



REESE at AERA 2011

The 2011 Annual Meeting of the American Educational Research Association (AERA) will take place Friday April 8 through Tuesday April 12 in New Orleans, Louisiana. The following schedule contains details of 2011 AERA sessions that include presentations on REESE projects and their findings. For additional information on AERA 2011, please visit <http://aera.net/Default.aspx?id=10412>. To add presentations highlighting REESE project work to this list, please contact ARC Research Assistant Elizabeth Keating (keating-elizabeth@norc.org).

FRIDAY, April 8

2:15pm - 3:45pm

Advanced Technology for Supporting and Assessing Student Learning

Building/Room: Building/Room: Astor Crowne Plaza / Toulouse A

Do Differences in Student's Exploration Behavior Lead to Differences in Domain Learning or Inquiry Skills?

Janice Gobert

Students' Success in the STEM Disciplines

Building/Room: Sheraton / Grand Ballroom A

An Inquiry Into the Goal Commitment of Science, Technology, Engineering, and Mathematics (STEM) Graduate Students

Melissa D. Hurst, Michelle A. Maher

Teaching and Learning in Graduate Education

Building/Room: Sheraton / Grand Ballroom A

The Impact of Undergraduate Research Experience on a Performance-Based Measure of Science, Technology, Engineering, and Mathematics (STEM) Graduate Students' Research Skills

Angeline Gilmore, Michelle Vieyra, and Briana Crotwell Timmerman

4:05pm - 5:35pm

Poster Session: Motivation in Learning and Instruction

Building/Room: Sheraton / Grand Ballroom C

"Should I Take the Bio Exam?" An Expectancy-Value Perspective on Undergraduates' Decisions to Take an Optional Biology Exam

Anthony Perez, Jennifer Cromley, Erin Horvat, and Emily Tancredi-Brice Agbenyega

4:05pm - 6:05pm

Linking Mathematics Classroom Practices to Student Outcomes

Building/Room: New Orleans Marriott / Preservation Hall Studio 9

Capturing What Counts: Classroom Practices That Lead to Robust Understanding of Algebra

Daniel Reinholz, Mariana Levin, Hee-Jeong Kim, Danielle Dawn Champney, Robert E. Floden, Duanghathai Katwibun, Jerilynn Lepak, Nicole Louie, Sarah Nix, Jose Sanchez, Alan H. Schoenfeld, Kimberly Seashore, Niral Shah, and Jamie Wernet

Empirical Research to Link Classroom Practices to Student Mathematics Learning: Challenges and Solutions

Robert E. Floden, Alan H. Schoenfeld, Danielle Dawn Champney, Duanghathai Katwibun, Hee-Jeong Kim, Jerilynn Lepak, Mariana Levin, Nicole Louie, Sarah Nix, Daniel Reinholz, Jose Sanchez, Kimberly Seashore, Niral Shah, and Jamie Wernet

Measuring Middle-School Students' Robust Understanding of Mathematics

Jerilynn Lepak, Kimberly Seashore, Daniel Reinholz, Sarah Nix, Danielle Dawn Champney, Robert E. Floden, Duanghathai Katwibun, Hee-Jeong Kim, Mariana Levin, Nicole Louie, Jose Sanchez, Alan H. Schoenfeld, Niral Shah, and Jamie Wernet

Capturing What Counts: Classroom Practices That Lead to Robust Understanding of Algebra

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Chair: Robert E. Floden

SATURDAY, April 9

8:15am - 9:45am

Computational Thinking: Progress in Defining, Supporting, and Measuring Computational Thinking in Projects Funded by the National Science Foundation's Division of Research on Learning

Building/Room: Sheraton / Grand Ballroom E

Strategies for Engaging Middle School Students in Computational Thinking
Jill Denner

Pathways of Minorities and Women Into Postsecondary Science Careers: Interdisciplinary Perspectives

Building/Room: Sheraton / Grand Ballroom B

The International Baccalaureate Program in Florida: Access and Enrollment for Historically Underserved Students

Becky A. Smerdon, Reginald S. Lee, Aimee Eden, Patricia Rodriguez De Gil

Investigating Factors Contributing to Underrepresented Minority Students' Academic Achievement in First-Semester Organic Chemistry

Enrique Lopez, Kiruthiga Nandagopal, Evan Szu, Richard J. Shavelson

Has the Expansion of Public School Choice Enhanced the Preparedness of Black Youth for Science, Technology, Engineering, and Mathematics (STEM) Careers?

Lara Cristina Perez-Felkner, Eric Hedberg, Barbara L. Schneider

Investigating Factors Contributing to Underrepresented Minority Students' Academic Achievement in First-Semester Organic Chemistry

Enrique Lopez, Kiruthiga Nandagopal, Evan Szu, Richard J. Shavelson

Implicit Predictors of Engineering Persistence

Frederick L. Smyth, Brian Nosek

Chair: Janice H. Earle

Assessing Student Learning, Development, and Outcomes in STEM Education

Building/Room: JW Marriott / Conde

Bridging the Gap: An Exploration of Tensions Between Pedagogical Reforms and Science, Technology, Engineering, and Mathematics Students' Learning Needs

Emily Agbenyega Tancredi-Brice, Erin Horvat, Anthony Perez, Jennifer Cromley, Ingelle Townsend, and Lillian Raja

10:35am - 12:05am

College classrooms, teaching and student engagement

Building/Room: JW Marriot/Conde

Perceived Norms and their Relationship to Interactive Teaching: A Mixed-Methods Study
Matthew Hora, Craig Anderson

Division I Poster Session

Building/Room: Sheraton / Grand Ballroom C

*Enhancing the Capability of Professional Skills Assessment in Engineering Education:
An Application of Generalizability Theory*
Mo Zhang, Ashley Ater Kranov

12:25pm - 1:55pm

Critiques of the Examination of Issues Related to Gender, Race, and Class for Academic Success

Building/Room: Sheraton / Grand Ballroom D

Life Stories of the Double Bind: Women of Color in Science and Engineering
Irene Liefshitz, Lily Ko, Carol Wright, Apriel Hodari, and Maria (Mia) Ong

Developments in Interest Theory and Research

Building/Room: New Orleans Marriott / Preservation Hall Studio 2

*Self-Regulatory Trade-Offs When Learning Online: Interested Engagement Can Hurt
AND Help*
Carol Sansone

1:00pm - 5:00pm

Developing a Competitive Educational Research Proposal for the National Science Foundation's Division of Research on Learning

Building/Room: Hotel Monteleone / Vieux Carre

Director: Gavin W. Fulmer
Director: Janice H. Earle
Instructor: Kusum Singh
Instructor: Celestine H. Pea

2:15pm - 3:45pm

Progress in Learning Science Through Technology-Enhanced Models

Building/Room: New Orleans Marriott / Mardi Gras Salon FGH

Supporting Students' Learning of Genetics Utilizing an Online Visualizations-Based Genetics Unit

Michelle Williams, Joi Merritt

Role of Strategy Use and Metacognition in the Development of Mathematics Problem Solving

Building/Room: Hotel Monteleone / Orleans

Self-Explanation Prompts are Less Beneficial if Students Know More

Marci DeCaro, Bethany Rittle-Johnson

Innovative STEM Teacher Education and Professional Development

Building/Room: Sheraton / Grand Ballroom C

Designing Inclusive Science, Technology, Engineering, and Mathematics Academies in Texas

Ann House, Corinne Singleton, Viki Young, and Barbara Means

Roundtables: the Use of Instructional Tools to Improve Learning Outcomes

Building/Room: Sheraton / Grand Ballroom B

Teaching Inferential Reasoning With Diagrams in High School Biology Classes: Who Gains From Self-Explanation Training?

Bradley Bergey, Jennifer Cromley, Ting Dai, Shannon Fitzhugh, and Theodore Wills

The Robert L. Linn Distinguished Address

Building/Room: Doubletree / Madewood A

Title Displayed in Event Calendar: The Robert L. Linn Distinguished Address

Using "Replacement Units" to Link Assessment With Instruction and Enable Research and Professional Development

Lorrie A. Shepard

Discussant: James W. Pellegrino

Discussant: Joan Ferrini-Mundy

4:05pm - 6:05pm

Culturally Relevant Mathematics Education

Building/Room: New Orleans Marriott / Preservation Hall Studio 6

Helping Mathematics Teachers Become Culturally Relevant Educators: Results From a Conference to Increase Teacher Knowledge of Culturally Relevant Teaching
Raquel Leonor Gonzalez, Martin Leroy Johnson, and Stephanie Timmons Brown

Poster: Teaching, Learning, and Social Issues in Mathematical Education

Building/Room: Sheraton / Grand Ballroom C

Designing Integrative Learning Tasks for Unit Concepts Throughout Length, Area, and Volume Measurement
Dave Klanderma, Craig Cullen, and Amanda Miller

Excellence in Education Research: Early Career Scholars and Their Work

Building/Room: New Orleans Marriott/Mardi Gras Salon DE

Resilience in Pathways to Four-Year College Degrees: Perceived Regard and School Reform
Lara Cristina Perez-Felkner

Using Education Research Data to Advance Cumulative Knowledge

Building/Room: Sheraton / Napoleon Ballroom D

Federal Policy and an Expanded Vision for Data Sharing
Myron P. Gutmann

Making Research Products Public Goods
Sarah-Kathryn McDonald

Chair: Barbara Schneider

SUNDAY, April 10

8:15am - 10:15am

Diverse Perspectives on Embodied Learning: What's So Hard to Grasp?

Building/Room: Astor Crowne Plaza / Toulouse B

Mathematical Instruments and Perceptuo-Motor Integration
Ricardo Nemirovsky, Molly Kelton, and Rhodehamel Bohdan,

10:35am - 12:05pm

Poster Session: Research on Student Science Learning

Building/Room: Sheraton / Grand Ballroom C

The Effect of Diagrammatic Reasoning Intervention on Students' Attention to Text and Diagrams: An Examination of Eye Movements

Shannon Fitzhugh, Jennifer Cromley, Bradley Bergey, and Theodore Wills

Unpacking Middle School Students' Understanding of Genetic Inheritance and Cell Division Using Structural Regression Modeling

Michelle Williams, Angela Haydel DeBarger, and Beronda L. Montgomery

From Policy to Practice: National, Local, and Individual Student Perspectives on High School Accelerated Coursetaking

Building/Room: Sheraton / Grand Ballroom A

Pathways in America's High Schools

Becky Smerdon, Aimee Evan, Kathryn Borman, and Arland Nguema

Advanced Placement (AP) "Open Door Policy": Increasing AP Enrollment in Two Florida High Schools

Aimee Eden, Ashley Spalding, and Rebekah Heppner

Gender and Racial Class Composition Effects on Calculus Coursetaking

Will Tyson

Student Agency and Accelerated Academic Program Participation

Ashley Spalding, Aimee Eden, and Arland Nguema

From Policy to Practice: National, Local, and Individual Student Perspectives on High School Accelerated Coursetaking

Ashley Spalding

Understanding Variations in Teachers' Implementations of Curricula

Building/Room: New Orleans Marriott / Preservation Hall Studio 9

Examining Teachers' Practice To Determine The Effectiveness Of A Professional Learning Task

Kristie Newton

Comparing Incorrect and Correct Examples in Algebra Classrooms

Kelley Durkin, Bethany Rittle-Johnson

Exploring Relationships between MKT and Teachers' Implementation of Curricula

Jon Star, Katie Lynch, and Courtney Pollack

Teacher Divergence from Expected Curriculum Use
Megan Westwood Taylor

Diverse Strategies to Help Students Improve Their Conceptual Understanding and Problem Solving

Building/Room: Hotel Monteleone / Royal Ballroom

The Effects of Self-Explanations on Robust Understanding of the Control of Variables Strategy
Janice Gobert

Influence of Teachers' Knowledge and Beliefs on Instructional Practice

Building/Room: Hotel Monteleone / Iberville

Teachers' intentions and reflections for classroom instruction in a curricular context.
Bikai Nie, Tony Freedman, Ning Wang, John Moyer, and Jinfa Cai

Teaching Standards, Professional Development, and Teacher Retention

Building/Room: Sheraton / Grand Ballroom D

What Are the Effects of Teacher Preparation on Beginning Math and Science Teacher Retention?
Richard Ingersoll, Henry May, and Lisa Merrill

12:25pm - 1:55pm

Federal Priorities for Supporting and Advancing Scientific Research

Building/Room: Sheraton / Napoleon Ballroom B2

Chair: Gerald E. Sroufe
Participant: John Q. Easton
Participant: Joan Ferrini-Mundy
Participant: Myron P. Gutmann

MONDAY, April 11

8:15am - 10:15am

Sociology and Stratification in Math and Science Curricula, Instruction, Coursetaking, and Educational Trajectories

Building/Room: JW Marriott/ Ile de France I

Gendered Differences in Aligned Ambitions: High School Experiences and Pursuit of Postsecondary Opportunities in Science, Technology, Engineering, and Mathematics (STEM) Majors

Lara Cristina Perez-Felkner, Erin Grogan, Barbara Schneider, Sarah-Kathryn McDonald

10:35am - 12:05pm

Teacher Mathematical and Pedagogical Knowledge

Building/Room: New Orleans Marriott / Preservation Hall Studio 9

Effects of Middle Grades Teachers' Understandings of Rational Numbers on Student Achievement

Andrew Izsak, Aijun Wang, Allan Cohen, and Chandra Orrill

Theoretical and Empirical Accounts of Framing in Classroom Interactions

Building/Room: New Orleans Marriott / La Galerie 3

How does expansive framing promote transfer?

Randi Engle

Cultural Dimensions of Informal and Formal Learning: Design-Based and Community-Based Perspectives

Building/Room: Sheraton/Napoleon Ballroom B3

Informal Learning in Contributing to a Community

Barbara Rogoff

Designing Technology to Support Collaboration in the Classroom

Building/Room: Hotel Monteleone / Bienville

Embedded Phenomena: Rethinking Technology Support for Complex Collaborative Activity Structures in Classrooms

Tom Moher, Alejandro Gnoli, James D. Slotta

Doctoral Education Across the Disciplines SIG Roundtable Session II

Building/Room: Sheraton / Grand Ballroom D

"I Start With Turning to the Literature": Crossing the Thresholds to Research Skill Development

Michelle A. Maher, Melissa D. Hurst, Briana Crotwell Timmerman, David F. Feldon, and Joanna Angeline Gilmore

Design Research Exploring Transformative Frameworks for Learning and Education

Sheraton, Third Level, Napoleon Ballroom B3

Scientific Literacy in the Context of Civic Reasoning: An Educational Design Problem

Sharon J. Derry, Dan Zalles

12:25pm - 1:55pm

Merging Human Creativity and the Power of Technology; Computation Thinking in the K-12 Classroom

Building/Room: Hotel Monteleone / Orleans

Measuring Computational Thinking in Middle School using Game Programming

Jill Denner

What Educational Psychologists and Learning Scientists Can Learn From Each Other: A Dialogue

Building/Room: Hotel Monteleone / Royal Ballroom

Participant: Clark A. Chinn

Participant: Susan R. Goldman

Participant: Cindy E. Hmelo-Silver

Chair: Gale M. Sinatra

2:15pm - 3:45pm

Early Cognitive Abilities for Learning Math and Science: Implications for Instruction from the National Science Foundation's Research and Evaluation on Education in Science and Engineering Program

Building/Room: Hotel Monteleone / Orleans

Teaching and Learning of Evolution in the Primary Grades

Kathleen Metz

Understanding evolution: A proposed learning progression from children's everyday intuitions to counterintuitive concepts of common descent and natural selection

E. Margaret Evans

Nonsymbolic Subitizing and “Groupitizing” Skills may be Foundational to Elementary School Children’s Development of Symbolic Math Fluency
Bruce McCandliss

Science Learning Pathways for Preschool Children
Rochel Gelman

Chair: Gregg Solomon

SIG/Research in Mathematics Education Roundtable 4: Learning

Building/Room: Sheraton / Grand Ballroom A

Area Hypothetical Learning Trajectory: Relating Square Units to Nonrectilinear Regions
Craig Cullen, Amanda Miller, Chepina Witkowski, Jeffrey E. Barrett, Julie Sarama, and David Klanderman

4:05pm - 5:35pm

Using Models in the Classroom: Research Into Practice

Building/Room: New Orleans Marriott / Mardi Gras Salon FGH

Promoting Model-Based Reasoning and Conceptual Change in Middle School
Clark A. Chinn, Ravit Golan Duncan, William J. Pluta, and Luke Andrew Buckland

Modeling Observational Practice in a Middle School Classroom
Catherine Eberbach, Cindy E. Hmelo-Silver, Suparna Sinha, Sameer Honwad, Rebecca Jordan, Spencer Rugaber, and Ashok K. Goel

Chair: Cindy E. Hmelo-Silver

Discussant: Janice Gobert

Curricular Effects on Mathematics Learning and Teaching

Building/Room: New Orleans Marriott / Mardi Gras Salon A

*Investigating the effects of curricula and classroom emphases on algebra learning:
Cross-sectional analyses*
Jinfa Cai, John Moyer, Jeffrey Shih, and Ning Wang

Technology, Instruction, Cognition, and Learning 5: Developing, Managing, and Assessing Learning Environments

Building/Room: Sheraton / Napoleon Ballroom C2

Game-Based Embedded Assessment Measures Learning
Debbie Denise Reese, Ralph J. Seward, Andrew Harrison, Lisa McFarland, Ben Hitt, Barbara G. Tabachnick

TUESDAY, April 12

8:15am - 10:15am

A Research Agenda for the New K-12 Standards in Science/Engineering: Studying Innovations and Forms of Implementation That Advance the Goals of Equity and Diversity
Building/Room: Sheraton / Napoleon Ballroom C3

Scientific Practices as a Bridge Across Science Learning Environments
Jean Moon

Teacher Professional Development
Richard A. Duschl

Implementing the New Common Core: A Research Agenda
William R. Penuel

Chair: Nancy Brickhouse

Uniquely Situated in Computing Sciences Programs in Higher Education: Experiences of African American Women Who Still Find Success
Building/Room: New Orleans Marriott / Preservation Hall Studio 2.

Approaches to Success: Gendered Analysis of African Americans in STEM.
LaVar Jovan Charleston, Phillis George, and Jerlando Jackson

Professional Development to Enhance Teacher and Student Learning
Building/Room: Sheraton / Grand Ballroom D

Comparing the Effect of Two Formative Assessment Professional Development Models
Yue Yin, Paul Brandon, Judith Olson, Hannah Slovin, and Melfried Olson

Learning STEM: The Need for Instruction and Motivational Scaffolding
Building/Room: New Orleans Marriott / La Galerie 5

Cognition and Motivation in Science, Technology, Engineering, and Math Retention.
Jennifer Cromley, Erin Horvat, Jacqueline Tanaka, John Michel, Anthony Perez, Emily Tancredi-Brice, Lillian Raja, Patricia Vorndran, Melanie Wills, and Theodore Wills

10:35am - 12:05pm

Learning With Spatial, Embedded, and Embodied Representations
Building/Room: New Orleans Marriott / Mardi Gras Salon FGH

Embedded Simulations Support Learning in Geoscience

Allison J. Jaeger, Jennifer Wiley, Tom Moher, Brenda A. Lopez Silva, Francesco Novellis

12:25pm - 1:55pm

Principled Design of Simulation-Based Science Assessments

Building/Room: New Orleans Marriott / La Galerie 5

Science ASSISTments: Assessing and Scaffolding Students' Inquiry Skills in Real Time

Janice Gobert

Extending, Expanding, and Applying the Construct of Mathematical Knowledge for Teaching

Building/Room: New Orleans Marriott / Preservation Hall Studio 9

Tracing Professional Development to Practice: Understanding the Role of Mathematical Knowledge for Teaching (MKT) in One Teacher's Instructional Decisions

Chandra Orrill, Julie Kittleson

Middle School Teachers' knowledge of Proportional Reasoning for Teaching

Joanne Lobato, Erik Jacobson, Bridget Druken, and Chandra Orrill

Roundtable Session: Science Teachers, Curricula, and Teaching

Building/Room: Sheraton / Grand Ballroom D

Inquiry-Oriented Teaching Skills and Research Skills: Competing or Compatible Skills?

David F. Feldon, Cindy K. Stiegelmeyer

2:15pm - 3:45pm

Examinations of Learning in Computer Gaming Environments

Building/Room: New Orleans Marriott / Preservation Hall Studio 2

AquaRoom: A Pilot Study of a Classroom-Based Investigation of Subterranean Water Flow

Francesco Novellis, Tom Moher

Examining Analogical Reasoning in the Process of Learning Science

Building/Room: New Orleans Marriott / Mardi Gras Salon A

Transfer of Runnability in Learning Via Analogy

John J. Clement

ARC is a National Science Foundation funded initiative that supports education researchers in science, technology, engineering, and mathematics (STEM). Headquartered at NORC at the University of Chicago's Hyde Park campus offices, ARC is committed to capitalizing on and sharing the insights, methods, and results that help to build an *arc of knowledge* across STEM fields.

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