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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 (ODE) has customized the value-added modeling and data inputs for a more meaningful growth measure. The purpose of this document is to give a technical overview of this customized approach for the schools participating in these programs.

Data Inputs

At the dropout recovery programs, students take assessments upon entering the program and again after they have received at least 84 days of instruction.

The tests that are used in this analysis were selected by ODE through a competitively bid contract. One property of the selected assessments is that they are computer adaptive since the grade level can be difficult to determine for some students. More information about these assessments can be found on ODE's site.

Modeling Approach

The value-added model for dropout recovery programs is similar to the multivariate response model (MRM) currently used for OST Math and Reading in non-dropout recovery schools in the state. (For more information, please click Value Added Resources on the login page to view the Technical Report.) In less technical terms, growth is measured through a gain-based approach using the two test scores in the same subject 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 considers 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 a normal curve equivalent distribution using the norm data provided by the test vendor. This norm information is from a typical 10th grader testing in April. This does not assume anything about the achievement of individuals included in the analysis; it only puts them on a referenced curve of achievement to be able to compare their scores over time with an equal expectation of growth. The average score for the first test of a specific program is compared to its average score for the second test. The expected growth is that students will maintain their achievement levels between the two tests 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 expected growth, a growth index is then calculated by dividing the growth measure by its standard error. The growth index is categorized into three levels: Exceeds Standards, Meets Standards, and Does Not Meet Standards. Multi-year growth measures are also reported where sufficient data exist. Prior to the 2019 reporting, the norms used were different. They represented a complete school year instead of the 84 days of instruction that is currently used. The difference in the interpretation from the OST growth measure 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 the initial test at the time of program entry to the second assessment at least 13 weeks later.