |
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| **Lamb, R.** (2014). Education and neuropsychology, Presented at Mathematics and Science Education Ph.D. Program (T&L598), Washington State University, Pullman, WA. | 5 |
| **Lamb, R.** (2013). Computational educational modeling, Presented at Educational Psychology Seminar (EDPSY 574), Washington State University, Pullman, WA. | 4 |
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| **Lamb, R.** (2013). Computational educational modeling, Presented at Brown Bag Seminar Series, Washington State University, Pullman, WA. | 3 |
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| **Lamb, R.** & Annetta, L. (2012). Affective measures in science education: An alternative to traditional content assessments, Paper presented at STEM Stakeholder Summit, Carnegie Institute, Carnegie Academy for Science Education, Washington, DC. | 2 |
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| **Lamb, R.** (2010). Assessment Science Training Immersive Modules for University Learning Around Teacher Education. Paper presented at MEGA Conference, Raleigh, NC. | 1 |

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| **SERVICE** |  |
| **International Service** |  |
| Advisory Board Member, Educational Research Laboratory, Prince Sultan University | 2023 to Current |
| Conference Coordinator, International Conference on Scientific Literacy, Beijing Normal University | 2019 to 2020 |
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| **National Service** |  |
| Thread Coordinator, Association for Science Teacher Education (ASTE) | 2015 to 20182022 to Current |
| Strand Coordinator, National Association for Research in Science Teaching (NARST) | 2014 to 20162022 to Current |
| Mentor, AERA Doctoral and Early Career Researchers | 2022 to Current |
| Ad-Hoc Reviewer Expertise Area Functional Neuroimaging and MeasurementNational Science Foundation EHR-CORE | 2020 to Current |
| Award Committee, Committee Member, Association for Science Teacher Education (ASTE) | 2020 to Current |
| Buffalo Zoo Blue Ribbon Panel on Educational Technology Integration, | 2018 to 2020 |
| iLRN Committee IEEE | 2016 to Current |
| Reviewer, National Association for Research in Science Teaching (NARST) | 2013 to Current |
| Reviewer, Association for Science Teacher Education (ASTE) | 2013 to Current |
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| **State Service** |  |
| Outreach to Edgecombe Early College, Edgecombe County Schools | 2022 to Current |
| Outreach to Salam Elementary School, Wake County Public Schools | 2021 to Current |
| Outreach to East Carolina University Community School, Pitt County Schools | 2019 to 2022 |
| Outreach to Innovation Early College High School, Pitt County Schools | 2019 to Current |
| Outreach to Lockhart Elementary School, Wake County Public Schools | 2019 to 2022 |
| University of North Carolina System School Literacy Data Team | 2019 to 2024 |
| Institute of Museum and Library Service Grant Advisory Board and Evaluator | 2017 to 2019 |
| National Science Foundation, Science of Learning Interdisciplinary Review Panel | 2016 to Current |
| Outreach to Enterprise Charter School, Buffalo Public Schools | 2016 to 2020 |
| Outreach to Warsaw Central School District | 2016 to 2019 |
| Outreach to EduKids Early Childhood Center, Lancaster, NY | 2016 to 2018 |
| Outreach to the Early Childhood Research Center University at Buffalo | 2016 to 2018 |
| Outreach to Moscow Middle School, Moscow, ID | 2013 to 2016 |
| Stater of Washington Computer Science Programing Education Governor’s Task Force | 2013 to 2016 |
| Committee President, Pullman School District STEM Technology, Career, and Technical Education Advisory Board. | 2014 to 2016 |
| National Association for Research in Science Teaching, Graduate Student Mentor | 2013 to 2017 |
| Association for Science Teacher Education (ASTE) Association for Science Teacher Education, Graduate Student Mentor | 2013 to 2017 |
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| **University Service** |  |
| Faculty Senate Representative Student Appellate Committee | 2021 to 2022 |
| Alternate Faculty Senator, East Carolina University | 2020 to 2024 |
| Faculty Judge for Research & Creative Achievement Week | 2021 and 2023 |
| Faculty Mentor East Carolina University Faculty Academy | 2020 to 2024 |
| Reviewer, Fiver-Year Review Crisp Small Business Resource Center | 2020 |
| East Carolina University Institution Review Board Member | 2019 to Current |
| University at Buffalo Artificial Intelligence Initiatives Group Member | 2017 to 2019 |
| University at Buffalo Center for Educational Innovation Search CommitteeMember | 2017 |
| University at Buffalo Jacob School of Medicine and Biomedical SciencesPhase I Curriculum Committee Member | 2016 to 2019 |
| Washington State University Entrepreneurial Ambassador | 2014 to 2016 |
| Washington State University SMART System Grand Challenge Committee | 2014 to 2016 |
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| **College and School Service** |  |
| College of Education, Chair Educational Technology Committee Chair | 2022 to Current |
| College of Education, Chair Educational Technology Committee | 2022 to Current |
| College of Education, Research Committee Chair | 2022 to Current |
| College of Education, Research Committee | 2022 to Current |
| College of Education Early Career Faculty Mentor and Writing Group Leader | 2020 to 2023 |
| College of Education, Ph.D. Development Lead | 2019 to 2021 |
| Graduate School of Education, Executive Committee Member | 2017 to 2019 |
| Graduate School of Education, Undergraduate Pathways DevelopmentCommittee Member | 2016 to 2019 |
| Graduate School of Education, Chair Undergraduate Teacher Development Committee  | 2016 to 2019 |
| College of Education, Educational Research Course Committee | 2014 to 2016 |
| Search Committee Member, Washington State University College of Education and, College of Veterinary Medicine, University at Buffalo Graduate School of Education, East Carolina University College of Education | 2014, 2015, 2019, 2021 |
| College of Education Faculty Funding Grant Reviewer | 2014 to 2016 |
| College of Education Research Advisory Committee Chair | 2014 to 2016 |
| College of Education, Funding Reallocation Committee Member | 2014 to 2016 |
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| **Departmental Service** |  |
| Program Director Research Method Certificate | 2021 to Current |
| Teacher and School Relationship Outreach Committee | 2019 to Current |
| Special Education, Foundations, and Research Education Admissions Interviewer | 2019 to 2021 |
| Scholarship and Fellowship Committee | 2018 to 2019 |
| Curriculum and Instruction Science of Learning Doctoral Program Director | 2017 to 2018 |
| Science and the Public Master’s Program Director | 2016 to 2019 |
| Educational Technology Master’s Program Director | 2016 to 2019 |
| Curriculum and Instruction Science of Learning Program Committee | 2016 to 2019 |
| Elementary Education Admissions Interviewer | 2017 to 2019 |
| Educational Leadership Program Member | 2015 to 2016 |
| Special Education Program Member | 2014 to 2016 |
| Educational Psychology Program Member | 2014 to 2016 |
| Counseling Psychology Program Member | 2014 to 2016 |
| Elementary Education Program Committee | 2013 to 2016 |
| M.I.T. Program Interviewer | 2013 to 2016 |
| Science and Mathematics Ph.D. Program Committee | 2013 to 2016 |
| Elementary Education Program Review and Analysis Group | 2013 to 2015 |
| Elementary Education Scholarship Application Reviewer | 2013 to 2016 |
| M.I.T. Education Program Committee | 2013 to 2016 |
| **STUDENT ADVISEMENT** |  |
| **Doctoral Student In-Progress** |  |
| Howington, Andy. (In progress), TITLE TO BE DETERMINED. (Doctoral Dissertation, UNIVERSITY OF GEORGIA). Biomedical Sciences, Department of Physiology and Pharmacology.Yang, Haotian. (In progress), TITLE TO BE DETERMINED. (Doctoral Dissertation, UNIVERSITY OF GEORGIA). Learning, Design and Technology, Department of Workforce Education and Instructional Technology. | 1 |
|  |  |
| **Doctoral Student Committee Chair Completed** |  |
| Hoston, D. (March, 2021), JOHN HENRYISM: EXPLORATION OF PHYSIOLOGICAL EXAMINATION OF COLLEGE STEM, CUMMULATIVE TRAUMA, ALLOSTATIC LOAD. Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 4 |
|  |  |
| Devillier, N. (February, 2021), DEMOGRAPHIC DISPORPORTIONALITY OF HIGH SCHOOL GRADUATION: WHAT’S SERVICE-LEARNING GOT TO DO WITH IT?(Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 3 |
|  |  |
| Kavner, A. (April, 2020), *DEVELOPMENT OF A PSYCHOPHYSIOLOGICAL ARTIFICAL NEURAL NETWORK TO MEASURE SCIENCE LITERACY*. (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 2 |
|  |  |
| Mazzeye D. (April, 2020), *A THREE-STUDY INVESTIGATION INTO THE INFLUENCE OF A TEACHER RESIDENCY MODEL FOR LITERACY TEACHER PREPARATION: DOES A RESIDENCY PROVIDE AN ADVANTAGE?* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 1 |
|  |  |
| **Doctoral Student Committee Member Completed** |  |
| Andrew Wiess Ph.D. (September, 2019), *ONLINE ASYNCHRONIES LEARNING FOR SCHOOLS OF PUBLIC HEALTH STUDENTS.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 16 |
|  |  |
| Zimmer K. (May, 2019). *THE IMPACT OF THE ACADEMIC LITERACY SKILLS TEST ON TEACHER PREPARATION IN NEW YORK.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Science of Learning, Department of Learning and Instruction. | 15 |
|  |  |
| Evans, R. (October, 2018). *BIFURCATIONS, FRACTALS, AND NON- LINEARITY IN SECOND LANGUAGE DEVELOPMENT: A COMPLEX DYNAMIC SYSTEMS**PERSPECTIVE.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Foreign and Second Language Education, Department of Learning and Instruction. | 14 |
| Kong, Y. (September, 2018). *ESL GRADUATE STUDENTS’ PERCEPTION OF READING ON SCREEN AND READING ON PAPER: A MIXED-METHOD STUDY.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Foreign and Second Language Education, Department of Learning and Instruction. | 13 |
|  |  |
| Walker, H. (May, 2018). *PREPARING FUTURE TEACHERS TO MANAGE CLASSROOM BEHAVIOR USING MIXED REALITY SIMULATION TECHNOLOGY.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Special Education, Department of Learning and Instruction. | 12 |
|  |  |
| Chi, S. (April, 2018). *EFFECTS OF THE TEST ADMINISTRATION MODES ON STUDENT PERFORMANCE IN THE ASSESSMENT OF THE NGSS.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Sciences of Learning, Department of Learning and Instruction. | 11 |
|  |  |
|  Mahmood, A. (December, 2017). *THE EFFECTS OF TEACHER FEEDBACK VERSUS COMPUTER FEEDBACK ON MATHEMATICS HOMEWORK ON STUDENT MATHEMATICS HOMEWORK IN STUDENT MATHEMATICS ACHIEVEMENT*. (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Sciences of Learning, Department of Learning and Instruction. | 10 |
|  |  |
| Thew, K. (July, 2017). *THE EFFECT OF INTERACTION WITH A THERAPY DOG ON COLLEGE STUDENT STRESS LEVELS.* (Doctoral dissertation, Washington State University). Counseling Psychology, Department of Educational Leadership, Sports Studies, and Educational / Counseling Psychology. | 9 |
| Rinker, T. (March, 2017). *GRAPHICAL DISCOURSE ANALYSIS: DATA VISUALIZATION AS A TOOL FOR ANALYZING CLASSROOM DISCOURSE.* (Doctoral dissertation, UNIVERSITY AT BUFFALO). Curriculum and Instruction Sciences of Learning, Department of Learning and Instruction. | 8 |
|  |  |
| Alshemari, H. (April, 2015). *INCLUSIVE EDUCATION AND STUDENTS WITH INTELLECTUAL DISABILITIES IN THE STATE OF KUWAIT: ARE WE READY?* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Special Education, Department of Teaching and Learning. | 7 |
|  |  |
| Caniglia, C. (April, 2015). *SPECIAL EDUCATION TEACHERS’ REPORTED PREPAREDNESS AND CONFIDENCE TO IMPLEMENT THE 2012 CEC INITIAL LEVEL SPECIAL EDUCATOR PREPARATION STANDARDS.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Special Education, Department of Teaching and Learning. | 6 |
|  |  |
| Abbas, Z. (April, 2014). *EXAMINING SPECIAL EDUCATION TEACHERS’ KNOWLEDGE AND SKILLS REGARDING THE IEP DOCUMENT AND PROCESS IN THE STATE OF KUWAIT: AN EXPLORATORY INVESTIGATION.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Special Education, Department of Teaching and Learning. | 5 |
|  |  |
| Alrubian, A. (March, 2014). *GENERAL EDUCATION TEACHERS' ATTITUDES, KNOWLEDGE, AND STRATEGIES RELATED TO TEACHING STUDENTS WITH LEARNING DISABILITIES IN SAUDI ARABIA.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Special Education, Department of Teaching and Learning. | 4 |
|  |  |
| Alkhateeb, N. (March, 2014)*. FEMALE GENERAL EDUCATION TEACHERS’ KNOWLEDGE OF AND PERCEIVED SKILLS RELATED TO LEARNING DISABILITIES IN THE QASSIM REGION, KINGDOM OF SAUDI ARABIA.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Special Education, Department of Teaching and Learning. | 3 |
|  |  |
| Nuseir, N. (March, 2014). *PERCEPTIONS OF THE ROLE OF SOCIAL NETWORKING IN THE LIBYAN UPRISING: IMPLICATIONS OF ENGAGEMENT IN SOCIAL MEDIA.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Language Literacy and Technology Education, Department of Teaching and Learning. | 2 |
|  |  |
| McAlister, C. (February, 2014). *EXAMINATION OF VARIABLES THAT MAY AFFECT THE RELATIONSHIP BETWEEN COGNITION AND FUNCTIONAL STATUS IN INDIVIDUALS WITH MILD COGNITIVE IMPAIRMENT: A META-ANALYSIS.* (Doctoral dissertation, WASHINGTON STATE UNIVERSITY). Clinical Neuropsychology, Department of Psychology. | 1 |
|  |  |
| **Master’s Student Committee Chair Completed (Thesis)** |  |
| Leteste, R. (December, 2018). INCREASING ENGLISH-AS-A-SECOND LANGUAGE PARTICIPATION AND SUCCESS IN DENTAL PROGRAMS AT A COMMUNITY COLLEGE. (Master thesis, UNIVERSITY AT BUFFALO). Science and the Public, Department of Learning and Instruction. | 2 |
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|  |  |
| Carroll, L. (December, 2018). APPLYING COGNITIVE PRESENCE TO INDIVIDUAL EDUCATIONAL EXPERIENCE AS A FRAMEWORK FOR REFLECTION.(Master thesis, UNIVERSITY AT BUFFALO). Science and the Public, Department of Learning and Instruction. | 1 |
|  |  |
| **Master’s Student Committee Member Completed (Thesis)** |  |
| Simon, C. (April, 2015). THE ROLE OF COGNITIVE RESERVE AND MEMORY SELF-EFFICACY ON COMPENSATORY STRATEGY USE: A STRUCTURAL EQUATION APPROACH. (Master thesis, WASHINGTON STATE UNIVERSITY). Clinical Neuropsychology, Department of Psychology. | 1 |
|  |  |
| **Master’s Student Committee Chair Completed (Capstone Project)** |  |
| Angie Waldon, (2018). Master of Education in Educational Technology, Department of Learning and Instruction | 4 |
|  |  |
| Kaitlin McCLuskey (2018). Master of Education in Educational Technology, Department of Learning and Instruction | 3 |
|  |  |
| Jean D’Aurio (2018). Master of Education in Educational Technology, Department of Learning and Instruction | 2 |
|  |  |
| Adrienne Atzmiller, A. (2015). Masters in Teaching Science Education, Department of Teaching and Learning*.* | 1 |
|  |  |
| Rohort, C. (2015). Masters in Teaching Science Education, Department of Teaching and Learning. | 2 |
|  |  |
| Alhurishi, L. (2014). Masters in Teaching Educational Technology, Department of Teaching and Learning. | 1 |
|  |  |
| **Undergraduate Student Committee Chair Completed (Thesis)** |  |
| Peradas, G. (2024). Neuroscience. | 6 |
|  |  |
| Rosales-Mercado, D. (2023). Elementary Education and Psychology  | 5 |
|  |  |
| Linder, K. (2021). Science Education and Chemistry | 4 |
|  |  |
| Davis, M. (2015). Neuroscience, ***Pass with Distinction*** | 3 |
|  |  |
| Hamill, A. (2015). Elementary Education | 2 |
|  |  |
| Herron, W. (2015). Bioengineering | 1 |

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| **CLINICAL EXPERIENCES** |  |
| **McClammy Counseling and Research Laboratory** | 2024 to 2025 |
| Pediatric Clinical Mental Health Individual Counseling |  |
| Young Adult Clinical Mental Health Group Counseling |  |
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| **MEMBERSHIPS** |  |
| **Professional Membership** |  |
| American Counseling Association (ACA) | 2020 to Current |
| Society for Information Technology and Teacher Education (SITE) | 2018 to Current |
| American Educational Research Association (AERA) | 2016 to Current |
| American Psychological Association (APA), Division 5 | 2013 to Current |
| International Psychometric Society | 2010 to 2013 |
| National Association for Research in Science Teaching (NARST) | 2009 to Current |
| Association for Science Teacher Education (ASTE) | 2009 to Current |
| National Education Association (NEA) | 2003 to 2013 |
|  |  |
| **Other** |  |
| Immersive Science Learning Laboratory, University of Florida | 2016 to Current |
| Partnership for the Study of Learning and Learning Environments, Washington State University | 2013 to Current |
| Child Laboratory, University of Iowa | 2013 to 2019 |
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| **ADDITIONAL SERVICE** |  |
| **Reviewer** |  |
| Journal of Information Technology and Application in Education | 2015 to Current |
| Journal of Engineering Education | 2015 to Current |
| Learning and Instruction | 2015 to Current |
| Computers & Education | 2015 to Current |
| Computer and Human Behavior | 2015 to Current |
| International Journal of Mathematics and Science Education | 2013 to Current |
| Educational Research | 2013 to Current |
| Review of Educational Research | 2013 to Current |
| Journal of Research in Science Teaching | 2013 to Current |
| Journal of Science and Technology Education | 2013 to Current |
| Meridian Journal of Education | 2010 to 2019 |
| Association for Science Teacher Education | 2009 to Current |
| National Association for Research in Science Teaching | 2009 to Current |

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| **Professional Developments** |  |
| **Lamb, R.** (2023). Impacts of neurodevelopment on students. Presented at Innovation Early High School. Greenville, NC. | 11 |
|  |  |
| **Lamb R.** (2022). STEM in elementary School. Presented at Lockhart Elementary School. Knightdale, NC. | 10 |
|  |  |
| **Lamb, R.** (2020). Science literacy and its integration into the elementary classroom. Presented at Lockhart Elementary School. Knightdale, NC. | 9 |
|  |  |
| **Lamb, R.** St. George, A., & Innes, L. (2017). Google Expedition: A classroom based virtual reality system. Presented at Enterprise Charter School. Buffalo, NY. | 8 |
|  |  |
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| **Lamb, R.** (2017). Benefits of virtual reality in education. Presented at Enterprise Charter School. Buffalo, NY. | 7 |
|  |  |
| **Lamb, R.** (2011). Data Driven Decision Making using Paced Interim Assessments, District of Columbia Public Schools, Washington, D.C. | 6 |
|  |  |
| **Lamb, R.** (2011), Developing a positive behavioral interventions of support program in a low- performing school, District of Columbia Public Schools, Washington, D.C. | 5 |
|  |  |
| **Lamb, R.** (2011), STEM Integration at the K-12 Level. District of Columbia Public Schools, Washington, D.C. | 4 |
|  |  |
| **Lamb, R**. (2009) Analyzing the predictors and modeling student outcomes based on End of Course Data. Wake Country Public Schools. Garner, NC. | 3 |
|  |  |
| **Lamb, R**. (2008) Integration of SAS Curriculum Pathways into the high school classroom. Wake County Public Schools. Garner, NC. | 2 |
|  |  |
| **Lamb, R**. (2006). Initially Licensed Teacher Professional Development on Garner’s Multiple Intelligences. Wake County Public Schools, Garner, NC. | 1 |
|  |  |
| **Consulting Projects** |  |
| **Lamb, R.** (2020). Squidbooks Design and development team. | 9 |
|  |  |
| **Lamb, R.** (2018). Interactive AI: No human in the loop.  | 8 |
|  |  |
| **Lamb**, R. & Cavagnetto, A. (2015). Institute of Educational Sciences (IES), Statistical and Computational consultation with PI Brian Hand. | 7 |
|  |  |
| Akmal, T. & **Lamb, R.** (2015). Legislative Consultation, Representative Drew Henson (House Bill H-0865.1/15) Washington State Legislature. | 6 |
|  |  |
|  |  |
| Annetta, L., & **Lamb, R.** (2014). RAND Corporation Foresight Project, European Commission Report. | 5 |
|  |  |
| **Lamb, R.** (2011). Fairfax County Public Schools, Development and assessment of AYP testing growth models to inform student progress and interventions. | 4 |
|  |  |
| **Lamb, R.** (2011). Fairfax County Public Schools, Assessment of the psychometric properties of countywide benchmark test. | 3 |
|  |  |
| **Lamb, R.** (2011). Caroline County Public Schools, Rescaling of reading and literacy testing scores to assess student growth. | 2 |
|  |  |
| **Lamb, R.** (2011). Loudoun County Public Schools, Development of a countywide testing instrument to discriminate between English as a Second Language Learner and Special Needs Learners. | 1 |
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| **Advisory Committees** |  |
| PsytechVR Advisory Board | 2023 to Current |
| AscendantVR Advisory Board | 2022 to 2023 |
| Quantum Interface Advisory Board | 2022 to Current |
| Pullman Public Schools STEM Advisory Board, Pullman Washington. | 2014 to 2016 |
| Centers for Child and Family Policy and Appalachian State University, School of Education. | 2010 to 2012 |
| For the Love of Children (FLOC) STEM Advisory Board, Washington, DC. | 2010 to 2013 |
| District of Columbia Public Schools STEM Advisory Board, Washington, DC. | 2010 to 2013 |
| E-Learning Café, Reno NV. | 2009 to 2011 |
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| **UNIVERSITY COURSES TAUGHT** |
| **University of Georgia** |
| *Research Methods*  |
| EDIT 9300- Doctoral Dissertation PreparationPsycophysiomeasurment, University of Georgia, Athens, GA. |
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| PHRM 8650- Research Method II (Ph.D.), University of Georgia, Athens, GA. |
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| **East Carolina University** |
| *Science Education* |
| SCIE 6005- Advanced Studies in Earth Systems for Teachers (Masters), East Carolina University, Greenville, NC. |
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| **University at Buffalo** |
| *Science of Learning* |
| LAI 615- Introduction to Learning Sciences (Ph.D.), University at Buffalo, Amherst, NY. |
|  |
| LAI 635 – Special Topics in Education: Adult Learning (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 549 – Assessment and Student Learning (Ph.D.), University at Buffalo, Amherst, NY. |
|  |
| *Research Methods* |
| LAI 597 – Psychophysiological Measurement I, (Ph.D.), University at Buffalo, Amherst, NY. |
|  |
| LAI 689 – Advanced Application of Statistical Research Methods, (Ph.D.), University at Buffalo, Amherst, NY. |
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| LAI 685 – Research on Educational Technology (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 641 – Survey of Educational Research Methods (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 633 – Neuropsychology Laboratory Rotation (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
|  |
| LAI 647 – Design and Development of Surveys and Questionnaires (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
| **Washington State University** |
| *Science Education* |
| T&L 531- Frameworks for Research in Mathematics and Science Education (Ph.D.), Washington State University, Pullman, WA. |
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| T&L 572- Elementary School Science Methods, Washington State University (Masters), Pullman, WA. |
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| T&L 371- Elementary Science Education Methods (Undergraduate), Washington State University, Pullman, WA. |
| HON 390- Global Issues in the Sciences: Artificial Intelligence and Considerations for the Future (Undergraduate), Washington State University, Pullman, WA. |
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| *Measurement, Psychometrics, and Research Methods* |
| EDRES / EDPSY 508- Educational Statistics (Masters), Washington State University, Pullman, WA. |
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| T&L 598- Research Seminar in Mathematics and Science (Ph.D.), Washington State University, Pullman, WA. |
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| EDRES / EDPSY 569- Quantitative Techniques in Education: Multilevel Modeling (Ph.D.), Washington State University, Pullman, WA. |
|  |
| T&L 521 / 522- Special Topic in Education: Survey and Questionnaire Development (Ph.D.), Washington State University, Pullman, WA. |
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| EDRES / EDPSY 565- Quantitative Research Methods (Ph.D.), Washington State University, Pullman WA. |
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| T&L 600- Independent Study (Masters): Simple Regression and Multiple Regression, Washington State University, Pullman, WA. |
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| T&L 499- Independent Study (Undergraduate): Undergraduate Research, Washington State University, Pullman, WA. |
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| T&L 800- Research, Dissertation, and / or Examination (Ph.D.), Washington State University, Pullman, WA. |
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| **North Carolina State University***Science Education* |
| EMS 373- Technology in Science Education (Undergraduate), North Carolina State University, Raleigh, NC. |
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| **George Mason University***Science Education*  |
| EDUC 674- Science Education Assessment (Ph.D.), George Mason University, Fairfax, VA. |
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| **UNIVERSITY COURSES AND CERTIFICATES DEVELOPED** |
| **East Carolina University** |
| Educational Research, Evaluation, Measurement, and Statistics Certificate |
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| EDUC 6553 – Problem and Issues in Education: Bridging Neuroscience and Education (Ph.D. & Masters), East Carolina University. Greenville, NC. |
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| **University at Buffalo** |
| LAI 536 – Psychophysiological Measurement I (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 656 – Application of Quantitative Research Methods (Ph.D.), University at Buffalo, Amherst, NY. |
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| LAI 633 – Neuropsychology Laboratory Rotation (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 635 – Special Topics in Education: Adult Learning (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
|  |
| LAI 641 – Survey of Educational Research Methods (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| LAI 685 – Research on Educational Technology (Ph.D. & Masters), University at Buffalo, Amherst, NY. |
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| **Washington State University**  |
| Educational Neuropsychology Certificate |
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| EDRES 572- Survey Design and Development Research Methods (Ph.D.), Washington State University, Pullman, WA |
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| EDRES 573- Psychophysiological Measurement I (Ph.D.), Washington State University, Pullman, WA. |
| EDRES 574- Psychophysiological Measurement II (Ph.D.), Washington State University, Pullman, WA. |
| EDRES 575- Introduction to Neuroimaging and Electroencephalography (Ph.D.), Washington State University, Pullman, WA. |
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| EDRES 576- Neuropsychology Laboratory Rotation (Ph.D.), Washington State University, Pullman, WA. |

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| **WORKS IN PROGRESS** |  |
| **Patents and Intellectual Property** |  |
| **Lamb, R.** Etopio, E., & St. George, A. (**In Review**). Invention Disclose for Review and Patent of Virtual Reality Technology. University at Buffalo, Technology Transfer Office. | 5 |
|  |  |
| **Lamb, R.** (**In Review**). Project SMART: Self-Monitoring and Analysis Technologies, Patent Case Number 15/400,760, Washington, DC. U.S. Patent and Trademark Office. | 4 |
|  |  |
| **Lamb, R.** (**In Progress**). Patent Case Number 1516, Washington, DC. U.S. Patent and Trademark Office. | 3 |
|  |  |
| **Lamb, R.** & Schmitter-Edgecombe, M. (**In Progress**). Copyright Case Number 1532 (WSU Internal), Washington, DC. U.S. Patent and Trademark Office. | 2 |
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| **Lamb, R.** (**In Progress**). Patent Case Number 1642 (WSU Internal), Washington, DC. U.S. Patent and Trademark Office. | 1 |
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| **Refereed Journal Articles and Other Writings in Review** |  |
| **Lamb, R.**, Sadler, T., Neumann, K., Fortus, D., Antonenko, P., Kavner, A., & Hoston, D. (Revise and Resubmit). The use of functional neuroimaging to understand aspects of cognitive demand and learning in science via cascading autonomic microstate data. *International Journal of Science Education.* | 4 |
|  |  |
| McAlister, C., Schmitter-Edgecombe, M., & **Lamb, R**. (In Review). A Meta-Analysis of the variables that may impact the relationship between cognition and instrumental activities of daily living in Parkinson’s disease. *Neuropsychology.* | 3 |
|  |  |
| Firestone, J.B., **Lamb, R**., & Luft, J.A., (In Review). NOS & Norms: The impact of teaching experiences on Beginning Science Teachers’ Understanding of the Nature of Science *International Journal of Science & Mathematics Education*. | 2 |
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| Kavner, A., & **Lamb, R.** (In Review) “Science Literacy”, submitted as part of Neurocognitive Measurements in STEM education. | 1 |

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| **ADDITIONAL INFORMATION** |  |
| **State, University, College, and Departmental Awards** |  |
| East Carolina University College of Education Faculty Showcase Award | 2021 |
| University at Buffalo Graduate School of Education Research Award | 2018 |
| Washington State University, Best Academic Class Award | 2016 |
| Washington State University College of Education Research Award | 2016 |
| Washington State University, Honors College Faculty Fellow Award | 2015 |
| George Mason University, College of Education and Human Development Research Fellow Award | 2012 |

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| **Media Appearances** |
| Research Highlights National Security Agency (2024): The Case for the use of Neurological Data in the Evaluation of Summarized Text. Author Katherine Kershaw. |
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| Feature Very Well Mind (2022): Student Classroom Boredom and how to Help. Author Sarah Vanbuskirk. |
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| Feature Researcher Live (2022): Machine Learning and Neurocognitive Data a Path to Prediction of Student Success. Author Kristine Lennie. |
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| Feature Researcher Live (2022): Technology Enhances Dialectical Behavior Therapy. Author Kristine Lennie. |
|  |
| Feature Journey’s Edge (2020): Virtual reality labs in schools: A way forward? Author Kristian Bouw. http:// kristian@notiontheory.com. |
| Feature Business News Daily (2020): Virtual reality in schools. Author Siri Hedreen. |
|  |
| Feature UBNOW (2019): GSE developing innovative ‘avatar-guided’ teacher training. Author Charles Anzalone, <http://www.buffalo.edu/ubnow/stories/2019/05/lamb-avatars.html> |
|  |
| Feature UBNOW (2019): Students from Enterprise Charter School get up-close-and-personal tour of UB. Author Charles Anzalone and Erik Tingue, <http://www.buffalo.edu/ubnow/stories/2019/03/enterprise-charter-tour.html> |
|  |
| Feature UBNOW (2019): Many factors influence video games’ link to violent acts, UB researcher says. Author: Charles Anzalone, <http://www.buffalo.edu/ubnow/stories/2019/03/lamb-video-> games-violence.html |
|  |
| Feature Channel 4 News (2019): UB researchers are developing virtual reality program to help kids with trauma. Author: Rachele Mongiovi, https://[www.wivb.com/news/local-news/ub-](http://www.wivb.com/news/local-news/ub-) researchers-are-developing-virtual-reality-programs-to-help-kids-with-trauma/1819067076 |
|  |
| Feature UBNOW (2019): UB researchers using virtual reality to treat students with trauma. Author: Charles Anzolone, <http://www.buffalo.edu/ubnow/stories/2019/02/lamb-vr-> trauma.html?utm\_source=2016+UB+Reporter%2C+University+at+Buffalo+List&utm\_campaign=f62a4b5819-UBNow\_02\_15\_2019&utm\_medium=email&utm\_term=0\_af676811e4- f62a4b5819-88009589 |
|  |
| Feature Study International (2019): How the integration of new technology is changing the higher educational landscape, Author: Sharuna Segaren, https:/[/w](http://www.studyinternational.com/news/how-)w[w.studyinternational.com/news/how-](http://www.studyinternational.com/news/how-) the-integration-of-new-technology-is-changing-the-higher-education-landscape/ |
|  |
| Feature UB Graduate School of Education News Ticker (2019): Developing computational models to explain origins of violence, Author: Amber Winters, <http://ed.buffalo.edu/news-> events/ticker/archive.host.html/content/shared/ed/news/ticker/2019/02/05.detail.html |
|  |
| Feature UBNOW (2018): Lamb aims to use virtual reality to treat PTSD, Author: Michael Andrei, https://[www.buffalo.edu/ubnow/spotlight.host.html/content/shared/university/news/ub-](http://www.buffalo.edu/ubnow/spotlight.host.html/content/shared/university/news/ub-) reporter-articles/stories/2018/07/profile-lamb-ptsd.detail.html |
| Feature Market Scale Educational Technology (2018): Individualizing learning in modern day classrooms with Professor Richard Lamb, Author: Christian Wilson, https://marketscale.com/industries/education-technology/individualizing-learning-modern-day- classrooms-professor-richard-lamb/ |
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| **Certifications and Licenses** |
| North Carolina Licensed Clinical Mental Health Counselor ***(In Progress)*** |
| Licensed Professional Counselor’s Association of North Carolina Certificate for Diagnosis of Depression, Eating Disorders, Trauma, Substance Abuse, and Personality Disorders, DSM-5 |
| Virginia Post-Graduate Professional License: Earth and Space Science, Biology, Chemistry and Physics |
| North Carolina Class M Teaching License: General Science 9-12 |
| Advanced Placement Environmental Educator Certification |
| Advanced Placement Biology Educator Certification |
| International Baccalaureate Middle Years Program Level III Certification |
| International Baccalaureate Diploma Program Level II Certification |