Abstract

From: "https://engineering.purdue.edu/ENE/Research/Seminars/AReevaluationoftheDesignEngineeringandTechnologyDET"

Several critical concepts of applied psychometrics (e.g., measurement, reliability, validity, and factor analysis) will be explained. The important role these concepts can play in the research of engineering education will also be illustrated.

The study by Tao Hong, Dr. Purzer and Dr. Cardella: “the psychometric re-evaluation of the Design, Engineering and Technology (DET) survey” will be discussed. The purpose of this study was to re-examine the psychometric soundness of the DET survey with a new data set collected from elementary teachers representing a national population, and to present the details regarding how to appropriately conduct confirmatory (CFA) and exploratory (EFA) factor analyses and item analysis.

Bio

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Tao Hong is a Post-doctoral Research Associate in College of Engineering Education at Purdue University. He earned his Ph.D degree in Educational Measurement and Research Methodology from Purdue University in Aug 2010. His principal research focus is assessment methods in engineering education and service learning program evaluation.

Cite this work

(2011), A Re-evaluation of the Design Engineering and Technology Survey Instrument, "http://cleerhub.org/resources/394"