SREE
Advancing Education Research

Fall 2013 Conference
Interdisciplinary Synthesis in Advancing Education Science

PROGRAM
SREE Membership

The Society for Research on Educational Effectiveness brings together individuals interested in the use of causal inference to improve educational practice. SREE provides a forum to engage with a community of researchers, practitioners, policymakers, and students united in a desire to advance education research. SREE membership is for the calendar year.

Member - $150 per calendar year
Individual members in SREE have backgrounds in a diverse range of areas, including, but not limited to, education, economics, medicine, psychology, public policy, sociology, and statistics. They include researchers investigating causal relations in education, professionals active in school settings, and public officials and others instrumental in translating research into practice.

Student Member - $100 per calendar year
Student members must be enrolled in a degree-granting program at an accredited institution. The Graduate Student Organization exists to provide an organizational venue where students may begin the career-long process of establishing networks which foster their intellectual growth and maximize the utility of their research.

Institutional Members - $1500 per calendar year
Educational institutions, government agencies, nonprofit organizations, and for-profit organizations are encouraged to join SREE and designate an individual to represent their interests in the Society. Institutional members are acknowledged on the SREE website and in conference programs. Institutional members also receive discounts on conference exhibit space.

How to Join SREE or Renew Membership

By credit card:
All major credit cards are accepted at the conference registration desk
or via SREE’s secure site:
www.sree.org/members/payment/

By check:
Checks made out to SREE are accepted at the conference registration desk
or may be mailed to:
Society for Research on Educational Effectiveness
2040 Sheridan Rd.
Evanston, IL 60208

THURSDAY SEPTEMBER 26, 2013

5:30 PM - 7:00 PM: Welcome & Opening Address
Ballroom - Fairmont Hotel

Welcome & Introduction
Larry Hedges
SREE President

Opening Address
Beyond Cognitive Outcomes: Challenges, Necessities and Benefits
James Pellegrino
Liberal Arts & Sciences Distinguished Professor of Cognitive Psychology & Education
Co-Director, Learning Sciences Research Institute
University of Illinois - Chicago

7:00 PM - 8:00 PM: Reception
Gallery Ballroom - Park Hyatt Hotel

Sponsor: RAND Corporation
FRIDAY SEPTEMBER 27, 2013

8:30 AM - 10:30 AM: Session 1

1A. Cognitive Science and its Applications Invited Symposium
Empirical Studies of the Interplay of Cognitive and Affective Factors in Science Learning
Drawing Room - Park Hyatt Hotel, Ballroom Level
Organizer: Christian Schunn, University of Pittsburgh

Pathways to STEM Outcomes: Not Always Involving Early Motivation and Early Ability
Matthew A. Cannady, University of California - Berkeley, Eric Greenwald, SRI International, and Kimberly N. Harris, University of California - Berkeley

Drawing on Cognition and Affect to Trigger Interest and Learning: The ICAN Intervention
K. Ann Renninger, Melissa Emmerson, Brian King, Kathryn R. Riley, Alicia Niwagaba, & Jessica E. Bachrach, Swarthmore College

Affective Dynamics Within Students’ Scientific Inquiry
David Hammer & Lama Jaber, Tufts University

Science Learning Activation: Positioning Youth for Success
Christian Schunn, University of Pittsburgh, Rena Dorph & Matthew A. Cannady, University of California - Berkeley, Kevin Crowley, University of Pittsburgh, and Patrick M. Shields, SRI International

Discussant: Heidi Schweingruber, National Academy of Sciences

1B. Mathematics and Science Education in Secondary Grades Invited Symposium
Rigorous Research in Secondary Math and Science Classrooms
Gallery 3 - Park Hyatt Hotel, Ballroom Level
Organizer: Jodi Davenport, WestEd

Developing Rigorous and Meaningful Learning Measures for Middle School Mathematics
Yvonne Kao, WestEd, and James Pellegrino, University of Illinois - Chicago

Developing Multi-Modal Assessments of Student Learning in Technology-Infused Environments for High School Chemistry
Michael Stieff, University of Illinois - Chicago

Estimating the Effect of Web-Based Homework on Student Learning in Middle School Math
Kim Kelly, Neil Heffernan, & Christina Heffernan, Worcester Polytechnic Institute, Susan Goldman, James Pellegrino, & Deena Soffer Goldstein, University of Illinois - Chicago

Individual Differences in the Effectiveness of the Worked Example Principle
Julie Booth, Temple University, and Kenneth Koedinger, Carnegie Mellon University

Professional Development Interventions in a Large-Scale Randomized Controlled Study of Middle School Science Learning
Christine Massey, University of Pennsylvania, Donna Cleland & Bates Mandel, 21st Century Partnership for STEM Education
1C. Development and Evaluation of Educational Technology
Using Educational Technology to Adapt Teaching and Learning
Salon 5 - Park Hyatt Hotel, Ballroom Level

Chair: Steven Ross, Johns Hopkins University

A Randomized Control Trial of Computer Attention Training in Schools for Children with Attention-Deficit/Hyperactivity Disorder: Six-Month Follow-Up
Naomi Steiner, Elizabeth Frenette, Kirsten Rene, & Ellen Perrin, Tufts University, and Robert Brennan, Harvard University

Towards Automated Support for Small-Group Instruction:
Using Data from an ITS to Automatically Group Students
Maria Mendiburo, Laura Williams, James Segedy, & Ted Hasselbring, Vanderbilt University

Improving the Quality of and Access to Federally Funded, Digital Out of School Time Tutoring
Patricia Burch, University of Southern California, Carolyn Heinrich, University of Texas - Austin, and Annalee Good, University of Wisconsin - Madison

Proficiency-Based Pathways in Three Pilot Programs: Examining Implementation and Outcomes
Matthew Lewis, Jennifer L. Steele, Lucrecia Santibanez, Brian M. Stecher, Laura S. Hamilton, Susannah Faxon-Mills, & Mollie Rudnick, RAND

1D. Research Methods Panel
Assessing the Fidelity of Interventions: Tradeoffs in Designing a Strategy
Salon 3 - Park Hyatt Hotel, Ballroom Level

Moderator: Beth Boulay, Abt Associates

Rekha Balu, MDRC

Jose Blackorby, SRI International

Jill Lammert, Westat

Jill Feldman, Westat

1E. Research Methods Symposium
Using Public Health Screening Methods to Promote Social and Emotional Development at School
Gallery 1 - Park Hyatt Hotel, Ballroom Level

Organizer: Randy Kamphaus, Georgia State University

The Use of Student Self-Report Screening Data for Mental Health Risk Surveillance
Bridget V. Dever, Lehigh University, and Tara C. Raines, University of Nevada - Las Vegas

Leigh Harrell Williams, Georgia State University, Erin Dowdy, University of California - Santa Barbara, and Jennifer Twyford, California Lutheran University

Latent Class Analysis of Youth Behavioral and Emotional Risk: Associations with Demographic Characteristics
Jihye Kim & Randy W. Kamphaus, Georgia State University

Discussant: Catherine Bradshaw, Johns Hopkins University
11:00 AM - 12:00 PM: Keynote Address
Ballroom - Fairmont Hotel

Targeting Self-Regulation Through Intervention: Lessons from RCTs
Cybele Raver
Professor of Applied Psychology
Vice Provost of Academic, Faculty, & Research Affairs
New York University

Introduction: John Pane, SREE Fall 2013 Program Chair

12:00 PM - 1:00 PM: Lunch
Ballroom - Fairmont Hotel

1:00 PM - 7:00 PM: Career Forum
The Career Forum will run throughout the afternoon, providing firms an opportunity to meet with candidates in a variety of settings.

Career Forum sponsors have designated rooms in the Fairmont Hotel, Ballroom Level:
Abt Associates - Decatur
American Institutes for Research - Culpeper
MDRC - Imperial II
RAND - Latrobe
WestEd - Longworth
1:00 PM - 2:30 PM: Session 2

2A. Cognitive Science and its Applications
Effective Skills Development
Gallery 1 - Park Hyatt Hotel, Ballroom Level
Chair: Sean Kang, Dartmouth College

An Efficacy Study of Interleaved Mathematics Practice
Doug Rohrer, Robert Dedrick, & Kaleena Burgess, University of South Florida

Accelerating Vocabulary Development and Reading Comprehension in Grades 3-4-5 through an Inductive Vocabulary Model
Michael Vitale, East Carolina University, and Nancy Romance, Florida Atlantic University

The Effects of Retrieval Practice on Fraction Arithmetic Knowledge
Lisa Fazio & Robert Siegler, Carnegie Mellon University

2B. Mathematics and Science Education in Early Childhood & Elementary Grades
Experimental Evaluations of Early Math and Literacy Interventions: Student Outcomes and Instructional Processes in the Classroom
Gallery 2 - Park Hyatt Hotel, Ballroom Level
Chair: Marcia Barnes, University of Texas - Houston

Longitudinal Evaluation of a Scale-Up Model for Teaching Mathematics with Trajectories and Technologies: Persistence of Effects Three Years after the Treatment
Douglas Clements & Julie Sarama, University of Denver, Carolyn Layzer & Fatih Unlu, Abt Associates, Christopher B. Wolfe, Indiana University - Kokomo, and Mary Elaine Spitler, University at Buffalo

Explicit Instructional Interactions: Observed Stability and Predictive Validity During Early Literacy and Beginning Mathematics Instruction
Christian T. Doabler & Nancy Nelson-Walker, University of Oregon, Derek Kosty, Oregon Research Institute, Scott K. Baker, University of Oregon, Keith Smolkowski, Oregon Research Institute, and Hank Fien, University of Oregon

Changing the Developmental Trajectory in Early Math Through a Two-Year Preschool Math Intervention
Prentice Starkey & Alice Klein, WestEd, and Lydia DeFlorio, University of Nevada - Reno

2C. Mathematics and Science Education in Secondary Grades
Issues in Math and Science Education Research
Salon 5 - Park Hyatt Hotel, Ballroom Level
Chair: Mari Strand Cary, University of Oregon

Investigating the File Drawer Problem in Causal Effects Studies of Science Education Interventions
Joseph Taylor, Susan Kowalski, Molly Stuhlsatz, & Chris Wilson, BSCS, and Jessaca Spybrook, Western Michigan University

Building a Learning Progression for Argumentation in Science
Jonathan Osborne, Bryan Henderson, Anna MacPherson, & Evan Szu, Stanford University

The Relationship between Gender, Ethnicity, and Technology on the Impact of Mathematics Achievement in an After-School Program
Xudong Huang, University of Memphis, Scotty D. Craig, Arizona State University, Jun Xie, Arthur C. Graesser, Theresa Okwumabua, Kyle R. Cheney, & Xiangen Hu, University of Memphis

Evaluation, Integration and Institutionalization of Initiatives to Enhance STEM Student Success
Lisa Dickson, Marv Mandell, Kenneth Maton, Dave Marcotte, Philip Rous, Patrice McDermott, Janet Rutledge, William R. LaCourse, & Kathy Lee Sutphin, University of Maryland - Baltimore County

2D. Invited Panel
How to Effectively Communicate Research Findings to Policymakers & the Media
Salon 3 - Park Hyatt Hotel, Ballroom Level
Moderator: Michele McLaughlin, Knowledge Alliance

Jane Best, McREL
Lindsay Fryer, U.S. House Committee on Education and the Workforce
Jeffrey Noel, District of Columbia - Office of the State Superintendent of Education
Sarah Sparks, Education Week
2E. Development and Evaluation of Educational Technology Invited Panel
Does Supply Meet Demand for Education Technology Research?
Drawing Room - Park Hyatt Hotel, Ballroom Level
Moderator: Ed Dieterle, Bill & Melinda Gates Foundation
Scott Benson, Bill & Melinda Gates Foundation
Michael Horn, Clayton Christensen Institute
Joel Rose, New Classrooms Innovation Partners
Diane Tavenner, Summit Public Schools

2F. Research Methods
Methods to Gain a Better Understanding of Classroom Instruction and Learning
Gallery 3 - Park Hyatt Hotel, Ballroom Level
Chair: Robert Olsen, Abt Associates

Validity as Process: A Construct Driven Measure of Fidelity of Implementation
Ryan Jones, Vanderbilt University

Do Interim Assessments Influence Instructional Practice in Year One?
Evidence from Indiana Elementary School Teachers
Gregory Chojnacki, Jared Eno, Feng Liu, & Coby Meyers, American Institutes for Research,
Spyros Konstantopoulos, Michigan State University, Shazia Miller &
Arie van der Ploeg, American Institutes for Research

How Non-Linearity and Grade-Level Differences Complicate the Validation of Observation Protocol
Valeriy Lazarev & Denis Newman, Empirical Education

Exploring the Utility of Student ‘Think-Alouds’ for Providing Insights into Students’ Metacognitive and Problem-Solving Processes during Assessment Development
Deni Basaraba, Yetunde Zannou, Dawn Woods, &
Leanne Ketterlin-Geller, Southern Methodist University

Break

3:00 PM - 5:00 PM: Session 3
3A. Cognitive Science and its Applications Symposium
The Evolution and Evaluation of a Play-Based, After-School Curriculum That Improves Executive Function, Visuo-Spatial and Math Skills for Disadvantaged Children
Gallery 3 - Park Hyatt Hotel, Ballroom Level
Organizer: William Murrah, University of Virginia

Review of the Non-Experimental Evidence from Developmental and Cognitive Psychological, Education Science and Neuroscience That Provided the Impetus for the Development of the Intervention
David Grissmer, University of Virginia

Why Do Fine Motor Skills Predict Mathematics? Construct Validity of the Design Copying Task
William Murrah, University of Virginia, and Wei-Bing Chen, SRI International

The Evolution, Design and Implementation of the Minds in Motion Curriculum
Elizabeth Cottone, University of Virginia, Wei-Bing Chen, SRI International, and Laura Brock, College of Charleston

The Efficacy of Minds in Motion on Children’s Development of Executive Function, Visuo-Spatial and Math Skills
Andrew Mashburn, Portland State University, Elizabeth Cottone, University of Virginia, Laura Brock, College of Charleston, William Murrah, Julie Blodgett, &
Claire E. Cameron, University of Virginia
3B. Mathematics and Science Education in Early Childhood & Elementary Grades Invited Symposium
Multiple Perspectives on Understanding the Trajectory of Mathematical Learning During the Elementary School Years
Gallery 1 - Park Hyatt Hotel, Ballroom Level

Organizers: Alice Klein, WestEd, and Marcia Barnes, University of Texas - Houston

Why Do Children Have Difficulty Learning Fractions?:
Findings From a Three-Year Longitudinal Study
Nancy Jordan, University of Delaware

How the Math Anxiety of Teachers, Parents, and Children Themselves Relate to the Math Achievement of 1st and 2nd Grade Girls and Boys
Susan Levine, Erin Maloney, & Gerardo Ramirez, University of Chicago, Elizabeth Gunderson, Temple University, and Sian Beilock, University of Chicago

The Role of Memory Systems in Math Learning in Children
Vinod Menon, Stanford University

Discussant: Daniel Berch, University of Virginia

3C. Invited Panel
The No Child Left Behind and Education Sciences Reform Act Legislation:
Then, Now, and What Next?
Salon 3 - Park Hyatt Hotel, Ballroom Level

Moderator: Sarah M. Ryan, Carnegie Mellon University

Vinetta C. Jones, Howard University

Douglas E. Mitchell, University of California - Riverside

Lynn Okagaki, University of Delaware

3D. Mathematics and Science Education in Secondary Grades Symposium
Engaging Students in Argumentation and Sense-Making Activities to Improve Science Learning
Salon 5 - Park Hyatt Hotel, Ballroom Level

Organizer: Christina Chhin, Institute of Education Sciences

The Use of Argumentation in Science Education to Promote the Development of Science Proficiency: A Comparative Case Study
Patrick Enderle, Jonathon Grooms, & Victor Sampson, Florida State University

The Relationship between Students' Inquiry Skills for Experimenting and Their Skills at Sense Making in Science Microworlds
Janice Gobert & Juelaila Raziuddin, Worcester Polytechnic Institute

Examining the Impact of Using the Science Writing Heuristic Approach in Learning Science: A Cluster Randomized Study
Brian Hand & William Therrien, University of Iowa, and Mack Shelley, Iowa State University

Discussant: M. Anne Britt, Northern Illinois University
3E. Mathematics and Science Education in Secondary Grades Invited Symposium
Professional Development Interventions That Impact Student Learning
Drawing Room - Park Hyatt Hotel, Ballroom Level

Organizer: Steve Schneider, WestEd

Learning and Teaching Geometry
Mark Driscoll, Education Development Center

Making Sense of Science
Kirsten Daehler, WestEd

Making Middle School Mathematics Accessible to All Students
Shandy Hauk, WestEd

Learning and Teaching Linear Functions
Katie Salguero, WestEd

Discussant: Catherine Lewis, Mills College

3F. Research Methods Invited Symposium
Individually Randomized Trials with Post Random Assignment Clustering
Gallery 2 - Park Hyatt Hotel, Ballroom Level

Organizer: Michael Weiss, MDRC

Partially Nested Designs in RCTs: Theory and Practice
Peter Schochet, Mathematica Policy Research

Estimating the Standard Error of the Impact Estimate in Individually Randomized Trials, with Clustering

Accounting for One-Group Clustering in Effect-Size Estimation
Martyna Citkowicz & Larry V. Hedges, Northwestern University

Discussant: Henry May, University of Delaware

September 27, 2013
3:00 PM - 5:00 PM: Session 3

5:30 PM - 6:30 PM: Session 4 - Virtual Poster: Direct Exchange
Colonnade - Fairmont Hotel, Lobby Level

4A. Cognitive Science and its Applications

1: Integrating Non-Mathematical Domains into Mathematical Development: Key Factors to Consider in Constructing Effective Interventions
David Purpura, Purdue University, and Colleen Ganley, University of Illinois - Urbana/Champaign

2: Fostering Reading Comprehension in Middle-School Social Studies: A Formative Experiment of Teachers’ Practices and Adaptations for Content-Literacy Instruction
Ana Taboada Barber, Michelle M. Buehl, Leila N. Richey, Jori Beck, Melissa Gallagher, & Erin Ramirez, George Mason University

3: Examining the Relationship between Physiological Measurements and Self-Reports of Stress and Well-Being in Middle School Teachers Over One School Year
Deirdre Katz, Alexis R. Harris, Rachel M. Abenavoli, & Mark T. Greenberg, Pennsylvania State University

4: Predicting Trajectories of Students’ Achievement Beliefs and Perceptions of Relational Support from Classroom Tight-Knittedness
Kathleen Zadzora & Scott D. Gest, Pennsylvania State University, and Philip C. Rodkin, University of Illinois - Urbana/Champaign

5: Autism Peer Networks Project: Improving Social-Communication and Literacy for Young Children with ASD
Debra Kamps & Rose Mason, University of Kansas

4B. Mathematics and Science Education in Early Childhood & Elementary Grades

6: A Teacher-Friendly Method of Improving Reading and Mathematics
Julie K. Kidd, K. Marinka Gadzichowski, Deb A. Gallington, Claudia Lopez, & Robert Pasnak, George Mason University

7: Development of a Comprehensive Intervention to Improve Children’s Understanding of Math Equivalence
Caroline E. Byrd, Nicole M. McNeil, Heather Breltic-Shipley, & Julia M. Matthews, University of Notre Dame

8: Examining the Utility of Cognitive Measures for Predicting Mathematics Achievement and Differential Response to a Kindergarten Mathematics Intervention
Lina Shanley, Ben Clarke, & Sarah Carlson, University of Oregon, Keith Smolkowski, Oregon Research Institute, and Mari Strand Cary, University of Oregon
4C. Mathematics and Science Education in Secondary Grades

9: The Contribution of Domain-Specific Knowledge in Predicting Students’ Proportional Word Problem Solving Performance  
Asha K. Jitendra & Amy E. Lein, University of Minnesota, Jon R. Star, Harvard University, and Danielle N. Dupuis, University of Minnesota

10: Effects of the Teaching Science as Inquiry Aquatic Professional Development Course for Middle- and High-School Teachers  
Kanesa Duncan Seraphin, Joanna Philippoff, George Harrison, & Paul Brandon, University of Hawai’i - Mānoa

11: Middle-Grade Students’ Misconceptions about the Graphical Representation of Simple Fractions: An Assessment from the Eliciting Mathematical Misconceptions Project  
Peggy Clements, Pamela Buffington, & Cheryl Tobey, Education Development Center

4D. Research Methods

12: Lessons Learned in Conducting a Lottery-Based Study of Core Knowledge Charter Schools  
Thomas G. White, University of Virginia, Shannon Altenhofen, Colorado Department of Education, and Jennifer Larson, REACH Study

13: Play It High, Play It Low: Examining the Reliability and Validity of a New Observation Tool to Measure Children’s Play  
Carrie Germroth, University of Denver, Carolyn Layzer, Abt Associates, Crystal Day-Hess, McREL, and Elena Bodrova, Independent Consultant

6:00 PM - 7:00 PM: Reception  
Colonnade - Fairmont Hotel, Lobby Level
SATURDAY SEPTEMBER 28, 2013

9:00 AM - 10:30 AM: Session 5

5A. Cognitive Science and its Applications
Supporting Readiness to Learn
Salon 5 - Park Hyatt Hotel, Ballroom Level

Chair: Sharon Carver, Carnegie Mellon University

Measurement of Child Behavior Via Classroom Observations in the Good Behavior Game
Professional Development Models Randomized Control Trial
Anja Kurki, American Institutes for Research, Wei Wang, University of South Florida, Yibing Li & Jeanne Poduska, American Institutes for Research

Family-Based Training Program Improves Brain Function, Cognition, and Behavior in Lower Socioeconomic Status Preschoolers
Eric Pakulak, Courtney Stevens, Theodore A. Bell, Jessica Fanning, Scott Klein, Elif Isbell, & Helen Neville, University of Oregon

Becoming Effective Learners Survey Development Project
Camille Farrington, Rachel Levenstein, & Jenny Nagaoka, Consortium on Chicago School Research

5B. Mathematics and Science Education in Early Childhood & Elementary Grades
Factors That Affect Early Mathematics Achievement: Dual Language Immersion, Kindergarten Retention, and Teacher Data Use
Gallery 3 - Park Hyatt Hotel, Ballroom Level

Chair: Tammy Tolar, University of Houston

The Effect of Dual-Language Immersion on Student Achievement in Math, Science, and English Language Arts
Jennifer L. Steele, RAND, Robert Slater, American Councils for International Education, Jennifer Li, Gema Zamarro, & Trey Miller, RAND

Mathematics Development after Kindergarten Retention: Accounting for Post-Treatment School Trajectories Using a Propensity Score Matching Approach
Machteld Vandecandelaere, Gudrun Vanlaar, Eric Schmitt, Bieke De Fraine, & Jan Van Damme, Catholic University of Leuven

Using Data to Inform Decisions: How Teachers Use Data to Inform Practice and Improve Student Performance in Mathematics
Linda Cavalluzzo, Tom Geraghty, & Jane Alexander, CNA

5C. Mathematics and Science Education in Secondary Grades Panel
Research Alliance Use of Data and Evidence Standards to Improve Program Quality
Salon 3 - Park Hyatt Hotel, Ballroom Level

Moderator: Helen Apthorp, Marzano Research Lab

Arlene Mitchell, RMC Research
Clare Heidema, RMC Research
Richard C. Seder, REL Pacific
Tamera Murdock, Kansas City Area Education Research Consortium

5D. Research Methods Panel
Systematic Reviews: Growing Up to Meet Practitioner, Policymaker, and Researcher Needs
Drawing Room - Park Hyatt Hotel, Ballroom Level

Moderator: Larry Hedges, Northwestern University

Jill Constantine, Mathematica Policy Research
Anna Mastri, Mathematica Policy Research
Sarah Avellar, Mathematica Policy Research
5E. Research Methods
Advances in Non-Experimental Methods
Gallery 1 - Park Hyatt Hotel, Ballroom Level

Chair: Rebecca Maynard, University of Pennsylvania

Empirically Examining the Performance of Approaches to Multi-Level Matching to Study the Effect of School-Level Interventions
Kelly Hallberg, American Institutes for Research, Thomas D. Cook & David Figlio, Northwestern University

SIMEX for Weighting and Matching Applications with Error-Prone Covariates
J.R. Lockwood & Daniel F. McCaffrey, Educational Testing Service, and Claude Setodji, RAND

Examining Variation in Effects of Student Mobility
Using Cross-Classified, Multiple Membership Modeling
Bess Rose, Johns Hopkins University

Break

6A. Cognitive Science and its Applications Symposium
Applying Cognitive Science Principles to Improve Student Learning in Algebra
Gallery 1 - Park Hyatt Hotel, Ballroom Level

Organizer: Christina Chhin, Institute of Education Sciences

Arithmetic and Cognitive Contributions to Algebra
Paul Cirino & Tammy Tolar, University of Houston, and Lynn S. Fuchs, Vanderbilt University

Using Worked Examples Assignments in Classroom Instruction
Juliana Pare-Blagoev, SERP Institute, Julie Booth, Temple University, and Andrew Elliot, University of Rochester

Differentiating Instruction: Providing the Right Kinds of Worked Examples for Individual Students
Julie Booth, Temple University, Kenneth Koedinger, Carnegie Mellon University, Kristie Newton & Karin Lange, Temple University

Discussant: Doug Rohrer, University of South Florida
6B. Mathematics and Science Education in Early Childhood & Elementary Grades Symposium
Conceptualizing and Measuring Capacities beyond Achievement:
Research across the School Years
Drawing Room - Park Hyatt Hotel, Ballroom Level
Organizer: Chris Hulleman, University of Virginia

Kindergarten Fine Motor Skills and Executive Function Predict Growth in Academic Achievement
Abby Carlson, George Mason University, Helyn Kim, University of Virginia, and Timothy Curby, George Mason University

Latent Profile Analysis Using the ECLS-K of Four Early Cognitive Foundational Skills and Implications of the Distributions on Growth Trajectories through 8th Grade
Antje von Suchodoletz, University of Freiburg, Kevin Grimm, University of California - Davis, David Grissmer & Michell Ko, University of Virginia

Nonlinear Gompertz Curve Models of Achievement Gaps
Claire Cameron, University of Virginia, Kevin Grimm, University of California - Davis, Joel Steele, Portland State University, and Laura Castro-Schilo, University of California - Davis

A Longitudinal Analysis of STEM Motivation and Course-Taking: Bidirectional Relationships Between Parents and Children from Middle School to College
Chris Hulleman, University of Virginia, Chris Rozek, Janet Hyde, & Judith Harackiewicz, University of Wisconsin - Madison

Discussant: Daryl Greenfield, University of Miami

6C. Invited Symposium
Transdisciplinary Approaches to Understudied Populations with Learning Disabilities
Gallery 3 - Park Hyatt Hotel, Ballroom Level
Organizer: Kathy Mann Koepke, NICHD

Concurrent Difficulty with Reading Comprehension and Mathematics Problem Solving: A Role for Language Comprehension
Donald L. Compton, Lynn S. Fuchs, Douglas Fuchs, Pamela M. Seethaler, & Melanie Schuele, Vanderbilt University

The Roles of Brain Maturation, Conceptual Development, and Reward Processing in Early Math Learning
Terry Jernigan, Tim Brown, Erik Newman, Natacha Akshoomoff, Wesley Thompson, & Anders Dale, University of California - San Diego

Genetically-Sensitive Approaches to Neurobiology of Learning Disabilities
Brooke Soden & Stephen A. Petrill, Ohio State University, Lee A. Thompson, Case Western Reserve University, Erik Willcutt, University of Colorado - Boulder, and Laurie Cutting, Vanderbilt University

Reading Deficits in African American Children: Understanding the Role of Poverty and Cultural Dialects
Julie A. Washington & Nicole Patton Terry, Georgia State University, and Mark Seidenberg, University of Wisconsin - Madison

Discussant: Brett Miller, NICHD
6D. Development and Evaluation of Educational Technology

Using Educational Technology to Enhance Mathematics Achievement
Salon 3 - Park Hyatt Hotel, Ballroom Level

Chair: Roisin Corcoran, Johns Hopkins University

Improving Student Outcomes with mClass: Math, a Technology-Enhanced CBM and Diagnostic Interview Assessment
Ye Wang & Matthew Gushta, Amplify Education

Instructional Gaming: Using Technology to Support Early Mathematical Proficiency

Teaching Early Knowledge of Whole Number Concepts Through Technology: Findings from a Feasibility Study of an iPad Delivered Kindergarten Mathematics Intervention
Lina Shanley, Mari Strand Cary, Ben Clarke, & Kathy Jungjohann, University of Oregon

Exploring Optimal Conditions of Instructional Guidance in an Algebra Tutor

6E. Research Methods

Advances in Experimental Planning, Analysis, and Generalizability
Salon 5 - Park Hyatt Hotel, Ballroom Level

Chair: Elizabeth Tipton, Columbia University

Empirical Estimation and Prediction of Within-District Intraclass Correlations of Academic Achievement in Elementary Grades
Eric Hedberg, University of Chicago, and Larry Hedges, Northwestern University

Approaches to Incorporating Late Pretests in Experiments: Evaluation of Two Early Mathematics and Self-Regulation Interventions

On Correcting a Significance Test for Model Misspecification
Nathan VanHoudnos, Carnegie Mellon University

Using Within-Study Cross-Block Comparisons to Assess Generalizability of Impact Finding from ‘Broad to Narrow’
Andrew Jaciw, Empirical Education

SUNDAY SEPTEMBER 29, 2013

9:00 AM - 5:00 PM: Short Course
The short course requires an additional fee.

Short Course 1
Intervention Fidelity: Models, Methods, and Applications
Chris Hulleman, University of Virginia
Sulgrave - Fairmont Hotel, Floor 3

12:00 PM - 1:00 PM: Lunch
Program Notes

Symposia
Symposia in the conference program were either:
(a) accepted through the peer review process, or
(b) organized by the conference program committee.
All symposia sessions, including those designated Invited Symposium, are open to all conference participants. Each symposium includes a session organizer and an independent discussant.

Panels
Panels are discussions, led by a moderator, which include audience participation.
Panels in the conference program were either:
(a) accepted through the peer review process, or
(b) invited by the conference program committee.
All panel sessions, including those designated Invited Panel, are open to all conference participants. Each panel includes a moderator and panelists.

Individual Papers
Individual papers with a similar focus that were accepted through the peer review process were assembled into a session by the program committee. A session chair was invited by the program committee to manage the session.

Posters
SREE utilizes a virtual poster format. The three-week period before the conference includes a virtual poster session, for online review and two-way commentary between presenters and readers. During the conference, the poster session is utilized for on-site in-person interaction between presenters and conference participants. No physical posters are present, but presenters may utilize laptops and handouts to convey information.
Ballroom Level
Fairmont Washington, D.C., Georgetown

Floor 3 Meeting Rooms
Fairmont Washington, D.C., Georgetown

To Elevators
(via hallway overlooking lobby)
The theme of the SREE Spring 2014 Conference, Improving Education Science and Practice: The Role of Replication, highlights the important role of replication in building robust theories in education science and providing guidance for practitioners. When interventions work over time, in different contexts, and with different groups of students, researchers may construct robust theories that generalize beyond a specific study. The causal effects of educational interventions that replicate across different studies may inspire practitioners to use experimental evidence to enhance student success.

Yet the promise of replication remains an elusive goal in education. Social scientists are likely to employ different methods and embrace divergent views about the importance of replication relative to other research goals. Communication among education researchers and disciplinary scholars is necessary to yield convergent and useful lessons for designing research focused on replication.

The SREE Spring 2014 Conference highlights the role of replication in building scientific theories and scaffolding improved practices in education and child development, medicine, and social services. Symposia, panels, papers, and posters that address the conditions under which causal relations are demonstrated to be replicable: (a) over time, (b) in different contexts, and (c) among diverse groups of students and teachers, will offer a strong fit with the conference theme.

Questions of particular interest include:

- How may research findings in cognitive science and other fields be applied to the design of education interventions?
- How is research evidence being utilized to improve mathematics and science programs along the developmental continuum, including initiatives for at-risk learners?
- How may we conceptualize and measure capacities beyond academic achievement that are important to lifelong growth and development?
- How may technology be employed most effectively to improve education in diverse settings?
- What is the best means to develop expertise in the art and science of completing experiments in school settings?
Society for Research on Educational Effectiveness
Advancing Education Research

Fall 2013 Conference Program Committee
John Pane (Chair), RAND
Marcia Barnes, University of Texas - Houston
Jodi Davenport, WestEd
Alice Klein, WestEd
Steven Ross, Johns Hopkins University
Christian Schunn, University of Pittsburgh
Michael Weiss, MDRC

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