

William Boone, Ph.D.

Full Professor

Program in Learning Sciences and Human Development

Department of Educational Psychology

*Specializing in Evaluation, Measurement and Statistical Analysis in the
Fields of Business, Healthcare, and Education*

Miami University Distinguished Scholar

Education

Ph.D. Program in Measurement, Evaluation and Statistical Analysis (MESA),
Department of Education University of Chicago (1991)

M.S. Geophysics University of Wisconsin-Madison (1985)

B.S. Geology Indiana University-Bloomington (1982)
Substantial coursework in Mathematics and German

Research Interests

Dr. Boone's research interests include the use of Rasch measurement techniques and methodology to design, analyze, and revise questionnaires, surveys and tests. His current work emphasizes instruments (e.g. questionnaires, surveys and tests) used in the fields of business (market research), health care, and education. In his research, Dr. Boone frequently explores the development of techniques to better communicate analysis findings to stakeholders. Dr. Boone also frequently addresses how to 1) improve the efficiency of data collection, 2) provide succinct actionable guidance for decision makers, 3) reduce the cost per response, and 4) increase response rates. Groups using his guidance have been able to increase the quality of their data even with large fluctuations in respondent sample

compositions and participation over time. His expertise has allowed organizations with an interest in the evaluation of questionnaire data to lower the per item cost of response data collection while improving the quality of actionable guidance.

Dr. Boone has worked within the field of questionnaire/survey design and analysis over 30 years. During that time he has evaluated more than 1000 survey instruments which have targeted samples of respondents ranging in age from 5 years to adult. Selected instruments have also targeted respondents as a function of gender, ethnicity as well as other variables. He has been asked to provide evaluation, measurement and statistical analysis expertise to numerous individuals and organizations. Analyses have been for and/or supported by numerous professional groups, including:

- The American Board of Pediatric Dentistry
- Hewlett Packard
- DOW Chemical
- Cincinnati Children's Hospital
- The University of Cincinnati College of Medicine
- The National Aquarium in Baltimore
- The Cincinnati Museum of Natural History
- The National Science Foundation
- The United States Department of Education
- The National Institutes of Health, the State of Ohio
- The Indianapolis Public School District
- National and International Universities, including Ohio State University, University of Missouri-Columbia, University of Utah, University of Georgia, University of Cincinnati, University of Illinois-Chicago, Baylor University, Cornell University, Indiana University, Purdue University, Universität Duisburg-Essen, Munich's Ludwig-Maximilians Universität, Universität Trier, Georg-August-Universität Göttingen, Pädagogische Hochschule Zürich, Leibniz Universität Hannover, Freie Universität Berlin, Universität Osnabrück, Christian-Albrechts Universität Kiel, Universität Wien, Universität Kassel, Universität Cologne, Hochschule Darmstadt, Universität Paderborn, Leibniz Universität Hannover, Aarhus University, Universität Giessen.

Select Awards

- Fulbright Scholar
- Miami University Distinguished Scholar
- Student Choice Teaching Award – Indiana University-Bloomington
- Rosenberg Award – University of Chicago MESA (Measurement, Evaluation and Statistical Analysis) Program
- Chevron Oil Scholarship – Indiana University-Bloomington
- ARCO Award – Indiana University-Bloomington

Select Presentations and Publications

During his career at Indiana University and at Miami University, Dr. Boone has authored and co-authored over 100 publications and reports. His CV lists over 200 professional presentations and workshops. He has served on the editorial review board of many peer reviewed scholarly journals.

Selected Rasch book publications include:

- *Rasch Analysis in the Human Sciences, Springer (Boone, Staver & Yale)*
- *Advances in Rasch Analysis in the Human Sciences, Springer (Boone & Staver)*
- *Rasch Measurement in Science Education (Liu & Boone)*

There have been a total 73,000+ chapter downloads, and over 600 print copies sold for the two Rasch texts authored by Dr. Boone and published by Springer.

Dr. Boone is featured in a popular YouTube Video created by a faculty member in Singapore entitled “An Introduction to Rasch Measurement”

<https://www.youtube.com/watch?v=AfTPWtc3EXE> -that video has been viewed over 4,000 times.

A 2019 analysis of the work by Rasch researchers reported that Dr. Boone exhibited the highest burst strength of all Rasch researchers- this was viewed as reflecting “the growing importance of the author’s papers and ideas.” Dr. Boone presents Rasch workshops and Webinars throughout the world.

Select Workshops and Webinars

Dr. Boone has presented Rasch workshops and webinars throughout the world. For example workshops have been held at Universität Duisberg-Essen (Germany), Munich’s Ludwig-Maximilians Universität (Germany), Universität Trier (Germany), Georg-August-Universität Göttingen (Germany), University of Utrecht (Netherlands), University of Lecce (Italy). Webinars presented for faculty and students of Singapore, Indonesia, Philippines, Turkey, Kazakhstan, Italy, and Thailand.

Teaching Interests

Dr. Boone has helped guide M.S. and Ph.D. thesis projects using statistical and psychometric techniques for the analysis of questionnaire/survey data. Primarily, Dr. Boone teaches graduate level courses in measurement/psychometrics, statistics, advanced research design and program evaluation. Dr. Boone also teaches an undergraduate course in evaluation and assessment.

He is well versed in the use of SPSS software for the analysis of survey data (frequency distributions, graphic presentations, analysis of central tendency, variability, correlation, analysis of variance, chi-squared computations utilizing crosstabs). Additionally, he is an expert in the use of advanced survey analysis software which facilitates, in part, the use of the Rasch model to compute logit scale scores. Such scores (outcome measures) are now being utilized by researchers in business, health care and education prior to parametric statistical

tests. Dr. Boone is also an expert in the use of techniques that facilitate the evaluation of questionnaire validity and reliability.

Dr. Boone speaks conversational German. He lived for a year in Bonn, Germany and for a year in Oxford, England. He frequently presents Rasch workshops throughout Europe.

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