

Iowa Achievement Gaps Legislative Report

August 2014

Iowa Department of Education



State of Iowa
Department of Education
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Achievement Gaps Report Requirement

Prepare and submit to the chairpersons and ranking members of the senate and house education committees a report on the state's progress toward closing the achievement gap, including student achievement for minority subgroups, and a comprehensive summary of state agency and local district activities and practices taken in the past year to close the achievement gap.

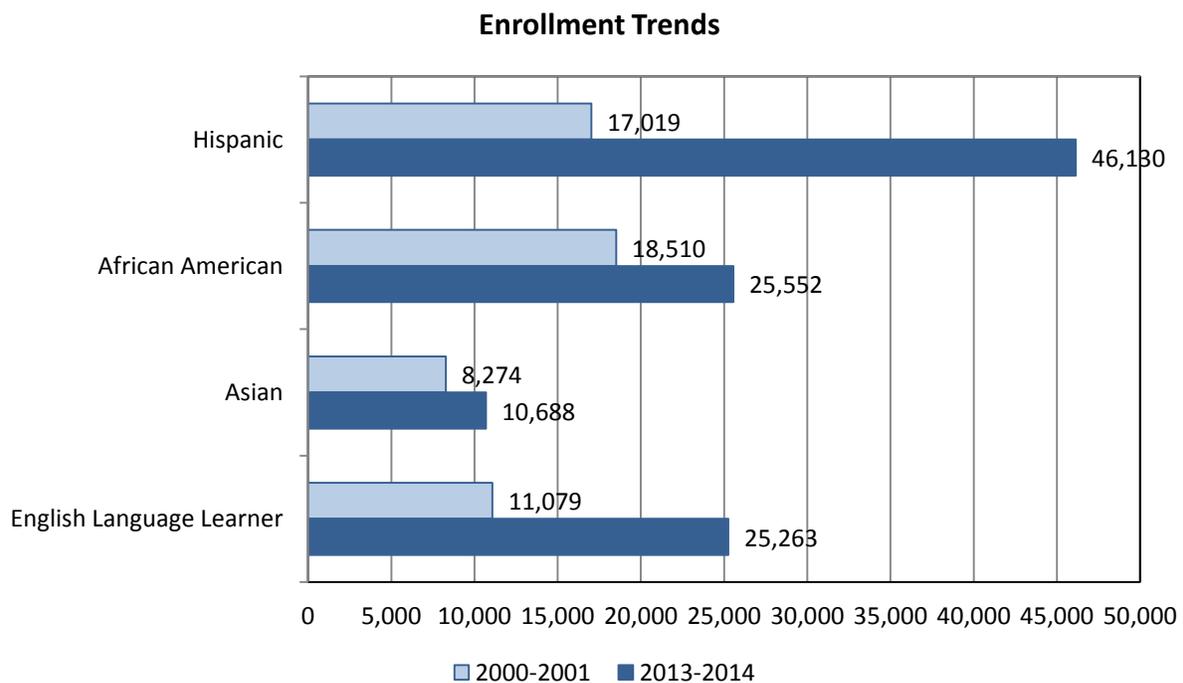
Executive Summary

Achievement gaps occur when one group of students outperforms another group and the difference in average scores for the two groups is meaningfully significant. The gaps between race/ethnicity and socioeconomic subgroups are not unique to Iowa, and other states are also struggling to find answers to close these gaps. Countless studies have documented these disparities and investigated the many underlying reasons for them, but still they persist. The National Assessment on Educational Progress (NAEP) reports on the Hispanic-White achievement gap and the Black-White achievement gap using NAEP scores in mathematics and reading for these groups to illuminate patterns and changes in these gaps over time. These reports can be read in their entirety at <http://nces.ed.gov/nationsreportcard/studies/gaps/>. This analysis focuses on fourth grade reading and eighth grade mathematics in order to provide an in-depth evaluation of the achievement gap using a consistent set of information. The data in this report comes from NAEP, the Iowa Assessments, and ACT. No matter which of these indicators is used, the report is the same: Unacceptable achievement gaps persist in reading and mathematics in Iowa's schools.

Enrollment Trends

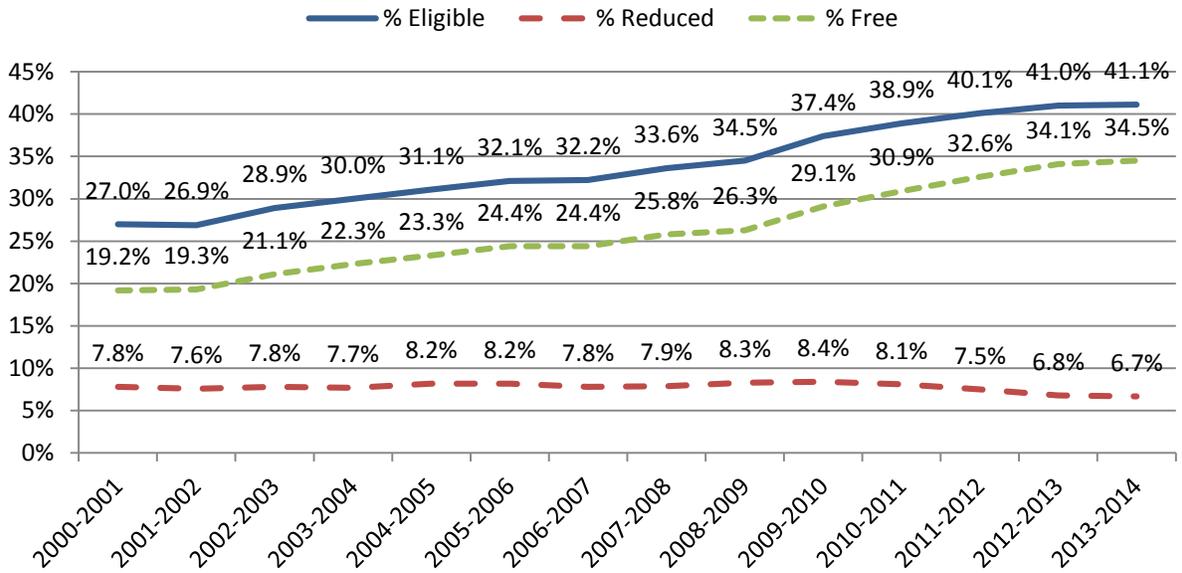
Iowa continues to see increases in the number of students who come from diverse backgrounds, live in poverty, and don't speak English as their native language. In October 2013, 21.1 percent of Iowa students were racial or ethnic minorities. This compares with approximately 10 percent of Iowa students who were minorities in 2000. Overall, this is a 108 percent increase in minority students over the 14 year period.

In examining individual group differences, the largest gains can be found in the number of Hispanic and African American students in Iowa schools. There are approximately 30,000 more Hispanic students today than during the 2000-2001 school year. At the same time, significant increases can also be found in the number of students participating in English Language Learner programs in Iowa. The growing size of the Hispanic population in Iowa and the percentage of elementary Hispanic students that are English language learners underlie the achievement gap between Hispanic and white students.



The percentage of students who are eligible for free-or-reduced priced lunch continues to increase in Iowa schools. While the percentage of students who are eligible for reduced priced lunch has maintained approximately the same levels over the past 14 years, the percentage of students eligible for free priced lunch has significantly increased. This suggests that more students in Iowa schools face economic challenges than ever before.

Percent of Students Eligible for Free or Reduced Priced Lunch 2000-01 to 2013-14



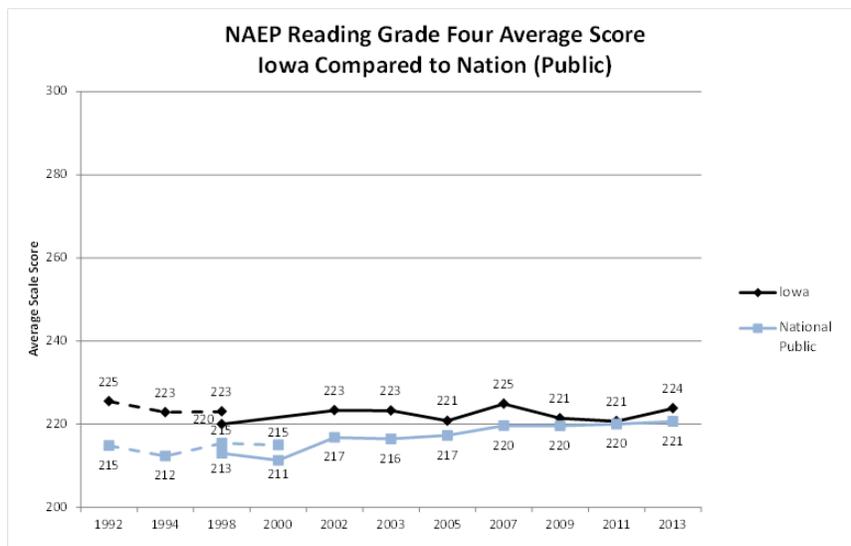
While the overall population of Iowa students is changing, it is important to consider these trends in relation to student achievement.

Reading

In November 2013, the US Department of Education released the most recent results from NAEP. These results show recent gains in reading in grades four and eight as well as mathematics grade four from 2011 to 2013. While on the face of it, a significant increase in student achievement is certainly good news for Iowa districts, long-term trends show overall flat results in these same grades and content areas.

NAEP reading in grade four is scored on a 0 to 500 point scale. In 2013, the average reading score for fourth-grade students in Iowa was 224. This was higher than the nation's public schools (221). The average score for students in Iowa in 2013 (224) was not higher than that in 1992 (225), but was higher in 2011 (221).

The overall trend for Iowa reading grade four has been consistently flat. The 2013 results indicate that a new upward trend may be emerging, but it is too soon to be sure. Data trends should not be defined without consistency in at least three different assessment points.

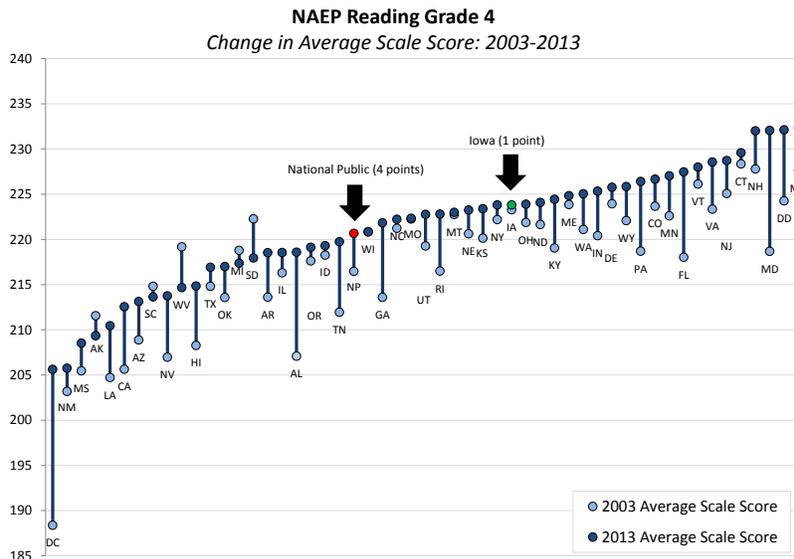


Note: Dashed lines represent assessments where accommodations were not permitted.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011 and 2013 Mathematics Assessments.

The National Assessment of Educational Progress (NAEP) is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas. Since NAEP assessments are administered uniformly across the nation, NAEP results serve as a common metric for all states. The assessment stays essentially the same from year to year, with only carefully documented changes. This permits NAEP to provide a clear picture of student academic progress over time.

Iowa students have participated in NAEP since it began in the early 1970's. When state results became available in the early 1990's Iowa participated along with over 40 other states in reading at grade four and mathematics at grades four and eight. With the reauthorization of the Elementary and Secondary Education Act (ESEA) in 2002 all states were required to participate in NAEP.

In 2013, the average reading score for fourth-grade students in Iowa (224) was one point above the average score in 2003 (223). This difference was not statistically significant. At the same time, the average for the nation's public schools grew by seven points. There is a positive upward trend overall for the nation. The top performing jurisdictions, Massachusetts and Department of Defense Schools both grew by a significantly larger amount than Iowa did, five and eight points, respectively. Many states, Florida (218), for example, scored below Iowa in 2003, but made large gains (9.4) and scored significantly higher (227.5) than Iowa in 2013.



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, 2009, 2011 and 2013 Reading Assessments.

While the 2013 NAEP grade four reading results brought considerable good news for Iowa schools. Two troubling issues remain. First, Iowa white students continue to score below the nation's white students, and second, large gaps remain between race/ethnic groups and between students who are eligible for free or reduced price lunch and their more affluent peers. Eighty percent of the students assessed by NAEP 2013 in grade four reading were white. White students in twenty states significantly out-performed Iowa's white students. The national average for white students (231) was also significantly greater than the mean score in Iowa (227). In only two states, West Virginia (215) and Mississippi (222), did white students perform significantly below Iowa's white students.

About NAEP Participants

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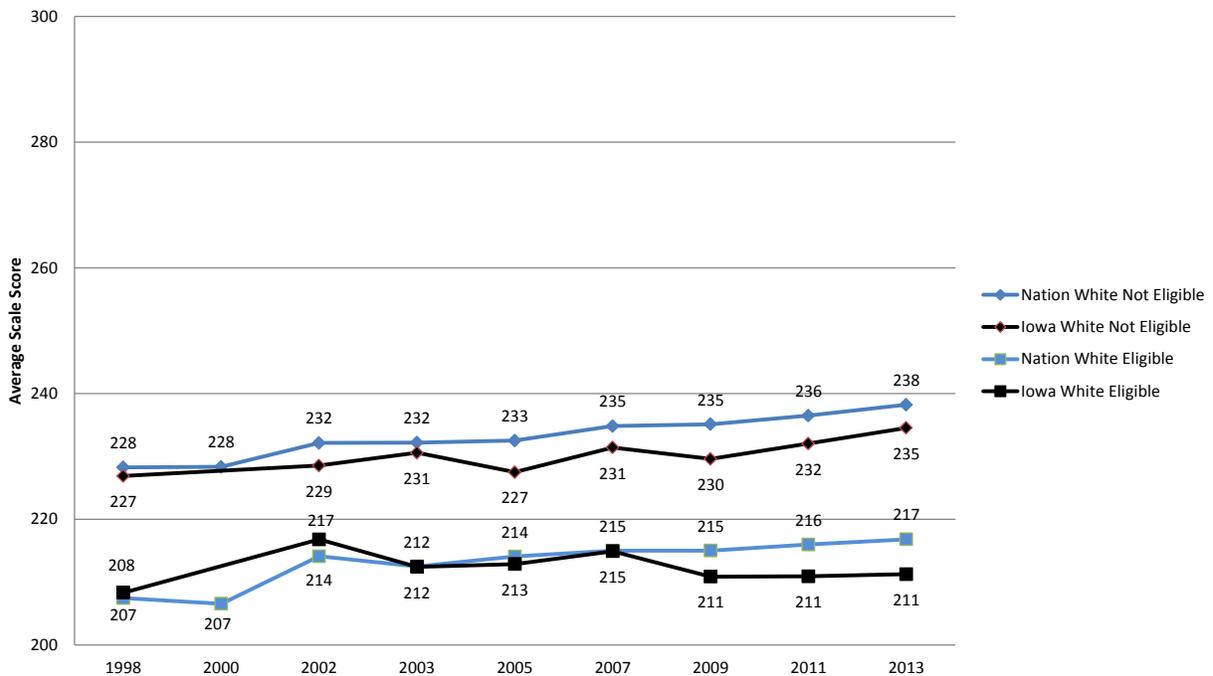
Since 2003 Iowa has been intentionally inclusive for students with disabilities and English language learners. During the earliest years of state NAEP the assessments were given without accommodations for students with disabilities or students who were English language learners. Beginning in 1996 and after much study accommodations were made available for students who take NAEP. The percent of student identified as having disabilities assessed in Iowa increased significantly from 2003 (9 percent) to 2013 (13 percent). About 12 percent of the Iowa students assessed in 2013 were students identified as students with disabilities, four percent were identified as English language learners, and one percent had both designations.

Similarly the percent of students who are eligible for free or reduced price lunch has increased over time. In 1998, the first year the demographic was recorded, 28 percent of Iowa's assessed students were eligible for free or reduced price lunch. In 2013, the percentage increased to 39 percent.

From 1998, the first year the subgroup was reported, white students not eligible for free or reduced price lunch in Iowa have scored below their white peers in the national public schools overall. However, during the last four years, Iowa's white more affluent students have begun to close the gap. In 2009, Iowa's white more affluent students scored five points below their national counterparts. In 2013, this gap closed to three points with both Iowa student's and the nation's improving significantly.

White students eligible for free or reduced price lunch have also scored similar to or below their national peers since 1998. The score for these Iowa students has been stagnant at 211 for the last four years while their national counterparts have improved slightly, but significantly by two points.

**NAEP Reading Grade 4 White Students Only
Iowa and Nation (Public)**



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998, 2000, 2002, 2003, 2005, 2007, 2009, 2011 and 2013 Reading Assessments.

Achievement gaps occur when one group of students outperforms another group and the difference in average scores for the two groups is statistically significant (that is, larger than the margin of error). In 2013, white students in Iowa had an average scale score that was higher than the average scores of black and Hispanic students, but not significantly different from the average score of Asian/Pacific Islander students. Even with changes in the racial/ethnicity of the students assessed on NAEP, this gap in achievement has continued from the first time Iowa NAEP results were reported for these subgroups.

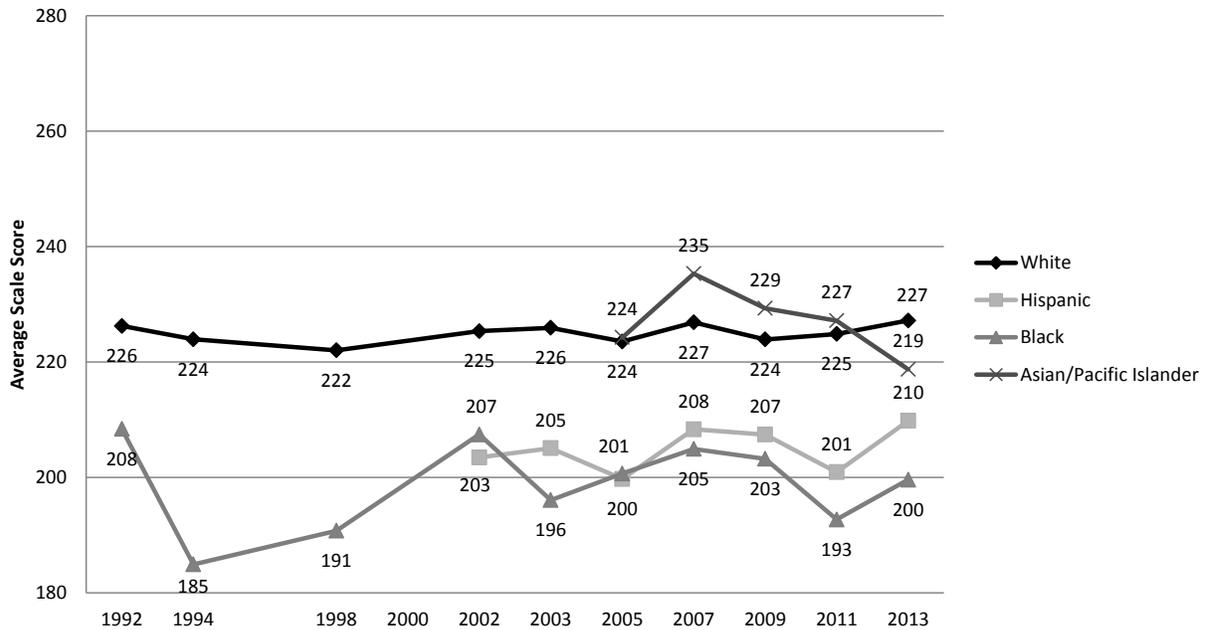
Percent of Assessed Students by Race/Ethnicity NAEP Reading Grade 4

Year	White	Black	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native	Two or more races
2013	80%	5%	8%	3%	< 1%	3%
2011	80%	6%	9%	2%	< 1%	2%
2009	84%	6%	7%	2%	1%	< 1%
2007	86%	5%	6%	2%	< 1%	< 1%
2005	85%	5%	6%	2%	1%	1%
2003	87%	5%	5%	2%	1%	< 1%
2002	88%	5%	4%	2%	1%	< 1%
1998	91%	4%	2%	2%	< 1%	< 1%
1994	94%	3%	2%	1%	< 1%	< 1%
1992	93%	3%	2%	2%	< 1%	< 1%

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, 2002, 2003, 2005, 2007, 2009, 2011 and 2013 Reading Assessments.

Because the Black, Hispanic and Asian/Pacific Islander student groups are smaller than the white student group, the associated standard errors are larger. This means that their scores will fluctuate more than their white counterparts. Even when this variation is taken into account, the gaps remain large, consistent, and unacceptable.

NAEP Reading Grade 4 Iowa Score by Race/Ethnicity



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) Reading Assessments.

The gaps were also examined by excluding students who are identified as having a disability, English language learners, or both. Seventeen percent of the black students assessed were identified as having a disability and twelve percent were English language learners. Seven percent of Hispanic students were identified as having a disability, thirty-four percent as English language learners, and seven percent were identified as both. One notable difference identified is that the gap between white and Hispanic students closes from 17 points to about eight points with non-identified white students scoring 234 and non-identified Hispanic scoring 226. The gap for non-identified white (234) and non-identified black students (212) remains large (22).

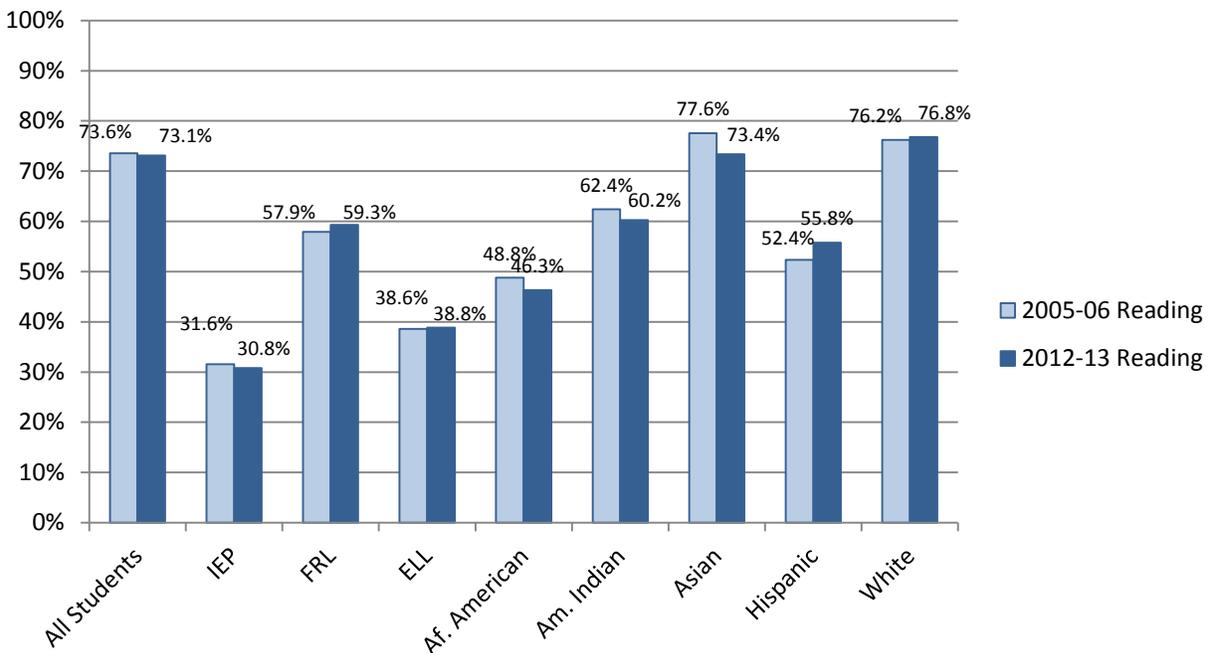
Poverty also tends to exacerbate the achievement gap. There is a large socioeconomic gap between race/ethnicities in Iowa. Income inequality and in the increasing correlation of income with other family resources means that family resources have become increasingly unequal. Trend studies show that poor students enter the K-12 public school system behind their more affluent counterparts, and the gap does not close. Thirty-two percent of white students, assessed on NAEP in Iowa, were identified as eligible for free or reduced price school lunches. Eighty-two percent of their black and seventy-seven percent of their Hispanic classmates were identified as eligible.

While it is important to examine Iowa's achievement results in comparison to national trends, it is also critical to look at multiple measures and triangulate results to draw conclusions about

the achievement gap for Iowa students. The results from student scores from the Iowa Assessment provide another source of student achievement trends to meet this purpose. Data from the Iowa Assessments were examined over an eight year period between the 2005-06 and 2012-13 school years. For analytical purposes, student groups were collapsed across multiple grade levels to examine the subgroups as a whole in comparison to each other.

There are multiple ways to examine the achievement gap between groups. In this chart, the achievement of subgroups is compared to the all student group using the Iowa Assessments. Overall, achievement for all students in the state was down slightly from 2005-06 to 2012-13 (-0.5 percent). At the same time, achievement for Iowa’s white students slightly increased over this same period of time (+0.6 percent). The achievement gaps in reading proficiency show mixed results between subgroups. For example, low socioeconomic students and Hispanic students improved, while African American and American Indian did not.

Reading Proficiency Iowa Assessments 2005-06 to 2012-13



Gaps can also be compared by examining each subgroup’s proficiency rates compared with the remainder of the group. For example, students with disabilities were compared with students that do not have a disability (IEP versus Non-IEP). These comparisons were completed to determine if the gaps between groups increase or decrease over time. The low socioeconomic subgroup improved, but not by enough to close the gap during the next years.

Reading Subgroup Gaps 2005-06 – 2012-13

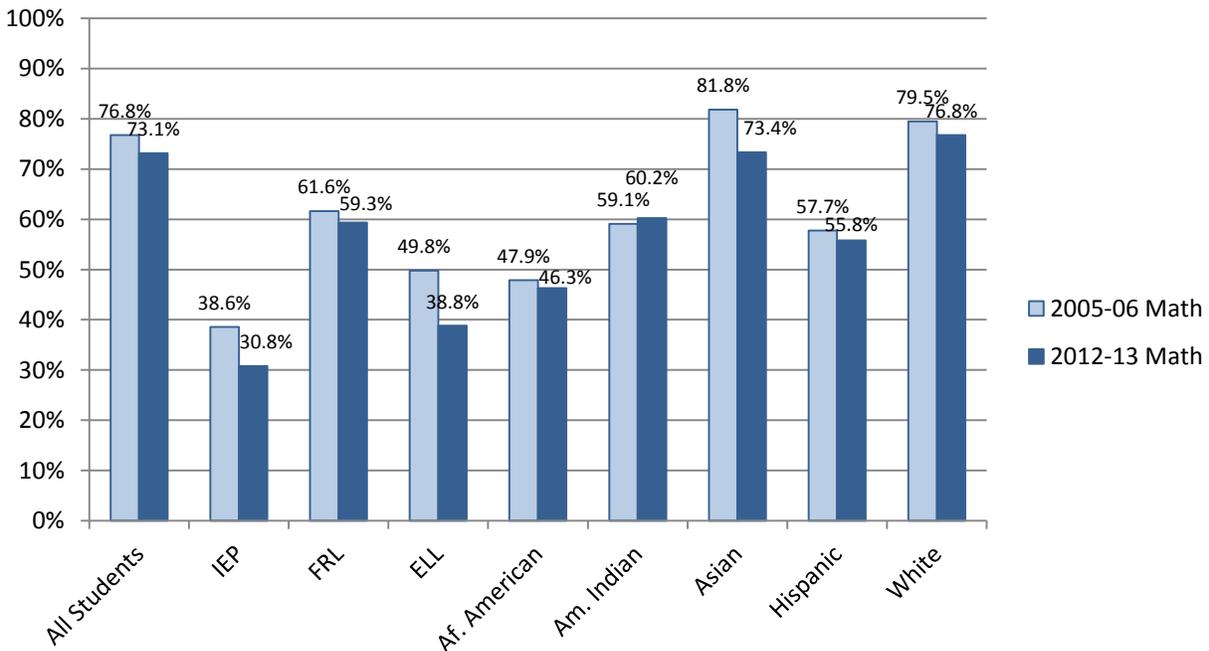
2005-06 Proficiency			2012-13 Proficiency			Change		
IEP	Non-IEP	Gap	IEP	Non-IEP	Gap	IEP	Non-IEP	Gap
31.6%	80.6%	49%	30.8%	79.5%	48.7%	-0.8%	-1.1%	+0.03%

2005-06 Proficiency			2012-13 Proficiency			Change		
FRL	Non-FRL	Gap	FRL	Non-FRL	Gap	FRL	Non-FRL	Gap
57.9%	81.0%	23.1%	59.3%	81.9%	22.6%	1.4%	0.9%	-0.5%

Mathematics

Mathematics skills are foundational for many fields. Once you master the fundamentals of mathematics, you have the basis to build specialized knowledge in STEM (science, technology, engineering and math) and other fields. The results in mathematics in Iowa continue to tell the same story of large and enduring achievement gaps as seen in the reading results. Gaps are shown from the first testing in third grade and persist into high school.

Math Proficiency Iowa Assessments 2005-2006 to 2012-2013



Not mastering the basics of mathematics during the elementary and middle school years before high school means that remediation is needed prior to higher level mathematics courses such as Algebra II. Too many students, especially those in the low socioeconomic, IEP, and racial minority subgroups do not make up the needed skills and opt out of higher level mathematics

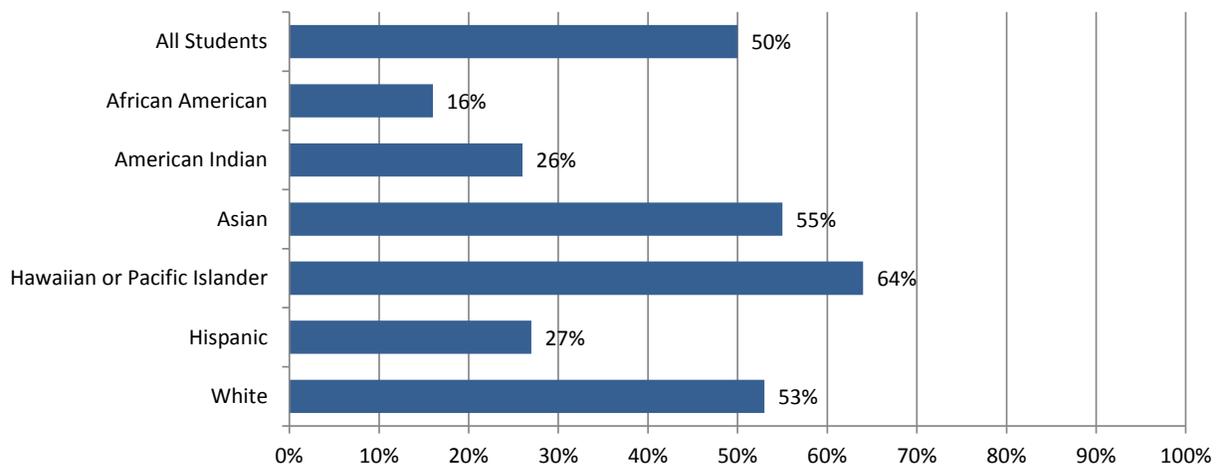
classes. The achievement gap becomes a skills gap as students consider postsecondary opportunities.

NAEP was administered to a representative sample of Iowa grade 12 students in 2013. In addition to performance on an achievement assessment, additional information was collected using an accompanying student survey. One question asked of the second semester seniors was have you or are you currently taking Algebra II. Thirty-one percent of the low socioeconomic students said that they had not and were not taking Algebra II. Seventeen percent of their more affluent counterparts also stated that their high school courses would not include Algebra II. Forty-one percent of Black students and twenty-four percent of Hispanic students reported not taking Algebra II. Nineteen percent of white students said that they did not take Algebra II.

The ACT is a national college admissions examination that consists of subject area tests in English, mathematics, reading, and science. Approximately 66 percent of Iowa's 2013 graduating class completed the ACT assessment. The ACT College Readiness Benchmarks are scores on the ACT subject area tests that represent the level of achievement required for students to have a 50 percent chance of obtaining a B or higher or about a 75 percent chance of obtaining a C or higher in corresponding credit-bearing first-year college courses. Based on a nationally stratified sample, the benchmarks are median course placement values for these institutions and represent a typical set of expectations.

Gaps on the ACT assessment echo the gaps seen in the earlier grades. African American, American Indian, and Hispanic students do not score as well as their counterparts. ACT does not disaggregate results based on socioeconomic status.

Percent of 2013 ACT-Tested Iowa High School Graduates Meeting College Readiness Benchmarks in Mathematics by Race/Ethnicity



Source. ACT: The Condition of College & Career Readiness in Iowa 2013.

Practices to Close the Achievement Gap

In this section, we provide a brief overview of practices Iowa schools have implemented and are continuing to implement in order to improve their students' performance in reading and mathematics and reduce academic gaps.

1. The Iowa Core standards for all students. Iowa schools are implementing local curriculums that support the Iowa Core standards in English/language arts and mathematics. These include classroom-based practices that, if well implemented, can very likely lead to gap-closing learning opportunities for low-income students and children of color. These practices also hold promise for raising academic performance for all students and adequately preparing them for the academic rigors and job skills of the 21st century.
2. Multi-Tiered System of Supports (MTSS) is a decision-making framework of evidence-based practices in instruction and assessment that addresses the needs of all students starting in general education. MTSS allows educators to judge the overall health of their educational system by examining data on all students (general and special education) as well as identifying students who need additional supports. Those supports are provided in both small group and individual settings, and measured to determine if these supports are making a difference to ensure all learners demonstrate proficiency in the Iowa Core standards and leave school ready for life.
3. The Teacher Leadership and Compensation System rewards effective teachers with leadership opportunities and higher pay, attracts promising new teachers with competitive starting salaries and more support, and fosters greater collaboration for all teachers to learn from each other. The overriding philosophy of the system is multi-pronged, but boils down to this: Improving student learning requires improving the instruction they receive each day. There is no better way to do this than to empower our best teachers to lead the effort.
4. Iowa's Statewide Voluntary Preschool Program for Four-Year-Old Children provides an opportunity for all young children in the State of Iowa to enter school ready to learn by expanding voluntary access to quality preschool curricula for all four-year-old children. The allocation of funds for the Statewide Voluntary Preschool Program is intended to improve access to quality early childhood education and provide a predictable, equitable, and sustainable funding method to increase the number of children participating in quality programs.