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Value-Added Measures for Dropout Recovery Programs

Introduction

Growth measures are required for dropout recovery programs and, given the unique nature of student enrollment, student grade and student testing in these programs, the Ohio Department of Education has customized the value-added modeling and data inputs for more meaningful growth measure. The purpose of this document is to give a technical overview of this customized approach for the 8 schools and 15,000 students participating in these programs.

Data Inputs

At the dropout recovery programs, students participate in two testing windows during a given year, one at the beginning of the program and another at the end of the program/spring. For students who are enrolled at a dropout recovery program for more than one year, the model will use all available test scores while in the dropout recovery program.

The tests that are used in this analysis were selected by ODE for use in this project. One property of those assessments is that they are computer adaptive since the grade level can be difficult to determine for all of the students in the dropout recovery programs. More information about these assessments can be found here.

Modeling Approach

The value-added model for dropout recovery programs is similar to the multivariate response model (MRM) currently used for OAA math and reading in non-dropout recovery schools in the state and described in detail here In less technical terms, growth is measured through a gain-based approach using the two test scores within a given year: the growth measure itself is the estimated *change in achievement* for a group of students with a specific program relative to the norm referenced population for that subject and grade. This measure takes into account the entering achievement of the group of students.

As a first step, the distribution of scores for a subject/grade/test window are mapped to Normal Curve Equivalent distribution (also described in the link referenced above) using the norm data provided by the test vendor. The average score for the first testing window of specific program is compared to its average score for the second testing window. The growth standard (or expectation) is that students will maintain their achievement levels between the two testing windows relative to the norm referenced population, and the growth measure is the difference between the two achievement levels.

To determine whether the growth measure represents *significantly* more or less progress than the growth standard, a growth index is then calculated by dividing the growth measure by its standard error. The growth index is categorized into different levels according to the same definitions used for non-dropout recovery schools in the state, and the interpretations of these levels would be similar for both dropout recovery and non-dropout recovery schools.

The difference in the interpretation is that the non-dropout recovery schools are measuring whether students maintained their same relative position in the distribution of statewide student achievement from one year to the next. The dropout recovery schools are using a national norm assessment and measuring whether students maintained their same relative position in that national norm referenced group from one year to the next.