Using Automated Procedures to Generate Test Items: A Progress Report

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2:30 – 4 p.m. (CDT)

University of Alberta, Education Centre North Room 6-1110
University of Iowa, Lindquist Center Room N221
University of Maryland, Benjamin Building Room 3233
University of Minnesota, Peik Hall Room 28
University of Nebraska-Lincoln, TEAC Room 112

Changes to the design and development of our assessments are resulting in the unprecedented demand for a large and continuous supply of content-specific test items. One way to address this growing demand is with automatic item generation. Automatic item generation is the process of using item models to create test items with the aid of computer technology. The purpose of my talk is to describe and illustrate a template-based method for generating test items. I will describe a three-stage approach where test development specialists, first, create a cognitive model in order to identify and structure the test content. Next, an item model is created. An item model is like a mould or rendering that highlights the features in an assessment task that must be manipulated to produce new items. Finally, features in the item model are systematically manipulated with computer algorithms to generate new items. Using this method, hundreds or even thousands of new items can be generated with a single item model. Select applications will also be provided to demonstrate how item quality can be evaluated as well how this method can be used for multilingual test development.

If you have questions about this seminar, contact Professor Mark Davison, mld@umn.edu.

To be notified about future seminars, contact sawye100@umn.edu.

The CanAm Online Symposium, formerly known as the Big Ten Online Symposium, is a series of presentations on advanced measurement and research methods in education. It is sponsored by the Centre for Research in Applied Measurement and Evaluation, Department of Educational Psychology, University of Alberta; the Quantitative Foundations of Education Program, Department of Educational Psychology, University of Iowa; the Quantitative Methods in Education Track, Department of Educational Psychology, University of Minnesota; the Measurement, Statistics, and Evaluation Program, Department of Human Development and Quantitative Methods, University of Maryland; and the Quantitative, Qualitative, and Psychometric Methods Program, Department of Educational Psychology, University of Nebraska-Lincoln. In 2015-16, the Symposium will include four online seminars.