Ed Stats SIG

Volume 4, Issue 3

Spring 2008

The Stats Source: Newsworthy Notes from the Ed Stats SIG

President's Column

Hello Educational Statisticans SIG members,

I hope that each of you has finished planning your upcoming trip to New York City for the annual meeting of the American Educational Research Association. As importantly, I hope that you have completed all your research and submitted those papers to discussants. Now's the time to finesse your presentations!

Many thanks go to ***Shlomo Sawilowsky***, our 2008 Program Chair, for organizing a wonderful program for the Educational Statisticians SIG. We have two symposia (entitled: "Advances in Techniques for the Synthesis of Multivariate Linear Models" and "Rethinking Graduate Applied Educational Statistics Classes") scheduled.

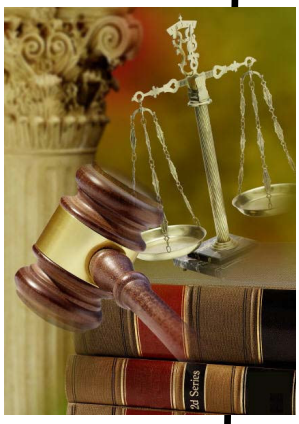
We also have four roundtable sessions including: Simulation Studies; Missing Data, Regression, Uni/ Multivariate; Teaching and Reporting; and Various Procedures. See the program for details of times and locations.

Many thanks to all of you who served as proposal reviewers this year. Your input is of the utmost importance in terms of the final selection of sessions. Thanks also to those of you who submitted proposals. The more proposals that a SIG receives, the more opportunities for sessions. Please consider us as a future outlet for your research. Thanks also go to those of you who will serve as Chairs and Discussants of our sessions.

Last, but not least, many thanks go to the newsletter editor and webmasters for their service throughout the year: ***Debbie Hahs-Vaughn***, ***Steve Sivo***, and ***Lea Witta***.

I'm delighted to remind you that ***Ingram Olkin***, Professor of Statistics and of Education at Stanford University and the first (and second) President of the Educational Statisticians SIG, is our invited speaker for the business meeting. His talk is entitled "*Meta-Analysis: History, Rationale and Methods*". The business meeting is scheduled for **Monday, March 24th**, from **6:15 – 7:45pm** in the New York Marriott Marquis Times Square, Empire Complex, Empire/ Hudson Room, 7th Floor. Please join us for Dr. Olkin's talk and to attend the very brief business meeting.

Continued on next page...



President's Column *continued...*

The Four ***SIG Social*** has been scheduled to take place immediately following (7:45 – 9:15pm) and in the same location as the business meeting. The four SIGs include ourselves, the Structural Equation Modeling SIG, the Hierarchical Linear Modeling SIG and the Advanced Studies of National Databases SIG. Light appetizers and dessert will be served. In addition, a free drink (wine or beer) will be awarded to the first 50 attendees. Please spread the word with fellow SIG members and come join us to celebrate the start of the conference.

We need to elect a new program chair for the 2009 AERA conference. Please submit nominations to me (tasha.beretvas@mail.utexas.edu) or Shlomo Sawilowsky (Shlomo@edstat.coe.wayne.edu) as soon as you can. Self-nominations are encouraged.

Before I sign off, I just want to ask that each of you continue to strengthen the Educational Statisticians SIG membership by encouraging your fellow educational statisticians to become members and to contribute to our SIG in the form of both research and service. It has been my pleasure serving the Educational Statisticians SIG as Program Chair and President. I look forward to seeing you at the conference in NYC!

Best regards,

Tasha Beretvas

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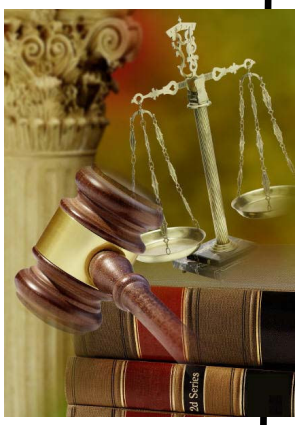


Four SIG Social

The Educational Statisticians SIG, along with the Advanced Studies of National Databases (ASOND), Hierarchical Linear Modeling (HLM), and Structural Equation Modeling (SEM) SIGs will be hosting a Four-SIG Social.

Light appetizers and dessert will be served. A free drink (wine or beer) will be provided for the first 50 attendees.

When:

7:45-9:15 pm

Monday, March 24

immediately following the Ed Stats SIG business meeting

Where:

New York Marriott Marquis Times Square Hotel, Empire Complex, Empire/Hudson Room (7th floor)

(same room as the Ed Stats SIG business meeting)

Advice to a Young Variable

Robert W. Lissitz
Slightly Skewed
University of Maryland

You have just been created and you are just beginning to generate little data of your own. These data and many more will be created as you appear in the format that permits you to propagate in a healthy and hopefully reliable and valid way. This is a wonderful time in a new variable's life and you should relish this time. But, there is more potential for success than you could ever dream of and it can be yours in the future, if, of course, you follow my advice and proceed carefully. You may think it can't get any better than this, but that is not true. It is possible to become a great source of data, perhaps you could even be known as a latent variable or maybe you could even be referred to as a construct. It is also possible to remain one of the lesser variables, a mere manifest variable that appears to be solitary and usually works alone and stands alone in summary tables. This is an honorable existence but it is not being all you can be.

If you just do your job in an open and honest manner you are destined to remain a manifest variable your whole life. You can be common, hard working, sometimes even mildly interesting and intriguing and maybe a little challenging, but never among the great variables in the pantheon of variables that truly create the world of education and psychology. You must learn to do some very difficult tricks if you want to move up the status hierarchy of variables.

First, you need to seem to be related to others in your field, and I do not mean just where you came from. Almost no one cares who invented you although occasionally someone might remark on when you came on the scene, but do not waste your time on such genealogical matters. In other words, what I mean is that you should have some moderate correlation with many other variables, and in a pattern that is not easy to decipher but is suggestive of great import. It is best if some of these variables are older, familiar ones and some are newer and just becoming popular. In other words, cultivate a mix of ties to the familiar and ties to the new or less familiar. This will make human researchers think there is something there worth studying because you have an historical familiarity as well as the promise of something new. Feeling this, human researchers will be more likely to use you in their next series of studies. Use is what you live for. That, and the fame of being perceived as critical and necessary in any study.

Second, you must not be too obvious. Become somewhat inscrutable with a hint of potential greatness. For example, if you relate to some other variables in a direct way, mix in a few indirect relationships so that you will not be seen as boring or too readily predictable. Remember that researchers like to feel that you are familiar, but that you are holding something back. That keeps their interest.

Third, make the researchers work for their insight. If a scientist gets the insight too easily, he or she will not see the need to "buy" the variable, if you know what I mean. This means that at a minimum a computer program will be needed to calculate something about you and your place in the panoply of variables.

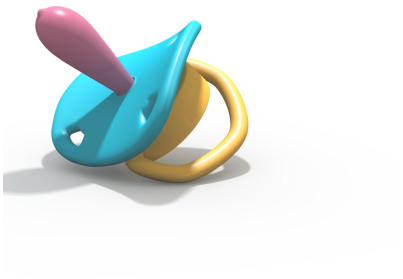
Remember that your goal is to be latent or even maybe to someday represent the idea of a construct. No one knows what those terms mean, but they are none-the-less very meaningful to researchers and everyone wants to use one in their study. You may become famous as a manifest variable but you will never hold the true respect of the human researchers. For example, if you try to be like "salary" you will be used a lot but not respected, like when someone says " O.K., let's throw in a measure of income." Being an afterthought or even an automatic variable is not a goal worth having. Humans have an intuitive sense of the depth of an idea so that your variable name must suggest a certain panache or a complexity that is intriguing, remote and yet suggests an idea that will be understood with time.

Advice to a Young Variable (continued)

As to the use of a computer, remember that you will be seen as more interesting if you become transformed and the more complex the transformation the better. So for example, you might learn from your middle aged friend, theta, how to become known through solving a complex equation and in that way you will take a big step toward latency or constructness (i.e., the degree to which a variable represents or suggests the existence of a construct). Never forget that a simple transformation or mathematical process such as arcsin or obtaining the expected value is just not going to change you enough to make you appear to possess sufficient depth for star quality. If a researcher has to study the transformation (in other words, it is a complicated transformation) before he or she can even understand you, that is one of the characteristics that will set you apart and make you valuable and perhaps even famous. So rotations are always going to make you seem more interesting than if you result from a simple multiplication by a constant or even multiplication and addition by constants.

Remember the F word and its magical power to demand that you be studied further and that you be taken seriously. Being "factored" is an almost sure ticket to becoming at least latent and maybe even a construct or at least a key element of a construct. Also remember that being confirmed is better than just being explored. So if you and your closest and not so close friends can work as a team you can all gain in the process, although loading on several important factors is sometimes, better than just loading on one factor, especially if the one is not the first to birth. Remember you do NOT want to be part of the scree and also remember to avoid being ignored you need to have relations with as many of your friends as possible, while keeping some individuality for yourself.

Do not misunderstand what I mean by my advice above. Being used is the best thing that can happen to you, but you must also be respected for the power that you hold over the human mind. I am sure you realize that no-one really respects a dummy variable, no matter how they code it. You want to become a necessary and integral part of any model that human researchers are contemplating. This will keep you really alive and let you live long and prosper. Good luck, my young friend.



Change Agents in Teaching & Learning Statistics: CATALST

We are pleased to announce the establishment of the CATALST group in the Department of Educational Psychology at the University of Minnesota. CATALST stands for Change Agents in Teaching and Learning Statistics.

We are conducting statistics education research studies, developing and evaluating new curriculum, hosting seminars and outside speakers, and more.

We welcome visiting scholars to come and share their work with us and form new collaborations.

Please check out our website at:
http://www.tc.umn.edu/~delma001/CATALST

AIMS: Adapting and Implementing Innovative Materials

AIMS: Adapting and Implementing Innovative Materials
A CAUSEway Workshop
University of Minnesota, Minneapolis

Friday, June 6 &
Saturday, June 7, 2008

Presented by Joan Garfield, Bob delMas, and Andrew Zieffler
This workshop will share teaching methods and materials developed by the NSF-Funded AIMS (Adapting and Implementing Innovative Materials) project.

The activities are designed for use in an introductory, non-calculus based college statistics course. We invite participants who teach statistics and are interested in learning about teaching a student-centered, activity based course that utilizes exemplary software tools, real data sets, and alternative methods of assessment.

For more information and to sign up go to:
http://www.causeweb.org/workshop/aims/

Joan Garfield
Professor of Educational Psychology
University of Minnesota
http://www.tc.umn.edu/~delma001/CATALST

Bob delMas
Associate Professor of Educational Psychology
University of Minnesota

Position Announcement: University of South Carolina

Executive Director of the Office of Program Evaluation in the College of Education at the University of South Carolina-Columbia. This position is a non-tenure track faculty appointment as Senior Research Professor (full or associate) in the College of Education that requires a doctorate with expertise in research design, testing, and program evaluation.

The position further requires experience conducting evaluations and research studies with a demonstrated record of writing funded grant proposals. For more information on this position go to **http://www.ed.sc.edu/positions/nontenure.asp**.

USC is an equal opportunity employer.

Information Age Publishing, Inc. Announces Release of: *Multilevel Modeling of Educational Data*

Multilevel Modeling of Educational Data

Edited by **Ann A. O'Connell** and **D. Betsy McCoach**

University of Connecticut

A volume in the series: Quantitative Methods in Education and the Behavioral Sciences: Issues, Research, and Teaching. Series Editor (s): Ronald C Serlin, *University of Wisconsin – Madison*

(sponsored by the Educational Statisticians, SIG)

Multilevel Modeling of Educational Data, co-edited by Ann A. O'Connell, Ed.D., and D. Betsy McCoach, Ph.D., is the next volume in the series: *Quantitative Methods in Education and the Behavioral Sciences: Issues, Research and Teaching* (Information Age Publishing), sponsored by the Educational Statisticians' Special Interest Group (Ed-Stat SIG) of the American Educational Research Association. The use of multilevel analyses to examine effects of groups or contexts on individual outcomes has burgeoned over the past few decades. Multilevel modeling techniques allow educational researchers to more appropriately model data that occur within multiple hierarchies (i.e.- the classroom, the school, and/or the district). Examples of multilevel research problems involving schools include establishing trajectories of academic achievement for children within diverse classrooms or schools or studying school-level characteristics on the incidence of bullying. Multilevel models provide an improvement over traditional single-level approaches to working with clustered or hierarchical data; however, multilevel data present complex and interesting methodological challenges for the applied education research community.

In keeping with the pedagogical focus for this book series, the papers this volume emphasize applications of multilevel models using educational data, with chapter topics ranging from basic to advanced. This book represents a comprehensive and instructional resource text on multilevel modeling for quantitative researchers who plan to use multilevel techniques in their work, as well as for professors and students of quantitative methods courses focusing on multilevel analysis. Through the contributions of experienced researchers and teachers of multilevel modeling, this volume provides an accessible and practical treatment of methods appropriate for use in a first and/or second course in multilevel analysis. A supporting website links chapter examples to actual data, creating an opportunity for readers to reinforce their knowledge through hands-on data analysis. This book serves as a guide for designing multilevel studies and applying multilevel modeling techniques in educational and behavioral research, thus contributing to a better understanding of and solution for the challenges posed by multilevel systems and data.

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Real Data Analysis; A Volume in the Series *Quantitative Methods in Education and the Behavioral Sciences: Issues, Research, and Teaching*

Real Data Analysis
Edited by:
Shlomo S. Sawilowsky
Wayne State University
A volume in the series:
Quantitative Methods in Education and the Behavioral Sciences: Issues, Research, and Teaching. *Series Editor: Ronald C. Serlin, University of Wisconsin—Madison.*

The invited authors of this edited volume have been prolific in the arena of Real Data Analysis (RDA) as it applies to the social and behavioral sciences, especially in the disciplines of education and psychology. Combined, this brain trust represents 3,247 articles in refereed journals, 127 books published, US $45.3 Million in extramural research funding, 34 teaching and 92 research awards, serve(d) as Editor/Assistant Editor/Editorial Board Member for 95 peer reviewed journals, and provide (d) ad hoc reviews for 362 journals. Their enormous footprint on real data analysis is showcased for professors, researchers, educators, administrators, and graduate students in the second text in the AERA/SIG ES Quantitative Methods series.

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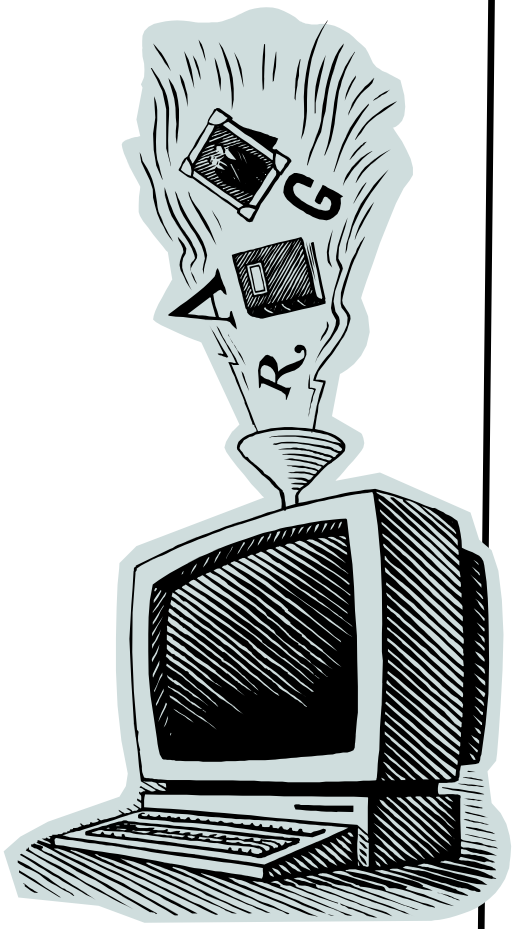

AERA Fellowships & Grants Programs

Information on AERA's Fellowships and Grants Programs can be found at http://www.aera.net/fellowships/?id=57. From this site, details and related links for more information on the following programs can be accessed:

- **AERA-AIR Fellows Program**
- **AERA-ETX Fellowship Program in Measurement**
- **Minority Fellowship Program in Education Research**
- **AERA Grants Program**

FERA 2008

Announcing the 53rd Annual Conference of the

Florida Educational Research Association (FERA)

The Rosen Centre Hotel, Orlando, FL
November 19-21, 2008

Florida is a beautiful place to visit anytime, but especially in November!

Call for Proposal Deadline: June 15, 2008
Visit the FERA website at http://feraonline.org

Use our new Pay Pal Online option to register for the conference, join FERA – or to renew your membership!

Ed Stats SIG

Florida is a beautiful place to visit anytime, but especially in November!

Mark your calendars for a wonderful meeting in New York in March

We will soon be hosted from the AERA website! Until then, our temporary address is:

http://homes.education.ucf.edu:16080/~ssivo/EDSTATS/Ed%20Stat%20Homepage.htm

Upcoming Conferences

American Educational Research Association (AERA)

www.aera.net

March 24-28, 2008; New York

American Psychological Association (APA)

www.apa.org/

August 14-17, 2008; Boston

American Statistical Association Joint Statistical Meeting

www.amstat.org/meetings/

August 3-7, 2008; Denver

Florida Educational Research Association Annual Meeting

www.feraonline.org

November 9-21, 2008, Orlando

See you in the big apple in March!