

Determining Adequate Yearly Progress (AYP) 2007-08

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Introduction

A new edition of reading tests for grades 3-8 was implemented in 2007-08 and new editions of End-of-Course tests in Algebra I and English I were implemented in 2006-07. This necessitated two modifications in the reporting of AYP results for 2007-08 only. To accommodate the additional timeline for scaling and setting standards on the reading tests, a two-stage release of AYP results was planned. The initial release of preliminary AYP results by Local Education Agencies (LEAs) occurred July 21, 2008 and revealed AYP results for high schools, and results for mathematics only for grades 3-8. This will be followed by formal release and approval of the results by the State Board of Education (SBE) at its August meeting. The remaining AYP results for reading in grades 3-8 will occur at the November SBE meeting.

The second modification to reporting relates to the new editions of Algebra I and English I. To accommodate differences in the scales between the new editions and the scales for previous editions (used for the banked scores), new standards (Level III cut scores) were set for the banked scores, equivalent to the standards on the new edition tests. This was effected by determining an equipercentile approximation of the new edition cut scores on the previous edition tests and then recalculating the proficiency for each student on the previous edition tests. This effectively made the proficiency determinations on the banked scores comparable to the proficiency determinations on the new editions of Algebra I and English I. Once this was accomplished, new AMO targets were set for Grade 10 "reading" and "mathematics" (as they are structured for AYP purposes), which the SBE approved in July 2008.

This document describes the general approach for determining AYP in any year. It must be read with the two previous paragraphs in mind.

Definition of AYP

Adequate Yearly Progress (AYP) is defined as a series of performance targets that states, school districts, and specific subgroups within their schools must achieve each year to meet the requirements of No Child Left Behind (NCLB). In each public school and Local Education Agency (LEA) in North Carolina, the ten student subgroups are:

1. School as a whole (all students);
2. American Indian;
3. Asian;
4. Black;
5. Hispanic;
6. Multi-racial;
7. White;
8. Economically Disadvantaged (Based on Child Nutrition data files submitted in accordance with Memorandum of Agreement dated Nov. 19, 2007);
9. Limited English Proficient (LEP) (based on IPT data collections); and,
10. Students with Disabilities (SWD) (based on the April 1 Exceptional Childrens' Headcount collected via CECAS).

In order for elementary and middle schools (including grades in the 3 to 8 grade range) to make AYP, each student subgroup in tested grades must meet the following targets:

1. 95% participation rate in reading/language arts assessment
2. 95% participation rate in mathematics assessment
3. Meet or exceed the state's annual measurable objective (AMO) for proficiency in reading/language arts
4. Meet or exceed the state's annual measurable objective (AMO) for proficiency in mathematics
5. The school as a whole must show progress on the other academic indicator (OAI): attendance for schools in grades 3 to 8.

In order for a high school (grade range 9 to 12) to make AYP, each student subgroup must meet the following targets:

1. 95% 10th grade participation rate on the English I and Writing assessment or its alternate (NCEXTEND1/NCEXTEND2). For purposes of determining the 95% tested rule in reading, use the English I and Writing or its alternate test from the spring administration for these students. Divide by the number of 10th graders on First Day of Spring (FDS).
2. 95% 10th grade participation rate on the Algebra I assessment or its alternate.
3. Meet or exceed the state's annual measurable objective (AMO) for 10th grade proficiency on English I and Writing assessment or its alternate.
4. Meet or exceed the state's annual measurable objective (AMO) for 10th grade proficiency on the Algebra I assessment or its alternate.
5. The school as a whole must show progress on the other academic indicator (OAI), 4-year cohort graduation rate (if the high school does not graduate seniors, then attendance is the OAI).

Note: For a public school or LEA to make adequate yearly progress, each student subgroup must meet or exceed the State's annual measurable objectives, each student subgroup must have at least a 95% participation rate (North Carolina will average participation rates for the last two or three years, depending on how many years of data are available, whenever a school does not meet the 95% standard for the current year) in the statewide assessments, and the school must meet the State's requirement for graduation rate or attendance

For 2007-08 test takers, the following scores will be used for AYP proficiency calculations.

Test	Current Edition	Previous Edition (banked)
Algebra I	148	60
English I	146	54

NCLB Required 95% Participation

The 95% rule will apply whenever the number of students in membership in a group is at least 40.

Schools in First Year of Operation

Schools in the first year of operation will receive an AYP status. However, they will not be able to invoke safe harbor until they have been in operation at least two years.

Other Academic Indicators (OAI)

If a school contains a combination of elementary/middle and high school grade ranges, all available targets will be used for determining AYP status. Beginning 2006-07, the threshold for graduation rate will be 80% and attendance will continue to have a threshold of 90%. Progress on the OAI is defined as at least .1 percentage point increase from one year to the next, up to the threshold (.9 for attendance and .8 for cohort graduation rate). Any fluctuation above the threshold will meet the requirement for progress. If a school graduates seniors then graduation rate takes precedence over attendance. For LEAs, all available targets are utilized; the OAI is graduation rate and attendance.

Subgroup Size

A subgroup must have at least 40 students, with the exception of the school as a whole if there are no subgroups; in the latter case, up to as few as 5 students will be utilized for OAI and 3 or more students for proficiency targets. For proficiency and attendance targets, only students in membership a full academic year (FAY) are considered. FAY is defined as 140 days in membership as of the first day of End-of-Grade (EOG) testing or Spring EOC.

Annual Measurable Objectives (AMO's)

In grades 3 through 8, the AMO targets in effect for 2007-08 are:

- **to be determined in reading/language arts after achievement levels have been set for the new edition of reading tests, and**
- **77.2% in mathematics.**

For 10th grade, the AMOs were recalculated to reflect the new editions of Algebra I and English I, and their associated higher achievement standards. The new AMO targets for Grade 10, for 2007-08 are:

- **38.5% in reading/language arts, and**
- **68.4% in mathematics.**

Safe Harbor Provision

Safe Harbor is the first provisional status calculation applied. If a subgroup meets the 95% participation rate but does **not** meet the proficiency target, that subgroup can meet its proficiency target with a safe harbor provision, providing that:

- the subgroup has reduced the percent of students not proficient by 10% from the preceding year for the subject area; and
- the subgroup shows progress on the OAI.

Safe harbor data will be provided by DPI. These data include the previous years' proficiency results by subgroup, with all the AYP decision rules appropriately applied, i.e., 140 days in membership and 40 students in a subgroup. If a subgroup does not have the minimum numbers of students or scores required in the previous year, then that subgroup's performance is determined using the current year's data, without using the safe harbor provision of NCLB. Safe harbor, based on federal guidance, is not a "right".

Confidence Interval (Agresti-Coull method)

Proficiency statistics (e.g., percent proficient) provide an estimate of a student group's performance or a school's aggregate proficiency. The more students taking the test in a particular group, the more confident we can be of the results. A confidence interval acknowledges a margin of uncertainty associated with any group statistic. For each student group, a 95 percent confidence interval is used around the percentages of students scoring proficient in reading and/or mathematics to determine whether target goals for AYP are met. This analysis is independent of the safe harbor calculations and cannot be combined with safe harbor for any one subgroup.

Targeted Assistance Schools (TAS)

LEAs are given three options for determining Adequate Yearly Progress (AYP) for targeted assistance schools (TAS). AYP can be determined using (1) all students in the school, (2) using students actually served in the TAS program, or (3) students eligible to be served in the TAS program. NCDPI will initially analyze AYP results for TAS using all students in the school. If the subgroup in the TAS does not meet AYP, then NCDPI will analyze the results for served students, if the subgroup in the TAS again does not meet AYP, then NCDPI will analyze the results for eligible students. These additional analyses are contingent upon the LEA identifying the appropriate students.

NCLB Trajectory Growth

After attempting to use safe harbor and then attempting Confidence Interval and TAS options (if applicable), the results for trajectory growth will be compared to the AMO. The number of students who are on trajectory to be proficient within the allotted time will be added to the number of proficient students and used as the numerator for the proficiency calculation. It is important to note that this does not include, nor can it be combined for a single subgroup with either safe harbor or the confidence interval.

Operational Procedures

The Division of Accountability Services provides software and other resources for LEAs to verify the completeness of their data and to view and publish their AYP results. For 2007-08 preliminary results for schools were released by LEAs on July 21, 2008. Complete AYP results were released for high schools; only AYP results associated with mathematics in grades 3-8 were released for other schools. Reports included the numbers and percentages of AYP targets met by their schools. Full AYP results will be presented to the State Board of Education at the November SBE meeting.

Considerations for AYP Calculations

1. For schools with fewer than 40 students in the tested grades in the entire school in the current year, whatever data are available will be used to calculate AYP. The report will note "results based on less than 40 students, and should be interpreted with caution."
2. For low population schools with a mix of grades elementary/middle and high school, rules are applied so that if one of the grade-ranges (elementary/middle or high school) has a lower population than the other, only the part with higher population will be taken into consideration for determining AYP. To determine which part to keep, add the number of students with FAY in math and reading and choose the targets for the grade-range with the highest sum.
3. For each AMO and OAI target, full precision is carried throughout intermediate calculations; the final result is rounded to the nearest tenth and status is based on the rounded

- result. For percent tested targets, the final result is rounded to the nearest whole number.
4. In K-2 schools, special education schools, hospital schools, and vocational and career centers, a school specific feeder pattern will be used to determine AYP.
 5. For K-2, the elementary school that receives the largest percent of students from the K-2 school is used to determine AYP status.
 6. For the special education schools, vocational \ career schools, and hospital schools, at least half the feeding schools must make AYP for the receiving school to be designated as having made AYP.

AYP proficiency statistics are reported for the LEA and the State, in addition to the school. With AYP calculations, proficiency data for the LEAs are based on different data than the proficiency statistics for the schools. You cannot, therefore, combine the school-based AYP proficiency statistics (e.g. by using a weighted average) in order to compute the AYP proficiency statistics for the LEA.

For example, there is a federal requirement to count students who have been in the LEA for at least 140 days (full academic year), even though they may not have been in a single school within that LEA for 140 days. This means some students would be counted for AYP proficiency at the LEA level but not at the school level.

Current changes to AYP implemented in 2007-08

1. Algebra I and English I (reset AMOs) – The SBE approved revised AMOs at the high school level to reflect the impact of the higher achievement level standards (as was done for the 2005-06 school year when the new mathematics assessments were implemented). To effect this transition, an equipercentile approximation of the new edition cut scores was determined for the previous edition tests. Then the proficiency for each student was recalculated for the previous edition test scores that were banked for the tenth grade reading and mathematics AYP calculations. This effectively made the proficiency determinations on the banked scores comparable to the proficiency determinations on the new editions of Algebra I and English I. The new AMOs were then set using the procedures originally prescribed in the NCLB Final Regulations from the U.S. Department of Education (USED).
2. Science Testing at the High School Level – The USED approved the use of the Biology EOC assessment as the high school science component under No Child Left Behind (NCLB) using results from all 11th graders (including banked scores from students who took the assessments in earlier grades). However, science results are only reported and will not be included in the calculation of AYP.
3. For 2007-08 only, AYP results are to be released in two stages. High school AYP and AYP results for mathematics in grades 3-8 will be reported first (August SBE meeting). AYP results for reading in grades 3-8 will be reported at the November SBE meeting.

Changes to AYP rules implemented in 2003-04

The State Board of Education (SBE) and the U.S. Department of Education (USED) approved changes in the process for determining AYP for the 2003-04 accountability year that included:

1. The addition of a new ABCs recognition category, *Honor Schools of Excellence*, to denote schools that made expected or high growth and met AYP.
2. Allowing a process for medical exclusions from testing for students with serious medical conditions.

3. Averaging participation rates for the last two or three years, depending on how many years of data were available, whenever a school did not meet the 95% participation standard for the current year.
4. Special analysis of AYP for targeted assistance schools (TAS). The first analysis used all students in the school. If the TAS did not meet AYP, then the results for Title I served students were analyzed; if AYP was still not met, then the results for students eligible for Title I were analyzed. (These additional analyses were contingent upon the LEA “tagging” the appropriate students for the analyses.) Unless the TAS met the minimum number of 40 students being served or eligible to be served then the results were based on all students in the school. If the school provided services in only one subject area, then the LEA determined if the results for AYP for each subject were based on only the served students, only the eligible students or all of the students in the school. The OAI could be calculated on any of the options unless safe harbor needed to be invoked. In that case, the same criterion was used for comparison purposes (only those served or only those eligible). If this was not possible, then the OAI was based on all students in the school. Results from all students in the TAS are to be used for making AYP decisions at the LEA and State levels. For schools without tested grades, AYP could be determined by back-mapping or forward-mapping students.
5. Applying a 95% confidence interval to the percentages of students scoring proficient in reading and/or mathematics to determine if subgroups met the AMO.
4. Requiring a Title I school not making AYP to miss targets in the same subject (e.g., reading) for two successive years before entering Title I School Improvement.
7. Placing a 1.0 percent cap on the percentage of students held to alternate achievement standards and deemed proficient (through the NCAAP, and NCAAAI administered at least three years or more below students’ assigned grade levels) at the district and State levels.
8. Not requiring LEP students (who score below Intermediate High on the reading section of the language proficiency test) in their first year in U.S. schools to be assessed on the reading End-of-Grade tests, High School Comprehensive Test in Reading, or the NC Alternate Assessment Academic Inventory (NCAAAI) for reading. (Schools were to use the language proficiency test for determining the 95% participation; mathematics results were not used in determining AYP or ABCs performance composite scores for LEP students who scored below Intermediate High.) Students previously identified as LEP who exited LEP identification during the last two years were included in the AYP calculations only if the subgroup already met the minimum number of 40 students.
9. Setting the minimum N count used in determining the AYP status of LEAs at 40 or 1% of the tested students, whichever is greater. (Operationally, the LEA is treated as a school, for the grades 3 to 8 targets, the minimum N is the maximum of 1% of tested students in grades 3 to 8 and 10. For the high school targets, the minimum N is the maximum of 1% of the tested 10th grade students and 40.)
10. Providing that an LEA could enter Improvement Status only if the LEA did not make AYP in the same subject area in both the 3-8 and high school grade spans for two consecutive years.
11. Allowing site visits by a School Improvement team to make AYP designations for

schools with two (2) or fewer students meeting the FAY requirements.

Changes implemented in 2004-05

The State Board of Education and the U.S. Department of Education approved changes in the process for determining AYP for the 2004-05 accountability year that included:

1. Using Algebra I and a combination of English I and the Grade 10 Writing Assessment to determine proficiency for AYP in mathematics and language arts at grade 10. New starting points for Grade 10 are:
 - a. **35.4%** proficiency in reading/language arts
 - b. **70.8%** in mathematics.
2. Providing that an LEA could enter Improvement Status only if the LEA did not make AYP in the same subject area in each of three grade spans: elementary, middle, and high school, for two consecutive years.
3. Allowing the LEA two weeks to appeal its LEA Improvement Status and authorizing the State Superintendent to make a final determination for the LEA.

Changes implemented in 2005-06

New Growth Model, 2005-06

1. Beginning in 2005-06 North Carolina applied a modified form of its ABCs growth model to add an additional layer to the Accountability Model. This decreased the likelihood of falsely identifying schools as being in need of improvement that are providing a quality education for their students. This approach is useful for measuring the growth in student performance from one year to the next and also adapts well to the changes in curriculum and subsequent changes in test editions. These modifications were approved by the State Board of Education at its meeting on February 2, 2006.

After all other statistical methods and safe harbor have been applied to a school's proficiency targets, a four year growth trajectory will be calculated for all non-proficient students. This growth trajectory, should the student meet the trajectory's intermediate targets, would lead a student to performing "proficient" within four years in the tested grades. These targets are set based on initial status derived from the first test in the student record and project out to the grade-level test three school years after entering the first tested grade. Students who are on their trajectory in the current year would then be added to the proficient students for purposes of calculating proficiency against the Annual Measurable Objectives (AMO).

The method for calculating both growth and trajectory can be found in "North Carolina's Proposal to Pilot the Use of a Growth Model for AYP Purposes in 2005-06", April 16, 2006. <http://www.ncpublicschools.org/docs/accountability/reporting/abc/2005-06/ncaypgrowthproposal041606.pdf>

As required by the USED as part of the trajectory growth pilot, beginning in 2006-07, the percent of all students in any subgroup in any school in the state that achieve their individual growth target (for proficient students this is the ABCs growth target and for non-proficient

students it is the trajectory growth target) will be reported with the AYP results for the school.

2. There is a 2.0 percent cap on the number of students that can be deemed proficient when taking NCEXTEND2, and this calculation is separate from the cap for students with the most significant cognitive disabilities. The significant change is that students with “persistent academic disabilities” can be deemed proficient using alternate assessments.

Changes implemented in 2006-07

1. Algebra I and English I (Equated scores) – The SBE approved new achievement level standards for the new Algebra I and English I End-of-course (EOC) assessments administered during the 2006-07 school year. In order to combine the results from 10th graders taking new EOC assessments, the North Carolina Department of Public Instruction (NCDPI) will equate the new assessment scores to the old scale using an equi-percentile method and continue to use the current annual measurable objectives (AMOs) for this year’s reporting of AYP at the high school level.
2. Cohort Graduation Rate – On February 28, 2007, the SBE reviewed the first report of a 4-year cohort graduation rate for NC’s schools. This summer was the first time that the 4-year cohort graduation rate will be used to determine if a subgroup can access safe harbor at the high school level. The SBE may want to adjust the current threshold of 80% used as part of meeting the former graduation rate target. The SBE will be able to start the conversation once they have the data to review.
3. Definition of a New School – The Title I office in NCDPI was informed that the Accountability Workbook should include a definition of what constitutes a new school. This issue will need to be addressed by the SBE.
4. Confidence Interval and AYP Growth – After implementation of the new AYP growth model in 2005-06 school year, it is apparent that an adjustment needs to be made because not even one school in the state met AYP based on the model. The SBE may want to propose that a 68% confidence interval be applied to the percentages of students scoring proficient (after including scores of students on track to proficiency as proficient). We should have an estimate of the impact of this effort within the next week.