



Volume I, Issue 6

April 2007

Upcoming Events

**April 5 to April 9**  
Easter Weekend—No classes  
Holy Thursday, Good Friday,  
Easter Monday (except classes  
beginning at 4:00 p.m. and later)

**April 11**  
Graduate and CASU registration  
for fall 2007 and summer 2007  
begins

**April 16**  
Patriot's Day—No classes

**April 24**  
Last date for official withdrawal  
from a course or from the uni-  
versity

Commencement  
BC Commencement—Monday,  
May 21st

Summer Session  
Summer Session I: May 14-June  
21  
Summer Session II: June 25-  
August 2.

For each session, Final Exams  
are given on the last day of class.  
No classes are held on Monday,  
May 28 or Wednesday, July 4.



# ERME NEWSLETTER

## *ERME at AERA & NEERO*

**2007 AERA**  
Annual Meeting and Exhibition  
Monday, April 9 - Friday, April 13  
Chicago



There will be over **30 ERME-associated participants** at this year's AERA meeting. A schedule of presentations and other information (the "ERME at AERA" booklet) has been prepared. Please email Tracy Lituri at [lituri@bc.edu](mailto:lituri@bc.edu) for an electronic copy.

**Important Change:** Annual Meeting Programs will be distributed on-site only. The program will be available on the American Educational Research Association's (AERA) Web site at <http://www.aera.net/annualmeeting/?id=1706>.



**NEERO**  
39th Annual Conference  
April 25-27, 2007  
Portsmouth, NH

**Keynote Address:** Dr. Henry Braun, ERME Professor and Boisi Chair in Education and Public Policy at Boston College, is presenting the keynote talk for NEERO's annual meeting and will be addressing issues in teacher accountability.

Current ERME students and faculty will also be presenting at NEERO. For a program of events, please see the NEERO website at:  
<http://faculty.education.uconn.edu/edlr/ccobb/neero/>

## Important News & Events

**Northeastern Educational Research Association (NERA)**  
38th Annual Conference announcement  
and Call for Proposals



October 17 - 19, 2007  
Hartford Marriott Rocky Hill  
Rocky Hill, Connecticut

**More Information Inside on Page 6**

[www.nera-education.org](http://www.nera-education.org)

### In This Issue

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## Spring 2007 Dissertation Defenses

### CREATING A TIMSS 2003 PROBLEM-SOLVING SCALE AND EXAMINING THE PROBLEM-SOLVING ACHIEVEMENT OF UNITED STATES EIGHTH-GRADE STUDENTS IN TIMSS 2003

Alka Arora  
Ina V. S. Mullis, Chair  
Abstract

**Alka  
Arora**

March 28th

Mathematics and science data from TIMSS 2003 were combined to create a new problem-solving achievement scale at the eighth grade. Problem-solving achievement results, overall and by gender, were produced for the eighth-grade students from 46 countries, including the United States. Each country's achievement in problem solving was compared to its TIMSS 2003 mathematics and science achievement. Findings from the study show that the top-performing Asian countries in mathematics and science also outperformed other participants in problem solving. However, many countries performed relatively differently in problem solving than in mathematics or science. Females had higher average achievement in problem solving than males in a majority of the countries. The United States performed above the international average but well behind the top-performing Asian countries. Relative to its performance in mathematics and science, the U.S. had the highest achievement in science, next in problem solving, and lowest in mathematics. Interestingly, even though males had significantly higher average achievement in both mathematics and science, there was no gender difference in problem-solving achievement.

Consistent with prevailing practice, the TIMSS IRT scaling methods treat all items independently. To explore any possible contextual effect for the TIMSS 2003 multi-part problem-solving tasks (testlets) in the TIMSS IRT scaling methods, the problem-solving scale was also constructed scoring each testlet as a polytomous item. A comparison of the polytomous scaling approach with the usual TIMSS approach revealed essentially no differences in the ability estimates, the amount of variance explained, scale reliability, or in average achievement for the countries. In summary, there was no apparent evidence of improved measurement precision.

### The Effects of Supplemental Educational Services on Student Achievement

Tiffany M. Cooper  
Joseph J. Pedulla, Chair  
Abstract

**Tiffany  
Cooper**

March 22th

Opportunities for academic development outside of school, particularly through focused efforts at supplementing education, may offer disadvantaged students an opportunity to achieve at higher levels. The 2001 reauthorization of the Elementary and Secondary Education Act recognizes this possibility and provides disadvantaged students with vouchers to receive Supplemental Educational Services. Past research on supplementary education and student achievement was inconclusive with a broad range of program models investigated and in many cases, non-equivalent groups used to make comparisons. The purpose of this research was to investigate the effects of one Supplementary Educational Services program on student achievement using standardized test scores and a statistically matched comparison group.

This study involved students attending seven New York City public schools in which BELL (one of many Supplemental Educational Services providers in the city) served several hundred disadvantaged students. Propensity score matching techniques were used for selecting a comparison group of modest size from a larger group of potential controls so that the comparison group was similar to program participants on all observed background characteristics. In doing so, propensity score matching reduced bias associated with decisions to participate in the program (known as self-selection bias). The impact of the program was estimated by comparing participants' achievement to that of the matched comparison group. English Language Arts and mathematics achievement scores were used from the New York State and City tests administered in the 2004-2005 academic year to students in grades 3-6.

Findings indicated that participation had a significant positive effect on math achievement and no detectable effect on English Language Arts achievement. Subgroup analyses indicated that rates of participation had differential effects for math achievement: students attending BELL's program for 40 or more days performed significantly higher in math than matched non-participants, whereas participants attending 27 days or less did not. Methodological findings suggested that propensity score matching is considerably better suited for evaluating supplementary programs than analysis of covariance techniques and provide a model for states to use in evaluating Supplemental Educational Services in their schools.

## Spring 2007 Dissertation Defenses

### Socio-Cultural Diversity in Elementary Classrooms: The Relationship between Structural and Curricular Diversity and Motivation

Sarah E. Enterline  
Larry H. Ludlow, Chair  
Abstract

**Sarah  
Enterline**

March 20th

The enhancement of diversity in the educational context has become an increasingly important issue to study and to support empirically. However, almost no study seeks to understand the impact of diversity within younger populations and what research there is often measures diversity using a limited approach. Even so, previous research has consistently supported the link between increased diversity and a series of academic and non-academic benefits. This study investigated the effect of socio-cultural diversity within elementary classrooms on one such benefit, student motivation, through student characteristics (structural diversity) and teaching practices (curricular diversity). The aim of this study included the development of a new approach to measuring structural diversity based on student race, gender, socioeconomic status, language, family composition and religion, and the development of a psychometrically sound measure of teaching practices as they relate to promoting an understanding of diversity. This dissertation explored the relationship between socio-cultural diversity and motivation in a number of ways—through correlational relationships, hierarchical linear modeling and item-level relationships—and while the results typically were not statistically significant, this research provided valuable insight nonetheless. Specifically, significant contributions include a series of tools to measure diversity using a new, multi-faceted approach, within the unique environment of an elementary classroom.

### The effect of response format and test taking strategies on item difficulty: A comparison of stem-equivalent multiple choice and constructed response test items

Lisa Famularo  
Michael Russell, Chair  
Abstract

**Lisa  
Famularo**

April 4th

Shortly after the multiple choice item was introduced in educational testing, educators began debating the advantages and disadvantages of this format in comparison with constructed response formats. Throughout the years, researchers have conducted studies comparing the two formats. A handful of researchers who have reported effects at the item level have noted that some items are more difficult in the constructed response format but for some items, format does not impact difficulty. Yet, there is little empirical evidence to explain why these differences occur for some items and not for others. The study presented here investigated the extent to which format-specific test taking strategies account for differences in stem-equivalent multiple choice and constructed response item difficulties. Test taking strategies, which have been recognized in educational measurement literature as a potential source of unwanted variance in test scores had not previously been considered in format effect research. Test and survey data were collected from over 1,000 middle-school students. Computer-based testing facilitated the use of an item type called multiple-choice with intervening construction which had not previously been used in response format research. Computer-based delivery also provided a unique opportunity to tailor the administration of a test taking strategy questionnaire to particular test items. This study's findings are consistent with previous studies that have found items in multiple choice format to be significantly easier than constructed response versions of the same items. Results suggest that the corrective feedback test-takers receive from multiple choice response options may account for some of the difference in multiple choice and constructed response item difficulty, especially for items where this difference is the largest. While it was difficult to isolate the effects of particular strategies, results suggest that some test taking strategies may also contribute to differences in multiple choice and constructed response item difficulty.

## Job Opportunities

### Associate Director for Assessment and Evaluation Teaching and Learning Laboratory Massachusetts Institute of Technology

The Teaching and Learning Laboratory (TLL) is part of the Office of the Dean for Undergraduate Education. Its goals are to promote excellence in teaching and learning throughout the Institute, serve as a resource for educational innovation, and further an understanding of learning in science and engineering. The Associate Director for Assessment and Evaluation will work with MIT faculty, administration, and students to design, manage, and implement the assessment of new, as well as ongoing, educational initiatives.

**Qualifications:** Ph.D. or Ed.D. in assessment and evaluation, education or educational psychology, or a related field; five years experience in the field of assessment and evaluation in academia or an equivalent organizational setting; demonstrated knowledge of issues, best practices, current research, and innovations in academic assessment and evaluation, preferably in science, engineering, and/or educational technology; in-depth knowledge of quantitative and qualitative assessment methodologies, including survey development; excellent writing and presentation skills; talent for listening carefully and communicating tactfully; ability to work in a high-pressure environment with a minimum of supervision.

Interested candidates may apply on-line at <http://web.mit.edu/jobs>. Please reference job number mit-00003873. Application Deadline is April 13, 2007

### Position Announcement Title: Director / VP of Test Development Location: California

**Requirements:** PhD in Measurement or related field is required. Strong background in Psychometrics and Test Development. Good supervisory and project management skills. Experience with Research Design and Validation Techniques.

**Summary:** Lead the licensure division. The company is growing fast. There is a lot of opportunity for growth in this position. They've been winning business from competitors. Relocation assistance is provided. Salary range is flexible - \$100k+. Depends upon experience.

Contact Tim Wielinski, Horizon Search Inc.,  
[tim@horizonsi.net](mailto:tim@horizonsi.net)

### Research and Evaluation Methodology Non-tenure Track Position Office of Educational Research and the Program in Research and Evaluation Methodology University of Florida

The successful candidate's responsibilities in the Office of Educational Research will include collaborating with College of Education faculty in designing studies, writing methodology sections of proposals, and analyzing data. In addition, the successful candidate will teach introductory quantitative research methodology courses in the Program in Research and Evaluation Methodology.

Minimum requirements include a doctorate in educational research, measurement, or statistics. Expertise in power analysis, hierarchical linear modeling, and structural equation modeling is required for the work in the Office of Educational Research. Interest and experience in research with children and adolescents in applied settings and interest and experience in distance education are also desirable.

**Deadline:** Applicants should send a letter of intent addressing qualifications, a current vita, transcript of courses, names and contact information for references, and samples of professional writing. The committee will begin reviewing applications on April 13, 2007, and will continue to accept and review applications until the position is filled.

**Apply to:** James Algina, Search Committee Chair, Department of Educational Psychology, PO Box 117057, University of Florida, Gainesville, Florida 32611-7047. Applications also accepted at [algina@ufl.edu](mailto:algina@ufl.edu) Please put REM Search and your last name in the subject line.

### TITLE: Associate Research Scientist Reports to: Senior Director, K-12 Research

This position is for a Research Scientist who will design and conduct research studies to support the K-12 Research Team, focusing on research to support the development of effective school-based program implementation in the classroom, particularly as it affects reduction of achievement gaps. Research and program evaluation designs will involve multilevel and/or causal modeling, experimental and quasi-experimental methodologies.

Please send resumes (and any questions) to Kristen Huff at [khuff@collegeboard.org](mailto:khuff@collegeboard.org).

## ERME User's Corner

The ERME Newsletter introduces it's newest feature: the **ERME User's Corner**. All are welcome to **contribute** items to this section of the newsletter, as well as **comment** on material that has been featured here. Please send your **feedback** to Tracy at [lituri@bc.edu](mailto:lituri@bc.edu) for printing in a later issue of the newsletter. We look forward to hearing from you. Thanks!



Hi all--since our family members are part of the extended ERME-family, I thought you might be interested in this note. I highly recommend this book of editorials. You will find them extremely interesting, regardless of your formal experience in teacher education issues.

Larry

**Marilyn Cochran-Smith** is the 2007 Recipient of the Relating Research to Practice Award in the Interpretive Scholarship Category for her book of editorials entitled, "Policy, Practice and Politics in Teacher Education." This award will be presented to her at AERA's 2007 Annual Meeting Awards Presentation and Presidential Address session on Wednesday, April 11, between 4:05 PM - 6:05 PM at the Sheraton Chicago Hotel & Towers, Sheraton Ballroom, Section V, Level 4.

Marilyn Cochran-Smith  
 Professor of Education  
 John E. Cawthorne Millennium Chair in Teacher Education  
 for Urban Schools Director  
 Doctoral Program in Curriculum & Instruction  
 Lynch School of Education Boston College



Our very own Tracy Lituri (ERME Administrative Assistant) got engaged in December, but kept it a secret until some of us noted the ring on her finger recently. Tracy and her beau, Kevin, plan on tying the knot on August 25, 2007 at the Larz Anderson Auto Museum in Brookline. We all raise a glass to the newly-engaged couple! (Submitted by: Yves Salomon-Fernandez, Ph.D. Candidate).

## Recent Presentations, Publications and Activities

The following article, co-authored by **James C. Gulek (Ph.D. '99)** is accepted for publication in the National Council for Professors of Educational Administration (NCPEA) 2007 Yearbook:

Browne-Ferrigno, T., Lad, K., Shoho, A. & Gulek, J.C. (2007--in press). Admission to University-Based Programs: Faculty Assessment of Current Practices and Implications for Navigating the Future. 2007 National Council for Professors of Educational Administration (NCPEA) Yearbook.

Ph.D. Candidate **Carolyn Fidelman's** paper, *Impact of Student Disposition Toward Course Evaluations on Course Ratings: A Pilot Study*, has won the AERA Survey Research in Education SIG Graduate Student Award. A certificate will be presented at the business meeting on Thursday, April 12.

Dr. Laura O'Dwyer recently had an article, *A Study of the Effectiveness of the Louisiana Algebra I Online Course*, published in the Journal of Research on Technology in Education, Volume 39 Number 3

Please submit your recent publications, presentations or activities to Tracy Lituri at [lituri@bc.edu](mailto:lituri@bc.edu).

## Stat Tidbits

### March's Question & Answer:

Q: What was the first statistical use of the letter "r" (obviously not the obvious answer)?

There were no answers submitted for March's question!

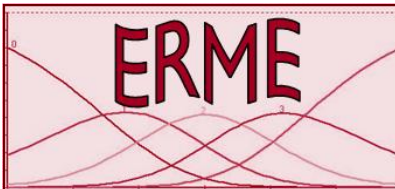
A: In 1856 Peters used "r" as the probable error of a single observation.

## Stat Tidbits for April

Question: How might the normal curve be used as a "geological standard"?

Send answers to [lituri@bc.edu](mailto:lituri@bc.edu)

\* Answer will appear in next newsletter.



**For More Information**  
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to the ERME Newsletter,  
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**NERA** NORTHEASTERN EDUCATIONAL  
RESEARCH ASSOCIATION

38<sup>th</sup> Annual Conference, October 17 - 19, 2007



## Call for Proposals

The 2007 Call for Proposals and Proposal Information  
(the F.A.Q.) are available now on the NERA website:

<http://www.nera-education.org/conference07.html>

➤ **Proposals are due June 1, 2007**

For more information about the 2007 Conference,  
contact the Conference Co-Chairs, Amy Drescher and April Zenisky  
[neramembers@gmail.com](mailto:neramembers@gmail.com)

### NEW LOCATION FOR 2007!

Hartford Marriott Rocky Hill in Rocky Hill, Connecticut

#### *Selected Program Highlights include:*

➤ **Keynote Speaker: Cora B. Marrett**

Assistant Director of Education and Human Resources, National Science Foundation

➤ **Keynote Speaker: Wayne J. Camara**

Vice President for Research and Development, The College Board

#### ➤ *Featured Sessions*

Using Assessment Data: Practice and Research

Teacher-as-Researcher Award Winner

Graduate Student Issues Committee Session

#### ➤ *Conference Pre-Session*

Educational Program Evaluation with Robert Gable

Item Response Theory with H. Swaminathan and Jane Rogers