



Achievement gap patterns of grade 8 American Indian and Alaska Native students in reading and math



Institute of Education Sciences
U.S. Department of Education



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July 2009

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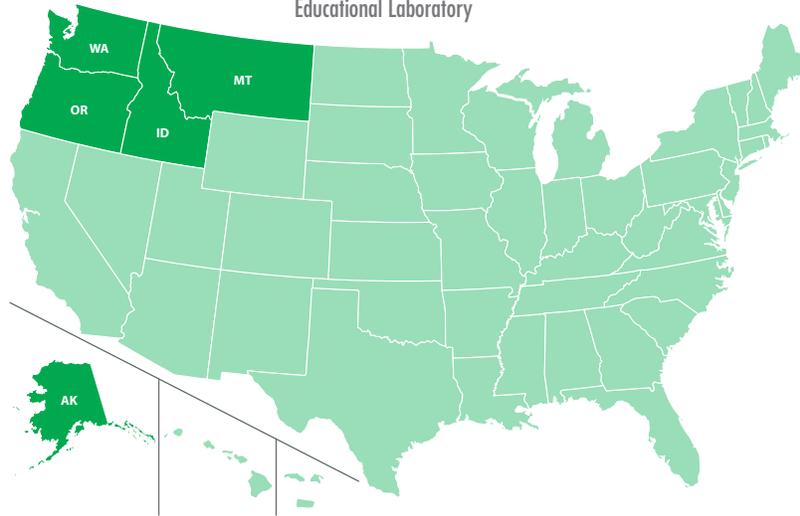


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This report is available on the regional educational laboratory web site at www.ies.ed.gov/ncee/edlabs.

Achievement gap patterns of grade 8 American Indian and Alaska Native students in reading and math

Focusing on student proficiency in reading and math from 2003/04 to 2006/07, this report compares gaps in performance on state achievement tests between grade 8 American Indian and Alaska Native students and all other grade 8 students in 26 states serving large populations of American Indian and Alaska Native students.

The No Child Left Behind (NCLB) Act of 2001 requires that all students reach proficiency in reading and math by 2014. The law further requires states to provide annual assessment results for all students and student subgroups, including racial/ethnic subgroups. Studies examining differences in the achievement of student subgroup populations during the first two years of NCLB implementation reveal that American Indian and Alaska Native students were performing lower on state and national assessments than other students were. Recognizing the unique needs of American Indian and Alaska Native students, President George W. Bush signed an executive order in 2004 to assist these students in meeting the challenges of the NCLB Act.

An interagency working group established to implement the order conducted a multiyear study on the status of such students. The National Indian Education Study documented the

performance of American Indian and Alaska Native students in grades 4 and 8 on the 2005 and 2007 National Assessment of Educational Progress (NAEP) in reading and math. Results show achievement gaps between American Indian and Alaska Native students and all other students at both grade levels in both reading and math. In reading, the achievement gap in grade 8 was 14 percentage points in 2005 and 18 percentage points in 2007—an increase of 4 percentage points. The achievement gap in math in grade 8 increased 3 percentage points, with a 16 percentage point difference in 2005 and a 19 percentage point difference in 2007. Trend analyses on the achievement gap between these student subgroups suggest that such gaps persist, though study limitations make it difficult to judge whether the gaps have widened or narrowed.

In response to a request by the Council of Chief State School Officers (CCSSO), this study reports on the gap between American Indian and Alaska Native students and all other students on state achievement tests beginning in 2003/04, shortly after implementation of the NCLB Act. It describes achievement patterns for grade 8 American Indian and Alaska Native students and all other grade 8 students between 2003/04 and 2006/07, focusing on student proficiency in reading and math on state assessments in 26 states serving large

populations of American Indian and Alaska Native students.

Staff at eight regional educational laboratories—Central, Midwest, Northeast and Islands, Northwest, Pacific, Southeast, Southwest, and West—collected data on statewide assessment results, number of students tested, and annual measurable objectives for states with grade 8 state assessment data for 2003/04 (20 CCSSO network states and 6 other states that served at least 4,000 American Indian and Alaska Native students). Using annual measurable objectives, the researchers analyzed proficiency rates in each subject against NCLB goals by state. Proficiency rates were graphically arrayed for each state and subject across the four years to show patterns in the achievement gaps between American Indian and Alaska Native students and other students. This revealed changes in the performance of these students relative to all other students and to the annual measurable objective.

Two research questions guided this study:

- What were the achievement gaps in reading and math on the state academic assessment between grade 8 American Indian and Alaska Native students and all other students in 2003/04 for individual states?
- What was the direction of the achievement gaps across 2003/04, 2004/05, 2005/06, and 2006/07 in each state?

The results indicate that in most states both American Indian and Alaska Native students and all other students experienced achievement gains across the study period. Although achievement gaps were generally found to persist, the American Indian and Alaska Native students were at least keeping pace by increasing in achievement along with all other students. The majority of states with three or four years of continuous data saw an increase in the proficiency rates of American Indian and Alaska Native students—with either a decrease in their performance deficit or, in states where their performance was above that of other groups, an increase in their performance lead over other students. For reading, they decreased the gap by which they trailed or increased the gap by which they led in 11 of the 19 states with three or four years of continuous data. For math, American Indian and Alaska Native students either decreased the gap by which they trailed other students or increased the gap by which they led in 14 of the 18 states with three or four years of continuous data.

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TABLE OF CONTENTS

Why this study	1
Study context	1
Study goals	3
What the study found	4
What were the achievement gaps in reading and math on the state academic assessment between grade 8 American Indian and Alaska Native students and all other grade 8 students in 2003/04 for individual states?	7
What was the direction of the achievement gaps across 2003/04, 2004/05, 2005/06, and 2006/07 in each state?	7
Appendix A Results from the National Indian Education Study and trend analyses	17
Appendix B Methods and data limitations	19
Appendix C Table of state assessment program web addresses	22
Appendix D Reading proficiency rates by state: 2003/04 to 2006/07	24
Appendix E Math proficiency rates by state: 2003/04 to 2006/07	32
Notes	41
References	42
Boxes	
1 Key terms	2
2 Study methods	3
Figures	
D1 Reading proficiency rates on the Alabama Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	24
D2 Reading proficiency rates on the Alaska Benchmark Exam and Standards Based Assessments for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	24
D3 Reading proficiency rates on Arizona’s Instrument to Measure Standards for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	25
D4 English language arts proficiency rates on the California Standardized Testing and Reporting program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	25
D5 Reading proficiency rates on the Colorado Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	25
D6 Reading proficiency rates on the Florida Comprehensive Assessment Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	25
D7 Reading proficiency rates on the Hawaii State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	26

D8	Reading proficiency rates on the Idaho Standards Achievement Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	26
D9	Reading proficiency rates on the Iowa Test of Basic Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	26
D10	Reading proficiency rates on the Kansas State Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	26
D11	Reading proficiency rates on the Louisiana Educational Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	27
D12	Reading proficiency rates on the Michigan Education Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2005/06–2006/07	27
D13	Reading proficiency rates on the Montana Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	27
D14	Reading proficiency rates on the Nebraska School-based, Teacher-led Assessment and Reporting System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	27
D15	Reading proficiency rates on the Nevada Proficiency Examination Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	28
D16	Reading proficiency rates on the New Mexico Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	28
D17	Reading proficiency rates on the New York State Testing Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	29
D18	Reading proficiency rates on the North Carolina End of Grade Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	29
D19	Reading proficiency rates on the North Dakota State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	30
D20	Reading proficiency rates on the Oklahoma Core Curriculum Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	30
D21	Reading proficiency rates on the Oregon Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	30
D22	Reading proficiency rates on the South Dakota State Test of Educational Progress for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	30
D23	Reading proficiency rates on the Texas Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	31
D24	Reading proficiency rates on the Utah Performance Assessment System for Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	31
D25	Reading proficiency rates on the Wisconsin Knowledge and Concepts Exam for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	31

- D26** Reading proficiency rates on the Wyoming Comprehensive Assessment System and Proficiency Assessments for Wyoming Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 31
- E1** Math proficiency rates on the Alabama Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2004/05–2006/07 32
- E2** Math proficiency rates on the Alaska Benchmark Exam and Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 32
- E3** Math proficiency rates on Arizona’s Instrument to Measure Standards for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 33
- E4** Math proficiency rates on the California Standardized Testing and Reporting program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 33
- E5** Math proficiency rates on the Colorado Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 33
- E6** Math proficiency rates on the Florida Comprehensive Assessment Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 33
- E7** Math proficiency rates on the Hawaii State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 34
- E8** Math proficiency rates on the Idaho Standards Achievement Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 34
- E9** Math proficiency rates on the Iowa Test of Basic Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 34
- E10** Math proficiency rates on the Kansas State Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2005/06–2006/07 34
- E11** Math proficiency rates on the Louisiana Educational Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 35
- E12** Math proficiency rates on the Michigan Education Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 35
- E13** Math proficiency rates on the Montana Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 35
- E14** Math proficiency rates on the Nebraska School-based, Teacher-led Assessment and Reporting System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 35
- E15** Math proficiency rates on the Nevada Proficiency Examination Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 36
- E16** Math proficiency rates on the New Mexico Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 36
- E17** Math proficiency rates on the New York State Testing Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07 37

E18	Math proficiency rates on the North Carolina End of Grade Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	37
E19	Math proficiency rates on the North Dakota State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	38
E20	Math proficiency rates on the Oklahoma Core Curriculum Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	38
E21	Math proficiency rates on the Oregon Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	38
E22	Math proficiency rates on the South Dakota State Test of Educational Progress for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	38
E23	Math proficiency rates on the Texas Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	39
E24	Math proficiency rates on the Utah Performance Assessment System for Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	39
E25	Math proficiency rates on the Wisconsin Knowledge and Concepts Exam for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	40
E26	Math proficiency rates on the Wyoming Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07	40

Tables

1	Grade 8 reading proficiency of American Indian and Alaska Native students on state assessments, 2003/04–2006/07	5
2	Grade 8 math proficiency of American Indian and Alaska Native students on state assessments, 2003/04–2006/07	6
3	Grade 8 achievement gaps in reading between American Indian and Alaska Native students and all other students, 2003/04 to 2006/07 (percentage points)	8
4	Grade 8 achievement gaps in math between American Indian and Alaska Native students and all other students, 2003/04 to 2006/07 (percentage points)	9
B1	Percentage of American Indian and Alaska Native students in all grades and grade 8 for 2006/07 in study states	20
C1	State assessment programs, 2003/04–2006/07	22

Focusing on student proficiency in reading and math from 2003/04 to 2006/07, this report compares gaps in performance on state achievement tests between grade 8 American Indian and Alaska Native students and all other grade 8 students in 26 states serving large populations of American Indian and Alaska Native students.

WHY THIS STUDY

The No Child Left Behind (NCLB) Act of 2001 requires state education agencies to specify “academic standards for all public elementary and secondary school children . . . including at least mathematics, reading or language arts . . . which shall include the same knowledge, skills and levels of achievement expected of all children” (§1111). The law further dictates that these annual measures of academic standards disaggregate data for “students from major racial and ethnic groups” (§1111). Such data confirm a well documented gap in academic achievement between American Indian and Alaska Native students and all other students in several states, including Alaska, Colorado, Minnesota, Oregon, and Utah (McCall et al. 2006; McDowell Group 2006; Minneapolis Foundation 2004; Newell and Kroes 2007; Oregon Department of Education, Office of Educational Improvement and Innovation 2005; Sharp-Silverstein 2005). In efforts to recognize the cultural and education needs of these students, President George W. Bush signed Executive Order 13336 on April 30, 2004, to “assist American Indian and Alaska Native students in meeting the challenging academic standards of the No Child Left Behind Act in a manner that is consistent with tribal traditions, languages, and cultures” (Exec. Order No. 13336 2004).

Study context

Established to implement the order, an interagency working group conducted a multiyear study on the current status of American Indian and Alaska Native students, documenting their achievement and progress. The results of this study, the National Indian Education Study, were published in 2006 and 2008. Part I documents the performance of American Indian and Alaska Native students in grades 4 and 8 on the 2005 and 2007 National Assessment of Educational Progress (NAEP) in reading and math (Rampey, Lutkus, and Weiner 2006; Moran et al. 2008); part II reports the outcomes of a survey measuring the education experiences of American Indian and Alaska Native students (Stancavage et al. 2006; Moran and Rampey 2008).

The 2005 and 2007 NAEP results suggested achievement gaps between American Indian and Alaska Native students and other students in grades 4 and 8 in reading and math

The 2005 and 2007 NAEP results suggested achievement gaps between American Indian and Alaska Native students and other students at both grade levels in reading and math (for a definition of *achievement gap* and other key terms see box 1). In reading, the achievement gap in grade 4 was 16 percentage points in 2005 and 18 percentage points in 2007—an

increase of 2 percentage points. For grade 8, the achievement gap was 14 percentage points in 2005 and 18 percentage points in 2007—an increase of 4 percentage points. In math the achievement gap in grade 4 remained the same, 12 percentage points in both 2005 and 2007. For grade 8 the achievement gap increased 3 percentage points (with a 16 percentage point difference in 2005 and a 19 percentage point difference in 2007). (See appendix A for detailed results of the National Indian Education Study and trends in American Indian and Alaska Native academic achievement.)

Later trend analyses on the achievement gaps between American Indian and Alaska Native students and all other students have provided mixed results on whether the achievement gap has narrowed since implementation of the NCLB Act (Freeman and Fox 2005; Hall and Kennedy 2006; Lee, Grigg, and Dion 2007; Lee, Grigg, and Donahue 2007; Kober, Chudowsky, and Chudowsky 2008). Furthermore, these studies are limited

because their data sample for the American Indian and Alaska Native students were insufficient at times, with American Indian and Alaska Native subgroups too small for state-level reporting, or because they focus on NAEP standards instead of state standards. Only Hall and Kennedy's study documents changes in the achievement gaps in states with significant American Indian and Alaska Native populations. But it also has limitations. Its combined results from multiple grade levels does not plot annual comparisons and reports only raw differences in proficiency rates. And the study excludes 7 of the 10 states with the largest American Indian and Alaska Native student populations and 9 of the 20 states of the Council of Chief State School Officers (CCSSO) Native Education Network, for which the study was conducted.

The CCSSO formed a network of 22 state education agencies in 2004 with the vision of “each American Indian, Alaska Native, and Native Hawaiian student achieving their full potential, while maintaining their cultural identity, through culturally responsive education” (Council of Chief State School Officers 2006). The network aims to annually increase the academic achievement of American Indian, Alaska Native, and Native Hawaiian students toward parity with all other students. The data disaggregation requirements for state academic assessments under the NCLB Act pushed states to analyze differences in academic proficiency by student populations, including American Indian and Alaska

BOX 1

Key terms

Achievement gap. The difference between the proficiency rate of American Indian and Alaska Native students and that of all other students. Positive achievement gaps indicate a performance deficit. Negative achievement gaps indicate a performance lead.

Annual measurable objective. The student proficiency targets that schools, districts, and states must meet under the No Child Left Behind Act of 2001. Because some states do not set an overall proficiency rate for a subject as their annual measurable objective target, some achievement data could not be examined in relation to states' targets.

Performance deficit. The student subgroup with the lower proficiency rate is referred to as having a performance deficit relative to the other subgroup.

Performance lead. The student subgroup with the higher proficiency rate is referred to as having a performance lead relative to the other subgroup.

Native students. The CCSSO sought the help of the regional educational laboratories to conduct a systematic review of the achievement data and document performance gaps between American Indian and Alaska Native students and all other students and recent trends over time. Eight regional educational laboratories—Central, Midwest, Northeast and Islands, Northwest, Pacific, Southeast, Southwest, and West—collaborated to provide data on achievement gaps. (See box 2 and appendix B for details on study methodology and limitations.)

Study goals

This report continues the work pioneered by Rampey, Lutkus, and Weiner (2006) and builds on Hall and Kennedy's (2006) work by adding an additional year of assessment results, focusing on states in which American Indian and Alaska Native education is an explicit policy issue, and more systematically exploring results for a single grade. Grade 8 was selected because the largest number of study states had been testing grade 8 students since 2003/04 and because it is also an

BOX 2

Study methods

The study included not only the 20 states in the Council of Chief State School Officers (CCSSO) Native Education Network that had grade 8 testing in reading or math during 2003/04, but also 6 non-CCSSO network states that served at least 4,000 American Indian and Alaska Native students and had grade 8 assessment data available for 2003/04 in one or both subjects (Alabama, Florida, Kansas, Louisiana, Michigan, and Texas). States varied in their data ranges. For reading, 15 states had four consecutive years (2003/04–2006/07) of data, and 4 had three years (2004/05–2006/07). For math, 13 states had four consecutive years (2003/04–2006/07) of data, and 5 had three years (2004/05–2006/07).

Data collection. Staff at the eight regional educational laboratories assembled three types of publicly available data: statewide assessment results (see appendix C for additional information), number of students tested, and annual measurable objectives. Data were retrieved from

Consolidated State Performance Reports (U.S. Department of Education, Office of Elementary and Secondary Education 2004, 2005, 2006, 2007), the Common Core of Data (U.S. Department of Education, National Center for Education Statistics 2008), and state accountability workbooks (U.S. Department of Education, Office of Elementary and Secondary Education 2008).

Analyses. Data analyses occurred in three stages. First, regional educational laboratory staff verified for their respective states whether there had been any changes to standards, assessments, or cutscores over the four years (2003/04–2006/07) so that data from before a change were not compared with data for later years. Second, academic content area, proficiency rates, and number of students tested were collected for American Indian and Alaska Native students and all other students for each state. Proficiency rates were then computed for all other students. Third, these values were arrayed across four years for reading and math performance in each state to display state-level patterns in the achievement gap between

American Indian and Alaska Native students and all other students.

Limitations. The study has several limitations. First, it is descriptive. The findings document only the presence of achievement gaps and the direction of changes over three or four years; they cannot explain why a gap exists or offer solutions. Second, the assessment results are not comparable across states. Differences in state content standards and difficulty levels are well documented (U.S. Department of Education, National Center for Education Statistics 2007b). Thus, the focus is on state-specific analyses. A third limitation is that Common Core of Data enrollment numbers were used for 2003/04 in place of actual numbers of students tested (as in the subsequent years), which were not available for 2003/04. And finally, since in most states American Indian and Alaska Native students make up a higher proportion of students with cognitive disabilities than other student subgroups do, American Indian and Alaska Native students might be exempted from testing at a higher rate than other students.

The majority of states with four years of continuous data saw an increase in the proficiency rates of American Indian and Alaska Native students and either a decrease in their performance deficit or an increase in their performance lead compared with all other students

NAEP-tested grade. The starting year 2003/04 was used because it is the first year for which complete Consolidated State Performance Reports were available from all states and because states' NCLB-driven accountability plans were approved by the U.S. Department of Education in 2003, before the 2003/04 school year.¹

Rather than focusing on student achievement on the NAEP in reading and math, as most other studies have done, this project focuses on

comparisons across four years of data on student achievement on statewide achievement tests in individual states, across the tests for which the NCLB Act seeks 100 percent student proficiency by 2014. Furthermore, because policy decisions about American Indian and Alaska Native education are state decisions, the report's state-specific description of assessment results will be more useful for informing policy decisions than a description of NAEP results.

Two research questions guided this study:

- What were the achievement gaps in reading and math on the state academic assessment between grade 8 American Indian and Alaska Native students and all other students in 2003/04 for individual states?
- What was the direction of the achievement gaps across 2003/04, 2004/05, 2005/06, and 2006/07 in each state?

WHAT THE STUDY FOUND

This study reports the initial gap between American Indian and Alaska Native students and all other students on state achievement tests following NCLB implementation and analyzes the patterns in these gaps across four years (2003/04–2006/07) for 26 states with a high proportion of American Indian and Alaska Native students.

The majority of states with four years of continuous data saw an increase in the proficiency rates of American Indian and Alaska Native students and either a decrease in their performance deficit or an increase in their performance lead compared with all other students. (Tables 1 and 2 summarize achievement results for reading and math for grade 8 American Indian and Alaska Native students in the study states.)

In 12 of the 15 states with four years of continuous data for reading, American Indian and Alaska Native student proficiency rates increased, and in 10 states either their performance deficit decreased or their performance lead over all other students increased. In addition, in 10 of the 15 states the reading proficiency rate of American Indian and Alaska Native students was above the annual measurable objectives in 2006/07, but in only 5 of the 15 states did their reading proficiency rate improve relative to the increasing annual measurable objective. And in 4 of the 15 states their proficiency rates were above the rate for all other students in the last year of the four-year study period.

The patterns for the math results were similar (see table 2). In 11 of 13 states with four years of continuous data the math proficiency rates of American Indian and Alaska Native students increased, and in 11 states either the performance deficit of American Indian and Alaska Native students decreased or their performance lead over all other students increased. In 6 of the 13 states the math proficiency rates of American Indian and Alaska Native were above the annual measurable objectives in 2006/07, but in only 4 of the 13 states did their math proficiency improve relative to the annual measurable objective. And in 2 of the 13 states the math proficiency rate of these students was above the rate for all other students in the last year of the four-year study period.

Of the four states with only three years of continuous reading data to 2006/07, three had increases in American Indian and Alaska Native student proficiency. And of the five with only three years

TABLE 1

Grade 8 reading proficiency of American Indian and Alaska Native students on state assessments, 2003/04–2006/07

State	Percent proficient increased over		Performance deficit decreased (or lead increased) over		Percent proficient higher than annual measurable objective in 2006/07	Percent proficient improved relative to the annual measurable objective over		Percent proficient higher than all other students in 2006/07
	2003/04	2006/07	2003/04	2006/07		2003/04	2006/07	
States with four years of continuous data								
Alabama	Yes		Yes		Yes	Yes		Yes
California	Yes		Yes		Yes	No		No
Colorado	Yes		Yes		Yes	No		No
Florida	Yes		Yes		Yes	No		Yes
Iowa	Yes		Yes		No	Yes		No
Louisiana	Yes		No		Yes	No		Yes
Montana	Yes		Yes		No	Yes		No
Nebraska	Yes		Yes		Yes	No		No
Nevada	Yes		No		Yes	Yes		No
North Carolina	No		No		Yes	No		No
Oklahoma	Yes		Yes		Unknown ^a	Unknown ^a		No
South Dakota	No		No		No	No		No
Texas	No		No		Yes	No		Yes
Utah	Yes		Yes		No	No		No
Wisconsin	Yes		Yes		Yes	Yes		No
States with three years of continuous data								
Alaska	Yes		No		No	Yes		No
Arizona	No		No		No	No		No
New Mexico	Yes		No		No	No		No
North Dakota	Yes		Yes		No	Yes		No
States without three or four years of continuous data								
Hawaii	—		—		Yes	—		Yes
Idaho	—		—		No	—		No
Kansas	—		—		Yes	—		No
Michigan	—		—		Yes	—		No
New York	—		—		Unknown ^a	Unknown ^a		No
Oregon	—		—		Yes	—		No
Wyoming	—		—		Yes	—		No

— Not calculated because grade 8 testing in this subject did not start until 2005/06 or changes were made in the standards, assessments, or cutscores over the study period.

a. Change relative to annual measurable objective not available because state does not use a proficiency rate on the state assessment test as the annual measurable objective.

Source: Authors' compilation based on data from Consolidated State Performance Report (see reference list entries by state department of education).

TABLE 2

Grade 8 math proficiency of American Indian and Alaska Native students on state assessments, 2003/04–2006/07

State	Percent proficient increased over		Performance deficit decreased (or lead increased) over		Percent proficient higher than annual measurable objective in 2006/07	Percent proficient improved relative to the annual measurable objective over		Percent proficient higher than all other students in 2006/07
	2003/04	2006/07	2003/04	2006/07		2003/04	2006/07	
States with four years of continuous data								
California	Yes		No		No		No	No
Colorado	Yes		Yes		No		Yes	No
Florida	Yes		Yes		Yes		No	Yes
Iowa	Yes		Yes		No		Yes	No
Louisiana	No		No		Yes		No	No
Montana	No		Yes		No		No	No
Nebraska	Yes		Yes		Yes		Yes	No
Nevada	Yes		Yes		Yes		No	No
Oklahoma	Yes		Yes		Unknown ^a		Unknown ^a	No
South Dakota	Yes		Yes		No		No	No
Texas	Yes		Yes		Yes		No	Yes
Utah	Yes		Yes		No		No	No
Wisconsin	Yes		Yes		Yes		Yes	No
States with three years of continuous data								
Alabama	No		No		Yes		No	Yes
Alaska	Yes		No		No		Yes	No
Arizona	Yes		Yes		Yes		Yes	No
New Mexico	Yes		Yes		No		No	No
North Dakota	Yes		Yes		No		No	No
States without three or four years of continuous data								
Hawaii	—		—		Unknown ^a		—	No
Idaho	—		—		No		—	No
Kansas	—		—		Yes		—	No
Michigan	—		—		Yes		—	No
New York	—		—		Unknown ^a		Unknown ^a	No
North Carolina	—		—		No		—	No
Oregon	—		—		Yes		—	No
Wyoming	—		—		No		—	No

— Not calculated because grade 8 testing in this subject did not start until 2005/06 or changes were made in the standards, assessments, or cutscores over the study period.

a. Change relative to annual measurable objective not available because state does not use a proficiency rate on the state assessment test as the annual measurable objective.

Source: Authors' compilation based on data from Consolidated State Performance Report (see reference list entries by state department of education).

of continuous math data, four had increases in American Indian and Alaska Native student proficiency. One had a decrease in the performance deficit of American Indian and Alaska Native students in reading, and three had a decrease in the American Indian and Alaska Native performance deficit in math. None had American Indian and Alaska Native proficiency rates above the annual measurable objectives in reading in 2006/07, but two of the five did in math. And in two states the American Indian and Alaska Native proficiency rate in math and reading improved relative to the annual measurable objectives.

In summary, in most states American Indian and Alaska Native students are at least keeping pace with the achievement gains of other students on state assessment results. In 11 of the 19 states with three or four years of continuous data in reading, the performance deficit of American Indian and Alaska Native students decreased or their performance lead increased. Meanwhile, in 14 of the 18 states with three or four years of continuous data in math such students' performance deficit decreased or their performance lead increased.

What were the achievement gaps in reading and math on the state academic assessment between grade 8 American Indian and Alaska Native students and all other grade 8 students in 2003/04 for individual states?

In 2003/04 American Indian and Alaska Native students' achievement gap deficit was as high as 34.9 percentage points in reading and 40.3 percentage points in math (tables 3 and 4). Because of differences in demographics, standards, assessments, and cutscores, no comparison should be made between the states based on proficiency rate differences. In four states American Indian and Alaska Native students had a performance lead over all other students for reading, and in three states for math.

What was the direction of the achievement gaps across 2003/04, 2004/05, 2005/06, and 2006/07 in each state?

Annual measurable objectives and the proficiency rates of American Indian and Alaska Native students

and all other students were arrayed for each state and for each subject to view patterns in achievement gaps (see figures D1–D26 in appendix D and E1–E26 in appendix E). This section describes the main findings by state, first in reading and then in math.

In 2003/04 American Indian and Alaska Native students' achievement gap deficit was as high as a 34.9 percentage points in reading

Reading

Alabama. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 17.0 percentage points in Alabama (figure D1). In all years it was above the annual measurable objective—and in 2006/07 it was above the annual measurable objective by 30.0 percentage points. The proficiency rate for all other students was lower than that for American Indian and Alaska Native students, but was also above the annual measurable objective in all four years. Alabama was one of four states where American Indian and Alaska Native students' proficiency rate in reading was above that for other students in 2003/04 and 2006/07. And over the four years the performance lead of American Indian and Alaska Native students rose 3.2 percentage points, from 6.1 percentage points to 9.3 percentage points (see table 3).

Alaska. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 1.7 percentage point in Alaska (figure D2). In all three years it was below the annual measurable objective—and in 2006/07 it was below it by 12.5 percentage points. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 3.2 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students rose 1.5 percentage point from 2004/05 to 2006/07, from 25.4 percentage points to 26.9 percentage points (see table 3).

Arizona. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska

TABLE 3

Grade 8 achievement gaps in reading between American Indian and Alaska Native students and all other students, 2003/04 to 2006/07 (percentage points)

State	Reading achievement gap				Four year change (2003/04 –2006/07)	Three year change (2004/05 –2006/07)
	2003/04	2004/05	2005/06	2006/07		
Alabama ^{a,b}	-6.1	-7.2	-5.5	-9.3	-3.2	-2.1
Alaska	32.9	25.4	24.1	26.9	—	1.5
Arizona	28.9	21.7	20.6	23.4	—	1.7
California	5.0	3.7	4.2	4.4	-0.6	0.7
Colorado	7.5	7.4	5.2	5.1	-2.4	-2.3
Florida ^{a,b}	-4.0	-6.0	-4.1	-4.1	-0.1	1.9
Hawaii ^b	1.0	-3.2	2.0	-5.6	—	—
Idaho	21.5	14.8	19.1	11.4	—	—
Iowa	14.5	10.7	14.1	9.9	-4.6	-0.8
Kansas ^a	13.8	13.6	6.7	5.6	—	—
Louisiana ^{a,b}	-2.4	4.1	2.2	-0.3	2.1	-4.4
Michigan ^a	— ^c	— ^c	10.9	5.7	—	—
Montana	33.2	34.8	33.3	30.0	-3.2	-4.8
Nebraska	14.9	12.0	16.9	14.8	-0.1	2.8
Nevada	3.2	4.4	3.6	3.8	0.6	-0.6
New Mexico	17.1	18.6	21.5	19.7	—	1.1
New York	16.9	16.2	15.1	11.7	—	—
North Carolina	3.2	4.3	7.2	4.8	1.6	0.5
North Dakota	34.9	30.6	28.7	25.7	—	-4.9
Oklahoma	4.3	4.9	3.4	2.1	-2.2	-2.8
Oregon	16.4	13.1	12.0	12.6	—	—
South Dakota	27.7	28.6	29.4	30.4	2.7	1.8
Texas ^b	-2.0	-3.0	-4.0	-0.9	1.1	2.1
Utah	26.8	28.5	27.3	26.3	-0.5	-2.2
Wisconsin	11.2	10.3	8.8	9.3	-1.9	-1.0
Wyoming	26.3	19.5	26.8	23.0	—	—

— is unavailable because students were not tested for a study year, data were not reported, or data were reported but were not comparable due to discontinuities in state standards, assessments, or cutscores.

Note: Positive achievement gaps indicate a performance deficit, and negative achievement gaps indicate a performance lead. Because of differences between states in standards, assessments, and cutscores, no comparison can be made between states based on these data. Data should be compared across years within individual states. Numbers in bold are not comparable with 2006/07 results because of discontinuities in the state's standards, assessments, or cutscores.

a. State was not a Council of Chief State School Officers Native Education Network state but was included because it had more than 4,000 American Indian and Alaska Native students enrolled in public schools.

b. American Indian and Alaska Native students had proficiency rates higher than all other students in some or all four years.

c. Students were not tested.

Source: Authors' compilation based on Consolidated State Performance Reports unless otherwise noted on figures D1–D26.

TABLE 4

Grade 8 achievement gaps in math between American Indian and Alaska Native students and all other students, 2003/04 to 2006/07 (percentage points)

State	Math achievement gap				Four year change (2003/04 –2006/07)	Three year change (2004/05 –2006/07)
	2003/04	2004/05	2005/06	2006/07		
Alabama ^{a,b}	— ^c	-10.8	-7.7	-5.5	—	5.3
Alaska	27.6	23.6	24.8	24.3	—	0.7
Arizona	18.2	21.8	20.1	21.4	—	-0.4
California	5.0	5.4	8.6	7.7	2.7	2.3
Colorado	18.2	13.3	11.6	10.2	-8.0	-3.1
Florida ^{a,b}	-4.0	-4.0	-5.5	-8.4	-4.4	-4.4
Hawaii	13.1	3.0	9.0	—	—	—
Idaho	24.9	17.5	24.8	15.6	—	—
Iowa	21.2	15.9	18.8	12.3	-8.9	-3.6
Kansas ^a	— ^c	— ^c	11.0	8.9	—	—
Louisiana ^a	1.6	3.2	7.1	3.4	1.8	0.2
Michigan ^a	5.4	12.1	8.6	5.6	—	—
Montana	38.9	35.5	35.4	34.4	-4.5	-1.1
Nebraska	18.1	15.0	17.0	14.4	-3.7	-0.6
Nevada	6.2	9.2	6.1	6.1	-0.1	-3.1
New Mexico	19.2	14.5	13.9	14.3	—	-0.2
New York	13.2	12.5	12.1	12.5	—	—
North Carolina	3.2	8.8	15.5	12.9	—	—
North Dakota	34.6	33.2	34.6	29.1	—	-4.1
Oklahoma	5.8	4.9	5.0	2.4	-3.4	-2.5
Oregon	17.5	15.3	12.3	10.2	—	—
South Dakota	40.3	41.8	41.8	37.1	-3.2	-4.7
Texas ^{a,b}	-3.0	-2.0	-3.0	-3.5	-0.5	-1.5
Utah	28.3	24.4	23.1	25.8	-2.5	1.4
Wisconsin	19.3	18.5	18.1	15.1	-4.2	-3.4
Wyoming	25.7	20.5	28.2	28.4	—	—

— is unavailable because students were not tested for a study year, data were not reported, or data were reported but were not comparable due to discontinuities in state standards, assessments, or cutscores.

Note: Positive achievement gaps indicate a performance deficit, and negative achievement gaps indicate a performance lead. Because of differences between states in standards, assessments, and cutscores, no comparison can be made between states based on these data. Data should be compared across years within individual states. Numbers in bold are not comparable with 2006/07 results because of discontinuities in the state's standards, assessments, or cutscores.

a. State was not a Council of Chief State School Officers Native Education Network state but was included because it had more than 4,000 American Indian and Alaska Native students enrolled in public schools.

b. American Indian and Alaska Native students had proficiency rates higher than all other students in some or all four years.

c. Students were not tested.

Source: Authors' compilation based on Consolidated State Performance Reports unless otherwise noted on figures E1–E26.

In four states—Alabama, Florida, Louisiana, and Texas—the reading proficiency rate for American Indian and Alaska Native students was above that for all other students in the first and last years of the study period

Native students in reading fell 0.7 percentage point in Arizona (figure D3). In all three years it was within 2 percentage points of the annual measurable objective. The proficiency rate for all other students was above the annual measurable objective by more than 20 percentage points in every year and increased by 1.0 percentage point from 2004/05 to 2006/07.

Over the three years the performance deficit of American Indian and Alaska Native students rose 1.7 percentage point, from 21.7 percentage points to 23.4 percentage points (see table 3).

California. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in English language arts rose 9.8 percentage points in California (figure D4). It was 10–15 percentage points above the annual measurable objective every year. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 9.2 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students rose 0.6 percentage point, from 5.0 percentage points to 4.4 percentage points (see table 3).

Colorado. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 1.9 percentage point in Colorado (figure D5). In the last three study years it was within 3 percentage points of the annual measurable objective—and in 2006/07 it was 1.4 percentage point above it. The proficiency rate for all other students was above the annual measurable objective in every year, but decreased by 0.5 percentage point overall. And over the four years the performance deficit of American Indian and Alaska Native students fell 2.4 percentage points, from 7.5 percentage points to 5.1 percentage points (see table 3).

Florida. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students

in reading rose 4.1 percentage points in Florida (figure D6). Although in every year it was above the annual measurable objective, it did not increase at the same pace as the annual measurable objective. By 2006/07 their proficiency rate was only 2.1 percentage points above the annual measurable objective. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 4.0 percentage points overall. Florida was one of four states where the reading proficiency rate for American Indian and Alaska Native students was above that for all other students in the first and last years of the study period. And over the four years the performance lead of American Indian and Alaska Native students rose 0.1 percentage point, from 4.0 percentage points to 4.1 percentage points (see table 3).

Hawaii. Introduction of a new reading assessment in 2006/07 prevented analysis of changes across the study period in Hawaii (figure D7).

Idaho. Cutscore revisions in reading in 2006 and 2007 prevented analysis of changes across the study period in Idaho (figure D8).

Iowa. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 7.7 percentage points in Iowa (figure D9). In every year it was below the annual measurable objective—starting 5 percentage points below it in 2003/04 and ending 4 percentage points below it in 2006/07. The proficiency rate for other students was above the annual measurable objective in every year and increased by 3.1 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students fell 4.6 percentage points, from 14.5 percentage points to 9.9 percentage points (see table 3).

Kansas. The introduction of a new reading assessment in 2005/06 prevented analysis of changes across the study period in Kansas (figure D10).

Louisiana. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native

students in reading rose 6.9 percentage points in Louisiana (figure D11). In all years it was above the annual measurable objective—ending 11.7 percentage points above it in 2006/07. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 9.0 percentage points overall. Louisiana was one of four states where the reading proficiency rate for American Indian and Alaska Native students was above that for all other students in the first and last years of the study. But over the four years the performance lead of American Indian and Alaska Native students fell 2.1 percentage points, from 2.4 percentage points to 0.3 percentage point (see table 3).

Michigan. Michigan did not begin testing grade 8 students in reading until 2005/06 (figure D12).

Montana. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 23.2 percentage points in Montana (figure D13). In all years it was below the annual measurable objective—starting 26.1 percentage points below it in 2003/04 and ending 21.9 percentage points below it in 2006/07. The proficiency rate for other students was above the annual measurable objective in every year and increased by 20.0 percentage points over all years. And over the four years the performance deficit of American Indian and Alaska Native students fell 3.2 percentage points, from 33.2 percentage points to 30.0 percentage points (see table 3).

Nebraska. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native in reading rose 8.1 percentage points in Nebraska (figure D14). In three of four study years it was above the annual measurable objective—ending 5.2 percentage points above it in 2006/07. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 8.0 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students fell 0.1 percentage point, from 14.9 percentage points to 14.8 percentage points (see table 3).

Nevada. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 6.6 percentage points in Nevada (figure D15). In all of the years it was above the annual measurable objective—and with a gain in 2006/07, ended 13.5 percentage points above it. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 7.2 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students rose 0.6 percentage point, from 3.2 percentage points to 3.8 percentage points (see table 3).

New Mexico. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 3.6 percentage points in New Mexico (figure D16). In 2005/06 it fell below the annual measurable objective—and in 2006/07 it was 3.2 points below it. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 4.7 percentage points overall. And over the three years the performance deficit of American Indian and Alaska Native students rose 1.1 percentage point, from 18.6 percentage points to 19.7 percentage points (see table 3).

New York. The introduction of a new reading assessment in 2005/06 prevented analysis of changes across the study period in New York (figure D17).

North Carolina. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading fell 1.4 percentage point in North Carolina (figure D18). In every year it was above the annual measurable objective—ending 6.5 percentage points above it in 2006/07. The proficiency rate for all other students was above the annual

In 10 of the 15 states with four years of continuous data to 2006/07 the reading proficiency rate of American Indian and Alaska Native students were above the annual measurable objectives in 2006/07, but in only 5 states did their reading proficiency rate improve relative to the increasing annual measurable objective.

But in none of the four states with only three years of continuous data to 2006/07 were the reading proficiency rates of American Indian and Alaska above the annual measurable objectives in 2006/07, although in two states they improved relative to the annual measurable objectives.

measurable objective in every year and increased by 0.2 percentage point overall. And over the four years the performance deficit of American Indian and Alaska Native students rose 1.6 percentage points, from 3.2 percentage points to 4.8 percentage points (see table 3).

North Dakota. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 8.3 percentage points in North Dakota

(figure D19). For all three years it was below the annual measurable objective—though it increased at about the same rate as it did. The proficiency rate for all other students was above the annual measurable objective in every year—but by only 0.5 percentage point in 2006/07, as the annual measurable objective increased at a faster pace than their performance did—and the proficiency rate increased by 3.4 percentage points overall. And over the three years the performance deficit of American Indian and Alaska Native students fell 4.9 percentage points, from 30.6 percentage points to 25.7 percentage points (see table 3).

Oklahoma. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 6.5 percentage points in Oklahoma (figure D20). The proficiency rate could not be compared with the state's annual measurable objective, however, because its annual measurable objective target was a composite of reading scores, math scores, attendance rates, and other factors rather than an overall proficiency rate target for a single subject. Over the study period the proficiency rate for all other students increased by 4.3 percentage points. And over the four years the performance deficit of American Indian and Alaska Native students fell 2.2 percentage points, from 4.3 percentage points to 2.1 percentage points (see table 3).

Oregon. Cutscore revisions in reading in 2006 and 2007 prevented analysis of changes across the study period in Oregon (figure D21).

South Dakota. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading fell 2.4 percentage points in South Dakota (figure D22). In every year it was below the annual measurable objective—and as the annual measurable objective increased, it fell further below. By 2006/07 it was 31.0 percentage points below the annual measurable objective. The proficiency rate for all other students increased by 0.3 percentage point and was above the rising annual measurable objective each year until 2006/07, when it fell 0.6 percentage point below. And over the four years the performance deficit of American Indian and Alaska Native students rose 2.7 percentage points, from 27.7 percentage points to 30.4 percentage points (see table 3).

Texas. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading fell 2.6 percentage points in Texas (figure D23). In every year it was above the annual measurable objective—and despite its decline, was 28.4 percentage points above it in 2006/07. The proficiency rate for all other students also was above the annual measurable objective in every year. Texas was one of four states where the reading proficiency rate for American Indian and Alaska Native students was above that for all other students in the first and last years of the study period. But over the four years the performance lead of American Indian and Alaska Native students fell 1.1 percentage point, from 2.0 percentage points to 0.9 percentage point (see table 3).

Utah. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in English language arts rose 3.9 percentage points in Utah (figure D24). In every year it was below the annual measurable objective, and it did not keep pace with the increases in the annual measurable objective—ending 22.1 percentage points below it in 2006/07. The proficiency rate for all other students was above the annual measurable objective in every year and increased by 3.4 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students fell 0.5 percentage point,

from 26.8 percentage points to 26.3 percentage points (see table 3).

Wisconsin. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in reading rose 6.9 percentage points in Wisconsin (figure D25). It remained above the annual measurable objective, which increased by 6.5 percentage points over the same period. The proficiency rate for all other students was also above the annual measurable objective every year and increased by 5.0 percentage points overall. And over the four years the performance deficit of American Indian and Alaska Native students fell 1.9 percentage point, from 11.2 percentage points to 9.3 percentage points (see table 3).

Wyoming. The introduction of a new reading assessment in 2005/06 prevented analysis of changes across the study period in Wyoming (figure D26).

Math

Alabama. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students in math fell 1.7 percentage point in Alabama (figure E1). In all three years it was above the annual measurable objective, but it was closer to it in the last year than the first. The proficiency rate for all other students was lower than that for American Indian and Alaska Native students, though still above the annual measurable objective. Alabama was one of three states where the math proficiency rate for American Indian and Alaska Native students was above that for other students. But over the four years the performance lead of American Indian and Alaska Native students fell 5.3 percentage points, from 10.8 percentage points to 5.5 percentage points (see table 4).

Alaska. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students in math rose 6.1 percentage points in Alaska (figure E2). For all three years it was below the annual measurable objective, though it moved closer to it. The proficiency rate for all other students improved at a similar pace and was above the

annual measurable objective in all three years.

And over the three years the performance deficit of American Indian and Alaska Native students rose 0.7 percentage point, from 23.6 percentage points to 24.3 percentage points (see table 4).

Arizona. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native rose 2.9 percentage points in Arizona (figure E3). In all three years it was above the annual measurable objective. The proficiency rate for all other students similarly improved and was above the annual measurable objective in all three years. And over the three years the performance deficit of American Indian and Alaska Native students fell 0.4 percentage point, from 21.8 percentage points to 21.4 percentage points (see table 4).

California. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 2.0 percentage points in California (figure E4). For the last three years of the study the proficiency rate was within 1 percentage point of the annual measurable objective—and in 2003/04 before the annual measurable objective was raised the proficiency rate of American Indian and Alaska Native students was 8 percentage points above. The math proficiency rate of all other students also rose; their performance was above the annual measurable objective by at least 4.5 percentage points in all four years. And over the four years the performance deficit of American Indian and Alaska Native students rose 2.7 percentage points, from 5.0 percentage points to 7.7 percentage points (see table 4).

Colorado. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 13.1 percentage points in Colorado (figure E5). While it was below the annual measurable objective in all four years, it did move 3 percentage points closer to it. The proficiency rate for all other students also improved, though it was

In 2003/04 American Indian and Alaska Native students' achievement gap deficit was as high as 40.3 percentage points in math

**In three states
Alabama, Florida,
and Texas the math
proficiency rate for
American Indian and
Alaska Native students
was above that for
other students**

above the annual measurable objective in every year. And over the four years the performance deficit of American Indian and Alaska Native students fell 8.0 percentage points, from 18.2 percentage points to 10.2 percentage points (see table 4).

Florida. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students in math rose 10.6 percentage points in Florida (figure E6). While their performance was above the annual measurable objective in all four years, it did not rise at the same pace as the annual measurable objective. The proficiency rate for all other students improved at a slower rate and was above the annual measurable objective in all four years. Florida was one of three states where the proficiency rate for American Indian and Alaska Native students in math was above that for all other students. And over the four years the performance lead of American Indian and Alaska Native students rose 4.4 percentage points (see table 4).

Hawaii. Math data were not reported in 2006/07 in Hawaii because of an insufficient subgroup size. This missing data prevented comparison with results in earlier years (figure E7).

Idaho. Cutscore revisions in reading in 2006 and 2007 prevented analysis of changes across the study period in Idaho (figure E8).

Iowa. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 12.1 percentage points in Iowa (figure E9). For all four years it was below the annual measurable objective—though by the last year it was within 2 percentage points of it. The proficiency rate for all other students also improved, but was above the annual measurable objective in all four years. And over the four years the performance deficit of American Indian and Alaska Native students fell 8.9 percentage points, from 21.2 percentage points to 12.3 percentage points (see table 4).

Kansas. Kansas did not begin testing grade 8 students in math until 2005/06 (figure E10).

Louisiana. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students fell 5.6 percentage points in Louisiana (figure E11). Despite this decline, and while the annual measurable objective did increase once, in all four years their performance was above the annual measurable objective by at least 8 percentage points. The proficiency rate for all other students also fell and also remained above the annual measurable objective. And over the four years the performance deficit of American Indian and Alaska Native students rose 1.8 percentage point, from 1.6 percentage point to 3.4 percentage points (see table 4).

Michigan. New content standards and a change in the testing window (from winter to fall) in 2005/06 prevented analysis of changes over the study period in Michigan (figure E12).

Montana. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students fell 0.8 percentage point in Montana (figure E13). In all four years it was also below the annual measurable objective—in 2006/07 it was more than 21 percentage points below the annual measurable objective. The proficiency rate for all other students also fell though it remained above the annual measurable objective in all four years. And over the four years the performance deficit of American Indian and Alaska Native students fell 4.5 percentage points, from 38.9 percentage points to 34.4 percentage points (see table 4).

Nebraska. From 2003/04 to 2006/07 the proficiency rate rose 11.7 percentage points in Nebraska (figure E14). It was above the annual measurable objective in three of the four years—ending 5.5 percentage points above it. The proficiency rate for all other students also improved and was higher above the annual measurable objective than was the rate for American Indian and Alaska Native students. And over the four years the performance deficit of American Indian and Alaska Native

students fell 3.7 percentage points, from 18.1 percentage points to 14.4 percentage points (see table 4).

Nevada. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 5.0 percentage points in Nevada (figure E15). In three of the four years it was above the annual measurable objective. The proficiency rate for all other students improved at a similar rate and was above the annual measurable objective in all the study years. And over the four years the performance deficit of American Indian and Alaska Native students fell 0.1 percentage point, from 6.2 percentage points to 6.1 percentage points (see table 4).

New Mexico. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 6.5 percentage points in New Mexico (figure E16). In two of the three years it was below the annual measurable objective—ending 2.4 percentage points below it in 2006/07. The proficiency rate for all other students improved at a similar rate, but was above the annual measurable objective in all three years by more than 10 percentage points. And over the three years the performance deficit of American Indian and Alaska Native students fell 0.2 percentage point, from 14.5 percentage points to 14.3 percentage points (see table 4).

New York. The introduction of a new math assessment in 2005/06 prevented analysis of changes across the study period in New York (figure E17).

North Carolina. Changes in its math standards and cutscores in 2005/06 prevented analysis of changes across the study period in North Carolina (figure E18).

North Dakota. From 2004/05 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 4.3 percentage points in North Dakota (figure E19). In all three years it was below the annual measurable objective. The proficiency rate for all other students also rose, and while their performance was above the annual

measurable objective in all four years it neared the annual measurable objective in 2006/07. And over the three years the performance deficit of American Indian and Alaska Native students fell 4.1 percentage points, from 33.2 percentage points to 29.1 percentage points (see table 4).

Oklahoma. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 10.1 percentage points in Oklahoma (figure E20). The proficiency rate could not be compared with the state's annual measurable objective, however, because its annual measurable objective target was a composite of reading scores, math scores, attendance rates, and other factors rather than an overall proficiency rate target for a single subject. The proficiency rate for all other students improved at a similar rate. And over the four years the performance deficit of American Indian and Alaska Native students fell 3.4 percentage points, from 5.8 percentage points to 2.4 percentage points (see table 4).

Oregon. A changed cutscore in math for the 2006/07 assessment prevented analysis of changes across the study period in Oregon (figure E21).

South Dakota. From 2003/04 to 2006/07 the proficiency rate rose 9.3 percentage points in South Dakota (figure E22). In all four years it was below the annual measurable objective. As the annual measurable objective was raised twice during the study, the American Indian and Alaska Native proficiency rate went from being 15.0 percentage points to 25.7 percentage points below it. The proficiency rate for all other students increased at a slower pace, though it was above the annual measurable objective in all four years. And over the four years the performance deficit of American Indian and Alaska Native students fell

In 6 of the 13 states with four years of continuous data the math proficiency rates of American Indian and Alaska Native students were above the annual measurable objectives in 2006/07, but in only 4 states did their math proficiency improve relative to the annual measurable objectives

And in two of the five states with only three years of continuous data to 2006/07 the math proficiency rates of American Indian and Alaska Native students were above the annual measurable objectives in 2006/07

3.2 percentage points, from 40.3 percentage points to 37.1 percentage points (see table 4).

Texas. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 6.3 percentage points in Texas (figure E23). In all four years it was above the annual measurable objective—ending 25.3 percentage points above it in

2006/07. The proficiency rate for all other students improved at a similar rate. Texas was one of three states where the math proficiency rate for American Indian and Alaska Native students was above that for all other students. And over the four years the performance lead of American Indian and Alaska Native students rose 0.5 percentage point, from 3.0 percentage points to 3.5 percentage points (see table 4).

Utah. From 2003/04 to 2006/07 proficiency rate of American Indian and Alaska Native students rose 8.8 percentage points in Utah (figure E24). In all four years it was below the annual measurable objective. As the annual measurable objective

increased, the gap between it and the proficiency rate for American Indian and Alaska Native students in math grew. The proficiency rate for all other students improved, but at a slower rate than the annual measurable objective. And over the four years the performance deficit of American Indian and Alaska Native students fell 2.5 percentage points, from 28.3 percentage points to 25.8 percentage points (see table 4).

Wisconsin. From 2003/04 to 2006/07 the proficiency rate of American Indian and Alaska Native students rose 14.0 percentage points in Wisconsin (figure E25). In all four years it was above the annual measurable objective. The proficiency rate for all other students improved at a similar rate and was above the annual measurable objective and higher than the proficiency rate of American Indian and Alaska Native students. And over the four years the performance deficit of American Indian and Alaska Native students fell 4.2 percentage points, from 19.3 percentage points to 15.1 percentage points (see table 4).

Wyoming. Introduction of a new math assessment in 2005/06 prevented analysis of changes across the study period in Wyoming (figure E26).

APPENDIX A RESULTS FROM THE NATIONAL INDIAN EDUCATION STUDY AND TREND ANALYSES

Part I of the National Indian Education Study conducted by the National Center for Education Statistics (NCES) provides an in-depth account of the academic performance of American Indian and Alaska Native students on the 2005 (Rampey, Lutkus, and Weiner 2006) and 2007 (Moran et al. 2008) National Assessment of Educational Progress (NAEP) in reading and math. This appendix discusses those results and explores various trend analyses of the academic achievement of American Indian and Alaska Native students in recent years.

Results from part I of the National Indian Education Study

Mean scores on the NAEP in reading and math for students in grades 4 and 8 were compared for American Indian and Alaska Native students and all other students. (Only the results for grade 8 are discussed here, as background for this study.) The 2005 NAEP results suggest achievement gaps between American Indian and Alaska Native students and other students at both grade levels for reading and for math. Achievement results for reading revealed that 59 percent of American Indian and Alaska Native students in grade 8 performed “at or above basic,” compared with 73 percent of all other students in grade 8. A similar gap was found for math achievement: 53 percent of American Indian and Alaska Native students in grade 8 performed at or above basic, compared with 69 percent of other students in grade 8.

The 2007 results also showed achievement gaps between the two groups in both grade levels for reading and math. For reading 56 percent of grade 8 American Indian and Alaska Native students performed at or above basic, while 74 percent of all other grade 8 students did. Similarly, for math 53 percent of American Indian and Alaska Native students in grade 8 performed at or above basic, while 72 percent of all other grade 8 students did.

No differences were found for American Indian and Alaska Native students between their 2005 and 2007 reading and math scores—though there were differences between 2005 and 2007 reading and math scores for all other students in grade 8. The achievement gap trend results of the National Indian Education Study, however, suggest a persistent gap between American Indian and Alaska Native students and other students in reading and math at both grade levels, with American Indian and Alaska Native students performing at a lower level. The gap between grade 8 American Indian and Alaska Native students and other students in reading was 14 percentage points in 2005 and 18 percentage points in 2007—an increase of 4 percentage points. The gap in math achievement, meanwhile, increased 3 percentage points for students in grade 8 (with a 16 percentage point difference in 2005 and 19 percentage point difference in 2007).

Trends in American Indian and Alaska Native student academic achievement: has the achievement gap increased or decreased?

Studying the status and trends of American Indian and Alaska Native students, Freeman and Fox (2005) note that despite increases in high school graduation rates, college enrollment numbers, and attainment expectations among American Indian and Alaska Native students in the past 20 years, a persistent gap remains between these students and their White peers on key indicators of education performance. NAEP scores in 2002 and 2003 suggest that the gap in reading achievement is widening for students in grades 4 and 8. And while the gap in math NAEP scores did not change between the two years, American Indian and Alaska Native students scored lower than their White peers.

Examining the trends in NAEP reading and math scores of a nationally representative sample of grade 4 and 8 students, Lee, Grigg, and Donahue (2007) report no significant score changes for American Indian and Alaska Native students between 1992 and 2007. Both reports, however,

reveal increases in reading and math scores for some other student subgroups.

A more recent study, examining trends in NAEP reading and math scores from 2002 to 2007, provides mixed findings on the trend in achievement gaps among American Indian and Alaska Native students and other students (Kober, Chudowsky, and Chudowsky 2008). American Indian and Alaska Native students were compared with White, non-Hispanic students. Overall trends in achievement gaps of NAEP and state test scores were unavailable at both grade levels and for both subjects because too few states had sufficient data to discern a pattern. For reading the gap widened in seven of the nine states for grade 8 students. For math, the gap widened in five states and narrowed in two for these students.

The majority of the trend analyses thus far have limited use for discerning trend differences in achievement gaps between American Indian and Alaska Native students and all other students in achieving state standards because most of the

states have insufficient data for these students or the subgroups are too small. Only recently has there been research to document the ongoing changes in the achievement gaps in states with significant American Indian and Alaska Native populations (see Hall and Kennedy 2006).

Hall and Kennedy look at the achievement gap between Native American and White students in elementary through high school in 27 states. Gaps in proficiency rates between Native American and White students on state assessments were compared over three years (2003–05). The number of states where the gap narrowed, remained the same, or widened was given for all three school levels. Compared with the proportion of states in which the gap widened, the proportion of states in which the gap narrowed in both reading and math in elementary and middle school was greater. The same was found for high school reading. And for math, the proportion of states in which the gap narrowed was the same as the proportion in which the gap widened.

APPENDIX B METHODS AND DATA LIMITATIONS

In addition to states in the Council of Chief State School Officers (CCSSO) Native Education Network with grade 8 testing in reading or math for 2003/04, the study included non-CCSSO network states that served at least 4,000 American Indian and Alaska Native students and had grade 8 assessment data for 2003/04 in reading, math, or both. All the CCSSO network states had these data, except for Minnesota and Washington. Six more non-CCSSO states (Alabama, Florida, Kansas, Louisiana, Michigan, and Texas) were added for a total of 26 states (20 CCSSO and 6 non-CCSSO states).

According to the National Center for Education Statistics' Common Core of Data for 2006/07, the American Indian and Alaska Native students in these 26 states represent 84.5 percent of all American Indian and Alaska Native students in public schools in the country (table B1; U.S. Department of Education, National Center for Education Statistics 2008). States varied in their data ranges. For reading, 15 states had four consecutive years of data (2003/04–2006/07), and 4 had three years (2004/05–2006/07). For math, 13 states had four consecutive years of data (2003/04–2006/07), and 5 had three years (2004/05–2006/07). In 8 states breaks in state standards, assessments, or cutscores prevented analysis across either three or four years for one or both subjects.

Data collection

Staff at the eight partner regional educational laboratories assembled three types of publicly available data: statewide assessment results, number of students tested, and annual measurable objectives.²

Each data type was obtained for the American Indian and Alaska Native student population and for the student population as a whole (except annual measurable objectives, which are the same for all groups). Proficiency rates on the statewide tests came from the Consolidated State Performance

Report (CSPR; see state education agency entries in reference list). If the CSPR data were not available or incomplete or a number appeared to be a probable transcription error, state education agencies were contacted to obtain correct data or to validate the CSPR data. State CSPRs also provided the total number of students who were tested for 2004/05, 2005/06, and 2006/07. For 2003/04, however, CSPRs did not provide counts of students tested, so enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). In addition, annual measurable objectives for each year in each state were obtained from state accountability workbooks (see state education agency entries in reference list).

Analyses

Data analyses occurred in three stages. First, regional educational laboratories staff verified for their respective states whether there had been any changes to standards, assessments, or cutscores over the four years. Red flags for possible changes to investigate were:

- Abrupt changes in the proficiency rates from one year to the next.
- A change in the name of the assessment.
- Warnings on the data reported in the CSPRs.
- Staff knowledge of changes.

Second, academic content area, proficiency rates, and number of students tested were collected for American Indian and Alaska Native students and all other students for each state. Proficiency rates were then computed for other students who were neither American Indian nor Alaska Native by subtracting the number of all proficient students from the number of proficient American Indian and Alaska Native students and then dividing that difference by the difference between the total number of all students tested and the total number of American Indian and Alaska Native students tested.

TABLE B1

Percentage of American Indian and Alaska Native students in all grades and grade 8 for 2006/07 in study states

State	Number of American Indian and Alaska Native students in all grades	Percentage of American Indian and Alaska Native students in all grades	Number of American Indian and Alaska Native students in grade 8	Percentage of American Indian and Alaska Native students in grade 8	Three or four years of continuous data
Alabama	5,944	0.8	546	0.9	Yes (4 years of reading, 3 years of math)
Alaska	35,320	26.6	2,635	25.9	Yes (3 years)
Arizona	59,715	5.6	4,815	6.0	Yes (3 years)
California	48,182	0.8	3,667	0.7	Yes (4 years)
Colorado	9,262	1.2	738	1.2	Yes (4 years)
Florida	7,931	0.3	634	0.3	Yes (4 years)
Hawaii	1,098	0.6	72	0.5	No
Idaho	4,227	1.6	309	1.5	No
Iowa	2,832	0.6	239	0.6	Yes (4 years)
Kansas	7,569	1.6	616	1.8	No
Louisiana	5,228	0.8	405	0.8	Yes (4 years)
Michigan	15,939	0.9	1,256	1.0	No
Montana	16,502	11.4	1,305	11.5	Yes (4 years)
Nebraska	4,940	1.7	373	1.7	Yes (4 years)
Nevada	6,778	1.6	545	1.6	Yes (4 years)
New Mexico	35,786	11.0	2,942	11.6	Yes (3 years)
New York	13,903	0.5	1,047	0.5	No
North Carolina	20,731	1.4	1,560	1.4	Yes (4 years of reading) No (math)
North Dakota	8,355	8.6	724	9.2	Yes (3 years)
Oklahoma	123,133	19.3	9,266	20.1	Yes (4 years)
Oregon	11,757	2.1	925	2.2	No
South Dakota	12,894	10.6	993	10.4	Yes (4 years)
Texas	15,832	0.3	1,346	0.4	Yes (4 years)
Utah	7,949	1.5	620	1.6	Yes (4 years)
Wisconsin	12,822	1.5	1,013	1.5	Yes (4 years)
Wyoming	3,020	3.5	243	3.6	No
Total	497,649	1.8	38,834	1.8	
Country	588,953	1.2	45,999	1.2	

Source: Authors' compilation based on data from U.S. Department of Education, National Center for Education Statistics (2008).

Third, figures were created with data arrayed across four years for all 26 states in reading and math, to reveal patterns in the achievement gap between American Indian and Alaska Native students and all other students (appendixes D and E). Any changes in standards, assessments,

or cutscores—confirmed through the state accountability workbooks, state education agency web sites, or phone calls to state education agency staff—are noted on the figures. When a change was documented for a particular state and subject, the data from the years before the change were

not compared with the data from later years. Any changes in standards, assessments, or cutscores were indicated by vertical bars on the figures in appendixes D and E. Annual measurable objectives were added to the figures to visually compare them with the proficiency rate data points.

Limitations of the study

The study has several limitations. First, it is descriptive. The findings document only the presence of achievement gaps and the direction of changes over three or four years; they cannot explain why a gap exists or offer solutions.

Second, the assessment results are not comparable across states. Differences in state content standards and difficulty levels are well documented (U.S. Department of Education, National Center for Education Statistics 2007b). Thus, the focus is on state-specific analyses. Because these assessments focus on state-specific academic standards, the analyses in this report are critical to state policy. Also, 9 of the 26 states made changes in their tests, preventing annual comparison in one or both subjects.

Third, because not all 50 states are in the study, findings do not reflect a nationally representative sample. However, the 26 states included represent 84.4 percent of the grade 8 American Indian and Alaska Native students attending public schools in the country, and results from these states will broaden the state policy discussion and implications of the findings.

Fourth, although mentioned in the CCSSO network goals, Native Hawaiian students were excluded from the analyses because only Hawaii disaggregated academic achievement data for Native Hawaiian students. The remaining states aggregated these

students with other Asian and Pacific Islander students. The study thus focused only on findings for American Indian and Alaska Native students.

Fifth, Common Core of Data enrollment numbers were used for 2003/04 in place of actual numbers of students tested (as in the subsequent years), which were not available for 2003/04. This might bias the findings. However, comparing the Common Core of Data's American Indian and Alaska Native student enrollment rate in 2004/05 with the enrollment rate calculated using CSPR counts of math test participants for the same year in the seven states with an American Indian and Alaska Native enrollment rate of more than 5 percent showed a 0.2 percentage point or smaller difference in such rates in five states and a 0.4 and 2.0 percentage point difference in two states. In Oklahoma, the state with the largest difference (19.8 percent using Common Core of Data and 17.8 percent using the CSPR), using the CSPR rate changed the calculation of the proficiency rate of all other students by only 0.1 percentage point (69.9 percent using the CSPR counts and 70 percent using the Common Core of Data counts).

And finally, since American Indian and Alaska Native students make up a greater proportion of students with severe cognitive disabilities than other student subgroups do, American Indian and Alaska Native students might be exempted from testing at a higher rate than other students. However, only 1 percent of students can be excluded, and even with high representation of American Indian and Alaska Native students, the proportion who could be exempted is still small. For example, in Alaska the percentage of students receiving services for such disabilities under the Individuals with Disabilities Education Act is less than 1 percent for both American Indian and Alaska Native students and all other students.

APPENDIX C**TABLE OF STATE ASSESSMENT PROGRAM WEB ADDRESSES**

Table C1 provides links to online information about the student assessment systems of the 26 states in the study. In addition, the U.S. Department of Education's decision letters on each state's final assessment system under the No Child Left

Behind Act can be found at www.ed.gov/admins/lead/account/nclbfinalassess/index.html. These letters show that each state submitted its assessment systems for evaluation and approval on several elements including technical quality and alignment. They also indicate and describe issues that may have arisen, along with any final approval conditions and terms.

TABLE C1

State assessment programs, 2003/04–2006/07

State	Testing program	Web address
Alabama	Alabama Student Assessment Program (ASAP)	ftp://ftp.alsde.edu/documents/91/Overview%20of%20Alabama%20Student%20Assessment%20Program.pdf
Alaska	Standards Based Assessments (SBA)	www.eed.state.ak.us/tls/assessment/sba.html
Arizona	Arizona's Instrument to Measure Standards (AIMS)	www.ade.state.az.us/standards/AIMS/AIMSInformation.asp
California	Standardized Testing and Reporting (STAR)	www.startest.org/cst.html
Colorado	Colorado Student Assessment Program (CSAP)	www.cde.state.co.us/cdeassess/documents/csap/usa_index.html
Florida	Florida Comprehensive Assessment Test (FCAT)	www.fcat.fldoe.org/
Hawaii	Hawaii State Assessment (HSA)	www.alohahsa.org/
Idaho	Idaho Standards Achievement Test (ISAT)	www.boardofed.idaho.gov/saa/index.asp
Iowa	Iowa Test of Basic Skills (ITBS)	www.education.uiowa.edu/itp/itbs/
Kansas	Kansas State Assessment Program	www.ksde.org/Default.aspx?tabid=420
Louisiana	Louisiana Educational Assessment Program (LEAP)	www.doe.state.la.us/lde/uploads/1703.pdf
Michigan	Michigan Education Assessment Program (MEAP)	www.michigan.gov/mde/0,1607,7-140-22709_31168---,00.html
Montana	Montana Comprehensive Assessment System (MontCAS)	www.opi.mt.gov/assessment/
Nebraska	Nebraska School-based, Teacher Led Assessment and Reporting System (STARS)	www.nde.state.ne.us/Assessment/documents/STARSbooklet.2006.pdf
Nevada	Nevada Proficiency Examination Program (NPEP)	www.nde.doe.nv.gov/Assessment.htm
New Mexico	New Mexico Standards Based Assessment (NMSBA)	www.ped.state.nm.us/AssessmentAccountability/AssessmentEvaluation/index.html
New York	New York State Testing Program (Intermediate School Level)	www.emsc.nysed.gov/osa/elintgen.html
North Carolina	North Carolina End of Grade Tests (EOGS)	www.ncpublicschools.org/accountability/testing/eog/
North Dakota	North Dakota State Assessment	www.dpi.state.nd.us/testing/index.shtm
Oklahoma	Oklahoma Core Curriculum Tests (OCCT)	www.sde.state.ok.us/AcctAssess/core.html
Oregon	Oregon Assessment of Knowledge and Skills (OAKS)	www.oaks.k12.or.us/
South Dakota	South Dakota State Test of Educational Program (Dakota STEP)	www.doe.sd.gov/octa/assessment/dakSTEP/index.asp

(CONTINUED)

TABLE C1 (CONTINUED)

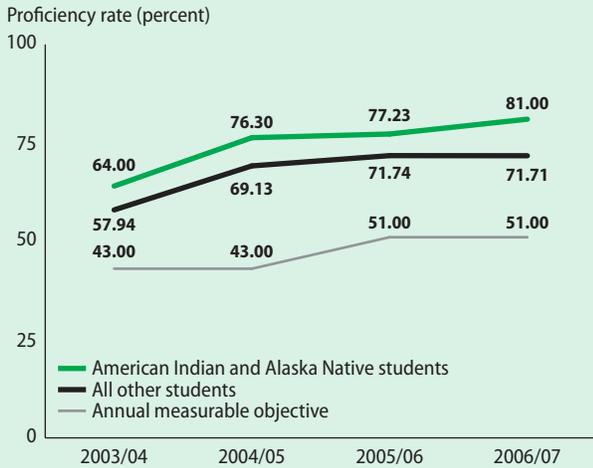
State assessment programs, 2003/04–2006/07

State	Testing program	Web address
Texas	Texas Assessment of Knowledge and Skills (TAKS)	www.ritter.tea.state.tx.us/student.assessment/taks/index.html
Utah	Utah Performance Assessment System for Students (U-PASS)	www.u-pass.schools.utah.gov/u-passweb/
Wisconsin	Wisconsin Knowledge and Concepts Exam (WKCE)	www.dpi.wi.gov/oea/wkce.html
Wyoming	Wyoming Comprehensive Assessment System (WyCAS)	www.k12.wy.us/SA/WyCAS/archive/index.htm

Source: Authors' compilation.

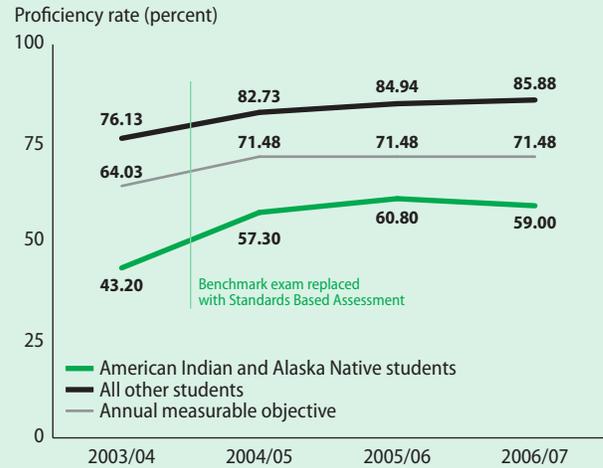
APPENDIX D
READING PROFICIENCY RATES BY
STATE: 2003/04 TO 2006/07

FIGURE D1
Reading proficiency rates on the Alabama Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

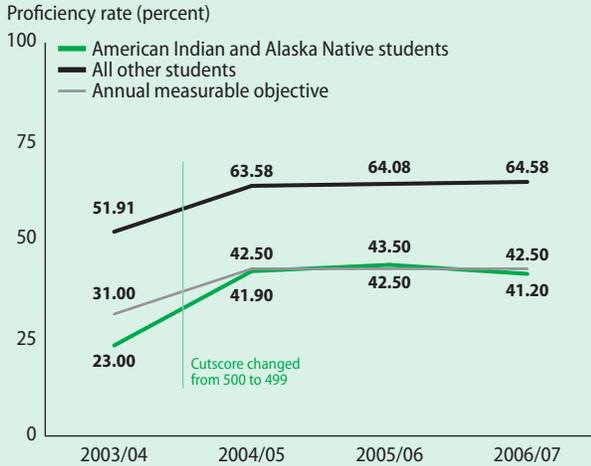
FIGURE D2
Reading proficiency rates on the Alaska Benchmark Exam and Standards Based Assessments for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D3

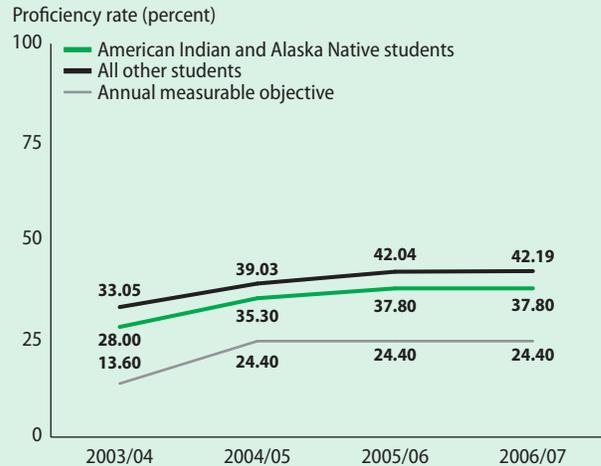
Reading proficiency rates on Arizona’s Instrument to Measure Standards for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR was not available, so proficiency rates from Arizona’s Instrument to Measure Standards reports on the Arizona Department of Education web site (www.ade.az.gov/Profile/PublicView/) and enrollment counts from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D4

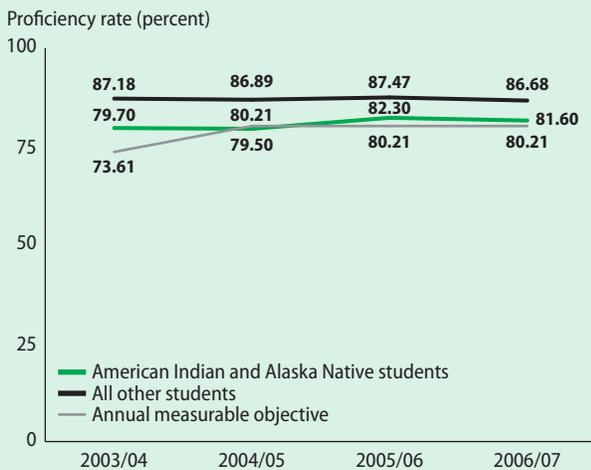
English language arts proficiency rates on the California Standardized Testing and Reporting program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D5

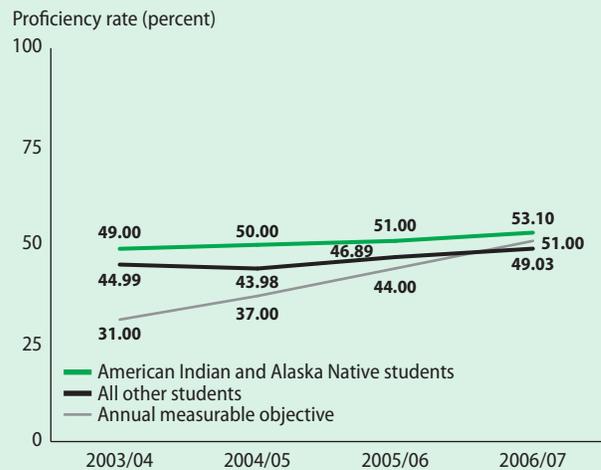
Reading proficiency rates on the Colorado Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D6

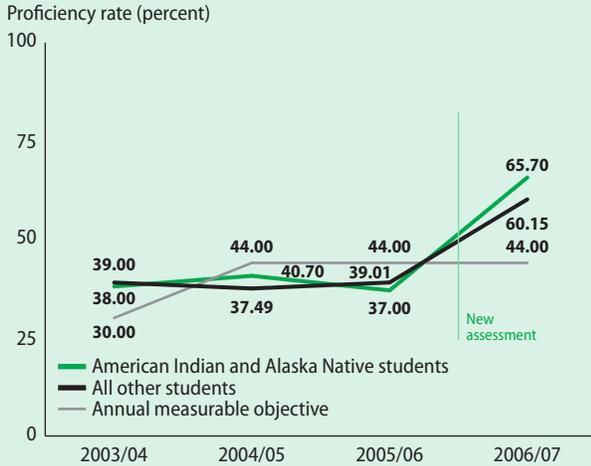
Reading proficiency rates on the Florida Comprehensive Assessment Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D7

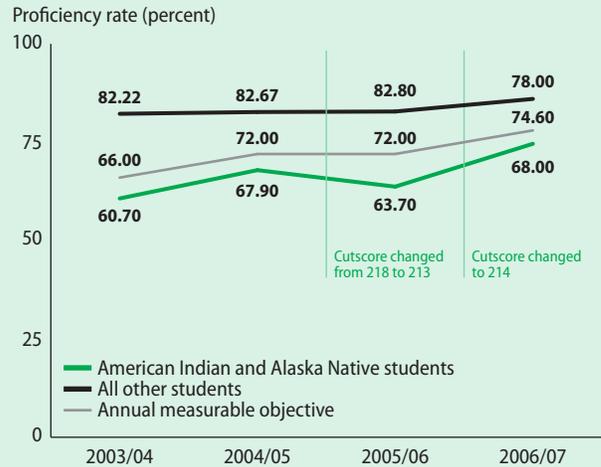
Reading proficiency rates on the Hawaii State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). Information about the 2006/07 assessment change came from Hawai'i Department of Education (2007).

FIGURE D8

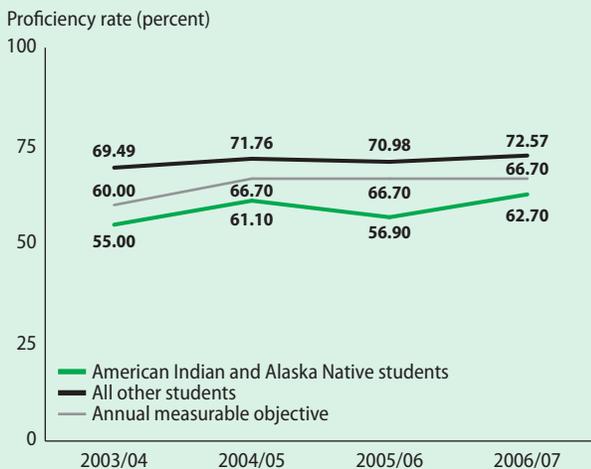
Reading proficiency rates on the Idaho Standards Achievement Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D9

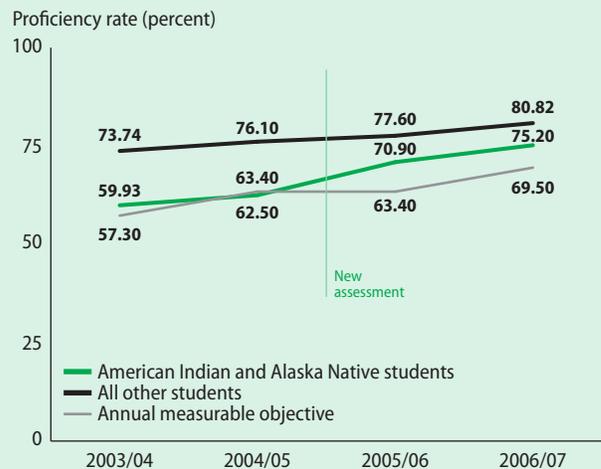
Reading proficiency rates on the Iowa Test of Basic Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). For American Indian and Alaska Native students the proficiency rate reported in the CSPR for that year was also incorrect. The correct rate was obtained from the Iowa Department of Education.

FIGURE D10

Reading proficiency rates on the Kansas State Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D11

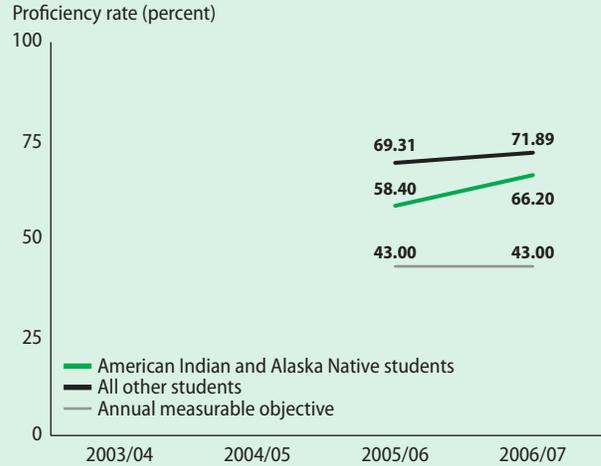
Reading proficiency rates on the Louisiana Educational Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D12

Reading proficiency rates on the Michigan Education Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2005/06–2006/07

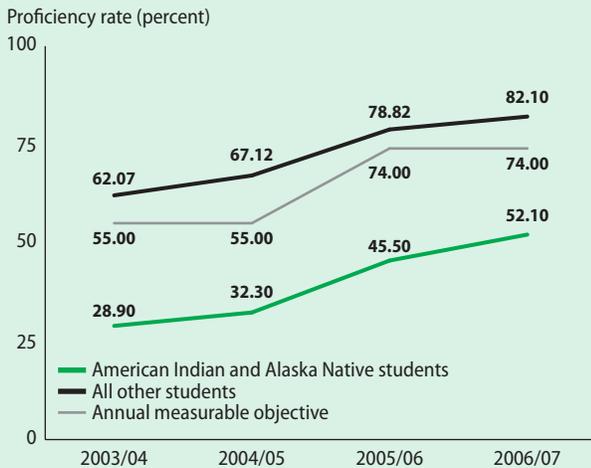


Note: Michigan did not test grade 8 students in reading until 2005/06.

Source: Authors' calculations based on data from Consolidated State Performance Reports.

FIGURE D13

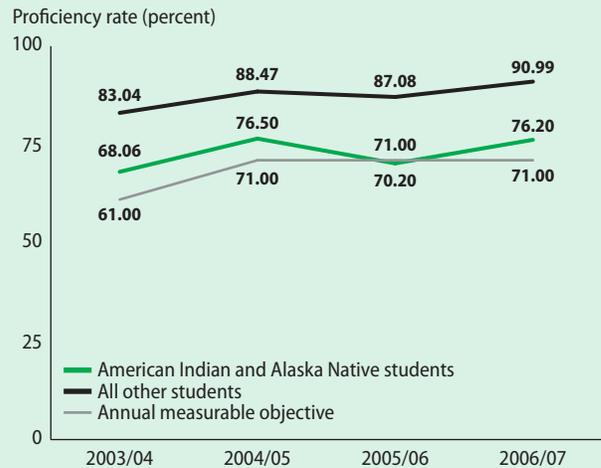
Reading proficiency rates on the Montana Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D14

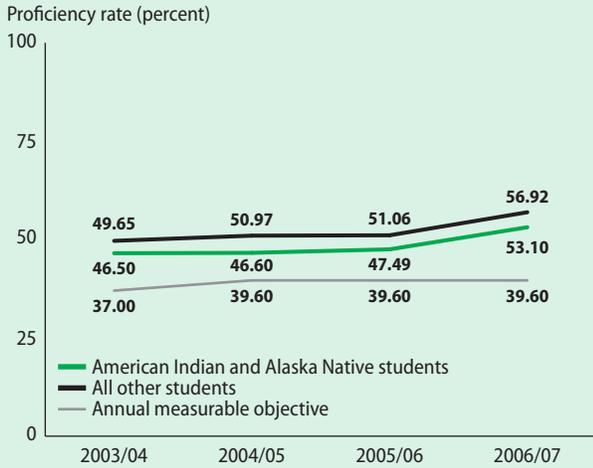
Reading proficiency rates on the Nebraska School-based, Teacher-led Assessment and Reporting System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). The numbers tested for 2005/06 and 2006/07 were based on the number of scores from multiple assessments per student.

FIGURE D15

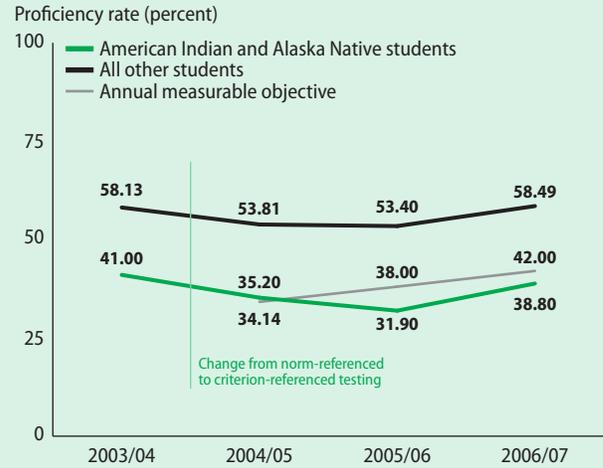
Reading proficiency rates on the Nevada Proficiency Examination Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04 and 2004/05. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). Data for 2004/05 were retrieved from a SchoolDataDirect.org state download file (SchoolDataDirect 2005). Annual measurable objectives are from Nevada's adequate yearly progress technical manual (Nevada Department of Education 2008) rather than the latest accountability workbook.

FIGURE D16

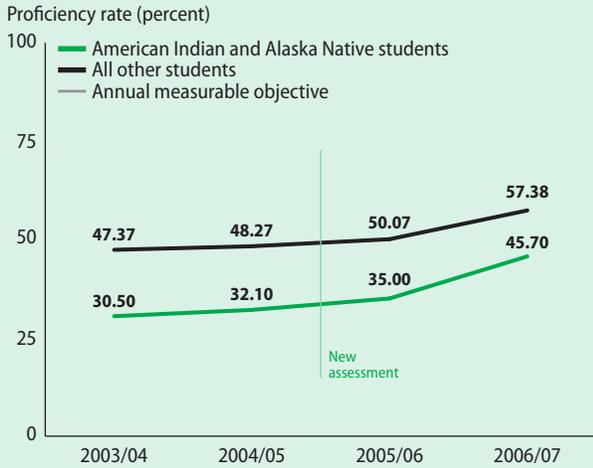
Reading proficiency rates on the New Mexico Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D17

Reading proficiency rates on the New York State Testing Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

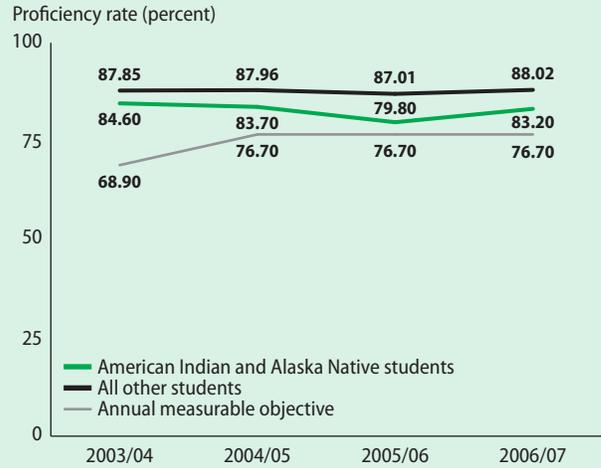


Note: The annual measurable objective is not shown because New York does not set an overall proficiency rate for a subject as its annual measurable objective target.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04 and 2004/05. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). Proficiency rates for 2003/04 and 2004/05 are from the New York State Education Department (personal communication).

FIGURE D18

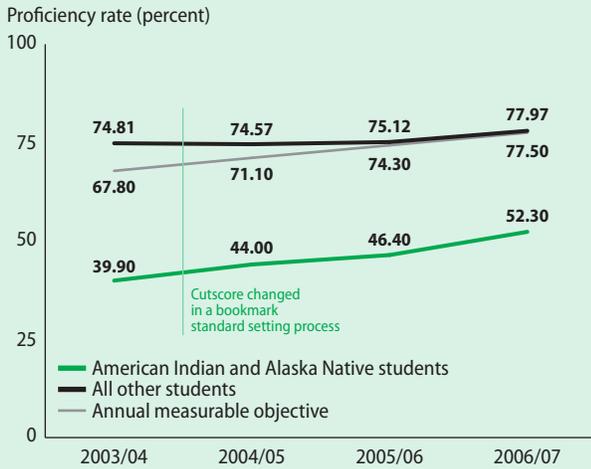
Reading proficiency rates on the North Carolina End of Grade Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D19

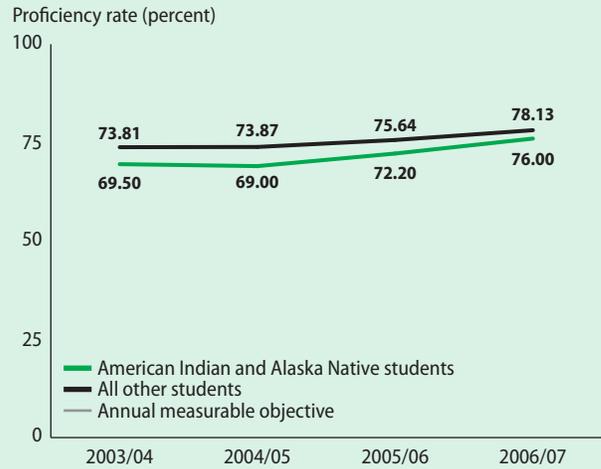
Reading proficiency rates on the North Dakota State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). For information on the 2005 cutscore change see Matzke (2005) and the 2003/04 CSPR (U.S. Department of Education, Office of Elementary and Secondary Education 2004, p. 7).

FIGURE D20

Reading proficiency rates on the Oklahoma Core Curriculum Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

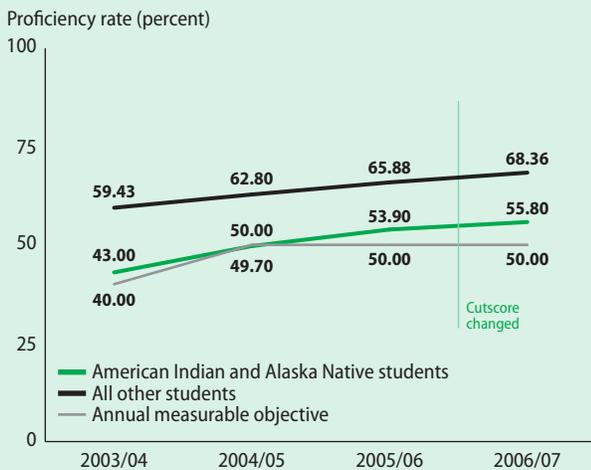


Note: The annual measurable objective is not shown because Oklahoma does not set an overall proficiency rate for a subject as its annual measurable objective target.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D21

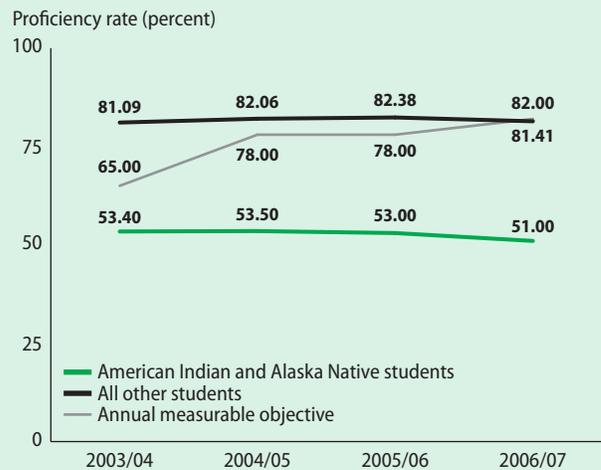
Reading proficiency rates on the Oregon Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D22

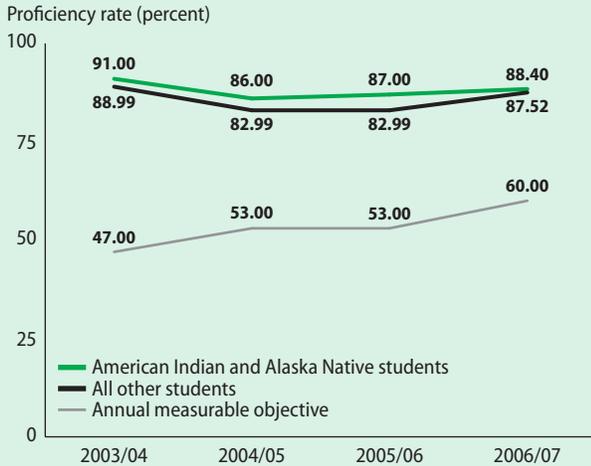
Reading proficiency rates on the South Dakota State Test of Educational Progress for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D23

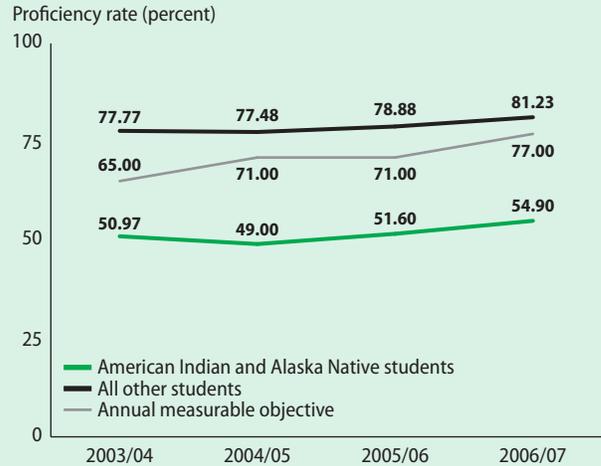
Reading proficiency rates on the Texas Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D24

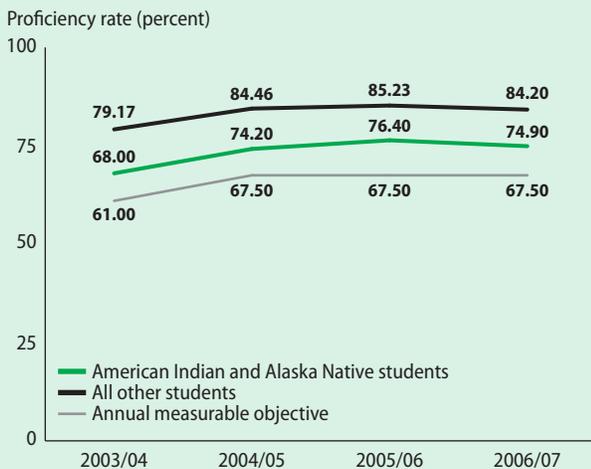
Reading proficiency rates on the Utah Performance Assessment System for Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D25

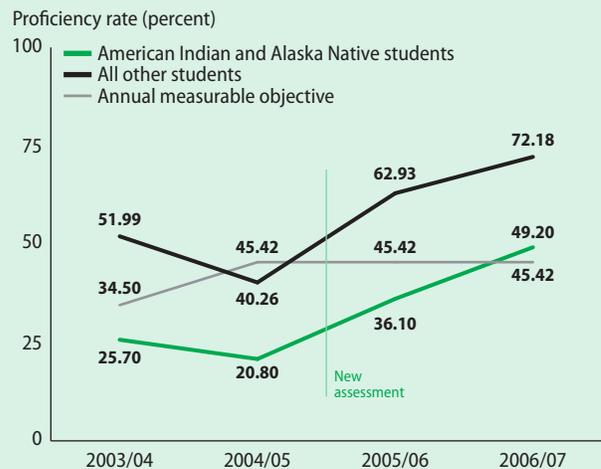
Reading proficiency rates on the Wisconsin Knowledge and Concepts Exam for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE D26

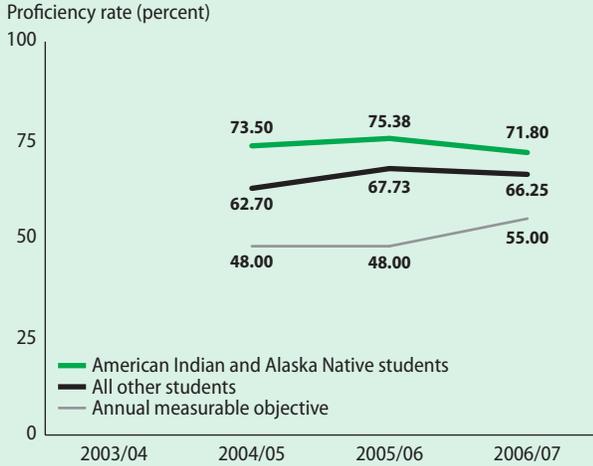
Reading proficiency rates on the Wyoming Comprehensive Assessment System and Proficiency Assessments for Wyoming Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

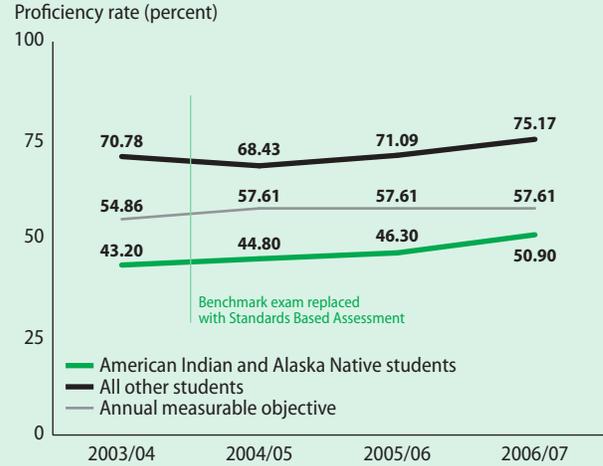
APPENDIX E
MATH PROFICIENCY RATES BY
STATE: 2003/04 TO 2006/07

FIGURE E1
Math proficiency rates on the Alabama Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2004/05–2006/07



Note: Alabama did not test grade 8 students in math until 2004/05.
Source: Authors' calculations based on data from the Consolidated State Performance Reports.

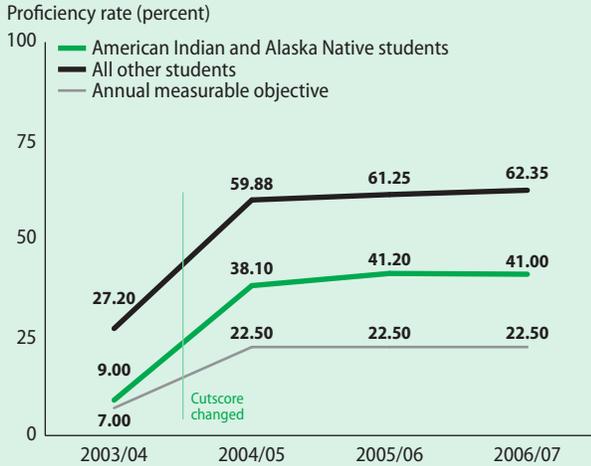
FIGURE E2
Math proficiency rates on the Alaska Benchmark Exam and Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E3

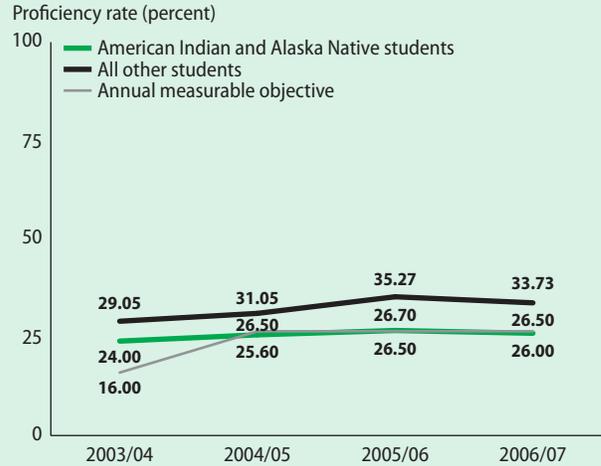
Math proficiency rates on Arizona’s Instrument to Measure Standards for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR was not available, so proficiency rates came from Arizona’s Instrument to Measure Standards reports on the Arizona Department of Education web site (www.ade.az.gov/Profile/PublicView/), and enrollment counts came from the Common Core of Data (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E4

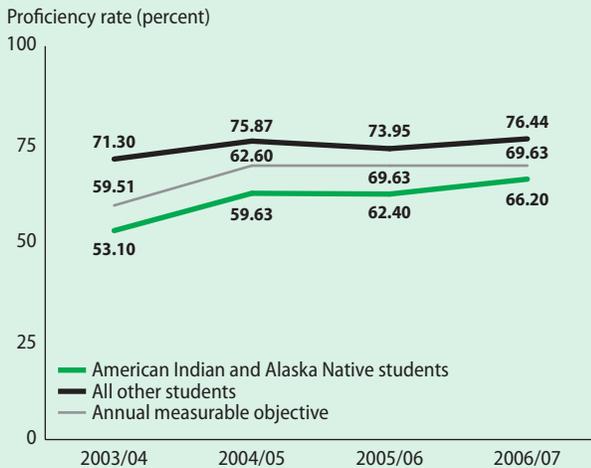
Math proficiency rates on the California Standardized Testing and Reporting program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E5

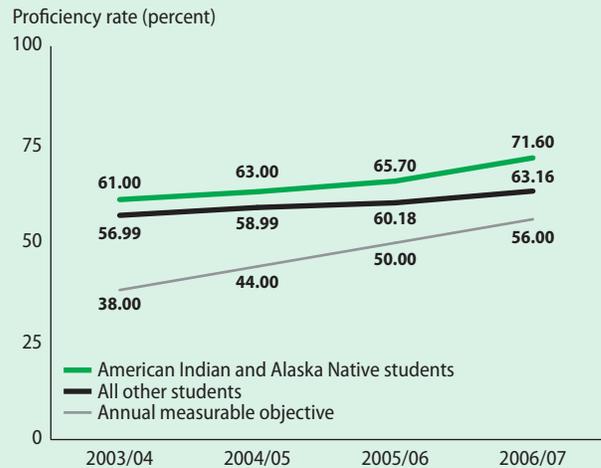
Math proficiency rates on the Colorado Student Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E6

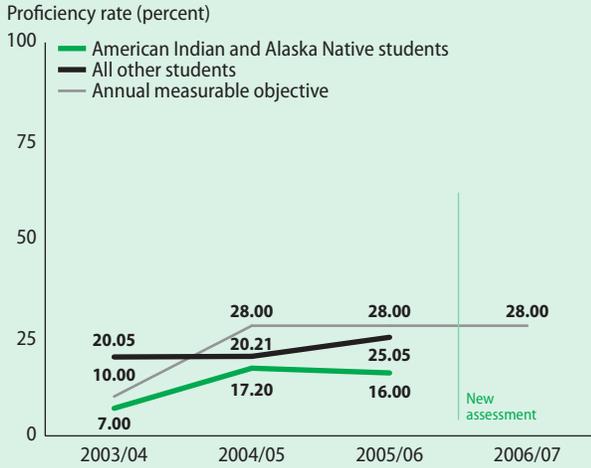
Math proficiency rates on the Florida Comprehensive Assessment Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors’ calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E7

Math proficiency rates on the Hawaii State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

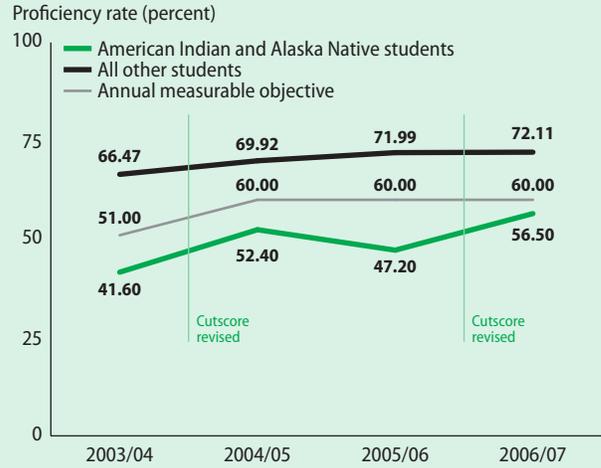


Note: There were no proficiency rates for 2006/07 because the number of American Indian and Alaska Native students tested was below the minimum subgroup size.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E8

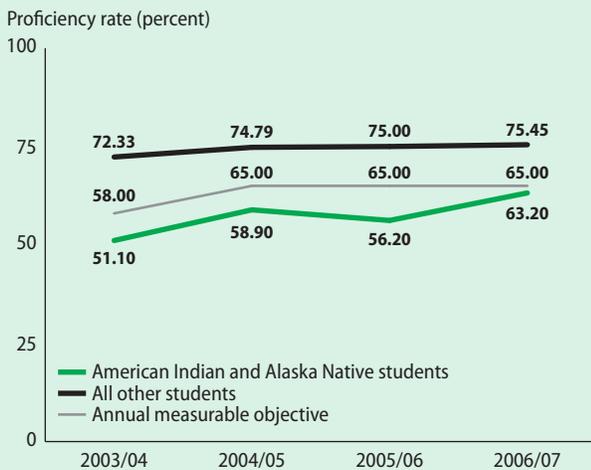
Math proficiency rates on the Idaho Standards Achievement Test for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E9

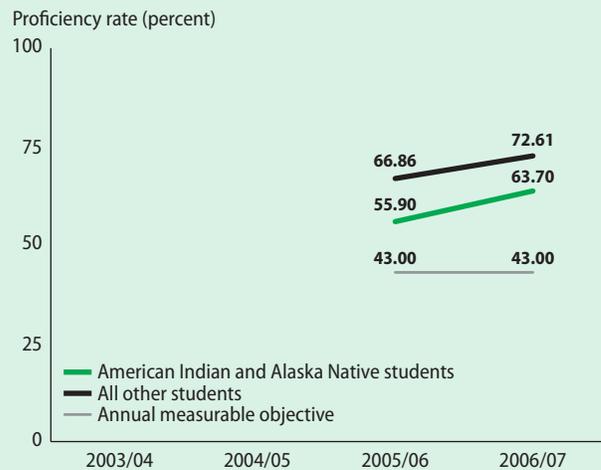
Math proficiency rates on the Iowa Test of Basic Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E10

Math proficiency rates on the Kansas State Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2005/06–2006/07

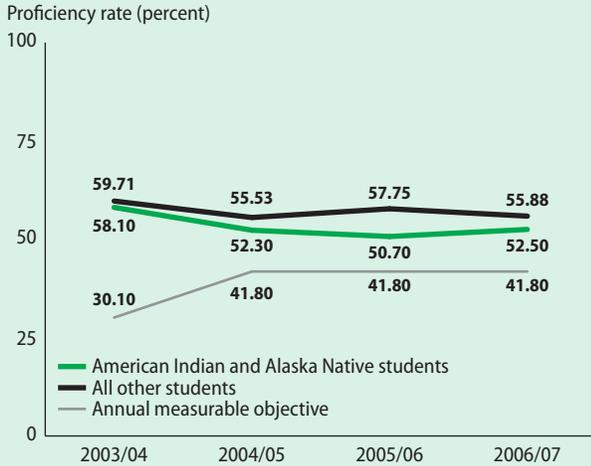


Note: Kansas did not test grade 8 students in math until 2005/06.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E11

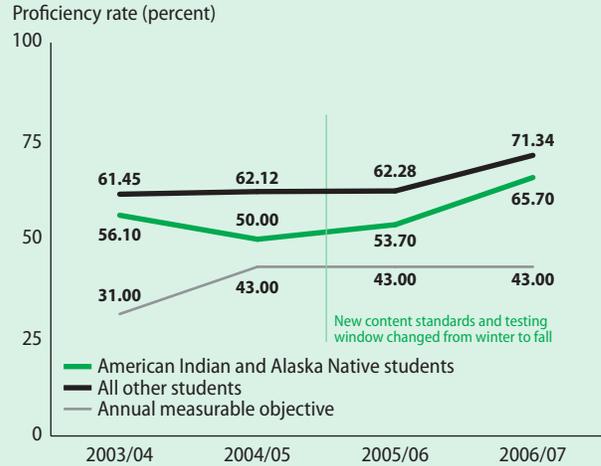
Math proficiency rates on the Louisiana Educational Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E12

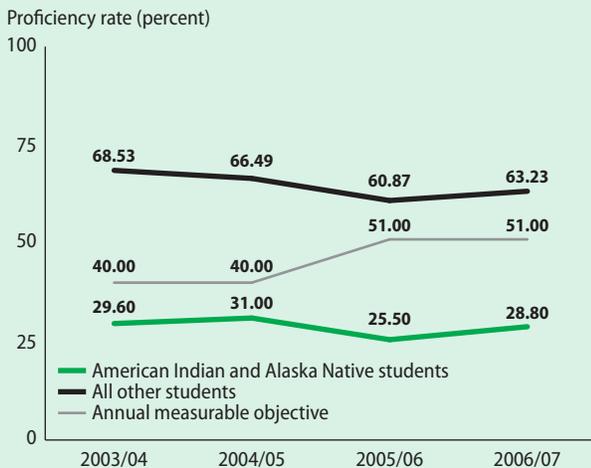
Math proficiency rates on the Michigan Education Assessment Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E13

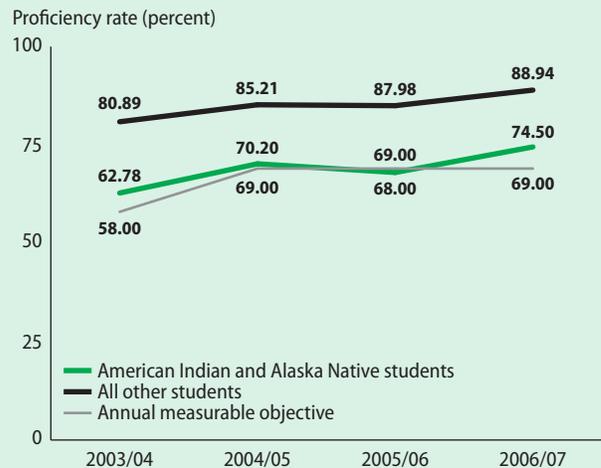
Math proficiency rates on the Montana Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E14

Math proficiency rates on the Nebraska School-based, Teacher-led Assessment and Reporting System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

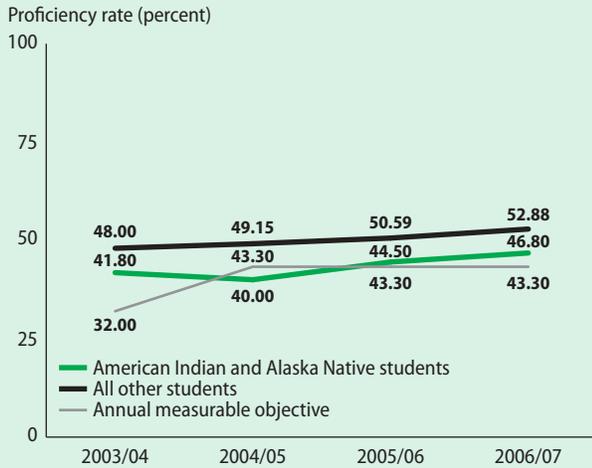


Note: The numbers tested for 2005/06 and 2006/07 were based on the number of scores from multiple assessments per student.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E15

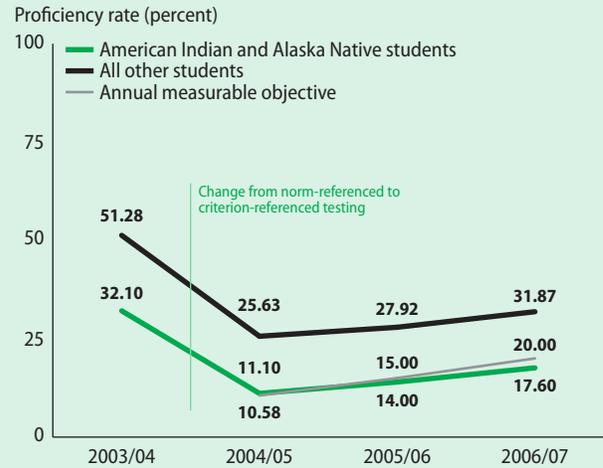
Math proficiency rates on the Nevada Proficiency Examination Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04 and 2004/05. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). Data for 2004/05 were retrieved from a SchoolDataDirect.org state download file (SchoolDataDirect 2005). Annual measurable objectives are from Nevada's adequate yearly progress technical manual (Nevada Department of Education 2008) rather than the latest accountability workbook.

FIGURE E16

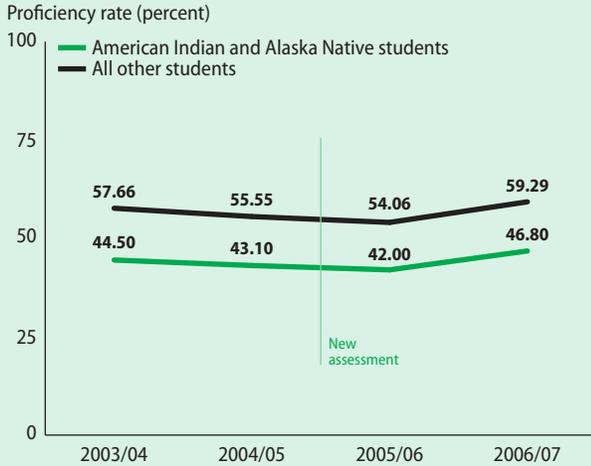
Math proficiency rates on the New Mexico Standards Based Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E17

Math proficiency rates on the New York State Testing Program for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

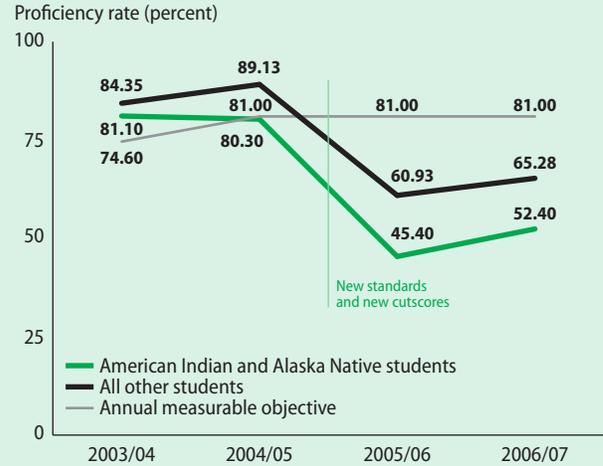


Note: The annual measurable objective is not shown because New York does not set an overall proficiency rate for a subject as its annual measurable objective target.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04 and 2004/05. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). Proficiency rates for 2003/04 and 2004/05 come from New York State Education Department (personal communication).

FIGURE E18

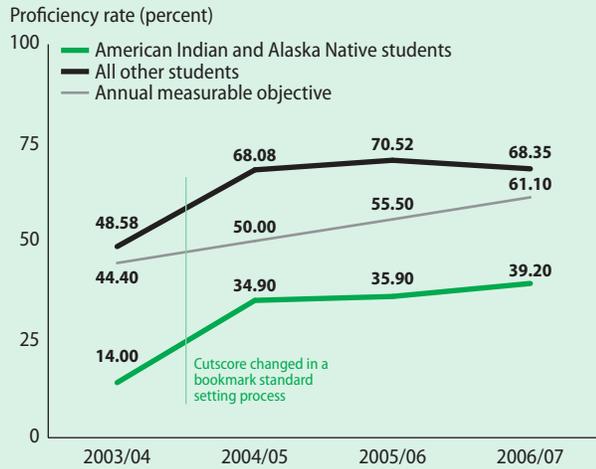
Math proficiency rates on the North Carolina End of Grade Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E19

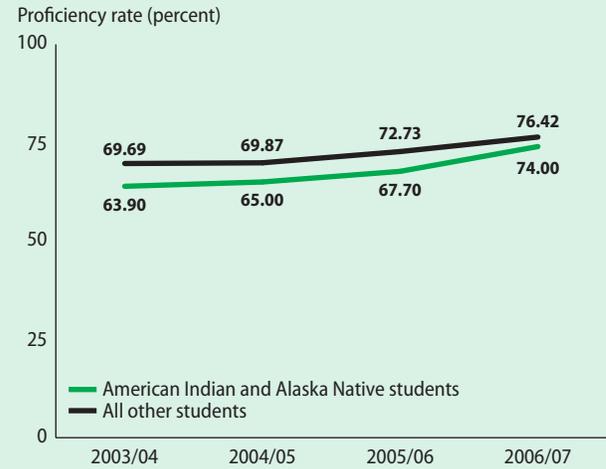
Math proficiency rates on the North Dakota State Assessment for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008). For information on the 2005 cutscore change see Matzke (2005) and the 2003/04 CSPR (U.S. Department of Education, Office of Elementary and Secondary Education 2004, p. 7).

FIGURE E20

Math proficiency rates on the Oklahoma Core Curriculum Tests for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07

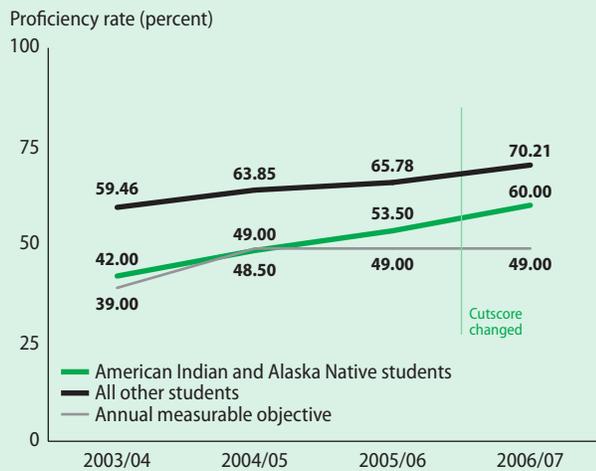


Note: The annual measurable objective is not shown because Oklahoma does not set an overall proficiency rate for a subject as its annual measurable objective target.

Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E21

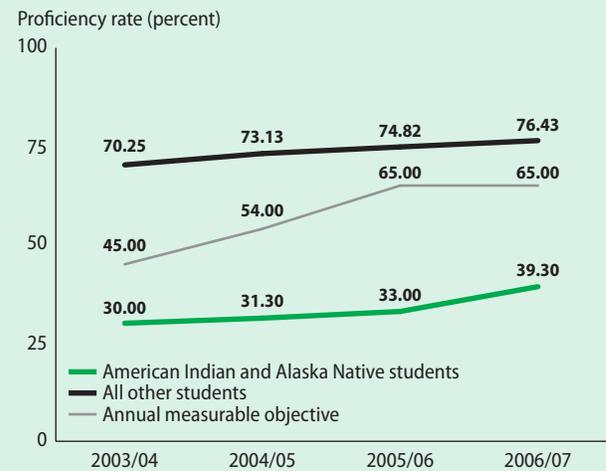
Math proficiency rates on the Oregon Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E22

Math proficiency rates on the South Dakota State Test of Educational Progress for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E23

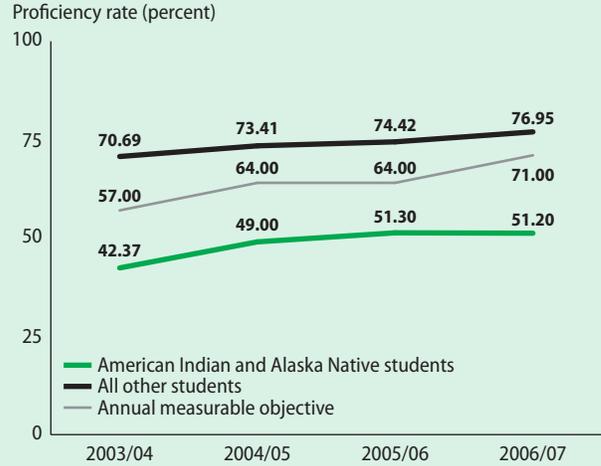
Math proficiency rates on the Texas Assessment of Knowledge and Skills for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

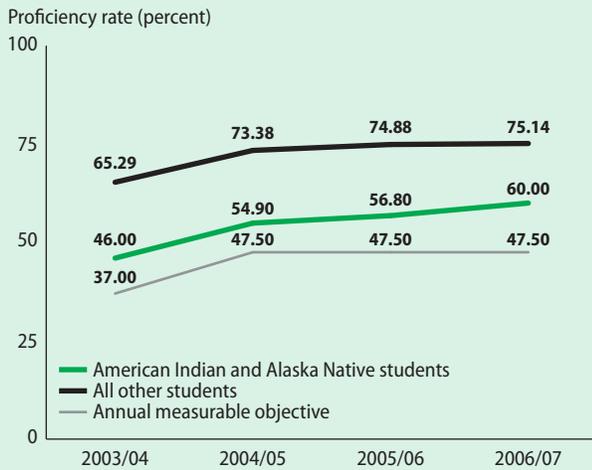
FIGURE E24

Math proficiency rates on the Utah Performance Assessment System for Students for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



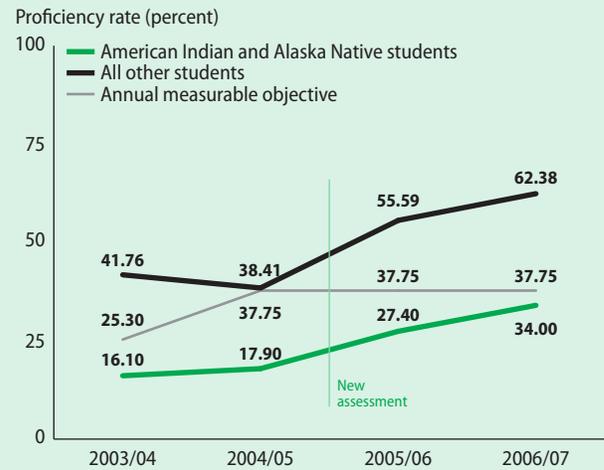
Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead place of these counts (U.S. Department of Education, National Center for Education Statistics 2008). For 2004/05 the count of all students tested was incorrect in the CSPR; the correct value was found on the state education agency web site www.schools.utah.gov/assessment/documents/Results_CRT_State_By_Grade_05-07.pdf.

FIGURE E25
Math proficiency rates on the Wisconsin Knowledge and Concepts Exam for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

FIGURE E26
Math proficiency rates on the Wyoming Comprehensive Assessment System for grade 8 American Indian and Alaska Native students and for all other grade 8 students, 2003/04–2006/07



Source: Authors' calculations based on data from the Consolidated State Performance Reports (CSPRs), except for 2003/04. The 2003/04 CSPR did not include counts of students tested, only the percent proficient, so student enrollment data from the Common Core of Data were used instead (U.S. Department of Education, National Center for Education Statistics 2008).

NOTES

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1. These accountability plans underlie the accountability systems that generate the data reported in the annual Consolidated State Performance Reports, which provided the proficiency data used in this report. They are also based on a national template that helps to ensure that data generally are comparable between years, though not between states, for each state.
2. See appendix C for additional information on statewide assessment results. Annual measurable objectives are the student proficiency targets that schools, districts, and states must meet under the No Child Left Behind Act. They must meet one proficiency rate for reading and another for math for all students as a group, five racial/ethnic subgroups, and three other subgroups (students eligible for free or reduced-price lunch, limited English proficient students, and students with disabilities; §1116 [b] [2] [G]).

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