

Joseph E Michaelis

Curriculum Vitae

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Education and Certification

Ph.D. Dissertator - Educational Psychology - Learning Sciences (2018-expected)

Computer Sciences Minor

Ed-GRS Fellow

Advisor: Mitchell Nathan

University of Wisconsin, Madison, WI

Master of Science – Educational Psychology (2015)

Advisor: Mitchell Nathan

University of Wisconsin, Madison, WI

Master of Science – Science Education Leadership (2012)

Advisor: Norman Lederman

Illinois Institute of Technology, Chicago, IL

B.S. Philosophy (2004)

University of Wisconsin, Madison, WI

Alternative Teacher Certification (2006)

Region 10 Alternative Teacher Education, Richardson, TX

Illinois Educator Certificate (2008 - 2018)

Initial Secondary Teaching: Science - Chemistry (6-12)

Teaching Experience

University Level:

Lecturer – Human Abilities and Learning (Educational Psychology 301) Fall 2016

Lecturer – Learning Theory and Application (Educational Psychology 711-025) Summer 2015&2016

Teaching Assistant – Introduction to Learning Sciences (Educational Psychology 795/796) 2014-2016

University of Wisconsin - Madison

K-12 Level:

Instructional Leader – HS Science, 2012–2013

Teacher – Physics and Robotics, 11th grade, 2011–2013 & Earth Science, 6th Grade, 2008–2011

Perspectives Charter School/IIT – Math and Science Academy, Chicago, IL.

Teacher – Physics and Chemistry, 9th and 10th grade, 2006-2007

Lancaster High School, Lancaster, TX.

Publications and Research

- Michaelis, J. E.**, Wu, S. P. W., Rau, M. A., Nathan, M. J. (April, 2018). *Testing the four-phase interest development survey for Chemistry*. Paper presentation to the 2018 Annual Meeting of the American Educational Research Association, New York, NY.
- Nathan, M. J., Walkington, C., Vinsonhaler, R., **Michaelis, J. E.**, McGinty, J., Binzak, J. V., & Kwon, O., H. (April, 2018). *Embodied account of geometry proof, insight, and intuition among novices, experts, and english language learners*. Paper presentation to the 2018 Annual Meeting of the American Educational Research Association, New York, NY.
- Michaelis, J. E.** (2017). *The role of interest and motivation in science investigation and engineering design instruction*. Paper commissioned for the National Academies of Sciences, Engineering, and Medicine committee on Science Investigations and Engineering Design for Grades 6-12.
- Michaelis, J. E.**, & Mutlu, B. (2017). *Reading socially: An extended field study of a reading companion robot*. Manuscript in preparation.
- Acuna, S., Michaelis, J. E., Roth, J., & Towles, J. (2017). *Intervention designed to increase interest in engineering for low-interest, K-12 girls did so for boys and girls*. Manuscript under review.
- Towles, J., Acuna, S., Francis, C. A., & **Michaelis, J. E.** (June, 2017). *Impact of biomechanics-based activities on situational and individual interest among K-12 students*. American Society of Engineering Education (ASEE 2017), Columbus, OH.
- Michaelis, J. E.**, & Mutlu, B. (May, 2017). *Someone to read with: Design of and experiences with an in-home learning companion robot for reading*. In CHI 2017, May 06-11, Denver.
- Michaelis, J. E.**, & Nathan, M. J. (June, 2016). *Observing and measuring interest development among high school students in an out-of-school robotics competition*. American Society of Engineering Education (ASEE 2016) Pre-college engineering education division, New Orleans, LA.
- Clinton, V. E., Cooper, J. L., **Michaelis, J. E.**, Alibali, M. W., Nathan, M. (2016). How revisions to mathematical visuals affect cognition: Evidence from eye tracking. In B. Morris, C. Was & F. Sansosti (Eds.) *Eye-Tracking technology applications in educational research*. New York, NY: IGI
- Michaelis, J. E.**, Clinton, V. E., Cooper, J. L., Nathan, M. J., Alibali, M. W. (2016, April) *Cognitive principles for effective uses of visual information improve mathematics learning by encouraging deeper processing*. Presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, D.C.
- Michaelis, J. E.**, & Nathan, M. J. (June, 2015). *The Four-Phase Interest Development in Engineering Survey*. American Society of Engineering Education (ASEE 2015) Educational Research Methods (ERM) Division. Seattle, WA.
- Rau, M. A., **Michaelis, J. E.**, & Fay, N. (2015). Connection making between multiple graphical representations: A multi-methods approach for domain-specific grounding of an intelligent tutoring system for chemistry. *Computers & Education*, 82(0), 460-485.
- Michaelis, J. E.**, & Nathan, M. J. (2015, April). *The role of feedback in interest development in an out-of-school engineering setting*. Paper presentation to the 2015 Annual Meeting of the American Educational Research Association, Chicago, IL

Michaelis, J. E., Nathan, M.J. (2014). The role of feedback in interest development in an out-of-school engineering setting. In Polman, J. L., Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., and D'Amico, L. (Eds.). (2014). *Learning and becoming in practice: The International Conference of the Learning Sciences (ICLS) 2014, Volume 3*. Boulder, CO: International Society of the Learning Sciences. (pp. 1525-1526)

Michaelis, J. E., Radochonski, N., Yang, H., King, D., (2012). Does immediate feedback with the use of a classroom response system increase student achievement on summative assessments? Master's Thesis, Illinois Institute of Technology: Chicago, IL.

Presentations and Workshops

Michaelis, J. E., & Dornfeld-Tissenbaum, C. (2017). Mentoring in writing: Junior-senior partnerships for developing writing skills. Presented at 2nd Annual Learning Sciences Graduate Student Conference. Bloomington, IN.

Michaelis, J. E., & Mutlu, B. (2017). Someone to read with: Design of and experiences with an in-home learning companion robot for reading. Presented at 2nd Annual Learning Sciences Graduate Student Conference. Bloomington, IN.

Michaelis, J. E., & Nathan, M.J. (2013, September). The role of feedback in interest development in an out-of-school engineering setting. Presented at DRP Poster Fair, WCER, Madison, WI.

Lederman, N.G., Lederman, J.S., Bartels, S., King, D., **Michaelis, J. E.** (2013, April). Inquiring minds want to know. Presented at the National Science Teachers Associate National Conference, San Antonio, TX.

Michaels, J. E., Heitzman, C., (2011, March). When will I ever use this? Incorporating authentic application in the science classroom. Presented at the National Science Teachers Associate National Conference, San Francisco, CA.

Professional Workshops

Michaelis, J. E., Condon, M., Albrecht-Malinger, R., (2012, August). Mastering mastery manager: Data driven instruction. Perspectives Charter Schools Network Professional Development, Chicago, IL.

Michaelis, J. E., Parker, M. (2011, January). Holy HOTS! Assessment framework to assessment questions. Presented at Perspectives Charter Schools Network Professional Development, Chicago, IL.

Curriculum Development

Science Synergy Course, Perspectives Charter Schools (2008 – 2013)
Curriculum development for innovative science inquiry course
6th Grade – Engineering and Design in Earth Science
11th Grade – Physics Principles in Robotics Engineering

IPRO: Inter-professional Design Course, Perspectives Charter Schools (2012-2013)

Curriculum developed in conjunction with Illinois Institute of Technology School of Design. The IPRO class is an interdisciplinary design course required of all IIT undergraduate students. My work has modified the curriculum to be implemented as a senior capstone project course at the high school level.

DifQuiz.com – ACT prep online (2011- 2012)

Consultant for Science Reasoning Test Preparation Development

Service

Learning Sciences Graduate Student Conference (2015-17)

Organizing Committee Member

Submissions Chair

STEMbuds (2015-16)

Undergraduate student group to encourage K-12 interest in STEM

Graduate student adviser

Conference and Journal Review:

American Educational Research Association (2017)

SIG – Advanced Technologies for Learning & SIG – Learning Sciences

American Society for Engineering Education (2015 - 2017)

K-12 & Pre-College Engineering Division

Computers in Human Behavior (2015-2017)

International Conference on Human-Robot Interaction (2017)

International Conference on Intelligent Tutoring Systems (2016)

Professional Affiliations

American Society for Engineering Education (2015 – present)

American Educational Research Association (2014 – present)

Association for Computing Machinery (2017)

International Society of the Learning Sciences, (2013 – present)

National Science Teachers Association, (2010 – present)

References

Mitchell J. Nathan, Professor
Educational Psychology
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Phone: 608-262-0831
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