



Public Schools of North Carolina  
State Board of Education  
Department of Public Instruction

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# Report to the North Carolina General Assembly

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Testing Transparency – ACT and SAT  
Alignment to North Carolina Standard  
Course of Study in Mathematics and  
English Language Arts

*S.L. 2017-57, (SB 257) Section 7.28A. (a)*

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**Date Due: 2/1/2018**  
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## **NC DEPARTMENT OF PUBLIC INSTRUCTION**

**Mark Johnson, State Superintendent :: 301 N. Wilmington Street :: Raleigh, North Carolina 27601-2825**

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## Executive Summary

Section 7.28A.(a) of S.L. 2017-57 directed the following:

The State Superintendent of Public Instruction shall study and make recommendations regarding the extent to which the SAT and ACT tests align with the English language arts and mathematics portions of the Standard Course of Study. By February 1, 2018, the Superintendent shall report findings and recommendations to the Governor, the President Pro Tempore of the Senate, the Speaker of the House of Representatives, and the Joint Legislative Education Oversight Committee.

High school students take the ACT and/or the SAT as part of the college admission process. Currently, as required by G.S. 115C-174.11(c)(4), “To the extent funds are made available, the State Board of Education shall plan for and require the administration of the ACT test for all students in the eleventh grade unless the student has already taken a comparable test and scored at or above a level set by the State Board.” Students’ ACT test scores are included in the School Performance Grades calculations for all schools with a grade 11 membership. Students may independently participate in SAT administrations, and if these students score comparably to the required University of North Carolina’s ACT minimum composite score of 17, they do not have to participate in the statewide administration of the ACT. With these requirements, all students take the ACT and some students take the SAT.

While resources and timeframe precluded an independent alignment study by NC Department of Public Instruction staff by this reporting deadline, the assessment vendors for the ACT and SAT have provided information on each test’s alignment to North Carolina content standards. Both of these reports are based on the content standards adopted by the North Carolina State Board of Education in 2010. Alignment reports on the North Carolina Standard Course of Study that was adopted for mathematics and English language arts/reading in 2017 are not currently available.

Section 7.26C.(a) of S.L. 2017-57 also required that NCDPI solicit Requests for Proposals (RFP) for the college readiness assessment for implementation in FY 2019-20. As part of this process, NCDPI will require vendors to describe the alignment of their proposed assessment to the North Carolina content standards in mathematics and English language arts. This report will be updated with those responses at that time.

## Background

The state-adopted content standards are the foundation of classroom instruction in North Carolina. To accurately measure student learning, it is critical that assessments align to the content standards. Focus on the delivery of state-adopted content standards and the administration of aligned assessments has been the fundamental education model employed by states, and to a growing extent federal policy-makers for twenty-plus years. This model is based upon two beliefs: 1) content standards serve as an explicit goal or target for curriculum planning, design and implementation, and 2) school accountability can be determined based upon student performance on standardized tests that are aligned to the state content standards. This approach requires the assurance of alignment between the content standards and the associated assessments.

With the use of assessment data to report on schools' performance, it is imperative that test results are valid measures of the intended instruction. A leader in state assessment alignment studies, Dr. Norman Webb, a Senior Research Scientist Emeritus at the University of Wisconsin-Madison's Center for Education Research, cites the following definition of alignment: "The degree to which expectations and assessments are in agreement and serve in conjunction with one another to guide the system toward students learning what is expected." However, the method used to determine alignment often is a reflection of the test developers' view of alignment. Likewise, the method may vary in its complexity, ranging from alignment between the content standard and the items to a more complex analysis of the alignment with respect to rigor and content breadth and depth.

Typically to determine alignment between content standards and an assessment, an independent alignment study is conducted. The actual study, which is a review of the assessment items to identify which content standard is being measured, is completed by content experts not associated with the test developer. The process requires the coding of various aspects of an assessment item as it relates to the content standard. These aspects may include:

- 1) Categorical Concurrence,
- 2) Depth-of-Knowledge Consistency,
- 3) Range-of-Knowledge Correspondence,
- 4) Structure-of-Knowledge Comparability,
- 5) Balance of Representation, and
- 6) Dispositional Consonance.

The determination of alignment is the interaction of all of these possible factors; it is not simply whether an item measures the content standard: Does the item measure the item at the level of

rigor required by the content standard? Do the items adequately represent all of the content standards? Do the items adequately represent the depth and breadth of the content standards?

The analysis from an alignment study may be used as evidence of content-related validity; however, there are limitations. State assessments typically do not measure all of the adopted state content standards due to the time constraint of the administration. Also, tests constructed with only multiple-choice items may not allow all content standard to be measured. For example, content standards that require research or a written response may not be measured with a multiple-choice item. Thus, it is accepted practice to align the assessment items to the identified content standards that are being measured, not all of the content standards.

Though providing evidence of alignment between an assessment and content standards is a primary consideration when affirming adherence to technical qualities, alignment is but one aspect of a test's characteristics. Other factors, such as appropriateness for the intended measures and the specified purposes and uses, must be reviewed when deciding to administer an assessment.

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In lieu of current alignment studies, this report provides alignment studies conducted by ACT, Inc. and College Board and a statement from each organization as to the alignment of their assessments to the North Carolina Standard Course of Study in Mathematics and English Language Arts.

## ACT

In 2015, ACT conducted an analysis of North Carolina's Standard Course of Study for English Language Arts, Mathematics and Science to determine which knowledge, skills, and abilities in the standards are assessed by the three tests that comprise the ELA portion of the ACT (Reading, English, and Writing), and the Mathematics and Science tests. The report, *ACT Alignment: English Language Arts, Mathematics, and Science*, was based on the North Carolina State Board of Education adopted content standards in 2010.

([https://www.rep.dpi.state.nc.us/docs/jleoc/NC\\_Alignment\\_Report\\_ACT.pdf](https://www.rep.dpi.state.nc.us/docs/jleoc/NC_Alignment_Report_ACT.pdf))

For additional clarification of the report and the alignment between ACT and the North Carolina Standard Course of Study in Mathematics and English Language Arts, the ACT, Inc. provided the following statement via email:

The alignment study was conducted by senior content specialists in Test Development at ACT and used a methodology that compares test design including reporting categories, blueprints, and DOK, as well as the ACT Content and Career Readiness Standards to the North Carolina Standard Course of Study. The methodology allowed content specialists to work independently, with escalating rounds of reviews for reconciliation. Per the document, ACT used highlighting to illustrate alignment with the domains of ACT subject tests. Highlighting indicates that those state standards and topics are within the domain of ACT tests and could be assessed when a student takes the test.

## SAT

The College Board, the developer of the SAT, provided a report, *SAT® Suite of Assessments: Alignment to North Carolina Standards*, in October 2016. This report was based on the State Board of Education adopted content standards in 2010.

([http://www.ncappartnership.org/uploads/3/9/7/4/39749470/north\\_carolina\\_sat\\_alignment\\_10-16.pdf](http://www.ncappartnership.org/uploads/3/9/7/4/39749470/north_carolina_sat_alignment_10-16.pdf))

For additional clarification of the report and the alignment between SAT and the North Carolina Standard Course of Study in Mathematics and English Language Arts, the College Board provided the following statement via email:

While the College Board's redesigned SAT Suite of Assessments was not designed to assess the attainment of any single set of standards, its tests measure knowledge and skills that the best available evidence shows are essential for college and career readiness and success. The SAT Suite, which includes the redesigned SAT®, PSAT/NMSQT® and PSATTM 10, and PSATTM 8/9, provides states and schools with a longitudinal, evidence-based assessment system that

measures growth in relation to essential college and career readiness and success outcomes from grade 8 through grade 12. The College Board is committed to ensuring that students are ready to make successful transitions to college and career by the time they leave high school.

The College Board completed an alignment study for the SAT Suite of Assessments in October of 2016. We found the alignment of the North Carolina state standards with the SAT Suite of Assessments is strong to very strong. There is a very strong alignment between the North Carolina state standards in reading, writing, and language and the Reading Test, the Writing and Language Test, and the SAT Essay in the SAT Suite. In Math, the alignment of the North Carolina state standards and the SAT Suite is strong. The SAT Suite of Assessments do not assess speaking and listening and therefore, we do not align to the North Carolina state standards in speaking.

### **Conclusion and Recommendation**

The alignment between an assessment and the content standards being measured is critical to ensuring what is being measured is what students are expected to know. The alignment reports provided address the question of alignment for the ACT and the SAT to the 2010 State Board of Education adopted content standards. Though valuable information, alignment to the current content standards is needed to fulfill the purpose of this report.

Thus, with the transition to newly adopted content standards by the State Board of Education in 2017 and with the statutory requirement for a competitive process to select a college admissions test to be administered to all North Carolina students beginning in the 2019–20 school year, the North Carolina Department of Public Instruction will include as a requirement in the RFP that responders describe the alignment of their assessments to the North Carolina Standard Course of Study in Mathematics and English Language Arts. As required by the statute, a report of the outcome of the competitive bid process is due to the Joint Legislative Education Oversight Committee and the Fiscal Research Division no later than May 15, 2019. This report will include information from the RFP process on the alignment of the selected assessment to the current state-adopted content standards.