The 2018-2019 J. George Jones, Jr. and Velma Rife Jones Endowed Lecture Series

PRESENTS

Contemporary Single-Case Intervention Research Designs and Statistical Analyses Practice

JOEL R. LEVIN, PH.D.

March 7-8, 2019 — SAEC Art Works for Kids Auditorium

Dr. Levin is Professor Emeritus of Educational Psychology, University of Wisconsin-Madison, and University of Arizona. The Julian C. Stanley Professor of Educational Psychology while at UW-Madison, Dr. Levin is internationally renowned for his research and writing on educational research methodology and statistical analysis, as well as for his career-long program of research on students’ learning strategies and study skills, with more than 400 scholarly publications in those domains. A former Editor of the American Psychological Association’s Journal of Educational Psychology, he also served as Chair of APA’s Council of Editors and was an ex-officio representative on APA’s Publications and Communications Board. Dr. Levin served on a committee that revised the “statistical-reporting guidelines” sections for the fourth (1994), fifth (2001), and sixth (2010) editions of the APA Publication Manual. He also served as APA’s Chief Editorial Advisor, a position in which he was responsible for mediating editor-author conflicts, managing ethical violations, and making recommendations bearing on all aspects of the research-and-publication process. His numerous research and teaching awards include APA Division of Educational Psychology’s most prestigious career recognition, the E. L. Thorndike Award, and Journal of School Psychology’s outstanding article of the year for his 2012 publication on recently developed statistical procedures for the analysis of single-case intervention data. For the past seven years, he has co-directed summer workshops on the design and analysis of single-case intervention research that have been funded through federal institutes and professional organizations.

Thursday, March 7

9:00 AM – 11:00 AM Dr. Levin will present an overview of advances in single-case intervention research methodology, with a special focus on the incorporation of various randomization schemes into single-case intervention designs. Intended audience includes faculty and students.

1:00 PM – 2:30 PM Dr. Levin will provide tips for conducting, reporting, and publishing single-case intervention research in professional journals, including a discussion of ethical issues. Intended audience includes junior faculty and students.

3:00 PM – 4:00 PM Follow-up questions and discussion on the day’s presentations.

Friday, March 8

9:00 AM to 11:30 AM Dr. Levin will provide an introduction to single-case randomization statistical tests, related novel design and data-analysis procedures, and selected effect-size measures along with applications of his ExPRT (Excel Package of Randomization Tests) Excel-based statistical software for analyzing data from a variety of randomized single-case intervention designs. Questions and discussion will follow. Intended audience includes faculty and students.

With support from:
The Departments of Special Education & Educational Psychology, and University Teaching Grant
Objectives. Dr. Levin will present three learning modules. COE attendees will be able to integrate recent innovations in SCD methodology in their courses and research, including grants and dissertations. The content of the modules will offer interdisciplinary training for faculty and graduate students in Special Education, School Psychology, Educational Psychology, BCBA, Reading and Literacy, and Learning Sciences. The following objectives will be addressed:

Module 1 for Faculty and Students
- Provide an overview of advances in SCD intervention research methodology: Then and Now: Introduction to Contemporary Single-Case Intervention Research Methodology
- Provide an introduction to the large variety of randomized SCDs: Random Thoughts on Single-Case Intervention Research Designs and Analyses (Part 1)

Module 2 for Junior Faculty and Students
- Provide tips for conducting, reporting, and publishing SCD intervention research in professional journals, including a discussion of ethical issues: Issues and Tips Related to Conducting, Reporting, and Publishing Research in Professional Journals

Module 3 for Faculty and Students
- Provide an introduction to the variety of single-case randomization statistical tests, related novel design and data-analysis procedures, and selected effect-size measures: Random Thoughts on Single-Case Intervention Research Designs and Analyses (Part 2)
- Provide instruction in the use of freely available Excel-based single-case statistical software to perform randomization-test analyses for AB-type, alternating treatment, and multiple-baseline designs: The ExPRT (Excel Package of Randomization Tests) Statistical Package for Analyzing the Data from Single-Case Intervention Studies

Plan and Timeline. On Day 1, Module 1 will be held from 9:00 – 11:00 AM and Module 2 will be held from 1:00 – 2:30 PM. Follow-up questions and discussion on the day’s presentations will be held from 3:00 – 4:00 PM. On Day 2, Module 3, along with questions and discussion, will be held from 9:00 – 11:30 AM. Dr. Levin will also consult with the PIs of this proposal for ways to improve their current course curricula covering SCD intervention research and publication issues across the multiple programs.

Expected outcomes, long-term educational impact for students, and how the project will be sustained.
By incorporating advances in SCD methodology into applied practice, faculty and students will increase their knowledge and skills for designing rigorous SCDs. The following are expected outcomes and long-term educational impact:
- Faculty and students will increase their knowledge and skill in publishing SCD research in top-tier journals;
• Faculty and students will increase their knowledge and skill in obtaining funding from extramural grant competitions sponsored by educational and mental health agencies and organizations;
• Students will increase their knowledge and skill in dissertation research and will remain competitive in submitting proposals to national and international conferences; and
• Faculty will obtain knowledge regarding SCD methodological and data-analysis advances that can be integrated into courses in the Departments of Special Education and Educational Psychology.