

## 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 10<sup>th</sup> 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 34<sup>th</sup> 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.**

Professor of Education and Psychology  
Rossier School of Education  
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### **Robert Rueda, Ph.D.**

Stephen Crocker Professor in Education  
Rossier School of Education  
University of Southern California  
3470 Trousdale Parkway  
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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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School of Education and Behavioral Sciences  
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### **Krista R. Muis, Ph.D.**

Associate Professor of Learning Sciences  
Department of Educational and Counseling Psychology  
McGill University  
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