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Introduction

In 1991, the Indian Nations at Risk Task Force issued its final report, *Indian Nations at Risk: An Educational Strategy for Action*, recommending five major research-based strategies to improve the quality of education for all American Indian (AI) students.[1] However, despite dozens of well-intentioned federal and state reform efforts, the condition of education is as pressing today for AI students as it was more than two decades ago. In particular, AI student achievement and graduation rates remain far below national averages, and absenteeism and suspension rates are persistently high. In 2014, President Obama and the American Indian Education Study Group called for major changes to the U.S. Bureau of Indian Education (BIE), which has been under increasing criticism for the continued low performance of AI students within its jurisdiction (American Indian Education

1 For the purposes of this paper, "American Indian (AI) students" includes Alaska Native (AN) students, and includes both students living on reservations and students living off reservations.

Study Group, 2014). Among these changes are shifts in BIE governance of schools, expanded partnerships with the private sector, and federal payment for BIE teachers to become certified through the National Board of Professional Teaching Standards (Maxwell, 2014).

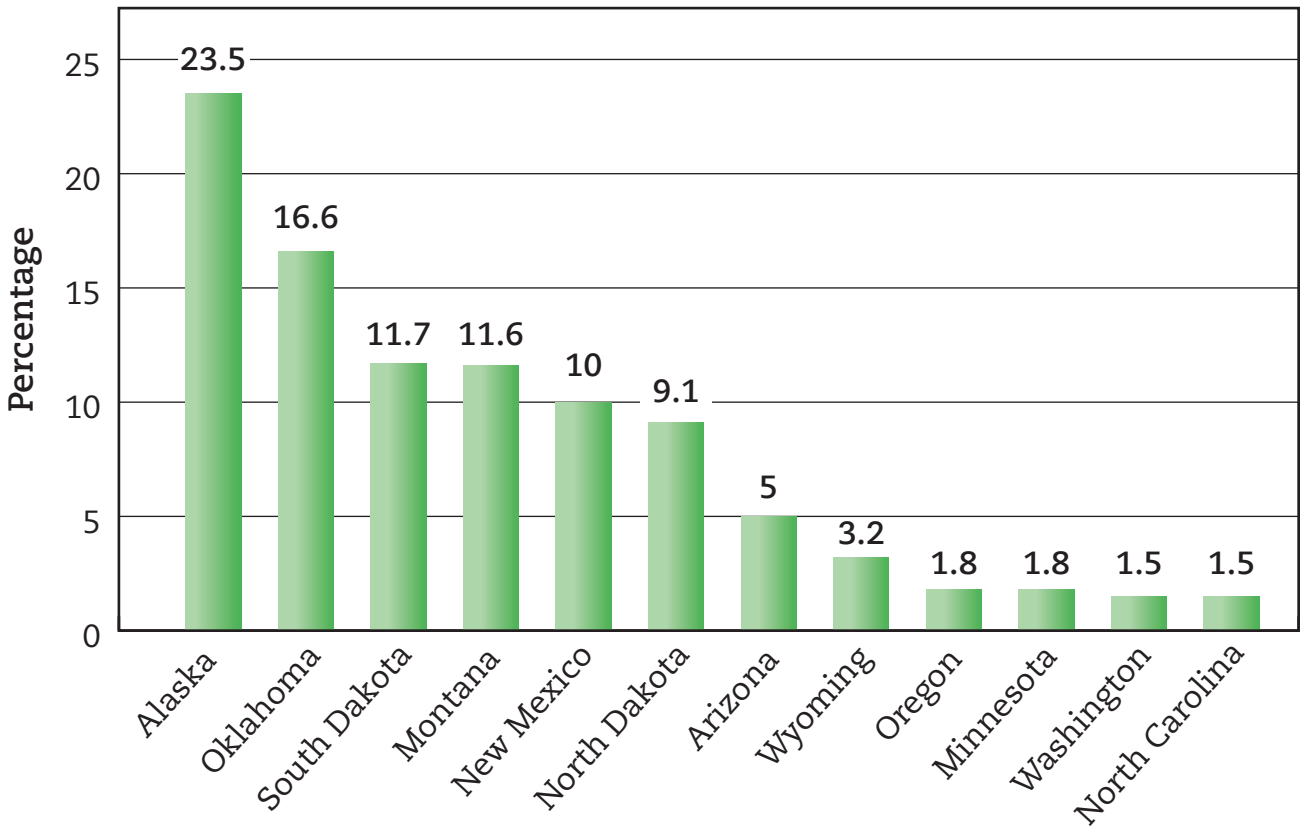
This Center on Standards and Assessment Implementation (CSAI) publication reviews recent research and publications on AI student outcomes, as part of CSAI's efforts to support diverse learners, including AI students. It discusses AI demographics, academic achievement, types of schools attended, high school graduation rates, college and career readiness, absenteeism, suspension, expulsion, coursework, diverse needs, school climate, international similarities, and student beliefs. The paper concludes with a brief discussion of the 2015 Every Student Succeeds Act (ESSA) and its possible implications for AI education. The CSAI website's resources on AI instruction and learning are also included.

Approximately 31 percent of AI students attend high-poverty elementary schools and 16 percent attend high-poverty secondary schools.

Demographics

Nationally, AI students comprise about 1.1 percent of the K–12 public school student population, with a total of approximately 547,400 students (National Center for Education Statistics [NCES], 2011–12). Of this student population, more than 90 percent attend public schools, while 8 percent attend BIE schools. Fifty-nine BIE schools are federally operated and 124 are tribally run and funded through BIE contracts or grants (Fischer & Stoddard, 2013; Fleury DeVoe, Darling-Churchill, & Snyder, 2008). The largest AI student populations are located in Oklahoma, Arizona, California, New Mexico, Alaska, Texas, North Carolina, Montana, Washington, Minnesota, South Dakota, New York, and Michigan (NCES, 2011–12). As shown in Figure 1, the greatest percentages of AI students are in Alaska, Oklahoma, South Dakota, Montana, and New Mexico (NCES, 2011–12).

Figure 1. **States with the Largest Percentages of AI Students, 2011–12 School Year**



Source: NCES (2011–12).

Even in states with large AI student populations, collecting accurate data for analyses is difficult because students may be dispersed across tribal and non-tribal regions. Faircloth and Tippeconnic, whose research focuses on the dropout and graduation crisis among AI students, argue that even large AI populations living off reservations frequently consist of "too small a proportion of the cities where they reside to garner the attention students and their families need" (2010, p. 25). For example, in 2000, about 57,000 American Indians (adults and children) lived in Los Angeles; however, this group made up less than 2 percent of the total population, creating a lack of "critical mass" and making them an "invisible minority" (Faircloth & Tippeconnic, 2010, p. 25). Inaccurate counts of AI students can obscure issues that arise in these students' schooling, or can adversely impact efforts to support all AI students.

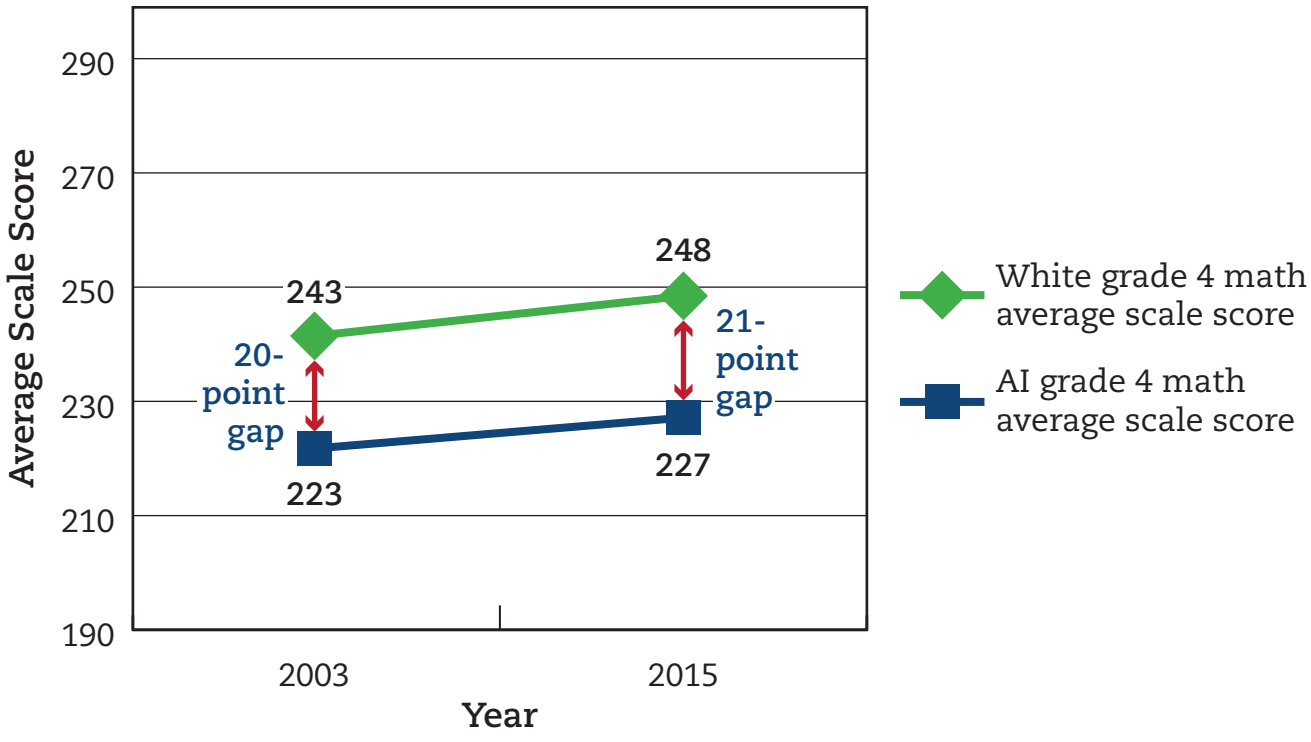
As part of recent accountability movements, ESSA and its predecessor, the No Child Left Behind Act of 2001, require that states, schools, and districts report disaggregated student achievement data by subgroups, not only to gauge students' academic progress

but also to ensure that all students are learning (U.S. Department of Education, 2013, 2016). Specifically, districts and schools must report test results by student race/ethnicity, economically disadvantaged status, English fluency level, and disability status. The purpose of this reporting is to make visible the performance of students from disadvantaged or minority backgrounds, so that educators can allocate time and resources to address the needs and improve educational outcomes for these students. These mandates have drawn attention to the performance of students from minority backgrounds, including the approximately 31 percent of AI students who attend high-poverty elementary schools and 16 percent who attend high-poverty secondary schools (National Indian Education Association, 2012).

Academic Achievement

In recent years, national test data for U.S. students indicate slightly improved student achievement in both fourth and eighth grades, compared to the early 1990s (NCES, 2013, 2015). While AI students have also made improvements during this period, major performance gaps remain between these students and their peers. For example, as shown in Figure 2, in 2003, the difference between the average scale scores of White students and AI students on the National Assessment of Educational Progress (NAEP) fourth grade mathematics assessment was 20 points (243 compared to 223, respectively), and in 2015, the difference was 21 points (248 compared to 227, respectively) (NCES, 2016).

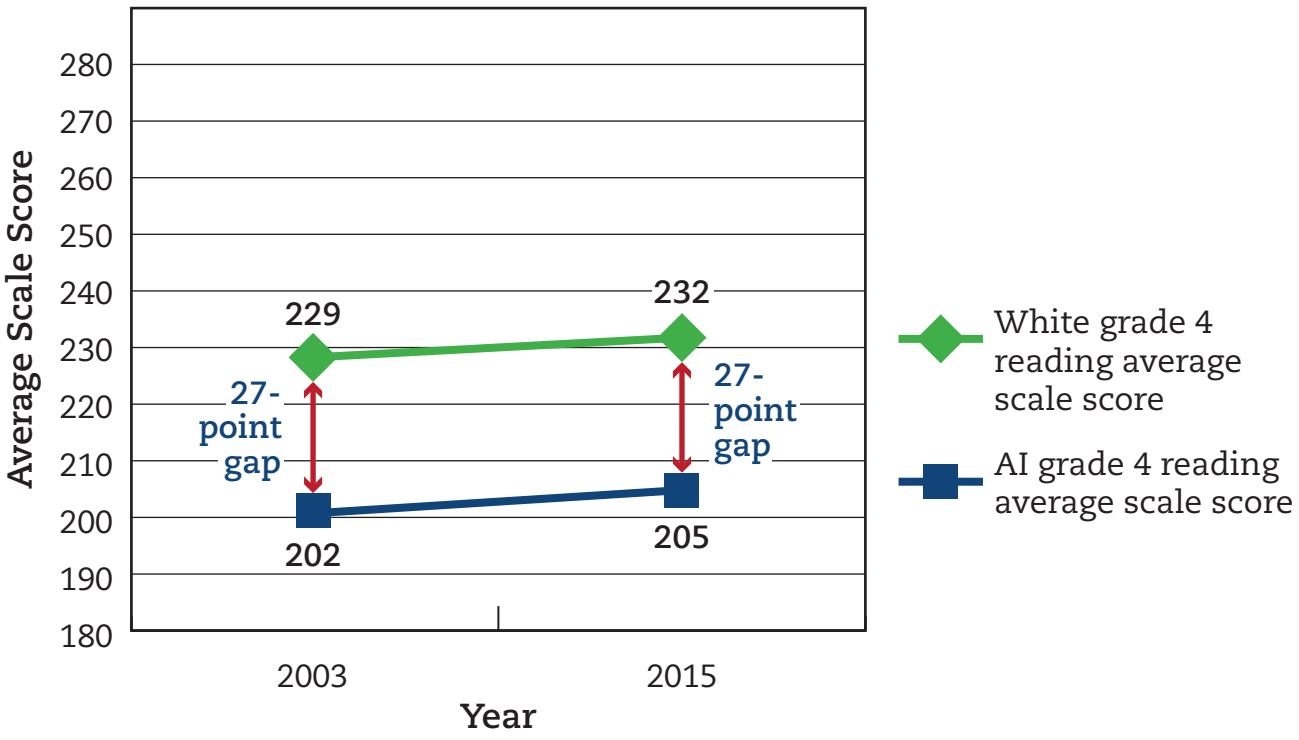
Figure 2. **AI vs. White Achievement Gaps on NAEP Fourth Grade Mathematics, 2003 and 2015**



Source: NCES (2016).

As shown in Figure 3, score differences between White and AI students on the NAEP fourth grade reading assessment have remained even larger: 27 points in both 2003 and 2015 (NCES, 2016).

Figure 3. **AI vs. White Achievement Gaps on NAEP Fourth Grade Reading, 2003 and 2015**



Source: NCES (2016).

On the NAEP eighth grade mathematics assessment, average scale scores of White students were 25 points higher than those of AI students in both 2003 (288 compared to 263) and 2015 (292 compared to 267) (NCES, 2016).

Additionally, although AI students, on average, scored higher than their Black and Hispanic peers on the 2003 NAEP assessments, these score differences have either decreased or disappeared. For example, between 2003 and 2015, average scale scores of AI students on the NAEP fourth grade reading assessment increased by three points, to 205, but average scale scores of Black and Hispanic students increased by eight points each, reaching 206 and 208, respectively. During this same period, AI students' average scale scores on the NAEP eighth grade mathematics assessment increased by four points, while the scores of their Black and Hispanic peers increased by eight and eleven points, respectively (NCES, 2015).

AI student scores on NAEP assessments at the secondary level show similar gaps. In twelfth grade mathematics, AI students' average scale scores in 2015 trailed White students' by 22 points (138 compared to 160). Between 2005 and 2015, AI student scores improved by four points, while Hispanic student scores improved by seven points and

Asian/Pacific Islander student scores improved by nine points. During the same period, AI students' twelfth grade reading scores showed no change, and the gap between those scores and White students' scores increased by six points, to 16 points (279 compared to 295) (NCES, 2016).

Grade 12 (2015)
AI compared to White
22-Point Math Gap
138 vs. 160

Grade 12 (2015)
AI compared to White
16-Point Reading Gap
279 vs. 295

Utilizing 2007 and 2009 NAEP assessment results, Fischer and Stoddard (2013) found that disadvantages in family background and school characteristics together account for two thirds of the achievement gap in reading and mathematics between AI students and their White peers, but that, even after accounting for family-level and individual-level characteristics and school-fixed effects, fourth grade AI students still scored 20 percent and 19 percent of a standard deviation lower than their White peers on NAEP mathematics and reading assessments, respectively (Fischer & Stoddard, 2013).[2]

AI student performance varies greatly across states. For example, as shown in Table 1, percentages of AI students performing at or above the basic achievement level on the NAEP fourth grade reading assessment in 2015 ranged from 31 percent in New Mexico to 73 percent in Oklahoma. Of the states shown in Table 1, no AI student groups reached the national average of 81 percent at or above basic in fourth grade reading performance, and Oklahoma and North Dakota were the only two states with at least half of their AI students reading at or above the NAEP basic achievement level in fourth grade (NCES, 2015).

Oklahoma and North Dakota were the only two states with at least half of their AI students reading at or above the NAEP basic level in fourth grade.

2 According to Fischer & Stoddard (2013), family-level and individual-level characteristics include race/ethnicity, free/reduced-price lunch status, English learner status, age, gender, disability status, parents' education level, and number of books at home. The authors did not specify what constitute "school-fixed effects."

Table 1. **AI Student Average Scale Scores on NAEP Fourth Grade Reading in Selected States, 2005–2015**

Location	2005	2007	2011	2015	At or above Basic Achievement Level (2015)
Nation	204	203	202	202	81%
Alaska	183	188	175	184	34%
Arizona	186	187	185	191	36%
Minnesota	n/a	205	195	198	41%
Montana	201	204	200	199	44%
New Mexico	190	197	193	184	31%
North Carolina	199	202	192	198	45%
North Dakota	198	204	206	204	50%
Oklahoma	211	213	212	223	73%
Oregon	197	206	213	192	36%
South Dakota	201	196	197	192	39%
Washington	n/a	205	202	198	45%
Wyoming	n/a	200	192	204	47%

Source: NCES (2016)

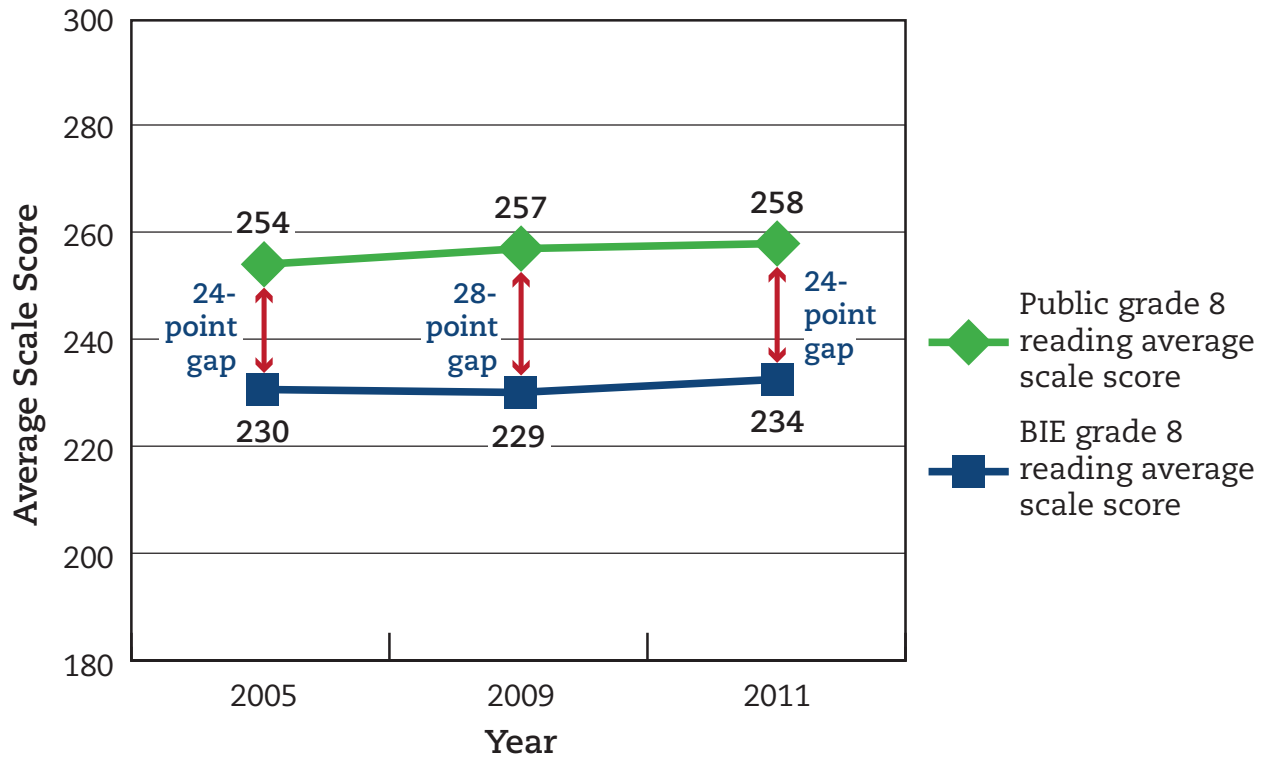
AI students' performance on state tests is often substantially lower than that of other subgroups as well. For example, Montana's 2014 achievement data report for its 2013 Criterion-Referenced Test (CRT) shows that, based on third, eighth, and tenth grade student scores, approximately 63 percent of AI students in the state were proficient in reading—a significant decrease of more than three percentage points from the previous year's AI achievement—compared to 88 percent of White students. In addition, approximately 38 percent of AI students were proficient in mathematics, compared to 71 percent of their White peers. Of the fourth, eighth, and tenth grade students who completed the science portion of the 2013 Montana CRT, only 30.5 percent of AI students were proficient, compared to approximately 66 percent of their White peers. As a whole, Montana's AI students scored substantially below White students on state assessments (Montana Office of Public Instruction, 2014).

The following section explores differences in AI student performance that are based on type of school attended.

Type of School Attended (BIE School vs. Public School)

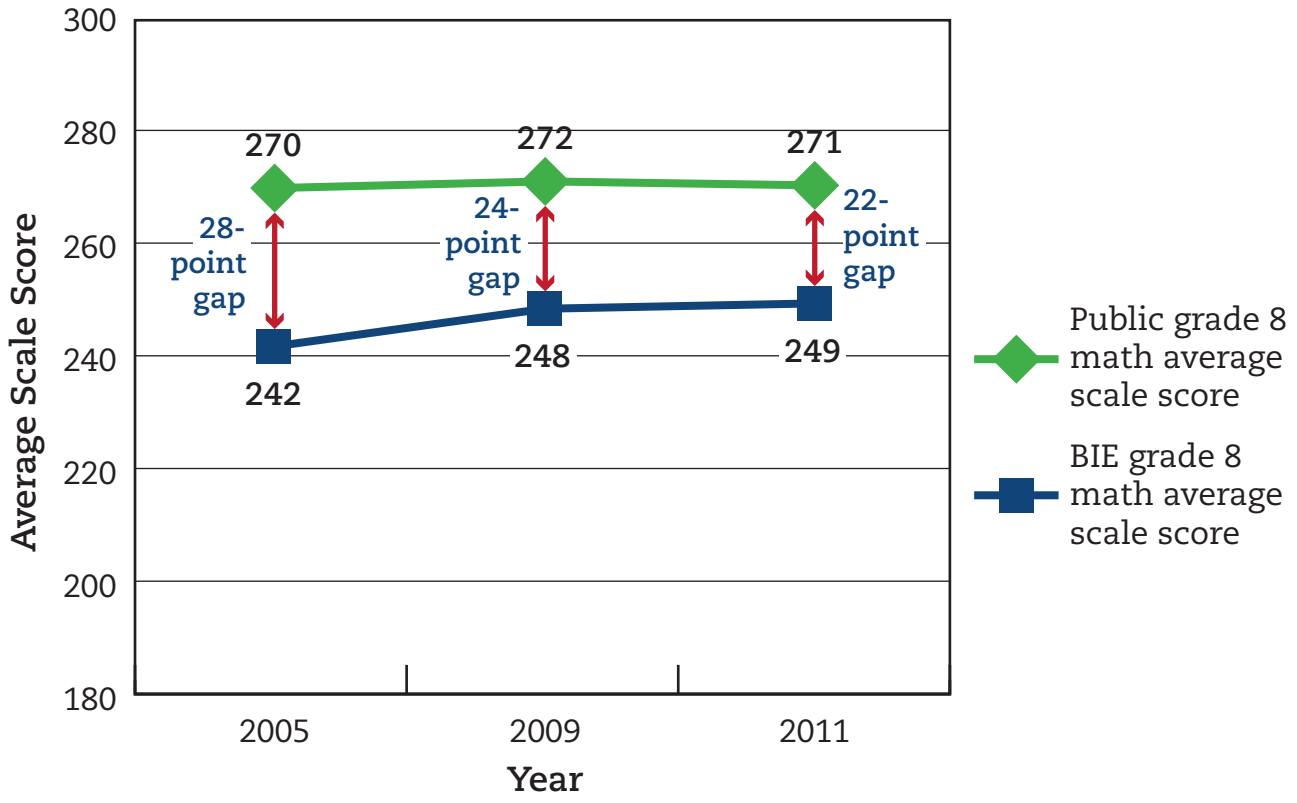
The National Indian Education Study provides information about the condition of AI education. The study's most recent report, based on 2011 data, shows that, in general, AI performance on NAEP assessments has remained relatively constant from 2005 to 2011, both for students attending BIE schools and for students attending public schools, as is shown in Figure 4. However, AI students attending low-density public schools continue to score higher in reading and mathematics than their peers in BIE schools. In 2011, AI students in low-density public schools scored 24 points higher on the eighth grade reading assessment than did their peers in BIE schools (Figure 4). For the same year, the difference between the two groups' performance on the eighth grade mathematics assessment was 22 points (Figure 5). Similar gaps occurred in fourth grade reading and mathematics. Further, AI students in low-density public schools performed close to or above the average for all students in each grade and in both subjects (NCES, 2012). Based solely on NIES data on NAEP assessments, one might conclude that AI students are better served by low-density public schools than by BIE schools.

Figure 4. **AI Achievement Gaps on NAEP Eighth Grade Reading, Public Low-Density School vs. BIE School, 2005–2011**



Source: NCES (2012).

Figure 5. **AI Achievement Gaps on NAEP Eighth Grade Mathematics, Public Low-Density School vs. BIE School, 2005–2011**



Source: NCES (2012).

In Montana, AI students who attend schools on reservations had lower scores on the state CRTs in mathematics, reading, and science, compared to their peers in schools located off reservations. For instance, the average science CRT score for off-reservation students was 245, compared to 233 for on-reservation students (Montana Office of Public Instruction, 2012). Similarly, a study conducted by the U.S. General Accounting Office (GAO) concluded that students attending BIE schools in North Dakota, South Dakota, and Arizona performed far below their public-school peers on state assessments in the 1999–2001 years.[3] In North Dakota, the average national percentile rankings for BIE students on the state's assessment, for all grades and subject areas tested, ranged between the 25th and 33rd percentiles, whereas the corresponding public school averages ranged between the 64th and 71st percentiles (GAO, 2001).[4] These

3 The study report only presented information for these three states because they were the only states from which the GAO was able to obtain state assessment data.

4 This report provides some information on the performance ranking of AI students in BIE schools; however, it falls short in providing specific information on achievement by grade, subject area, and school location. It also does not specify whether BIE students were compared to AI and/or non-AI pub-

results further illustrate the generally lower performance of AI students in BIE schools, in comparison to their public-school peers.

Given the ubiquitous nature of standardized assessments, discussions about achievement often revolve around test scores. However, AI student performance on other measures provides cause for concern as well. For example, the following section discusses graduation and dropout rates as a means of exploring AI student academic outcomes.

High School Graduation

Examining educational attainment often indicates disparities in that attainment (Proudfit & San Juan, 2012). The 1991 Indian Nations at Risk Task Force report noted that, of all racial/ethnic groups, AI/AN students had the highest high school dropout rate in the nation, with 36 percent of AI/AN tenth grade students eventually dropping out of school, compared to just 8 percent for Asian students. Similarly, findings from more recent reports indicate that while approximately 69 percent of AI high school students graduate in four years, about 83 percent of their White peers do so in the same amount of time (Education Trust, 2013; Stillwell & Sable, 2013). Faircloth and Tippeconnic (2010) argue that the number of AI students who graduate from high school continues to be an "urgent concern" (p. 3). Their study shows that less than half (47 percent) of AI students, on average, graduated from high school in 2005. Compared to other racial/ethnic groups, the AI graduation rate was lower, for example, than that of Latino students, 51 percent of whom graduated from high school (Faircloth & Tippeconnic, 2010).

There is a consensus that AI students are graduating from high school at a far lower rate than other racial/ethnic groups.

The graduation rate for AI students in Montana has increased over time but remains lower than the overall statewide rate. In 2013, nearly two thirds of AI students in the state graduated from high school, compared to 87 percent of White students and 84 percent of all students (Montana Office of Public Education, 2014). California's AI students graduated at a rate of 68 percent in 2011, 8.3 percent less than the state

lic-school students. There are not enough data in the report to fully examine the differences in achievement between AI students and their public school AI and non-AI peers. Nonetheless, the report presents a general consensus that AI students in BIE schools tend to perform academically worse than their AI and non-AI peers in public schools.

average (Proudfit & San Juan, 2012). Across states, there is a consensus that AI students are graduating from high school at a far lower rate than other racial/ethnic groups (Faircloth & Tippeconnic, 2010; Fleury DeVoe et al., 2008). Table 2 presents national graduation rates for students of different racial/ethnic groups and special populations, taken from a recent NCES report (Stetser & Stillwell, 2014).

Table 2. **Graduation Rate Percentages by Selected Demographics, 2010–11 School Year**

Total Average	79
AI/AN	65
Asian/Pacific Islander	87
Hispanic	71
Black	67
White	84
Economically Disadvantaged	70
Limited English Proficient	57
Students with Disabilities	59

Source: Stetser & Stillwell (2014).

Dropout rates help paint a more detailed picture of AI education. For the purposes of this report, "dropout" students are defined as young adults who are 16–24 years old, who are currently out of high school, and who have not earned a diploma or GED credential. Unlike graduation data, dropout information is more difficult to obtain, especially if students can leave the school system without anyone knowing about their exit. Brandt (1992), who studied the dropout problem within the Navajo community, describes a phenomenon called "floating" whereby students are transferring between schools until they find one that suits their specific needs. As a result of this floating from school to school, these students are considered dropouts because schools have lost track of their enrollment status.

Dropout data show that AI students often leave the school system at a greater rate than most other student groups (Freeman & Fox, 2005). In 2003, the dropout rate for AI students was 15 percent, compared to 6 percent for White students, 10.9 percent for Black students, 23.5 for Hispanic students, and 4 percent for Asian/Pacific Islander students (Freeman & Fox, 2005). The AI student dropout rate remained the same in 2006, a rate higher than those for White (7%), Black (11%), and Asian/Pacific Islander (3%) students but lower than the rate for Hispanic students (21%) (Fleury DeVoe et al., 2008; Freeman & Fox, 2005). In general, AI students drop out of high school at a rate that is higher than rates for White, Black, and Asian/Pacific Islander students, but lower than that for Hispanic students.

In Montana, of all state students with dropout status, about 1 percent dropped out in grades 7–8, and approximately 10 percent dropped out in grades 9–12. Montana AI students attending schools on reservations often drop out at a slightly higher rate (8%) than AI students who go to off-reservation schools (6%) (Montana Office of Public Education, 2012).

Reyhner (1992) cites a number of reasons for persistently high AI dropout rates, including large school sizes, lack of AI teachers, passive teaching methods, inappropriate curriculum, poor use of test scores, curricular tracking, and lack of parent involvement. These factors should be further examined, with the goal of increasing AI student persistence.

"Unfortunately, too many Native American children are not receiving an education that prepares them for college and career success, too few of them are going to college, and far too many of them drop out of high school. We need to do better."
—U.S. Secretary of Education Arne Duncan, 2014

College and Career Readiness

AI students also trail other students in overall college and career readiness as measured by ACT benchmarks. Forty-one percent of AI students scored proficient in English on the 2013 ACT, compared to 64 percent for all students. On other ACT subject exams, 26 percent of AI students scored proficient in reading, compared to 44 percent for all students; 22 percent scored proficient in mathematics, compared to 44 percent for all students; 18 percent scored proficient in science, compared to 36 percent for all students; and 10 percent scored proficient across all four subject exams, compared

to 26 percent for all students (Table 3). The percentage of ACT-tested AI students who meet three or more ACT benchmarks has slightly declined in recent years, from 22 percent in 2009 to 19 percent in 2013, while the percentages of Asian and White students meeting the same benchmarks have grown slightly, from 55 and 46 percent in 2009 to 57 and 49 percent in 2013, respectively (ACT, 2013). Data from this pre-college assessment suggests that AI students are not narrowing the gaps in their performance on ACT indicators for college and career readiness.

In terms of SAT performance, AI college-bound seniors scored below the national averages on the critical reading, mathematics, and writing sections of the SAT in 2007 (Fleury DeVoe et al., 2008). [5]

Table 3. **Percentages of AI Students Meeting ACT Benchmarks for College and Career Readiness, 2013**

	English	Reading	Mathematics	Science	Across all four subjects
All Students	64	44	44	36	26
AI Students	41	26	22	18	10

Source: ACT (2014).

Absenteeism/Suspension/Expulsion

Students who are frequently absent from school have fewer learning opportunities than those who attend school regularly. Based on NCES data, 66 percent of eighth grade AI students reported having been absent from school in the previous month (NCES, 2011–12), a rate that was higher than those of other racial/ethnic groups (Fleury DeVoe et al., 2008; Freeman & Fox, 2005).[6] This 66 percent absenteeism rate stayed constant between 2003 and 2007 (Fleury DeVoe et al., 2008; Freeman & Fox, 2005). Additionally, students can miss school for reasons such as suspension or expulsion. Suspension and expulsion rates for AI students are lower than those of Black students but higher than those of other racial/ethnic groups (Fleury DeVoe et al., 2008; Freeman & Fox, 2005).

5 Average reading score for AI students was 487 compared to national average of 502; math score was 494 for AI students compared to national average of 515; and writing score was 473 for AI students compared to national average of 494 (Fleury DeVoe et al, 2008).

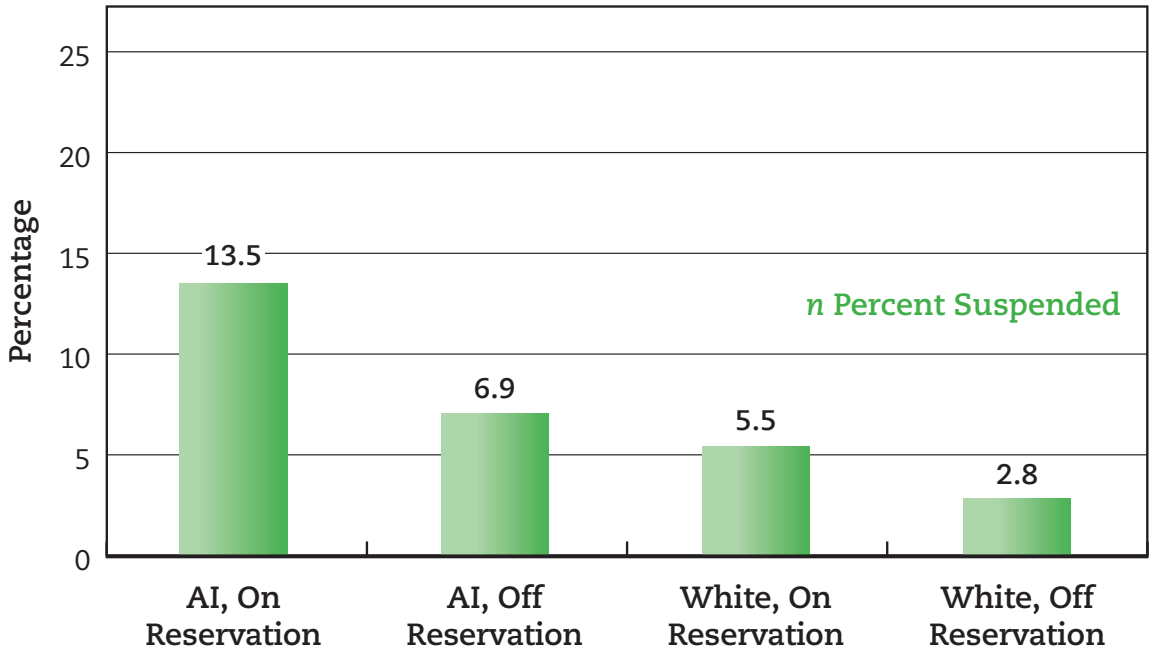
6 This information is self-reported by students, rather than being based on schools, districts, or states' actual attendance records. Although this information is useful, it may not be completely accurate in terms of describing the actual attendance of AI students and other students.

For example, in 2004, 7.2 percent of AI public school students were suspended, a higher percentage than those of White (5%), Latino (6.5%), and Asian/Pacific Islander (3%) students, but lower than that of Black students (15%) (Fleury DeVoe et al., 2008).

Across AI student groups at the state level, in the 2012-13 school year, for example, AI students in Montana were suspended at rates more than twice those of their white peers in both on-reservation and off-reservation schools (14.6% versus 5.8% and 8% versus 3.1%, respectively) (Figure 6). National expulsion rates for all racial/ethnic groups in 2000 were below 1 percent, but AI students were expelled at a rate that was second only to that of Black students (Fleury DeVoe et al., 2008; Freeman & Fox, 2005).[7] These data suggest that school discipline should be more closely examined as part of larger efforts to encourage AI student retention.

Montana AI students attending off-reservation schools were disproportionately suspended, compared to their peers in on-reservation schools, in the 2011–12 school year (40% versus 4%).

Figure 6. **AI vs. White Suspension Rates in Montana, On and Off Reservation Schools, 2013–14 School Year**



Source: Montana Office of Public Instruction (2014).

7 In 2004, expulsion rates were 0.3 percent for American Indian youth and 0.5 percent for Black students (Fleury DeVoe et al., 2008). These statistics did not change significantly from 2000 to 2004.

Coursework

Researcher Jeannie Oakes, who has studied academic tracking in schools, argues that access to and preparation for higher education are highly dependent on the types of courses that students take in high school. Specifically, she has found that the academic content to which students are exposed through their courses differentiates students who go on to college from those who do not. She also contends that the academic success of students greatly depends on the content to which they have access through their courses (Oakes, 2005). In other words, the types of coursework that students have access to, and that they complete, matter.

More and more AI students are taking AP exams; however, average scores for this group are low, compared to other groups.

In 2005, AI high school graduates completed more academic courses than in 1982; however, the percentage of AI high school graduates who completed a core academic track in 2005 was smaller than those of White, Black, and Asian/Pacific Islander graduates (Fleury DeVoe et al., 2008).[8] Of California students who graduated in 2011, 27 percent of AI students completed all of the required courses for University of California and/or California State University entrance, the lowest percentage of any racial/ethnic group (Proudfit & San Juan, 2012).[9] Furthermore, the Education Trust reports that AI students were less likely than other students to attend a high school that offers Advanced Placement (AP) courses. While very large percentages of Asian (97%), White (91%), Latino (91%), and Black (89%) students have access to high-level courses in high school, only three-quarters of AI students have such access (The Education Trust, 2013). In 2004, a smaller percentage of AI graduates completed coursework in advanced science, mathematics, and English, compared to white and Asian/Pacific Islander students. For example, only half of AI students completed advanced science, compared to 71 percent of White students and 84 percent of Asian/Pacific Islander students (Fleury DeVoe et al., 2008).

Students' academic success is also measured by results on AP exams, which enable college-enrolled students to earn college credit if they pass an exam with a score of 3

8 "A core academic track" includes at least four years of English, three years of social studies, three years of science, three years of mathematics, and two years of a foreign language. In 2005, 26 percent of AI students completed a core academic track, compared to 48 percent of White students, 44 percent of Black students, and 57 percent of Asian/Pacific Islander students.

9 This percentage was also 13 percentage points lower than the state average.

or higher. Between 1999 and 2007, the percentage increase in AI twelfth graders taking AP exams was 78 percent, a more significant increase than those for White and Asian/Pacific Islander students. Although more and more AI students are taking AP exams, average scores for this group are low, compared to other groups. The next step in improving the performance of AI students taking AP courses and exams is to provide understand what learning supports AI students need in these courses.

Diverse Needs

A larger percentage of AI students than White or Black students receive limited English proficiency (LEP) services,[10] and approximately 20 percent of AI students ages 5–17 speak a language other than English at home, compared to 6 percent of White and 5 percent of Black students (Fleury DeVoe et al., 2008).[11] However, the percentage of AI students qualifying for language services is lower than those of Hispanic and Asian/Pacific Islander students. In 2000, 11 percent of AI students qualified for LEP services, compared to 36 percent of Latino students and 23 percent of Asian/Pacific Islander students (Freeman & Fox, 2005). Of that 11 percent, 9.9 percent were actually enrolled in LEP services, compared to 32.5 percent of Hispanic students and 21.3 percent of Asian/Pacific Islander students who were enrolled in LEP services (Freeman & Fox, 2005). By 2006, the percentages of eligible and enrolled AI students had dropped slightly, to 8.5 percent and 7.2 percent, respectively (Fleury DeVoe et al., 2008). In 2001, BIE schools had nearly 60 percent of students considered to be LEP students, though the number or percentage of students receiving services is unspecified (GAO, 2001).

One out of every five AI students in BIE schools receives special education services.

A higher percentage of AI students also receive services under the Individuals with Disabilities Education Act (IDEA), compared to other subgroups. In 2006, 14 percent of AI students were served under IDEA, compared to 8 percent of White students, 11 percent of Black students, 8 percent of Latino students, and 5 percent of Asian/Pacific Islander students (Fleury DeVoe et al., 2008). Additionally, one out of every five AI students in BIE schools receives special education services (GAO, 2001).

10 In 2006, 11 percent of AI students, compared to 1 percent each of White and Black students, received LEP services (Fleury DeVoe et al., 2008).

11 These AI students could be speaking one of the 175 AI tribal languages (Freeman & Fox, 2005).

School Climate

Academic success and school involvement are often contingent on how safe students feel in school and how connected students feel to their teachers and administrators. Powers (2005) used survey data from 240 urban AI students to conduct correlational analyses and found a negative correlation between teacher supportiveness and student age. These results suggest that older students found their teachers to be less available and supportive, compared to younger students. Combined with the higher proportion of AI students who leave the school system later in their education, this indicates a need for educators to focus their attention on building environments that are conducive to collaboration and learning, especially at the high school level. Silver, Dietel, and Saunders (2011) note that dropout signs are usually clear by middle school, and encourage early action in elementary school to support student engagement and retention.

AI high school students are more likely than students in other racial/ethnic groups to report having been threatened or injured with a weapon on school property and/or having engaged in a physical fight on school property (Fleury DeVoe et al., 2008). As shown in Table 4, in the 2011–12 school year in Montana, 12 percent of AI high school students in urban schools reported having been threatened or injured with a weapon on school property during the past 12 months, a rate approximately twice those of their peers in schools on or near reservations (6.4%) and of all students in state high schools (6.3%); a higher percentage of AI students in urban schools reported having participated in a physical fight during the past 12 months (37.7%), compared to their peers in schools on or near reservations (34.9%) and to all students in state high schools (22.8%); and approximately 31.8 percent of Montana AI students in urban schools reported having been bullied on school property during the past 12 months, compared to their peers in schools on or near reservations (21.1%) and to all students in state high schools (26.3%) (Montana Office of Public Education, 2013).

Table 4. **School Climate Percentages in Montana by Selected Demographics, 2011–12 School Year**

	High School Students Overall	AI High School Students in Schools on or near Reservations	AI High School Students in Urban Schools
Percent of students in a physical fight one or more times during the past 12 months	22.8%	34.9%	37.7%
Percent of students threatened or injured with a weapon on school property one or more times during the past 12 months	6.3%	6.4%	12.0%
Percent of students bullied on school property during the past 12 months	26.3%	21.1%	31.8%

Source: Montana Office of Public Instruction (2014).

These Montana data illustrate that, compared to their peers in reservation schools, a greater proportion of AI students in urban schools face physical violence and bullying. Because physical violence typically leads to suspension from school, and thus to fewer learning opportunities for students, it is crucial for school leaders and educators to pay attention to this data to better provide safe learning environments in which all students, especially AI students, can thrive.

International Similarities

Other countries face similar challenges in the education and success of their native populations. For example, five percent of Australian students in primary schools are Indigenous, with approximately 83 percent of those students attending schools with a below average rating on the country's Index of Community Socio-Educational Advantage scale. As far back as 1977, Australia identified substantial performance gaps, with the average indigenous student performing as many as 57 percentage points below the average Australian student in reading, and similar gaps in mathematics. Despite decades of efforts to address these gaps, large differences in performance remain between Indigenous and non-Indigenous Australian students, as high as 26

percentage points in reading and 22 points in mathematics in 2011 (O'Keefe, Olney, & Angus, 2012).

As shown in Table 5, Indigenous students in Australia also scored substantially below non-indigenous students on the 2012 Programme for International Student Assessment (PISA), with a mean mathematical literacy score of 417 points, compared to the non-Indigenous student score of 507. According to the Australian Council for Educational Research, this 90-point gap is equivalent to two and a half years' worth of schooling. Results in reading were similar, with Indigenous students having an average score of 428 points, compared to 515 for non-Indigenous students, an 87-point gap (Thomson, De Bortoli, & Buckley, 2012).

Table 5. **Mean Australian Indigenous and Non-Indigenous Student Performance on PISA, 2012**

	Indigenous	Non-Indigenous	PISA Average	Indigenous vs. Non-Indigenous Gap
Mathematical Literacy	417	507	494	90
Science Literacy	440	524	501	84
Reading Literacy	428	515	496	87

Source: Thomson, De Bortoli, & Buckley (2012).

On average, Indigenous students in Canada also have lower school completion rates than their non-Indigenous counterparts. The non-completion rate of K-12 education for Indigenous young adults on First Nations reservations (ages 16–24) is as high as 61 percent, compared to 11 percent for non-indigenous young adults living in urban areas (Richards, 2013). A recent Statistics Canada report identified many issues facing AI students in relation to school completion rates, including disparities between schools on and off reservations, teaching quality, funding, and lack of services for special-needs students (Harris, 2013). As countries around the world seek to improve the educational outcomes of their native students, it is worth examining findings in other countries to see what strategies may arise.

Student Beliefs

For improvement of student outcomes, while it is important to look at achievement-related characteristics such as graduation rates, absenteeism, expulsion, and

coursework, it is just as essential to understand student perceptions and experiences, which are often captured by student surveys. Based on a survey of AI middle and high school students' views of their educational experiences and aspirations, Krueger (2003) found that a majority of AI students believed that getting an education or obtaining a high school diploma was important to them. Eighty-nine percent of respondents reported believing that it is important that they earn good grades, although only 42 percent reported that they "usually get good grades." Krueger concluded that there is a discrepancy between what students value and what actually happens in reality. In other words, the issue is not that AI students do not care about doing well academically (as indicated by the value that they place on school), but whether and how their beliefs translate into academic performance.[12] Overall, the Krueger study suggests that AI students value their education.

Only one third of AI students, in both public schools and BIE schools, said they discussed their class choices and futures with a teacher two or more times during the eighth grade.

AI students' expectations of educational attainment also indicate that they care about their education. In 2004, 57 percent of AI high school seniors said that they expected to attain a bachelor's degree or higher; this percentage did not differ from the percentages for students from other racial/ethnic groups (Fleury DeVoe et al., 2008).

Although, as these results indicate, many AI students see the importance of an education and aspire to attend college, lower percentages of AI students reported discussing their future plans or classes with a teacher or school counselor. Specifically, almost two thirds of eighth grade AI students, across both public and BIE schools, reported never having spoken with a school counselor about classes for high school or future plans; only one third of eighth grade AI students said they discussed their class choices and their futures with a teacher two or more times during the eighth grade (NCES, 2012).

With regard to the mental well-being of AI students, a survey distributed in 2011 to Montana high school students contains disturbing information (Montana Office of Public Instruction, 2011). Specifically, as shown in Table 6, the percentage of AI students on or near reservations who reported being "so sad or hopeless almost every day for

12 The Krueger (2003) study relied on students' responses to survey questions regarding academic performance. The author did not obtain data (e.g., report cards, transcripts) to analyze respondents' achievement.

two weeks or more in a row that they stopped doing some usual activities during the past 12 months" was 33.2 percent, compared to 26.4 percent of all high school students in the state. Additionally, among high school students who reported that they had "actually attempted suicide" one or more times during the past 12 months, the rate for AI students on or near reservations was nearly double the rate of all students (15.1 percent, compared to 7.9 percent), and AI students in urban schools were more than twice as likely to report that they had attempted suicide in the past 12 months, compared to all students (20.6 percent, compared to 7.9 percent) (Montana Office of Public Instruction, 2013).[13] These troubling data highlight the complexities and variations in AI students' experiences, while also strongly suggesting that mental health should be a concerted focus of efforts to fully support AI students.

Table 6. **Student Belief Percentages in Montana by Selected Demographics, 2011–12 School Year**

	High School Students Overall	AI Students on or near Reservations	AI Students in Urban Schools
Percent of students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months	26.4%	33.2%	38.3%
Percent of students who actually attempted suicide one or more times during the past 12 months	7.9%	15.1%	20.6%

Source: Montana Office of Public Instruction (2014).

Common Core and Indian American Education

The National Congress of American Indians (NCAI) has endorsed the Common Core State Standards (CCSS) and encourages all states to ensure that schools, teachers, and administrators have the necessary resources, including training, to successfully implement these new, rigorous standards (NCAI, 2013). However, early results and prior national and state education policies suggest that implementation of more demanding standards and forthcoming assessments are already challenging AI education. A recent

13 Across K–12 grades, 11.9 percent of AI students reported that they had attempted suicide, compared to 6.5 percent of all students.

Hechinger Report article (Butrymowicz, 2013) suggests that, while some teachers of AI students are optimistic about the CCSS because the standards may better match their students' learning styles, substantial challenges remain, including high poverty rates, cultural differences, deficiencies student writing skills, inadequate school funding for professional development, and limited technology in schools and at home.

New state assessments, including those developed by the Partnership for Assessment of Readiness for College and Careers (PARCC) and the Smarter Balanced Assessment Consortium (Smarter Balanced), are already challenging all United States students, due to their increased levels of difficulty, new formats, and deeper thinking requirements. These assessments are especially challenging for subgroups of students who traditionally perform at the lower end of the scoring spectrum. In the 1990s, when performance assessments similar to the PARCC and Smarter Balanced assessments were introduced, performance gaps increased, especially for English learner students whose language skills were typically lower than those of their non–English learner peers. According to Porter (n.d.), merely moving from multiple-choice tests to performance assessments likely increases the performance gap for disadvantaged students from 1.0 to 1.2 standard deviations below the mean.

Initial results from the new assessments support Porter's contention. In 2015, 68 percent of AI students in California, compared to 56 percent of California students overall, did not meet English language arts/literacy standards on the California Assessment of Student Performance and Progress (CAASPP)—composed mostly of rigorous Smarter Balanced test items—and 67 percent of AI students did not meet standards on the CAASPP mathematics assessment, compared to 56 percent for all California students (California Department of Education, 2015). These findings suggest that, for AI students, the challenge of the new assessments is sizable.

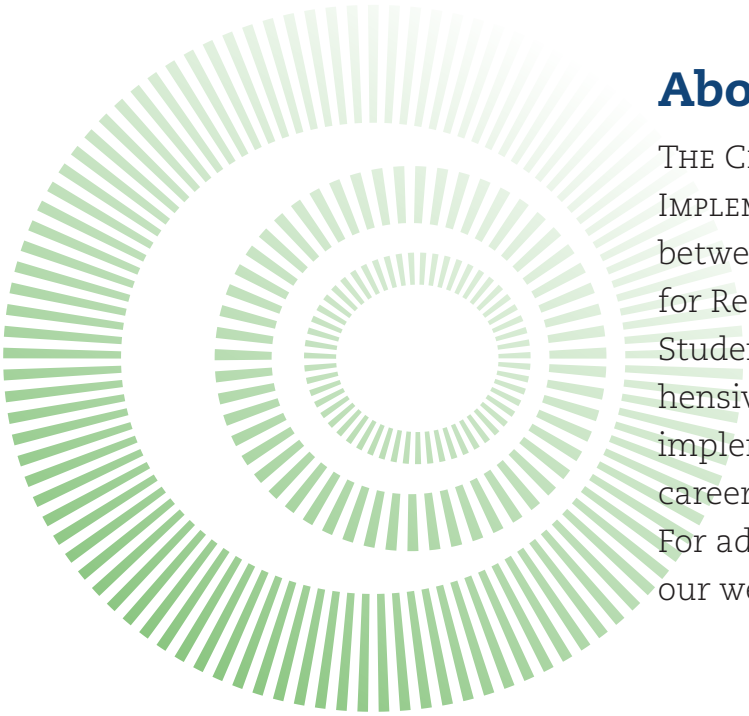
ESSA contains a number of provisions that are intended to better support AI education, including additional funding for Native-language immersion programs and allowing tribes to permit state and local education agencies to manage Title IV programs on tribal lands (Jones, 2016), but it is too early to know whether ESSA will lead to reductions in achievement gaps, especially with new accountability measures that are still being determined, making comparisons and potential adjustments more difficult.

Conclusion

Compared to their peers, AI students often underperform on national and state assessments. Within the AI student population, those who attend low-density public schools often score higher compared to their peers in BIE schools. Overall, AI students are less likely to engage, or to have the opportunity to engage, in advanced academic coursework, including AP classes. AI students graduate from high school at a lower rate than other students and drop out of school more frequently than most other racial/ethnic groups, and college entrance exams indicate that AI students may be less prepared to take on college coursework.

Although AI students, like their peers, expect to achieve high levels of education, they often do less to prepare than other students do, including discussing their coursework and future plans with teachers or school counselors. Additionally, they are more likely to face physical violence and bullying on campus, factors that can lead to poor academic performance and higher rates of absenteeism, suspension, expulsion, and/or other departure from the school system.

Although this literature review suggests a protracted difficult condition of AI education and for AI students, some states and communities are showing success in improving educational outcomes, which will be highlighted in an upcoming CSAI publication.



About CSAI

The Center on Standards and Assessment Implementation (CSAI), a partnership between WestEd and the National Center for Research on Evaluation, Standards, & Student Testing (CRESST), provides comprehensive services, tools, and resources for implementation of rigorous college and career readiness standards and assessments. For additional CSAI products and tools, visit our website at **http://csai-online.org**.

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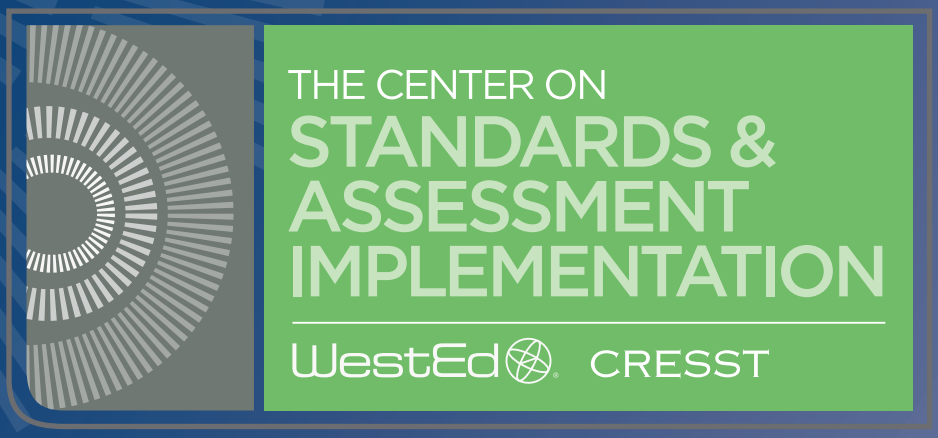
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