## Previous Comments by Workshop Participants

"It was great to review these concepts that I had learned in graduate school but haven't thought about in a while. They really are critical for daily school psychology practice."

"I wish there were more presentations like this to stimulate critical thinking about current practices in school psychology assessment like RTI, Cross-Battery Assessment, and proper interpretation of tests!"

"School psychologists will find this workshop very useful for their daily practice. I highly recommend it."

"It was nice to have this refresher and extension of measurement principles! It has been too long since I thought about these issues and they are very important."

"This made me really think about how current my information is and made me think that it is time to get reacquainted with statistics."

"Excellent presentation...very informative and interesting."

## **Continuing Education**

Dr. Canivez is Professor of Psychology, Arizona Licensed Psychologist (inactive status) and Nationally Certified School Psychologist. He is also a Certified School Psychologist in Illinois. This workshop may qualify as continuing education for licensed psychologists as well as state and nationally certified school psychologists. Check with your professional association to see if this workshop qualifies for you.

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# Measurement Matters!

Basic Psychological Measurement Principles That Should Guide Test Selection, Use, and Interpretation

A Continuing Professional Development Workshop for School and Clinical Psychologists

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# Measurement Matters! Basic Psychological Measurement Principles That Should Guide Test Selection, Use, and Interpretation

## **Workshop Summary**

Interpretation of psychological and educational tests and procedures involves making inferences about the individual based on their scores on the test or information from the procedure. The inferences made often result in diagnostic decisions and/or recommendations that have substantial implications for the individual assessed. Such scores and the resulting inferences must be empirically supported in terms of their reliability and validity according to the Standards for Educational and Psychological Testing (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999). Basic measurement principles of score reliability, score validity, diagnostic utility, and norms are fundamental aspects for school and clinical psychologists to apply when selecting a test or procedure, using the test or procedure, and interpreting test scores or information from the procedure.

This workshop reviews and extends basic measurement principles that school and clinical psychologists need to be mindful of and provides research examples of how each is used for providing empirical support for tests or other assessment procedures. Such concepts are critical and should guide everyday practices in the selection and use of tests and procedures. These concepts are applicable to all approaches including tests of intelligence, achievement, psychopathology, and Response to Intervention (RTI) methods.

Because test users are ultimately responsible for the ethical use of tests including selection, administration, scoring, and interpretation; it is the test user who must weigh the empirical evidence and deal with the psychometric issues concerning tests. In the cogent words of Wiener (1989), ethical psychologists must "(a) know what their tests can do and (b) act accordingly" (p. 829).

## **Workshop Outline**

Why Measurement Principles Matter

**Guiding Publications** 

#### Score Reliability and Research Examples

Internal Consistency Test-Retest (Stability) Interrater/Interobserver Agreement Alternate Forms (Equivalence)

#### Score Validity and Research Examples

Content Validity
Face Validity
Sampling Validity

Criterion Related Validity: Concurrent Validity Predictive Validity

Construct Validity:

Age/Developmental Changes
Distinct Group Differences
Theory Consistent Intervention Effects
Convergent Validity
Divergent Validity
Multitrait-Multimethod Matrix
Factorial Validity
Exploratory Factor Analysis
Confirmatory Factor Analysis
Incremental Validity

Utility/Diagnostic Efficiency: Discriminative Validity Diagnostic Utility

#### Test Norms: How we make sense of scores

Nomothetic vs. Idiographic Comparisons Why National Norms are Essential Sample Representativeness

### **Workshop Presenter**

Gary L. Canivez, Ph.D., is Professor of Psychology at Eastern Illinois University and principally involved in the Specialist in School Psychology program. Before coming to EIU Dr. Canivez was a school psychologist for 8 years in the Phoenix metropolitan area (Deer Valley Unified School District and Tempe Elementary School District), was on the adjunct faculty of Arizona State University and Northern Arizona University, and was president of the Arizona Association of School Psychologists. He currently serves on the editorial boards of Psychological Assessment, School Psychology Quarterly, and the Journal of Psychoeducational Assessment, and has been a reviewer for professional journals such as School Psychology Review, Psychology in the Schools, Applied Neuropsychology, and Behavior Research Methods. The author of over 50 research and professional publications and 100 professional presentations and continuing professional development workshops, Dr. Canivez specializes in psychological assessment and measurement pertaining to intelligence, achievement, personality, and psychopathology; and his research has been supported by the National Institutes of Health/ National Institute of Mental Health.

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