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A FRAMEWORK FOR PSYCHOMETRIC ANALYSIS OF STUDENT
PERFORMANCE ACROSS TIME: AN ILLUSTRATION WITH NATIONAL
EDUCATIONAL LONGITUDINAL STUDY DATA (124 pp.)

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High stakes testing, assessment, and accountability in public schools has become

one of the most important topics in educational policy in recent years. A challenging task

in this direction remains the bridging of more sophisticated analyses in the framework of

item response theory and interpretation and decision making within classical test theory.

The purpose of this study was to provide a comparison of various test forms and

student performance across years. This dissertation (a) illustrates the practical application

of a method that uses item parameter estimates to provide test information prior to

administration, (b) compares different test forms across years, (c) compares the

dependability index for criterion-referenced interpretations (e.g., mastery tests) across test

forms, and (d) compares changes of student performance by ability level over time.

This study provides a framework that permits test developers to understand

population performance on standardized tests prior to test administration. Teachers and

local practitioners can use this research to compare student performance and growth

across time and subgroups of students.