

A Review of the ABCs Standards Under HB 1414

Background

North Carolina's ABCs of Public Education accountability program began in the 1996-97 school year. This accountability system includes a series of end-of-grade (EOG) and end-of-course (EOC) tests. Achievement levels on these tests were set using a modified contrasting groups procedure. A growth standard for schools (one of the first in the nation) was implemented using actual student performance from one year to the next to set the basis for expected growth from one school year to the next. School accountability was twofold: first, the percent of all test takers who scored at achievement level III or IV in the school, and, second, based on the average student growth from one grade level to the next. This second expectation was truly that the average student in the school made one year's progress for one year of education.

In the 2000-01 school year, the second edition of the EOG mathematics tests was implemented to measure school achievement on the second edition mathematics curriculum. In 2002-03 the second edition reading tests were implemented to measure student achievement on the second edition reading curriculum at the school level.

During the summer of 2004, the NC General Assembly included a provision in HB1414 that mandated a review of the ABCs standards, putting new standards (if necessary) in place for the 2005-06 school year and reviewing the standards every five years thereafter. In compliance with this mandate, NCDPI, under the direction of the NC State Board of Education, began an internal review of the ABCs standards focusing primarily on growth and achievement standards while still looking at other factors that may affect the ability of stakeholders to make meaningful decisions about students and schools in North Carolina. As part of this review, the results were presented to a Technical Advisory Committee (TAC), an outside group of experts in the field of educational measurement that convened on January 27 and 28, 2005.

The results of this review are already being implemented where no change in policy is necessary. In those cases requiring changes to policy or administrative procedures, the results and recommendations will be discussed by the State Board of Education (SBE) on March 2, 2005, and will be presented to the SBE for Action in April 2005. Many items will require changes in APA (Administrative Procedures Act) policies, and the process is scheduled to start upon the State Board's approval of the requested modifications.

Process

The State Board of Education received and discussed a plan and timeline for evaluating the validity of the ABCs at its October 2004 meeting. The Reporting Section within the Division of Accountability Services began a data analyses with the assistance of the staff psychometricians. In addition to the data analyses, discussions were held with data

managers, LEA test coordinators and other stakeholders to determine what issues besides achievement levels and growth standards needed review. With the assistance of outside psychometric advisors, issues related to the growth standards were outlined and a variety of analyses were performed on the achievement level standards. Data and simple procedural issues were outlined.

Finally, to ensure a more comprehensive review of the ABCs Accountability Program, an outside firm was contracted to perform a test security audit. This audit will provide insights into possible improvements of the testing program's security integrity and identify any irregularities from the recent test administrations.

The results of all analyses, other than the security audit which is not completed, were shared with the TAC for input, clarification, guidance and review. The group found no issues with the conclusions drawn and presented in this document. All requested additional analyses were performed, and the results have been incorporated into the recommendations contained herein.

Findings

Growth Standard

North Carolina has one of the longest running accountability programs incorporating a school-level growth standard. This school-level standard allows local control (the C in ABCs), providing a principal the opportunity to make informed judgments about teachers through a variety of methods and providing the public a rating that applies to the school as a whole. This is a compensatory model in which all subjects and grades are taken into account in evaluating a school's overall performance.

The growth standard has been the same (with a few minor modifications) since the inception of the ABCs in 1996-97. In order to reflect curriculum and testing changes since 1996, North Carolina has had to rely on equating studies that link new tests (that reflect revised curriculum) back to the original formulas. In addition, with the advent of No Child Left Behind (NCLB), modifications are needed to address growth of the NCLB subgroups in each school.

Reviewing the standards over the years reveals:

- As the editions of the tests changed (in response to curriculum revisions), changes in the growth expectations may have been warranted.
- A year with a high percentage of schools meeting or exceeding their growth expectations for a cohort (grade level group of students) is followed by a year of a low percentage of schools meeting or exceeding their growth expectations for that cohort in that subject. This is called a sawtooth pattern.
- The percent of schools meeting or exceeding their growth expectations in a specific content area was not highly related to the implementation of new more challenging curricula.

Achievement Levels (Levels I, II, III, and IV)

The achievement levels were built prior to the beginning of the ABCs accountability model. They were structured by using the percent of students whom the teachers rated into one of four achievement levels based on descriptions of the achievement levels (Level I, II, III, IV). These percentages were applied to the distribution of student scores so that, in the standard setting year, the same percentage of students were placed in Achievement Level I by test score as by teacher judgment. As test editions changed, the new versions of the test were equated to the old versions. This equating has allowed North Carolina to graph continuous trend data across the eight years of the ABCs Accountability Program.

Measurement textbooks caution against doing direct comparisons between scale scores on different test editions. NCLB requires schools to increase the percent of students scoring at Achievement Levels III and IV until 100% of students score in this range. Many stakeholders feel that raising achievement level standards at this point would create a hardship in attaining the required proficiency levels of NCLB.

Reviewing the Achievement Levels over the years shows:

1. Teachers predict that all students will succeed in the current grade regardless of their performance on last year's EOG (as coded on the student answer sheets for the current year).
2. Many students coded as Achievement Level I by a teacher, score Achievement Level II on the actual test, and Achievement Level II students generally perform at Achievement Level III on the test.
3. Teachers code about the same percentage of students as Achievement Level I and Achievement Level II according to descriptions of the Achievement Levels today as they did during the original standard setting.
4. If achievement level standards are changed, the attainability of NCLB goals is affected. However, current standards for NCLB purposes could be maintained through 2013-14.
5. The current EOG and EOC tests provide limited diagnostic feedback at the student level. More diagnostic tests would involve increasing the number of items which would involve more testing time.

Testing Operation Procedures (Data)

Although the ABCs data collection system has grown and improved over time, it still relies on some of the same business processes used in 1995. As NC WISE is being implemented, the process of data collection and validation will improve.

Activities have already begun to address the business processes. Examples are listed below:

- New data collection process leading toward using the comprehensive student information management system to code the demographic information (leading to fewer instances of changed coding)
- Modifications are underway to our standard precoding procedures to completely randomize completely the test forms assigned to students (including the interleave patterns of the answer sheets).

Recommendations to Address Issues Identified

Growth Formulas

The state should continue with a system that has produced positive changes in the educational system with as few modifications as are reasonable to ensure the health of the system in the coming years. From outside review and stakeholder input, the best option for improving the standard is to move to a different formula that is designed to allow the implementation of new curricula. The formulas must reflect the implementation of the curriculum and the effectiveness of schools in teaching students. This change in formula alters the method of determining if schools succeeded in assisting students to learn a year's materials over the course of one year, uses actual student performance as the standard, and holds schools accountable for the students they actually teach.

The recommendation of this review is to move from the traditional growth formula for ABCs accountability to an Academic Change formula. The Academic Change formula better takes into account the structure of the North Carolina Standard Course of Study as well as directly addresses the issues caused by curriculum revisions and subsequent test edition changes. The new calculation provides a more stable method of addressing the question of how well schools are doing.

Achievement Levels (Levels I, II, III, and IV)

The TAC did not find compelling evidence that the achievement levels need to be adjusted. However, they do recommend clarification of the descriptions of these academic levels in grade and subject-specific terms. It is important to note that the current system of achievement levels is performing as originally designed - to provide trend data showing the change in performance of students within schools. Knowing also that other test editions will be implemented, it is recommended that any achievement level changes (if necessary) occur as test editions change, not during the life of an edition.

Conclusions

When discussing school accountability at national meetings, many will mention North Carolina's system. Although several changes are recommended, increases in SAT and AP scores and NAEP results validate that public schools in North Carolina are doing a

better job of educating the children they serve than they were prior to the implementation of the ABCs.

North Carolina is building on success for superior schools.