

Curriculum Vitae

Benjamin C. Heddy, Ph.D.

Jeannine Rainbolt College of Education
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Educational History

- 2011-2014 **University of Southern California**
Ph.D. Urban Education
Concentration: *Educational Psychology*
Cognate: *Social Psychology*
Dissertation Title: *Facilitating interest and out-of-school engagement in science in secondary school girls: Increasing the effectiveness of the TTES model through parental involvement*
Advisor: Gale M. Sinatra, Ph.D.
- 2009-2011 **University of Nevada, Las Vegas**
Ph.D. Educational Psychology, transferred to USC
Advisor: Gale M. Sinatra, Ph.D.
- 2007-2009 **University of Northern Colorado**
M.A. Educational Psychology
Thesis Title: *Teaching for transformative experience in social psychology*
Thesis Advisor: Kevin J. Pugh, Ph.D.
- 2003-2007 **Ferris State University**
B.S. Psychology

Research Interests

I explore cognitive and motivational aspects of learning including engagement, academic emotions, and interest development. I specialize in the investigation of learning activities that occur in everyday experience. As a second related line of research I study the mechanisms of conceptual and attitude change.

Professional Employment

- 2014-present **Assistant Professor, University of Oklahoma.** Designing and teaching educational psychology related courses. Maintaining an active program of research. Providing service to the university, community, and profession.

- 2011-2014 **Graduate Assistant, University of Southern California.** Assisted research process for Gale Sinatra, Ph.D. Worked on several research projects related to conceptual change, transformative experience, evolution education, and understanding emergent systems.
- 2009-2011 **Graduate Assistant, University of Nevada, Las Vegas.** Assisted research process for Gale Sinatra, Ph.D. Worked on several research projects regarding motivation, and conceptual change.
- 2009-2011 **After-School Instructor, Nevada Children's Center, Las Vegas, Nevada.** Taught academic skills to children with behavioral issues who reside in urban settings. Designed a curriculum and taught classroom.
- 2007-2009 **Graduate Assistant, University of Northern Colorado.** Conducted research and entered data for Kevin J. Pugh, Ph.D. Worked on several research projects involving motivation and teaching for transformative experience.
- 2007-2009 **Behavioral Instructor, Kathleen Painter Littler Center, Greeley, Colorado.** Taught a diverse population regarding academic, social, and behavioral skills at a residential treatment center for children with behavioral issues.

Scholarly Publications and Presentations

Peer-Reviewed Publications

Heddy, B. C. & Sinatra, G. M. (2013). Transforming misconceptions: Using transformative experience to promote positive affect and conceptual change in students learning about biological evolution. *Science Education, 97(5)*, 723-744.

Heddy, B. C. & Nadelson, L. S. (2013). Variables associated to public acceptance of evolution in the United States. *Evolution: Education and Outreach, 6(3)* 1-14.

Heddy, B. C. & Nadelson, L. S. (2012). A global perspective of the variables associated to acceptance of evolution. *Evolution: Education and Outreach, 5(3)*, 412-418.

Manuscripts in Review

Sinatra, G. M., **Heddy, B. C.** & Lombardi, D. (in revision). Engagement in science learning: How do we know it when we see it? Manuscript submitted for publication.

Muis, K. R., Pekrun, R., Azevedo, R., Sinatra, G. M., Trevors, G., Meier, E. & **Heddy, B. C.** (in revision). The curious case of climate change: Epistemic emotions mediate relations between epistemic beliefs, learning strategies and achievement. Manuscript submitted for publication.

Pugh, K. J., Schmidt, K., Koski, K. & **Heddy, B. C.** (in review). Teaching for transformative experiences in science: Developing and evaluating an instructional model.

Manuscripts in Progress

Heddy, B. C., Sinatra, G. M., Danielson, R. W. & Graham, J. (in progress). Modifying knowledge, emotions, and attitudes about genetically modified organisms.

Heddy, B. C., Sinatra, G. M., Seli, H. & Mukhopadhyay, A. (in progress). Transforming college success: Making learning meaningful to at-risk students.

Heddy, B.C. & Sinatra, G. M. (in progress). Facilitating interest and out-of-school engagement in science in secondary school girls: Increasing the effectiveness of the TTES model through parental involvement.

Peer-Reviewed Blog Posts

Heddy, B. C. (2013). “What do I need science for? I’m going into fashion!”: Teachers must encourage STEM learning through personal relevance. *Psychology Today*.
<http://www.psychologytoday.com/blog/psyched/201310/what-do-i-need-science-i-m-going-fashion>

Refereed Conference Proceedings

Heddy, B. C. & Sinatra G. M. (2012). Transformative experience and biological evolution: Facilitating deep engagement. In J. van Aalst, K. Thompson, M. Jacobson, & P. Reimann (Eds.), *Proceedings of the 10th International Conference of the Learning Sciences* (pp. 501-502). International Society of the Learning Sciences: Sydney, NSW, Australia.

Brem, S. K., Stump, G. S., Sinatra, G. M., Reichenberg, R. & **Heddy, B. C.** (2012). Misconceptions regarding emergent phenomena vary by domain. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 150-155). Austin, TX: Cognitive Science Society.

Presentations

International

Brem, S. K., Sinatra, G. M., Stump, G. S., **Heddy, B.C.**, Reichenberg, R. & Nelson, K. (2013). *From molecules to mammals: Domain specificity in reasoning about emergent systems*. Paper presented at the annual meeting of the European Association for Research on Learning and Instruction. Munich, Germany.

Brem, S. K., Sinatra, G. M., Stump, G. S., Reichenberg, R., **Heddy, B. C.** & Nelson, K. (2013). *Triangulating ants, protector geese, and slime mold armies: Routes to misconceptions about emergence*. Paper presented at the annual meeting of the European Association for Research on Learning and Instruction. Munich, Germany.

Heddy, B. C. & Sinatra G. M. (2012). *Transformative experience and biological evolution: Facilitating deep engagement*. Paper presented at the annual meeting of the International Conference of the Learning Sciences. Sydney, Australia.

Brem, S. K., Stump, G. S., Sinatra, G. M., Reichenberg, R. & **Heddy, B. C.** (2012). *Misconceptions regarding emergent phenomena vary by domain*. Paper presented at the annual meeting of the Cognitive Science Society. Sapporo, Japan.

National

Heddy, B. C., Sinatra, G. M., Greene, B., Berning, S. & Joel, J. (submitted). *Increasing the effectiveness of teaching for transformative experience in science through parental involvement in an all-girl secondary school*. Paper submitted to the annual meeting of the American Educational Research Association. Chicago, IL.

Heddy, B. C., Sinatra, G. M., Greene, B. & Mukhopdyay, A. (submitted). *Investigating the role of parental values in secondary school girls value for science content*. Paper submitted to the annual meeting of the American Educational Research Association. Chicago, IL.

Alongi, M., **Heddy, B. C.** & Sinatra, G. M. (submitted). *Promoting real-world engagement of history concepts beyond the secondary classroom: Teaching for transformative experience and conceptual change*. Paper submitted to the annual meeting of the American Educational Research Association. Chicago, IL.

Muto-Nelson, K., Hilpert, J., **Heddy, B. C.** & Brem S. (submitted). *Electrons certainly follow laws: Integrating complexity thinking with how learners view knowledge*. Paper submitted to the annual meeting of the American Educational Research Association. Chicago, IL.

Danielson, R. W., Sinatra, G. M., Seyranian, V., Mukhopadhyay, A., **Heddy, B. C.**, Marsh, J. A., Polikoff, M. S., Zhou, N. & Hossepian, K. (submitted). *Measuring Interest and Emotion in a 4th Grade STEM Unit*. Paper submitted to the annual meeting of the American Educational Research Association, Chicago, IL.

Heddy, B. C., Sinatra, G. M., Seli, H. & Mukhopadhyay, A. (2014). *Transformative experience as a facilitator of interest development and transfer in a college success course for at-risk students*. Paper presented at the annual meeting of the American Educational Research Association. Philadelphia, PA.

Heddy, B. C., Sinatra, G. M. & Danielson, R. W. (2014). *Modifying attitudes, emotions, and conceptual knowledge about genetically modified foods*. Paper presented at the annual meeting of the American Educational Research Association. Philadelphia, PA.

Muis, K. R., Pekrun, R., Sinatra, G. M., Azevedo, R., Trevors, G., Meier, E. & **Heddy, B. C.** (2014). *The curious case of climate change: Epistemic emotions mediate relations between epistemic beliefs, learning strategies and learning outcomes*. Paper presented at the annual meeting of the American Educational Research Association. Philadelphia, PA.

- Heddy, B. C.,** Sinatra, G. M., Danielson, R. W. & Graham, J. (2013). *Conceptual change and attitude change: A dynamic interplay*. Paper presented at the annual meeting of the American Psychological Association. Honolulu, HI.
- Heddy, B. C.,** Sinatra, G. M. & Seli, H. (2013). *Transforming college success: Making learning meaningful to at-risk students*. Paper presented at the annual meeting of the American Educational Research Association. San Francisco, CA.
- Heddy, B. C. &** Nadelson, L. S. (2013). *The variables related to public acceptance of evolution in the United States*. Paper presented at the annual meeting of the American Educational Research Association. San Francisco, CA.
- Sinatra, G. M. & **Heddy, B. C.** (2013). The challenges of defining and measuring student engagement in science learning. In D. Lombardi (Chair), *Engagement in science learning: How do we know it when we see it?* Symposium presented at the annual meeting of the American Educational Research Association. San Francisco, CA.
- Heddy, B. C. &** Sinatra G. M. (2012). *Transforming misconceptions: Exploring the relationship between transformative experience and conceptual change*. Paper presented at the annual meeting of the American Educational Research Association. Vancouver, B.C., Canada.
- Heddy, B. C. &** Sinatra, G. M. (2011). *Utilizing transformative experiences to facilitate conceptual change*. Paper presented at the annual meeting of the National Consortium for Instruction and Cognition. New Orleans, LA.
- Pugh, K. J., Schmidt, K., Russel, C. M. & **Heddy, B. C.** (2010). *Fostering transformative experiences in science: A design based study*. Paper presented at the annual meeting of the American Educational Research Association. Denver, CO.
- Pugh, K. J., Schmidt, K., Koski, K. & **Heddy, B. C.** (2009). *Motivation as a goal in its own right: One teacher's experience in teaching for transformative experiences*. Paper presented at the annual meeting of the American Educational Research Association. San Diego, CA.

Regional

- Heddy, B. C. &** Sinatra G. M. (2011). *Using transformative experience to promote positive affect and conceptual change in students learning about biological evolution*. Poster presented at the bi-annual meeting of the Southwest Consortium for Innovative Psychology in Education. Norman, OK.
- Heddy, B. C.** (2011). *Exploring the relationship between conceptual change and transformative experience*. Paper presented at the University of Nevada, Las Vegas Graduate Professional Student Association Forum. Las Vegas, NV.

Heddy, B. C. & Reynolds, R. (2010). *Exploring the effects of strategy instruction on metaphor comprehension.* Paper presented at the University of Nevada, Las Vegas Graduate Professional Student Association Forum. Las Vegas, NV.

Submitted Grants

Increasing Student Interest in STEM Careers in Diverse Urban Classrooms. *Principal Investigator.* Spencer Foundation Dissertation Grant (not funded).

Supervision of Graduate Student Research

Doctoral Committee Memberships

Tracy Farkas (Department of Educational Psychology)
John Madden (Department of Educational Psychology)
Jacqueline Goldman (Department of Educational Psychology)

Master's Committee Memberships

Brandon Wilmarth (Department of Educational Psychology)
Jennifer Lowery (Department of Educational Psychology)

Teaching Experience

Courses Taught

- 2014-present **Assistant Professor**, University of Oklahoma, *EIPT 5183 (Graduate): Motivation and Learning in the Classroom.*
- 2014-present **Assistant Professor**, University of Oklahoma, *EIPT 3483: Cognition, Motivation, and Classroom Management for Teachers.*
- 2010-2011 **Adjunct Professor**, University of Nevada, Las Vegas, *EPY 101: College Success.*
- 2009-2011 **Adjunct Professor**, University of Nevada, Las Vegas, *EPY 303: Educational Psychology (face-to-face and online).*
- 2008-2009 **Adjunct Professor**, University of Northern Colorado, *PSY 120: Introduction to Psychology.*

Courses Assisted

- Fall 2013 **Teaching Assistant**, University of Southern California, *EDUC 715 (Graduate): Current Issues in Motivation.*

Spring 2013 **Teaching Assistant**, University of Southern California, *EDUC 642 (Graduate): Learning and Instruction*.

Professional Developments Conducted

2013-2014 **Generating STEM Interest in Secondary School Students**, *Archer Charter School*. Trained two science instructors in a diverse urban all-girl middle school on strategies to trigger and maintain student interest in STEM topics. Training took place for five consecutive weeks.

2012-2013 **Developing Student Interest in STEM**, *Sequoyah Charter School*. Trained two science instructors in a diverse urban middle school on strategies to trigger and maintain student interest. Training took place for ten consecutive weeks.

Fall 2012 **Using SPSS to Analyze Educational Data**, *University of Southern California*. Taught grant funded research assistants how to use SPSS software for Brendesha Tynes, Ph.D.

Spring 2012 **Transforming College Success**, *University of Southern California*. Facilitated a professional development workshop for graduate student teaching assistants to increase student engagement in transformative experience.

Service

National

2014-present **AERA Division C Graduate Student Committee Faculty Mentor**. Provide mentorship to graduate students to engage in all necessary tasks.

2013-present **Psychology Today Editorial Committee**. Write and edit articles for the Psychology Today magazine and website.

2012-2014 **AERA Division C Graduate Student Committee Co-Chair**. Coordinate social media, recruit Division C members, and set up annual conference sessions.

2010-2012 **AERA Campus Liaison**. Provide students with information on AERA, disseminate information, and write monthly newsletter.

2007-2009 **Educational Psychology Society Newsletter Editor**. Research topics, interview students and instructors, and write a bi-semester newsletter.

College

2014-present **Research Committee**, *University of Oklahoma*. Develop methods for generating resources with the aim of increasing research productivity within the college.

Department

- 2014-present **Online Masters Degree Committee**, *University of Oklahoma*. Create and design an online masters program in its entirety.
- 2014-present **Graduate Student Experience Task Force**, *University of Oklahoma*. Design an instrument to assess and analyze graduate student experiences within the program.

Professional Organizations

American Educational Research Association (AERA) – Division C, Motivation SIG
American Psychological Association (APA) – Division 15
European Association for Research on Learning and Instruction (EARLI) – Motivation SIG
National Consortium for Instruction and Cognition (NCIC)
Southwest Consortium for Innovative Psychology in Education (SCIPIE)

Article Reviews

Contemporary Educational Psychology
Educational Psychologist
Evolution: Education and Outreach
International Journal of Science Education
Journal of Engineering Education
Science Education

Community Outreach

- 2011-2014 **I am Mentor**, *University of Southern California*. Volunteered as a mentor for inner city high school graduates. Provided advice and assistance applying for and succeeding in college.
- 2009-2011 **Child Haven**, *Las Vegas, Nevada*. Volunteered as a supervised visitation specialist for abused and neglected children in the inner-city. Taught parents and children appropriate behavior.

Awards

- Spring 2014 **Graduate Student Mentor Award**, *University of Southern California*. Selected by my peers as an effective mentor to graduate students.
- Summer 2013 **Doctoral Student Seminar Participant**, *American Psychological Association, Division 15 Educational Psychology*. Selected to participate in a seminar that trains graduate students how to be successful scholars. Honolulu, HI.

- Spring 2013 **Graduate Student Seminar Participant**, *American Educational Research Association*. Selected to participate in a seminar that trains graduate students how to be successful scholars. San Francisco, CA.
- 2011-2014 **Rossier Deans Fellowship**, *University of Southern California*. Received the Deans fellowship from the department of Urban Education, which recognizes excellence in research and scholarship.
- Spring 2011 **Research Award**, *University of Nevada, Las Vegas*. Won first place in a research competition that included methodology, analysis, and presentation.
- Spring 2010 **Research Award**, *University of Nevada, Las Vegas*. Won third place in a research competition that included methodology, analysis, and presentation.

References

Gale M. Sinatra, Ph.D.

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Robert Rueda, Ph.D.

Stephen Crocker Professor in Education
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Brendesha M. Tynes, Ph.D.

Associate Professor of Educational Psychology
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Kevin J. Pugh, Ph.D.

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Krista R. Muis, Ph.D.

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Department of Educational and Counseling Psychology
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