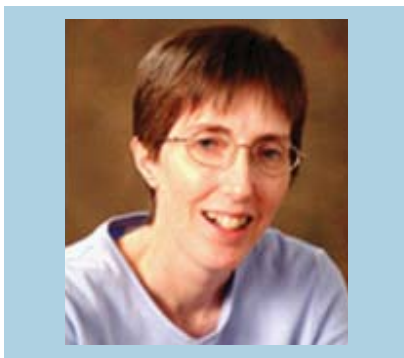


Bureau of Educational Research:
2009-2010 Seminar Series

Factor Analysis of Polytomous Item Response Data:

When “I Don’t Know” Means I Don’t Know



DR. CAROLYN J. ANDERSON

2009-2010

SENIOR DISTINGUISHED SCHOLAR

**Professor,
Educational Psychology**

WHERE:

242 EDUCATION BUILDING

WHEN:

THURSDAY, October 1st 12-1:00PM

Many variables in educational research are qualitative or categorical. When these types of variables are nominal or partially ordered they present problems for standard approaches to factor analysis and structural equation models that were developed for continuous data. **Problems with standard methods are discussed and an alternative approach is presented.**

The alternative is a class of flexible latent variable models for multivariate, multcategory nominal and/or ordinal variables. The approach is presented in the **context of a low-stakes test where response options do not have a clear ordering**, one of the response options is “Don’t know,” and different instructions were given to some of the examinees to encourage them to guess rather than use the response option “Don’t know.”

Also illustrated is how knowledge and information about the subject matter and items can be incorporated into the models. The methods illustrated in this talk yield more reliable measures, and their **applicability to problems in educational research is quite broad.**