

# National Indian Education Study

## Part II: The Educational Experiences of Fourth- and Eighth-Grade American Indian and Alaska Native Students Statistical Analysis Report



# NIES

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## Part II: The Educational Experiences of Fourth- and Eighth-Grade American Indian and Alaska Native Students

### Statistical Analysis Report

October 2006

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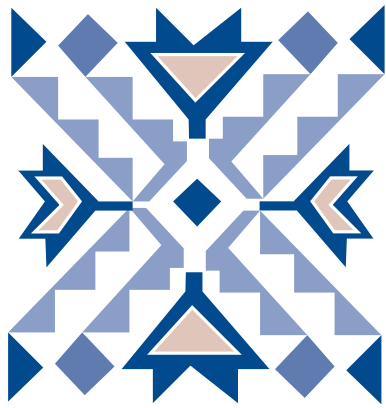
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# EXECUTIVE SUMMARY

This report presents results from a national survey, conducted in 2005, that examined the educational experiences of American Indian/Alaska Native (AI/AN) students in grades 4 and 8, with particular emphasis on the integration of native language and culture into school and classroom activities. Students, teachers, and school principals all participated in the survey, which constituted Part II of the National Indian Education Study (NIES). NIES was a two-part study conducted by the National Center for Education Statistics (NCES), with the support of the Office of Indian Education (OIE), for the U.S. Department of Education. Part I of NIES collected information on the academic performance of AI/AN students, as measured by the National Assessment of Educational Progress (NAEP).

AI/AN students represent about 1 percent of the total student population in the United States. In 2005, this represented approximately 46,000 students at grade 4 and 45,000 at grade 8 who were identified as AI/AN in official school records. A nationally representative sample of about 14,500 of these students (combined grades 4 and 8 in reading and mathematics) was selected to participate in NIES Part I. A smaller sample of those students (approximately 5,600) was selected to participate in NIES Part II. The Part I and Part II samples included students attending public, private, and Bureau of Indian Affairs (BIA) schools. The NIES Part II teacher sample was made up of the mathematics and reading/language arts teachers of the sampled students, while the school principal sample consisted of the principals at the schools these students attended. Questionnaires for the Part II survey were developed with the guidance of a technical review panel assembled to advise NIES.

This report describes important aspects of the educational experiences of AI/AN students in grades 4 and 8. Although the central focus of the report is AI/AN students, information is also provided about non-AI/AN students, where available, so that the reader can compare the characteristics of AI/AN students with their peers from different backgrounds. The source of the information on non-AI/AN students is NAEP, which included a survey component to collect limited demographic information about all students who participated in 2005. The NAEP survey, however, did not collect information on the role of AI/AN culture or language in education—topics which are the central focus of NIES. The NIES Part II report also provides comparisons between AI/AN students at high density and low density schools. High density schools are defined by the OIE as schools in which at least 25 percent of the students are American Indian or Alaska Native. All other schools are classified as low density.

All comparisons are based on statistical tests of significance that used Student's *t* statistics. Only differences that have been determined to be statistically significant at the .05 level after controlling for multiple comparisons are discussed in this report.

Findings are presented in four broad areas: characteristics of AI/AN students, their schools, their teachers, and their curriculum. The Technical Notes section provides information about sampling, interpreting statistical significance, and other technical features. The Data Appendix provides tables that support the findings provided in this report.

## AI/AN students

- More than one-half of American Indian/Alaska Native (AI/AN) students at both grades 4 and 8 were located in the Mountain or South Central regions of the country. By comparison, over one-half of non-AI/AN students at each grade level were located in the Atlantic and North Central regions, and non-AI/AN students were relatively infrequent in the regions where AI/AN students are concentrated. (Definitions of regions, community types, and other classification terms used in the Executive Summary are given in the Technical Notes.)
- AI/AN students were about equally divided between schools located in small towns/rural communities and schools in more urban areas (i.e., urban fringe/large town and central city). Non-AI/AN students, in comparison, were more concentrated at schools in urban fringe communities/large towns and central cities; about three-quarters of non-AI/AN students attended schools in such localities.
- Among AI/AN students, 50 percent at grade 4 and 45 percent at grade 8 attended high density schools. Compared to fourth-grade AI/AN students at low density schools, more fourth-grade students at high density schools were located in the Mountain or South Central regions and in small town/rural communities. At eighth grade, AI/AN students at high density schools were more concentrated in the Mountain region and in small town/rural communities.
- More than 60 percent of AI/AN students at each grade level qualified for free or reduced-price school lunch under the National School Lunch Program. This was greater than in the non-AI/AN population, where 41 percent of fourth-grade students and 36 percent of eighth-grade students qualified. Also, among AI/AN students, more students at high density schools than at low density schools qualified.

- A higher percentage of AI/AN students than non-AI/AN students was classified as English language learners (ELL) by their schools. Fourteen percent of AI/AN students in grade 4 and 13 percent in grade 8 held this classification. Moreover, for AI/AN students attending high density schools, the ELL classification rates were 26 percent at grade 4 and 24 percent at grade 8, significantly higher than the rates at low density schools.
- Seventeen percent of AI/AN students in grade 4 and 15 percent in grade 8 were classified by their schools as students with disabilities (SD). A smaller percentage of non-AI/AN students—9 percent at each grade level—was classified as SD. Differences by school density were also apparent at grade 4; at this grade level, a higher percentage of AI/AN students at low density schools than at high density schools was SD.
- About two-thirds of the AI/AN students in grade 4 and about three-quarters of the AI/AN students in grade 8 said they would probably go to college. One percent of the AI/AN students at each grade level thought that they probably would not graduate from high school. Some students at each grade (28 percent at grade 4 and 10 percent at grade 8) reported that they did not know their educational goals.

## Schools serving AI/AN students

- About one-third of American Indian/Alaska Native (AI/AN) students at each grade level attended schools where few other students were AI/AN. That is, they attended schools where the percentage of AI/AN students was 5 percent or less. At the other end of the spectrum, about one-quarter of AI/AN students attended schools where the percentage of AI/AN students was greater than 75 percent.
- Sixty percent of AI/AN students in grade 4 and 54 percent of AI/AN students in grade 8 attended schools where more than 50 percent of the student body was eligible for free or reduced-price school lunch. Among non-AI/AN students, 43 percent in grade 4 and 34 percent in grade 8 attended schools with such high concentrations of students eligible for free or reduced-price school lunch. Higher percentages of AI/AN students attending high density

schools (49 percent at grade 4 and 38 percent at grade 8) than low density schools (15 percent at grade 4 and 13 percent at grade 8) were at schools where more than 75 percent of the student body was eligible for free or reduced-price school lunch.

- The reported involvement of tribal or village representatives in school-related activities varied by high density and low density schools. At high density schools, principals reported widespread involvement of tribal or village representatives in many school-related activities such as visiting the school to share native traditions and cultures; attending cultural, sporting, or social events; and helping in the classroom or school. For example, 93 percent of grade 4 students and 75 percent of grade 8 students attended high density schools where tribal or village representatives visited to share native traditions and cultures.
- Fifty-two percent of grade 4 AI/AN students and 63 percent of grade 8 AI/AN students attended schools in which few of the teaching staff (0 to 5 percent) were identified as AI/AN. In high density schools, the presence of AI/AN faculty was greater compared to low density schools. Twenty-five percent of grade 4 AI/AN students and 5 percent of grade 8 AI/AN students attended high density schools where more than three-quarters (76 to 100 percent) of the teachers were identified as AI/AN.
- Thirty-seven percent of grade 4 AI/AN students and 38 percent of grade 8 AI/AN students attended schools where they had access to some sort of instruction in their own native languages. Extracurricular activities focusing on native culture were also available to 51 percent of grade 4 students and 38 percent of grade 8 students. More AI/AN students at high density schools than at low density schools had access to these services.

## Teachers serving AI/AN students

- Eighty-nine percent of grade 4 American Indian/Alaska Native (AI/AN) students were taught by teachers with regular or advanced teaching certificates. At grade 8, the percentages of AI/AN students whose teachers had regular or advanced teaching certificates were 78 percent for mathematics and 83 percent for reading/language arts. There were no significant differences in teacher certification between AI/AN and non-AI/AN students or between AI/AN students at high density and low density schools.
- Three-quarters of AI/AN students at grade 4 had teachers whose undergraduate majors were in education. More grade 4 AI/AN students than non-AI/AN students, and more grade 4 AI/AN students at high density schools than at low density schools, had teachers with education majors.
- At eighth grade, 36 percent of AI/AN students had mathematics teachers, and 52 percent had reading/language arts teachers, whose undergraduate majors aligned with their teaching specialization. Compared to AI/AN students, the percentage of non-AI/AN students at grade 8 whose teachers reported these types of majors was significantly higher for mathematics (45 percent) but not for reading (55 percent). There were no significant differences in the majors reported by the teachers of grade 8 AI/AN students at high density and low density schools.
- Eighty-one percent of AI/AN students at grade 4 were taught by teachers with at least 5 years of total teaching experience. At eighth grade, 72 percent had mathematics teachers, and 74 percent had reading/language arts teachers, with this amount of total teaching experience.
- At eighth grade, 36 percent of AI/AN students had mathematics teachers and 33 percent had reading/language arts teachers who had fewer than 5 years of teaching experience in their discipline. More AI/AN students at high density schools than at low density schools had mathematics teachers with less than 5 years experience teaching in their discipline.
- Forty percent of AI/AN students at grade 4 were being instructed by teachers who had spent fewer than 5 years at their current school. At grade 8, the corresponding percentages were 53 percent for mathematics teachers and 49 percent for reading/language arts teachers.
- Twenty-eight percent of grade 4 AI/AN students had teachers who spoke and understood, at least to some extent, tribal or village languages spoken by the local AI/AN community. At grade 8, the corresponding percentages were 25 percent for mathematics teachers



and 23 percent for reading/language arts teachers. For all grades and subject areas, more AI/AN students at high density schools than at low density schools had teachers with these capabilities.

## AI/AN culture and language in the curriculum

- Twenty-one percent of American Indian/Alaska Native (AI/AN) students at grade 4 had teachers who reported integrating an AI/AN perspective into their curriculum either daily or extensively. Ten percent of AI/AN students at grade 8 had mathematics teachers who reported daily or extensive use of an AI/AN perspective, while 16 percent had reading/language arts teachers who did the same. More AI/AN students at high density schools than at low density schools had teachers who reported this level of integration.
- The reported use of culturally relevant mathematics and language arts activities was more common in high density schools than in low density schools. For example, 29 percent of grade 4 AI/AN students and 45 percent of grade 8 AI/AN students at high density schools had teachers who reported using mathematics problems that were reflective of AI/AN homes and communities at least once a month, compared to 5 percent and 18 percent, respectively, at low density schools. Correspondingly, 50 percent of grade 4 AI/AN students and 40 percent of grade 8 AI/AN students at high density schools had teachers who reported assigning literature with AI/AN themes at least once a month, compared to 22 percent and 14 percent, respectively, at low density schools.
- The use of the students' AI/AN languages in mathematics or reading/language arts instruction was infrequent. The use of these languages, including the occasional use of isolated words or phrases, was reported by teachers of only small percentages of

AI/AN students. For example, 15 percent of grade 4 students and 12 percent of grade 8 students had teachers who reported such use in reading/language arts. The percentage of AI/AN students at high density schools whose teachers reported AI/AN language use was higher than the percentage at low density schools.

- About 90 percent of AI/AN students at grade 4 and about 80 percent of AI/AN students at grade 8 had teachers who reported using state content standards “a lot” in planning mathematics and reading/language arts lessons. A high percentage of AI/AN students (about 90 percent or greater) also had school principals who reported that state standards had “much influence” on their schools' mathematics and reading/language arts curriculum.
- Generally, the use of state or locally developed AI/AN content or cultural standards was reported more frequently by teachers of AI/AN students at high density schools than by teachers at low density schools. Twenty-three percent of grade 4 AI/AN students in high density schools had teachers who reported “some” or “a lot” of use of AI/AN content/cultural standards in mathematics, and 31 percent had teachers who reported “some” or “a lot” of use in reading/language arts. Among grade 8 AI/AN students in high density schools, 12 percent had mathematics teachers and 14 percent had reading/language arts teachers who reported using these standards “some” or “a lot.”

In summary, NIES Part II provided baseline information on many aspects of the educational experiences of AI/AN students. It is hoped that this information will help inform efforts to address the educational and culturally related academic needs of AI/AN students so that this diverse group can meet the same challenging state achievement standards as all other students.

The NIES Part I report describes the performance of American Indian and Alaska Native students on the National Assessment of Educational Progress (NAEP) 2005 reading and mathematics assessments. Performance results from Part I will not be linked to the survey findings reported here. Such associations will be examined in future data collections scheduled for 2007.



## Acknowledgments

This report is the culmination of the effort of many individuals. The National Indian Education Study (NIES) was a collaborative effort among the National Center for Education Statistics (NCES), the U.S. Department of Education, the Office of Indian Education (OIE), and the several contractors responsible for the conduct of this important project.

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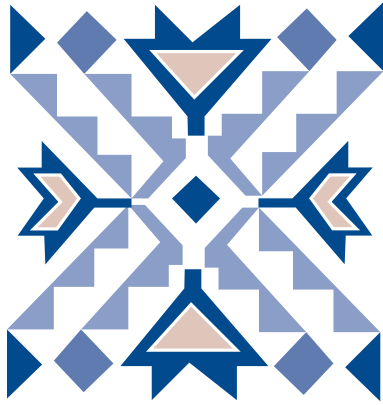
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This report would not have been possible without the contributions of the students, teachers, and principals who participated in this study. Special thanks also go to the student artists whose works are featured on the cover. Clockwise from the top: *Ticking Away* by Shea Enos; *If You Can Believe, Then You Can Achieve* by Antonio Perea; *College Dreams* by Parker Forrest Blair; and *Giving the Future* by Laurel Skye Cadotte.



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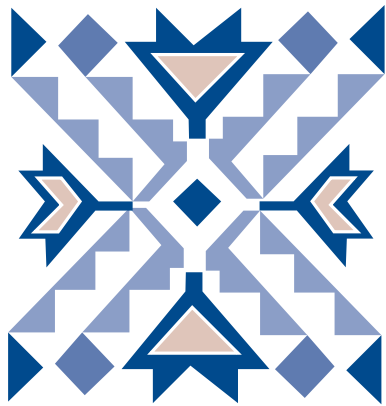


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# CHAPTER 1

## Introduction

This report presents findings from the National Indian Education Study (NIES) Part II, a national survey to describe the educational experiences of American Indian/Alaska Native (AI/AN) students across the United States. Survey participants included AI/AN students in grades 4 and 8, their teachers, and their school principals. These grades were chosen for the study because of the availability of national achievement data provided by the NAEP assessments at grades 4 and 8.

The two-part NIES was conducted in 2005 by the National Center for Education Statistics (NCES), with the support of the Office of Indian Education (OIE), for the U.S. Department of Education. Results from Part I, which examined the performance of AI/AN students in mathematics and reading on the National Assessment of Educational Progress (NAEP), are published in *National Indian Education Study Part I: The Performance of American Indian and Alaska Native Fourth- and Eighth-Grade Students on NAEP 2005 Reading and Mathematics Assessments* (NCES 2006-463).

Because different samples responded to each part of the study, the NIES Part I performance results and the NIES Part II survey results cannot be analyzed together. However, information on both the educational experiences and academic achievement of AI/AN students will be obtained in a future data collection scheduled for 2007.

### What was the background for the study?

AI/AN students represent about one percent of the total student population in the United States (Freeman and Fox, 2005). According to Census figures, about 36 percent of the total AI/AN population lives in tribal areas (see <http://www.census.gov/prod/2006pubs/censr-28.pdf>).<sup>1</sup> Executive Order 13336, “American Indian and Alaska Native Education,” was enacted in 2004 to support educational efforts on behalf of AI/AN students nationwide (see <http://www.whitehouse.gov/news/releases/2004/04/20040430-10.html>).

Section 3 of the Executive Order calls for

*...the compilation of comprehensive data on the academic achievement and progress of American Indian and Alaska Native students toward meeting the challenging student academic standards of the No Child Left Behind Act of 2001.*

<sup>1</sup> Tribal areas include federal and state American Indian reservations, Oklahoma tribal statistical areas, tribal designated statistical areas, state designated American Indian statistical areas, and Alaska Native village statistical areas.

... [and] assessment of the impact and role of native language and culture on the development of educational strategies to improve academic achievement.

To date, only a very few researchers have carried out experimental or quasi-experimental studies to investigate whether children exposed to educational programs that incorporate native language and culture exhibit better academic performance than children in matched comparison groups (Demmert and Towner, 2003). Within this small group, Tharp (1982) describes a series of quasi-experimental (successive-cohorts analysis) and experimental studies carried out with Polynesian-Hawaiian students in the Kamehameha Early Education Program (KEEP). In each of the studies, students participating in the KEEP program, which emphasized culturally based pedagogy, had higher test scores than matched control groups receiving a standard curriculum. Suggestive evidence is also available from comparative studies with weaker designs. For example, Bacon, Kidd, and Seaberg (1982) carried out a non-experimental comparison study of the effectiveness of bilingual instruction with Cherokee Indian students in which considerable efforts were made to establish adequate comparison groups through the use of control variables and covariates. Children in the bilingual program had higher mathematics and reading scores than the controls.

NIES Part II is a survey, not an experimental or quasi-experimental study. The survey information, however, allows one to explore the extent to which tribal languages and cultures are integrated into the education of AI/AN students. Thus, NIES provides a context for further understanding of how such culture and language can play a role in the education of AI/AN students.

## How was the information collected?

The survey included five sets of questions, each designed to collect information from one of the groups that participated in NIES: grade 4 students, grade 8 students, mathematics and reading/language arts teachers of the participating students at each grade level, and principals of the schools from which

the students were selected. The questionnaires were developed with the guidance of a Technical Review Panel (TRP) assembled to advise the NIES. The survey questions were designed to gather information on

- AI/AN students;
- schools attended by AI/AN students;
- teachers of AI/AN students; and
- curriculum, standards, and assessments used by teachers and schools serving AI/AN students.

Throughout the survey, questions were included to measure the extent to which AI/AN students were exposed to native language and culture in their lives and at school. In addition, a space was provided at the end of each survey for respondents' comments.

For further information about the questionnaires, and the manner in which they were administered, refer to the Technical Notes of this report. The questionnaires can be viewed online at <http://nces.ed.gov/nationsreportcard/nies.asp>.

## Who participated in NIES?

The NIES Part II sample was designed to produce information representative of all AI/AN students at grades 4 and 8. To create the sample, schools were selected first, and then students within the schools were selected. The target population of schools included all schools in the United States that had at least one AI/AN student enrolled in either grade 4 or grade 8. The target population of students was all grade 4 and grade 8 students who were identified as AI/AN by official school records (approximately 46,000 students at grade 4 and 45,000 at grade 8). If, at the time of the survey, it was determined that the AI/AN designation in the school records was not correct, the student was reclassified at the school's direction and excluded from NIES.

The sample included about 5,600 eligible students at approximately 550 schools located throughout the United States. The three types of schools in the sample were public, private, and BIA. The unweighted

percentage of eligible schools by type were, approximately, 84 percent public, 4 percent private, and 12 percent BIA. About 480 of these eligible schools actually participated in the Part II survey.

The questionnaires were completed by about 2,600 grade 4 students and 2,500 grade 8 students at approximately 480 schools. Also responding to the survey were about 480 grade 4 teachers, 820 grade 8 teachers, 240 grade 4 principals, and 230 grade 8 principals associated with these students. Some principals responded for both grade 4 and grade 8.

The weighted school response rates were 87 percent at grade 4 and 93 percent at grade 8. The weighted student response rates were 95 percent at grade 4 and 91 percent at grade 8. No separate samples were drawn for teachers or school principals. However, a weighted item response rate was calculated for teachers and school principals based on completed questionnaires obtained using student weights, since the student was the unit of analysis. Accordingly, at grade 4, completed questionnaires were obtained from school principals for 100 percent of students and from teachers for 99 percent of students. At grade 8, completed school questionnaires were obtained for 99 percent of students, completed mathematics teacher questionnaires were obtained for 93 percent of students, and completed reading teacher questionnaires were obtained for 94 percent of students. See the Technical Notes for unweighted response rates.

The intention of this report was to portray the general circumstances of AI/AN students nationally, rather than for specific regions or tribal groups. The survey did ask students (and teachers) to give the name of their tribe. Since students do not always know this information reliably, and since different respondents may designate their tribal affiliations in different ways or at different levels (e.g., Navajo or a specific band of Navajo), special analysis is required to report such data. The scope of this report does not include such analysis; however, the data will be made available in a data file that may be used for secondary analysis by independent researchers.

## How are results presented?

Although the central focus of the report is AI/AN students, information is also provided about non-AI/AN students, where available, so that the reader can compare the characteristics of AI/AN students with their peers from different backgrounds. These comparisons are based on information about non-AI/AN students collected through NAEP, another nationally representative survey. The comparisons are facilitated by the fact that NIES and NAEP included a number of questions that were asked in exactly the same way in both surveys.

The report provides comparisons between AI/AN students and non-AI/AN students with regard to the basic demographic characteristics of students and schools and teachers' general preparation for teaching. Most of the topics addressed by NIES, however, have never previously been asked of national samples, and so no comparative data are available.

Because the sample is designed to be representative of students (rather than schools or teachers), the report is written with the student as the focus. For example, information about teacher credentialing is reported as "percentage of students receiving instruction from teachers with regular teaching certificates" rather than "percentage of teachers holding regular teaching certificates." Results are weighted to represent the full population of AI/AN and non-AI/AN students in the United States in grades 4 and 8.

Throughout the report, results are displayed separately for grades 4 and 8. Within grade level, comparisons to non-AI/AN students are provided from NAEP for all topics when available. In addition, many of the results for AI/AN students are further separated to distinguish between students attending schools with high or low proportions of AI/AN students. In keeping with OIE usage, school density is the term used here to refer to the proportion of AI/AN students, and, also in keeping with OIE usage, high density schools are defined as those in which 25 percent or more of the students are AI/AN. Schools in which less than 25 percent of

the students are AI/AN are considered low density schools. This classification scheme has also been used in previous NCES reports examining AI/AN education (Pavel, Curtis, and Whitener, 1997).

Most of the results presented in the report are based on the responses to individual survey questions. In a few cases, responses from several survey questions have been combined to create an average rating. See the Technical Notes for information about the construction of the average ratings.

All of the estimates for AI/AN students are derived from the NIES surveys. Due to sampling, these estimates may differ from previously published estimates derived from NAEP. However, in most cases the differences fall within the standard errors of the estimates. In addition, some of the percentages reported in the text are constructed by combining data across two or more of the categories shown in the accompanying tables or figures. The combined percentages may differ slightly from the table values due to rounding.

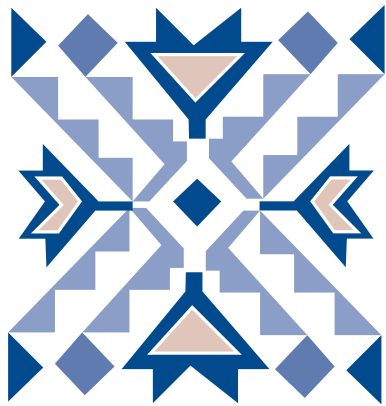
The significance of differences between groups of students that are reported here are based on statistical tests (Student's *t* statistics) that consider both the size of the differences between percentages or means and the standard errors of those statistics. Only differences that have been determined to be statistically significant at the .05 level, after controlling for multiple comparisons, are identified as significant in the tables and figures and addressed in the text. The reader is cautioned to rely on the reported differences in the text and tables rather than on the apparent magnitude of any difference. The standard errors of results shown in tables and figures are provided in the Data Appendix to this report.

## Cautions in interpretation

Although comparisons are made between AI/AN and non-AI/AN students, as well as between AI/AN students at high density and low density schools, this should not be interpreted as evidence that the race/ethnicity of the students or the density of the AI/AN school population are the causes of any significant differences in other student, teacher, and school characteristics. There are many reasons why students, teachers, and school programs may differ, including ones that are not examined in the current report or measured in the NIES surveys. This report is purely descriptive in nature, and readers are cautioned not to draw causal inferences based solely on the results presented here.

## How is the report organized?

The report is organized into five chapters. After this introductory chapter, chapter 2 describes the AI/AN students and explores the extent to which these students report identification with and exposure to AI/AN culture. Chapter 3 describes the schools that serve AI/AN students, including the efforts that these schools make to engage with parents and the wider AI/AN community. Chapter 4 discusses the characteristics of the teachers who provide mathematics and reading instruction to AI/AN students, including the teachers' general qualifications and their specific preparation to teach AI/AN students. Chapter 5 discusses the extent to which AI/AN culture and language are integrated into the curriculum, as well as assessments and standards used by teachers and schools serving AI/AN students. The Technical Notes section discusses technical procedures and terms. The Data Appendix provides more detailed results for some questions in the survey and standard error tables for all of the results discussed in this report.



## CHAPTER 2

### Description of American Indian/Alaska Native Students

This chapter presents information from NIES Part II that describes the basic demographic characteristics of American Indian/Alaska Native (AI/AN) students and explores the extent to which language and culture are integrated into the education of these students. Student perceptions about school and learning, family support for education, and engagement with the school are also examined.

Demographic information is presented for AI/AN students nationwide and is compared with similar information for a national sample of non-AI/AN students. In addition, information is presented separately for AI/AN students in high density and low density schools, a distinction that is consistent with the Office of Indian Education characterization of schools that serve AI/AN students. High density schools are schools in which at least 25 percent of all enrolled students are AI/AN, while low density schools enroll fewer than 25 percent AI/AN students.

Nationally, AI/AN students are almost equally divided between these two types of schools. Fifty percent of AI/AN students in grade 4 and 45 percent in grade 8 attend high density schools (table A-1); the remaining AI/AN students attend low density schools. As will be seen later in this chapter, the characteristics of AI/AN students who attend high density schools differ in many ways from the characteristics of AI/AN students who attend low density schools.

## Where are AI/AN students located?

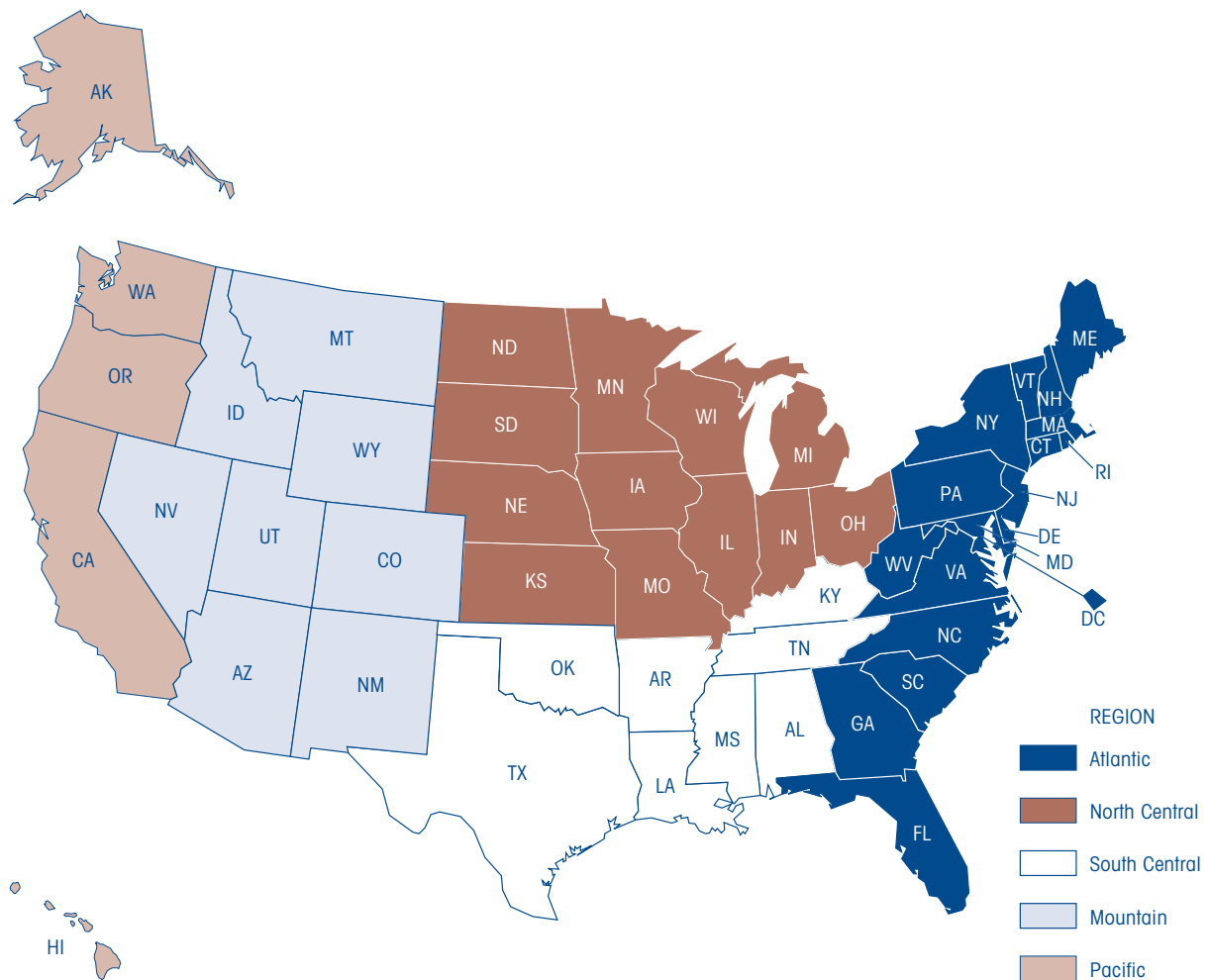
We begin with the basic question, “Where are AI/AN students located?” The regions and types of communities reported here were derived from the locations of the schools the students attended. The reader should bear in mind that some students may commute to schools in different communities. In addition, among the 7 percent of AI/AN students who attend Bureau of Indian Affairs (BIA) schools,

about 20 percent are at boarding schools. For more information on BIA schools, see <http://www.oiep.bia.edu/docs/Finger%20Tip%20Fact%202005.pdf>.

### Location by region

The five regions used in this report are shown in figure 2-1. They are based on Census divisions or aggregations of Census divisions.

**Figure 2-1.** Regions for the National Indian Education Study: 2005



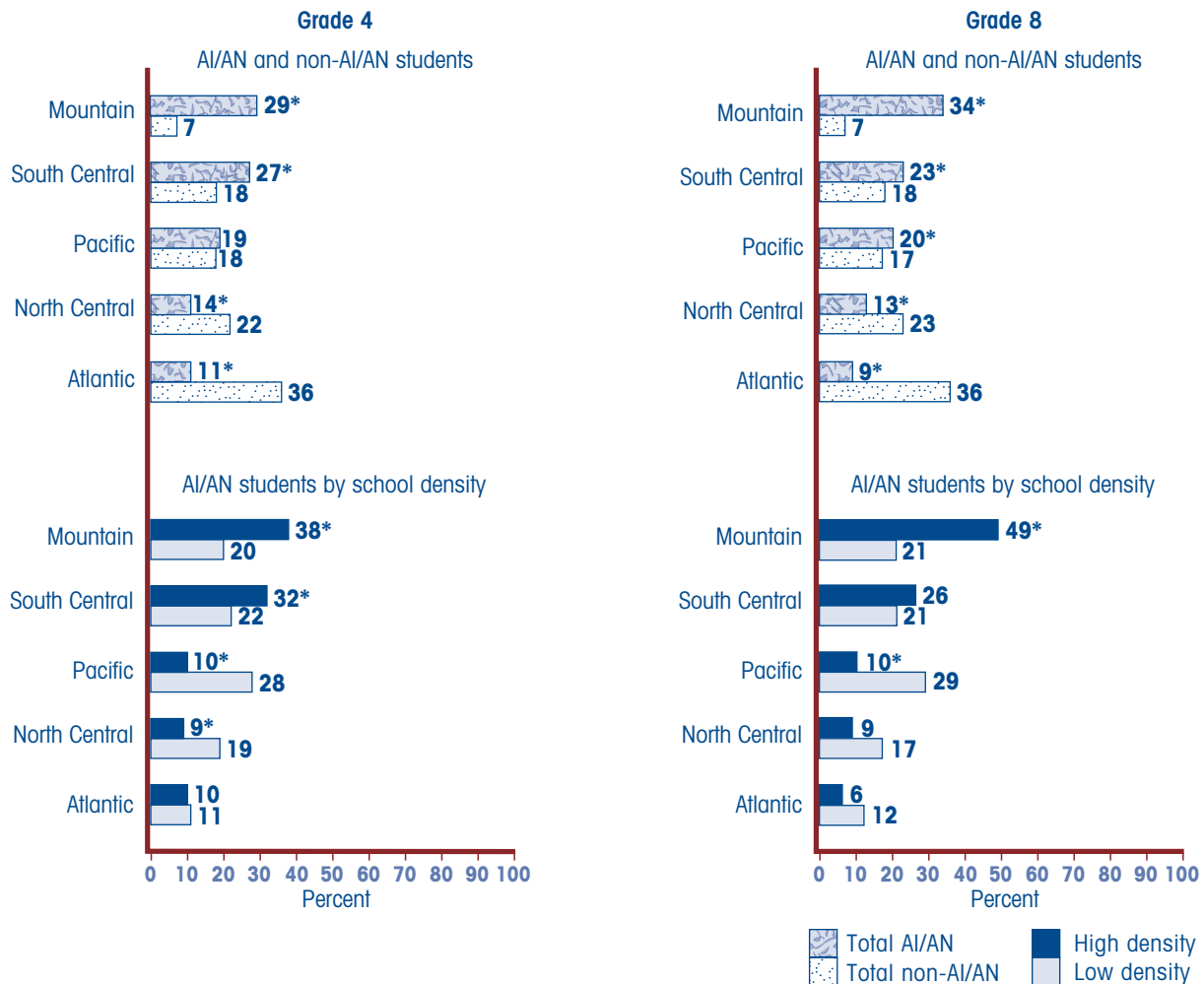
NOTE: Regions referenced in the figure are based on Census divisions or aggregations of Census divisions. They were defined by NCES exclusively for the 2005 National Indian Education Study.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

At both grades 4 and 8, more than one-half of AI/AN students attend schools in two of the regions—the Mountain and South Central regions (figure 2-2). In comparison, over one-half of non-AI/AN students attend schools in the Atlantic and North Central regions. Smaller percentages of non-AI/AN students attend schools in the regions where AI/AN students

are most concentrated. When one considers AI/AN students separately in high density and low density schools, the concentration in the Mountain and South Central regions is even more apparent. Seventy percent of grade 4 AI/AN students and 75 percent of grade 8 AI/AN students at high density schools are concentrated in these two regions.

**Figure 2-2.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, region, and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

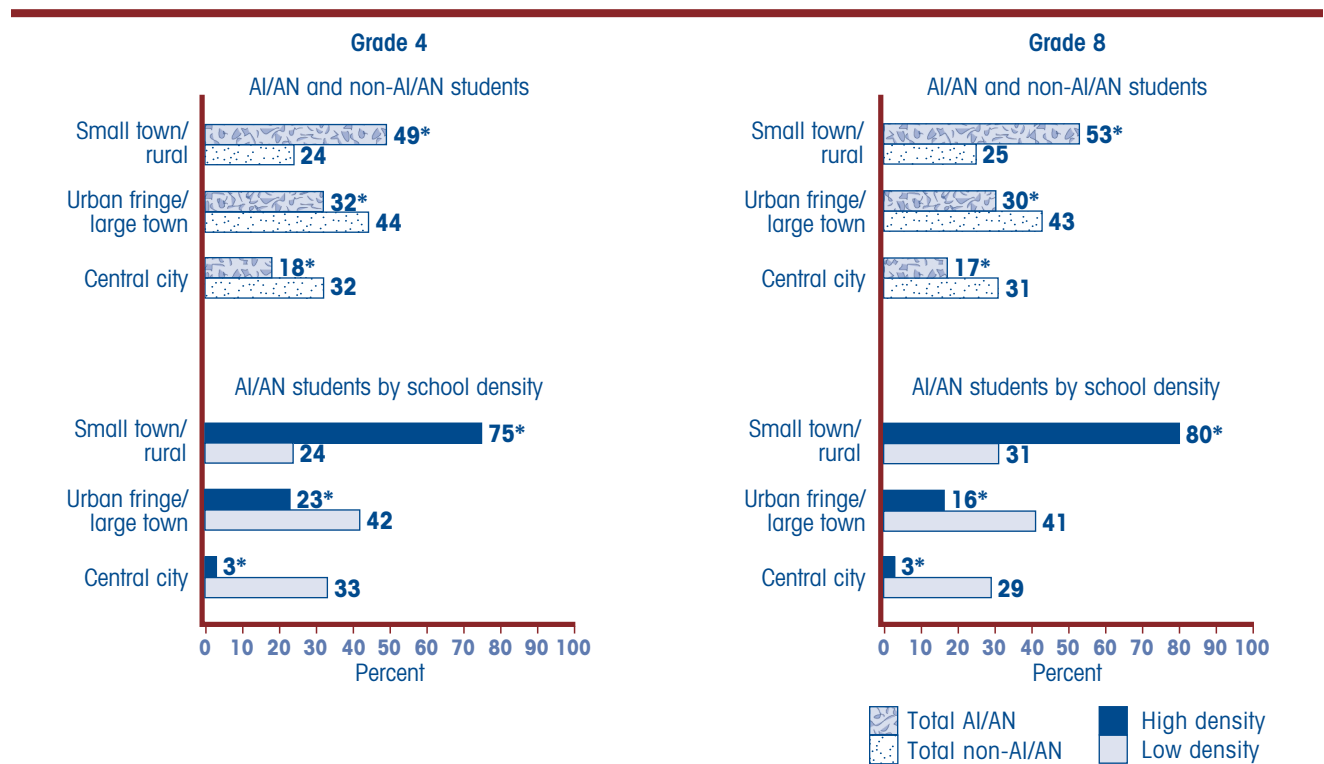
## Location by community type

Across the country, about one-half of all AI/AN students attend schools located in small towns or rural communities (figure 2-3). At grade 4, for example, 49 percent of AI/AN students attend schools in small towns or rural communities, while 32 percent are at schools in urban fringe communities or large towns, and 18 percent are at schools in central cities. Likewise at eighth grade, 53 percent of AI/AN students attend schools in small towns or rural communities, 30 percent are at schools in large towns or urban fringe communities, and 17 percent attend central city schools. In contrast, non-AI/AN students nationwide are more concentrated at schools in urban

fringe communities/large towns and central cities; about three-quarters of non-AI/AN students at each grade level attend schools in such localities.

Figure 2-3 also shows that, at both grades 4 and 8, more AI/AN students attending high density schools are located in small towns or rural areas, whereas more AI/AN students attending low density schools are located in urban fringe/large towns and central cities. In fact, among AI/AN students at high density schools, 75 percent of grade 4 students and 80 percent of grade 8 students attend schools in small towns or rural communities.

**Figure 2-3.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, community type, and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.



## What are the socioeconomic statuses and family resources of AI/AN students?

The socioeconomic status of AI/AN students was estimated on the basis of eligibility for free or reduced-price lunch under the National School Lunch Program (NSLP) and the highest level of education attained by either parent. Two indicators of family resources related to education were also explored, namely, the availability of literacy materials and access to computers in the students' homes.

### Eligibility for free or reduced-price school lunch

The 2003 American Community Survey found the percentage of the AI/AN population living below the poverty line to be 25.7 percent, which is more than double the national figure of 12.4 percent for the population as a whole (U.S. Census Bureau 2003). While the National Indian Education Study (NIES) does not provide precisely comparable information, it does indicate that the majority of AI/AN students comes from families with low-income levels.

Income status for students in both NIES and NAEP was estimated based on school records of eligibility for free or reduced-price school lunch under the NSLP.

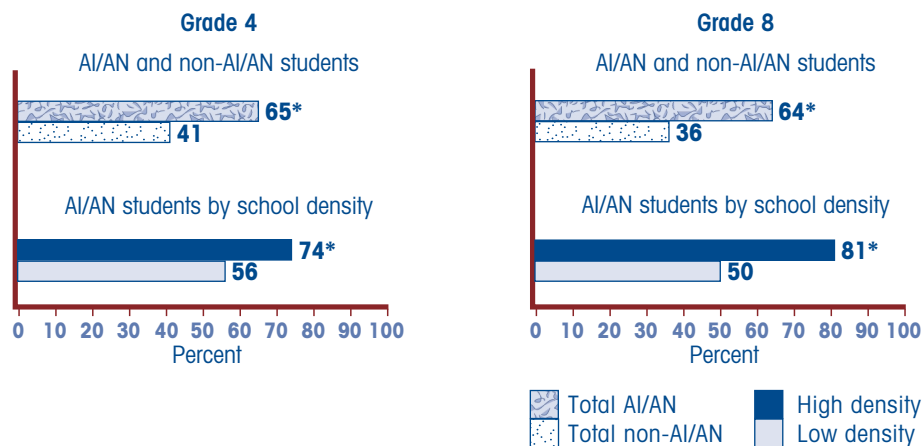
Children are eligible for free meals if their families have incomes at or below 130 percent of the poverty level. Those with family incomes between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals (USDA 2005). See the Technical Notes for more discussion of NSLP eligibility.

At both grades 4 and 8, about 65 percent of AI/AN students are eligible for free or reduced-price lunches.

Figure 2-4 shows that, at both grade levels, about 65 percent of AI/AN students qualify for the school lunch program. This percentage is significantly greater among AI/AN students than in the non-AI/AN student population, where 41 percent of fourth-grade students and 36 percent of eighth-grade students qualify.

Among AI/AN students, there are differences between percentages of eligible students at high density and low density schools. At fourth grade, 74 percent of students from high density schools are eligible, compared to 56 percent from low density schools. At eighth grade, 81 percent of AI/AN students at high density schools are eligible for free or reduced-price lunch compared to 50 percent at low density schools.

**Figure 2-4.** Percentage of grade 4 and grade 8 students identified as eligible for free or reduced-price school lunch, by American Indian/Alaska Native (AI/AN) status and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## Parent education

Parent education is an indicator of socioeconomic status that has been shown to be an important predictor of student achievement (Hampden-Thompson and Johnston, 2006). The level of parent education reported for this study is based on the responses grade 8 students gave to two questions concerning the highest level of education attained by their mother and the highest level of education attained by their father. Grade 4 students were not surveyed regarding parents' education because cognitive interview studies carried out by the National Assessment of Educational Progress have shown that grade 4 students do not reliably know this information (Levine, Huberman, and Buckner, 2002).

Figure 2-5 shows the highest education level attained by either the student's mother or father. Overall, 75 percent of AI/AN students reported that one or both of their parents had at least a high school diploma. This figure included 29 percent who reported that one or both of their parents had graduated from college, 25 percent who reported that one

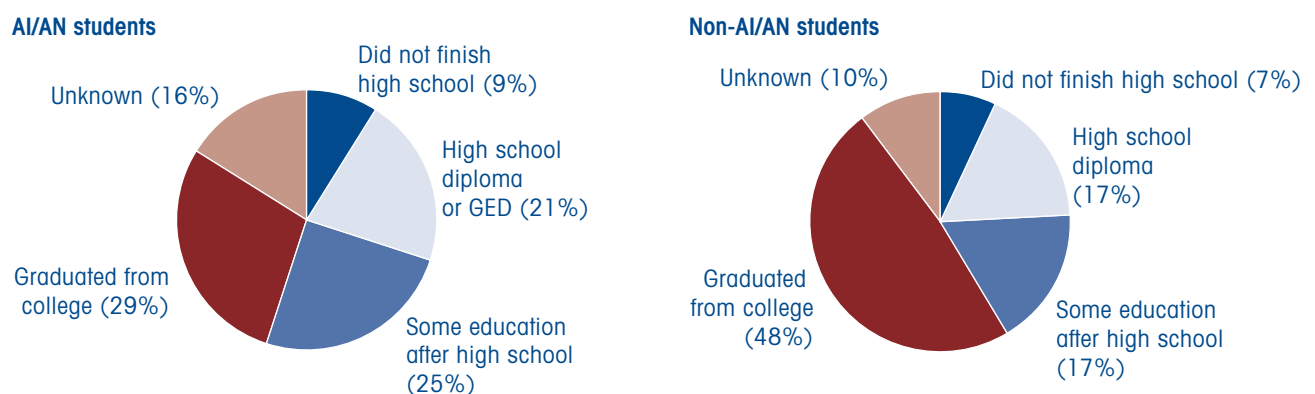
or both of their parents had some education after high school, and 21 percent who reported that one or both of their parents had a high school diploma or General Education Development (GED) certificate. Sixteen percent indicated that they did not know their parents' levels of education.

Fifty-four percent of AI/AN students at grade 8 reported that at least one of their parents had some education beyond high school or had graduated from college.

The corresponding percentages for non-AI/AN students were 83 percent for one or both parents having at least a high school diploma, 48 percent for one or both parents having graduated from college, and 10 percent for "unknown" status. The questions on parent education answered by AI/AN students and non-AI/AN students were not strictly comparable, however, because the questions for non-AI/AN students did not include the alternative of a GED certificate among the response options.

There was no significant difference in the levels of parent education reported by AI/AN students attending high density and low density schools (table A-5).

**Figure 2-5.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status and highest level of education reported for either parent: 2005



NOTE: Detail may not sum to totals because of rounding. Statistical comparisons between AI/AN students and non-AI/AN students are not appropriate because the survey questions posed to these two populations were slightly different. The AI/AN students responded to questions in which GED was listed along with high school diploma; the non-AI/AN students responded to questions in which GED was not mentioned.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## Literacy materials in the home

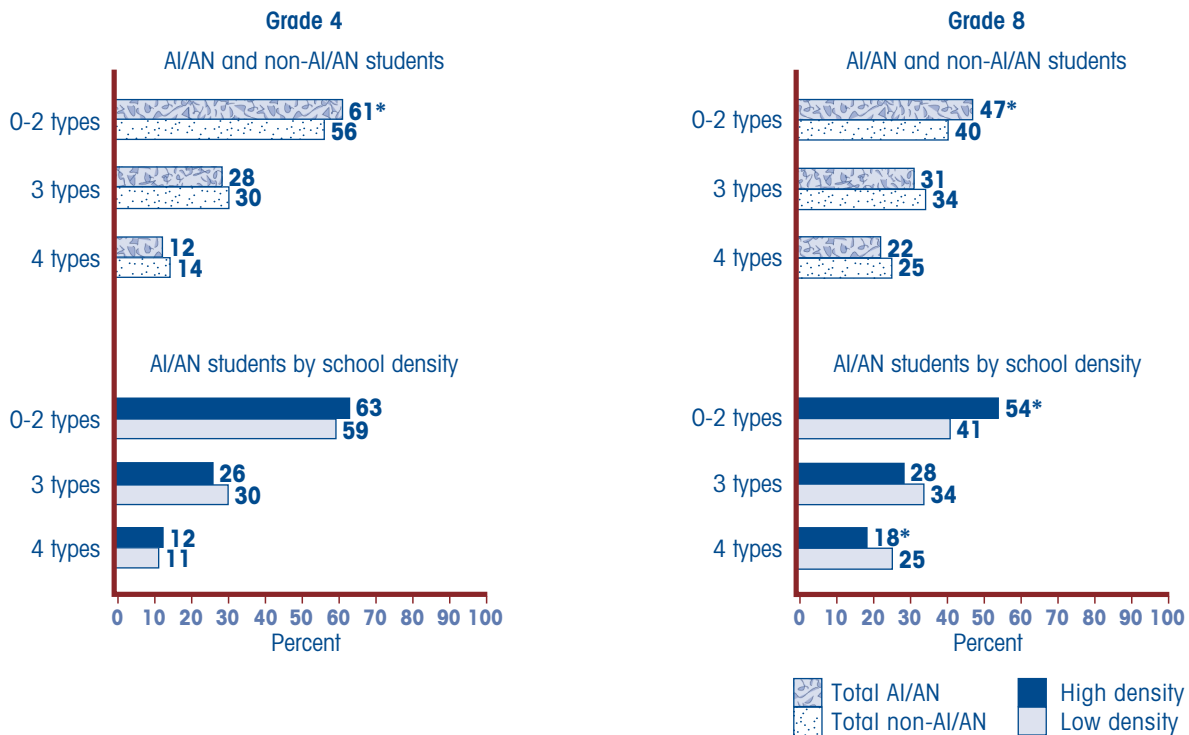
Literacy materials available in the home constitute a family resource that has been reported to be associated with students' achievement scores (Shaughnessy, Nelson, and Norris, 1998). The measure reported here is based on questions about the availability of four types of literacy materials in the home: newspapers, magazines, encyclopedias, and more than 25 books.

In fourth grade, 61 percent of AI/AN students reported having, at most, two of these types of literacy materials available in the home (figure 2-6). A significantly smaller percentage of non-AI/AN students (56 percent) reported this amount of availability. At the other end of the scale, 12 percent of AI/AN students and 14 percent of non-AI/AN students reported having all four types of literacy materials. The percentages were not significantly different from one another.

In eighth grade, 47 percent of AI/AN students reported having 0-2 types of literacy materials in the home, while 40 percent of non-AI/AN students reported this amount of availability. Again, the percentages of AI/AN and non-AI/AN students who reported just 0-2 types of literacy materials were significantly different. On the other end of the scale, 22 percent of AI/AN students and 25 percent of non-AI/AN students reported having all four types of literacy materials; these percentages were not significantly different.

Responses of AI/AN students in high density and low density schools also differed at this grade level—more AI/AN students attending high density schools reported that two or fewer types of literacy materials were available in their homes, while more AI/AN students in low density schools reported having all four types of literacy materials.

**Figure 2-6.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, the number of different types of literacy materials in their homes, and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding. Types of literacy materials include newspapers, magazines, encyclopedias, and more than 25 books.

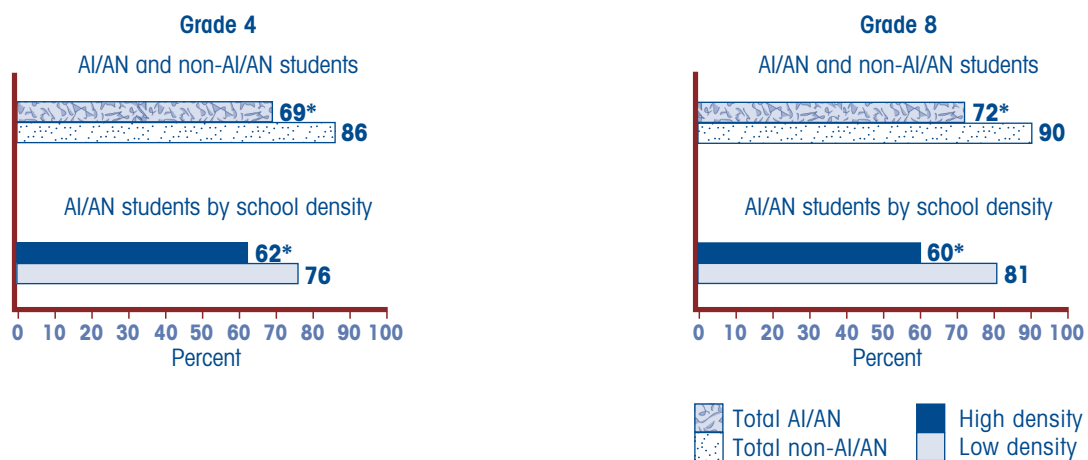
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## Computers in the home

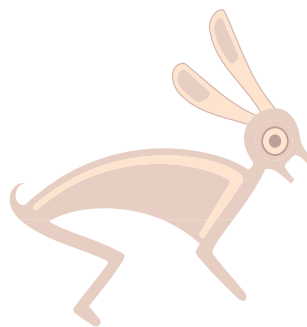
Another family resource that can be used for educational purposes is a computer. Figure 2-7 shows that 69 percent of grade 4 AI/AN students reported having a computer at home that they use. On the other hand, 86 percent of their non-AI/AN peers across the nation reported having computers in the home. Similar differences were seen at eighth grade. Nationwide, 72 percent of grade 4 AI/AN students reported having access to computers at home compared to 90 percent

of their non-AI/AN peers. Furthermore, AI/AN students at high density schools typically have less access to a computer at home. At high density schools, 62 percent of fourth-graders and 60 percent of eighth-graders reported having home computers. At low density schools, availability of home computers was reported by 76 percent of grade 4 students and 81 percent of grade 8 students.

**Figure 2-7.** Percentage of grade 4 and grade 8 students who reported having a computer at home that they use, by American Indian/Alaska Native (AI/AN) status and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.



## How many AI/AN students are English language learners?

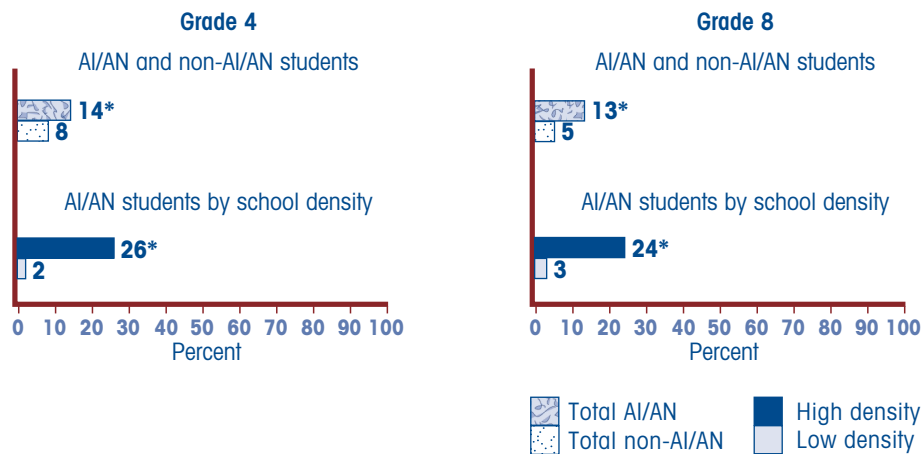
Nationally, school records collected at the time of the survey indicate that 14 percent of grade 4 and 13 percent of grade 8 AI/AN students were classified as English language learners (ELL).

Figure 2-8 shows that identification rates for non-AI/AN students were lower than for AI/AN students; 8 percent of non-AI/AN students at grade 4 and 5 percent at grade 8 were classified as ELL.

About 25 percent of AI/AN students at high density schools are English language learners, compared to less than 5 percent at low density schools.

Within the AI/AN population, ELL classification rates varied between high density and low density schools. At fourth grade, 26 percent of the AI/AN students at high density schools were ELL students compared to 2 percent at low density schools. At eighth grade, 24 percent of the AI/AN student population was classified as ELL in high density schools compared to 3 percent in low density schools.

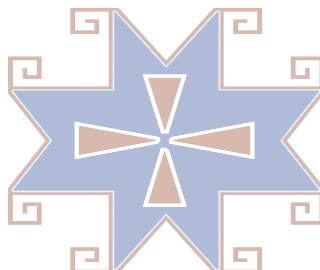
**Figure 2-8.** Percentage of grade 4 and grade 8 students classified as English language learners, by American Indian/Alaska Native (AI/AN) status and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.



## How many AI/AN students are classified as students with disabilities?

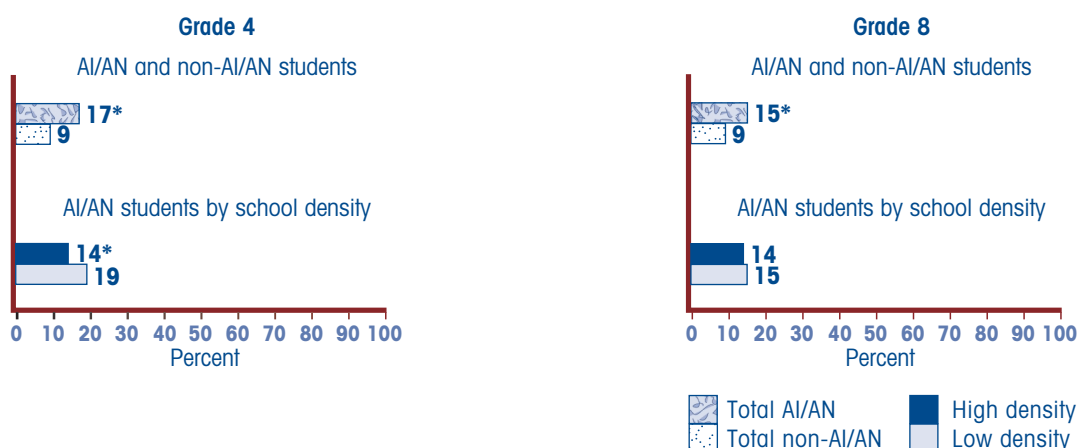
Information on students' disability status was also collected from school records at the time of the survey. Students were classified as having a disability if they had either an Individualized Education Plan or a Section 504 Plan, or if either type of plan was in the process of being developed.

Similar to the findings of ELL classification, a higher percentage of AI/AN students than non-AI/AN students in grades 4 and 8 were identified as students with disabilities (SD). Figure 2-9 indicates that 17 percent of AI/AN students at grade 4 were identified on

school records as SD, while 9 percent of non-AI/AN students were so identified. At eighth grade, 15 percent of AI/AN students and 9 percent of non-AI/AN were identified as SD.

Differences between high density and low density schools were observed at grade 4 only, where a lower percentage of AI/AN students at high density schools were found to have an SD classification. Fourteen percent of grade 4 AI/AN students at high density schools were identified as SD compared to 19 percent at low density schools.

**Figure 2-9.** Percentage of grade 4 and grade 8 students classified as students with disabilities, by American Indian/Alaska Native (AI/AN) status and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## How did the AI/AN students in NIES describe their own race/ethnicity?

All students selected for the NIES study were identified as AI/AN on school records collected at the time of the survey. In contrast to school records, the race/ethnicity data reported here is based on the students' responses.

Students answered two questions about race and ethnicity: "Are you Hispanic or Latino?" and "Which of the following [race categories] best describes you? Fill in one or more ovals." The race categories were

White, Black or African American, Asian, American Indian or Alaska Native, and Hawaiian or other Pacific Islander. Thus, students could identify with a single race/ethnicity or with multiple races/ethnicities. Table 2-1 shows the percentage of AI/AN students who self-identified as AI/AN only, those who self-identified as AI/AN in combination with some other race or ethnicity, and those who did not include AI/AN in their self-identification.

The category “AI/AN in combination” presented in the table includes those students who identified themselves as Hispanic and AI/AN, as well as those who selected AI/AN plus a second race/ethnicity.

Nationally, 44 percent of AI/AN students at grade 4 and 51 percent at grade 8 identified themselves as AI/AN only, while another 42 percent at grade 4 and 35 percent at grade 8 identified themselves as AI/AN in combination. The remaining 14 percent at each grade level did not self-identify as AI/AN.

At both grade levels, there was a relationship between school density and the manner in which students self-identified. At fourth grade, 57 percent of students in high density schools identified themselves as AI/AN only compared to 31 percent in

low density schools. At eighth grade, 64 percent of students in high density schools and 41 percent in low density schools reported themselves to be AI/AN only.

## To what extent, and in what ways, are AI/AN students exposed to traditional culture and language?

This section presents results for students’ self-reported exposure to AI/AN culture, including their degree of knowledge about their tribe or village, their participation in tribal or village activities, and the use of traditional language in their homes. Also reported are the students’ perceptions of their schools as a resource for learning about AI/AN culture.

### Students’ reported knowledge about tribe or village

As part of the student survey, grade 4 students answered a question that asked how much they knew about their tribe or village. Grade 8 students rated themselves in two areas: knowledge of current events and issues important to their tribe or village, and knowledge of the traditions of their tribe or village.

**Table 2-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and self-identification as AI/AN: 2005

Self-identification as AI/AN	Total	School density	
		High	Low
<b>Grade 4</b>			
Identifies as AI/AN only	44	57*	31
Identifies as AI/AN in combination	42	31*	52
Does not self-identify as AI/AN	14	12*	17
<b>Grade 8</b>			
Identifies as AI/AN only	51	64*	41
Identifies as AI/AN in combination	35	26*	42
Does not self-identify as AI/AN	14	9*	18

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: All students were classified as AI/AN by school records. The category “Identifies as AI/AN in combination” includes students who identified themselves as Hispanic and AI/AN as well as students who selected AI/AN plus a second race. School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

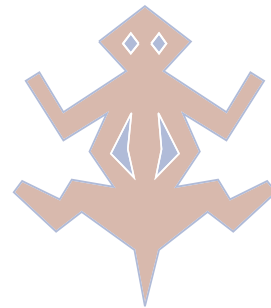


Table 2-2 shows that 21 percent of grade 4 AI/AN students reported knowing “a lot” about their tribe or village, while an additional 41 percent reported having “some” knowledge on this topic. Thirty-eight percent said they did “not [know] very much.”

A higher percentage of grade 4 students attending high density schools reported that they knew “a lot,” while a higher percentage of grade 4 students attending low density schools reported that they did not know very much.

Table 2-3 shows that, at eighth grade, 41 percent of the students rated their knowledge of current events and issues important to their tribe or village as “good” to “excellent.” Forty-five percent gave “good” to “excellent” ratings to their knowledge of the traditions of their tribe or village. A higher percentage of students from high density schools rated their knowledge in both areas as “good” (“good” or “excellent” in the case of traditions), while more students from low density schools rated their knowledge of these topics as “poor.”

**Table 2-2.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and self-reported extent of knowledge about their tribe or village: 2005

Knowledge about tribe or village	Total	School density	
		High	Low
Not very much	38	35*	42
Some	41	40	42
A lot	21	26*	16

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table 2-3.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and self-reported extent of knowledge about aspects of their tribe or village: 2005

Knowledge about	Total	School density	
		High	Low
Current events and issues important to tribe or village			
Poor	27	16*	36
Fair	32	33	31
Good	34	42*	28
Excellent	7	9	6
Traditions of tribe or village			
Poor	27	17*	36
Fair	28	28	28
Good	32	40*	26
Excellent	13	16*	10

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



## Participation in tribal/village activities

Information about participation in tribal or village activities was derived from responses to questions that asked students how often they went to ceremonies and gatherings given by members of their tribe or village.

Approximately one-half of all AI/AN students at both grade levels reported attending tribal or village ceremonies and gatherings once a year or more (table 2-4). A higher percentage of students attending high density schools reported participation several times a year—33 percent at fourth grade and 35 percent at eighth grade—while a higher percentage of students attending low density schools reported that they never participated—42 percent at fourth grade and 46 percent at eighth grade.

Sixty-five percent of grade 8 students also reported some participation in gatherings of people from many tribes or villages, while 42 percent reported having attended camps or lodges, and 43 percent reported engaging in other community activities that teach about the traditions of their tribes or villages (table A-14).

## Use of traditional language

Table 2-5 shows the frequency of traditional language use within families, based on a question at both grade levels that asked, “How often do people in your family talk to each other in your traditional language (the language of your tribe or village)?” Twenty-eight percent of grade 4 students and 23 percent of grade 8 students reported that their families talk to each other in the language of their tribe or village about one-half the time or more often. However, 41 percent of fourth grade and 51 percent of eighth grade students reported use of traditional language within the family as “never.”

At both grade levels, a larger percentage of students from high density schools reported that their families talk to each other in the language of their tribe or village about one-half the time or more often, whereas a larger percentage of students from low density schools reported that their families never talk to each other in their traditional languages.

**Table 2-4.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and attendance at ceremonies and gatherings given by members of their tribe or village: 2005

Attendance at ceremonies and gatherings	Total	School density	
		High	Low
<b>Grade 4</b>			
Never	36	31*	42
Less than once a year	12	13	11
At least once a year	25	23	26
Several times a year	27	33*	21
<b>Grade 8</b>			
Never	36	25*	46
Less than once a year	17	16	17
At least once a year	23	24	22
Several times a year	24	35*	15

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table 2-5.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which students' families communicate in their traditional languages: 2005

Traditional language use within family	Total	School density	
		High	Low
<b>Grade 4</b>			
Never	41	29*	54
Once in a while	31	29	33
About half of the time	12	16*	8
All or most of the time	16	26*	6
<b>Grade 8</b>			
Never	51	30*	68
Once in a while	26	28	25
About half of the time	10	18*	4
All or most of the time	12	24*	3

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## School as a resource for learning about AI/AN culture

This section presents findings on students' perceptions of school as a cultural resource. Students at grade 4 answered three separate questions about the availability of culturally relevant activities at their schools. Students at grade 8 answered one five-part question addressing the same theme.

Table 2-6 shows that 45 percent of grade 4 AI/AN students reported going on field trips or attending special events and checking out books or videos from the school library to learn about American Indians or Alaska Natives. Twenty-nine percent reported that elders or other people from their tribe or village came to school to teach about culture and traditions. A higher percentage of students from high density schools reported such visits than students from low density schools.

As shown in table 2-7, one-half of AI/AN students in grade 8 responded affirmatively that their schools had provided books, videos, or computer software with information about AI/AN history and traditions, while about one-quarter reported that their schools had provided performances of traditional AI/AN music and dance. Twenty-two percent reported class visits by elders or other people from their tribe or village to share their history or oral traditions; 21 percent reported craft demonstrations by members of their tribe or village; and 17 percent reported that their school had sponsored field trips to museums, traditional villages, or other places that tell about AI/AN history or traditions.

Based on these student reports, both high density and low density schools appear to provide primarily books, videos, or computer software to support learning about AI/AN culture. In addition, 40 percent of students at high density schools had access to music and dance performances through their schools, 35 percent had access to class visits and craft demonstrations, and 27 percent had access to field trips. At low density schools, the corresponding percentages were all under 20 percent.

**Table 2-6.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and school-based opportunities to learn about their AI/AN culture in the past year: 2005

Opportunities to learn about AI/AN culture	Total	School density	
		High	Low
Class went on field trips or attended special events to learn about American Indians or Alaska Natives	45	47	44
Checked out books or videos about American Indians or Alaska Natives from the school library	45	43	48
Elders or other people from tribe or village came to school to teach about culture and traditions	29	39*	19

\* Significantly different ( $p < .05$ ) from students attending low density schools.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table 2-7.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school-based opportunities to learn about their AI/AN culture in the past year: 2005

Opportunities to learn about AI/AN culture	Total	School density	
		High	Low
Books, videos, or computer software with information about American Indian or Alaska Native history and traditions	50	60*	42
Performances of traditional American Indian or Alaska Native music and dance	26	40*	14
Class visits by elders or other people from tribe or village to share history and oral traditions	22	35*	11
Craft demonstrations by members of tribe or village	21	35*	10
Field trips to museums, traditional villages, or other places that tell about American Indian or Alaska Native history or traditions	17	27*	9

\* Significantly different ( $p < .05$ ) from students attending low density schools.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## What are AI/AN students' perceptions regarding school and learning?

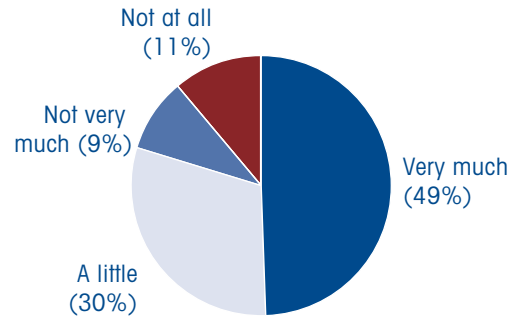
NAEP estimates indicate that, while AI/AN student achievement has improved over time, it continues to fall below the national average (Rampey, Lutkus, and Weiner, 2006). The NIES student surveys explored students' general perceptions of school and their goals in school. The surveys also collected information about the extent to which students discussed schoolwork with their families, the extent to which they received assistance with their schoolwork at home, and the frequency of school absences. In addition, students at grade 8 answered questions about their participation in academic counseling and extracurricular activities.

### Perceptions of school

Students' perceptions of school were explored at grade 4 with a question that asked "How much do you like school?" Figure 2-10 shows that more than three-fourths of grade 4 students reported that they like school at least "a little," and about one-half of the students reported that they like school "very much." Fewer students at high density schools than at low density schools selected the response category indicating that they liked school "a little" (table A-18).

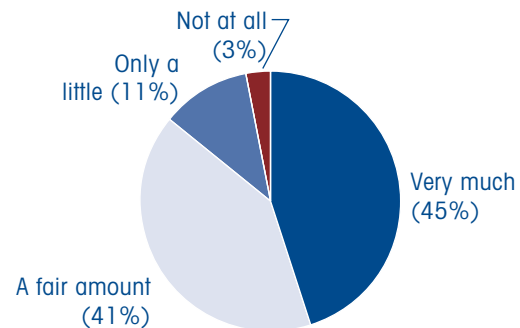
At grade 8, students were asked to indicate how much they believed that what they were learning in school would prepare them for the lives they want to lead. As figure 2-11 shows, 45 percent of grade 8 students reported that they believe what they are learning in school is preparing them "very much," while an additional 41 percent reported that what they are learning is preparing them "a fair amount." There were no significant differences between responses of students from high density and low density schools (table A-19).

**Figure 2-10.** Percentage of grade 4 American Indian/Alaska Native students, by how much the students like school: 2005



NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Figure 2-11.** Percentage of grade 8 American Indian/Alaska Native students, by how much the students believe that what they are learning in school will prepare them for the life they want to lead: 2005



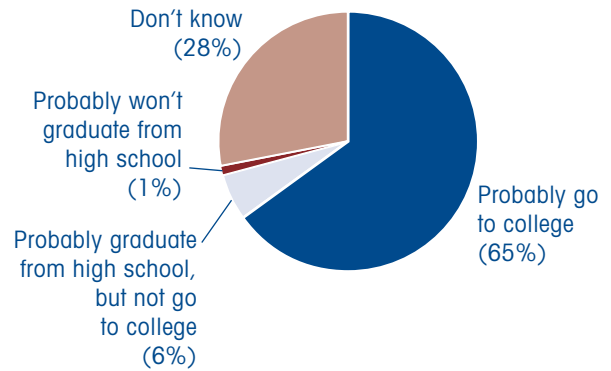
NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Educational goals

Students in grades 4 and 8 were probed about their educational goals with the question “What is your goal in school?” Response options ranged from “probably won’t graduate from high school” to “probably go to college,” with grade 8 students offered one additional response option regarding job training after high school. The wording of the response options for each grade level is shown in figures 2-12 and 2-13.

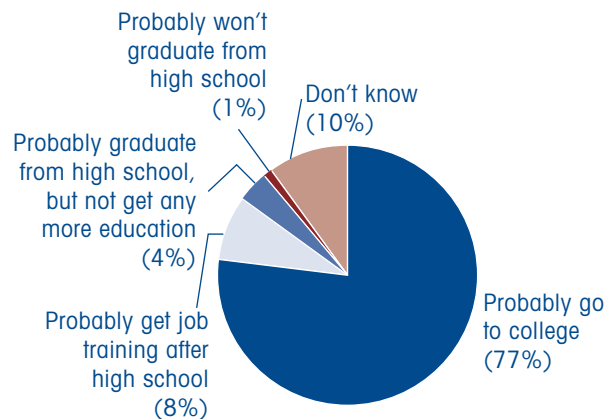
At both grade levels, “probably go to college” was the most frequently reported goal (65 percent at grade 4 and 77 percent at grade 8), while only 1 percent of students acknowledged a goal of “probably won’t graduate from high school.” Some students at each grade (28 percent at grade 4 and 10 percent at grade 8) reported that they did not know their goals. Responses from students at high density and low density schools were not significantly different (table A-20).

**Figure 2-12.** Percentage of grade 4 American Indian/Alaska Native students, by their goals in school: 2005



NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Figure 2-13.** Percentage of grade 8 American Indian/Alaska Native students, by their goals in school: 2005



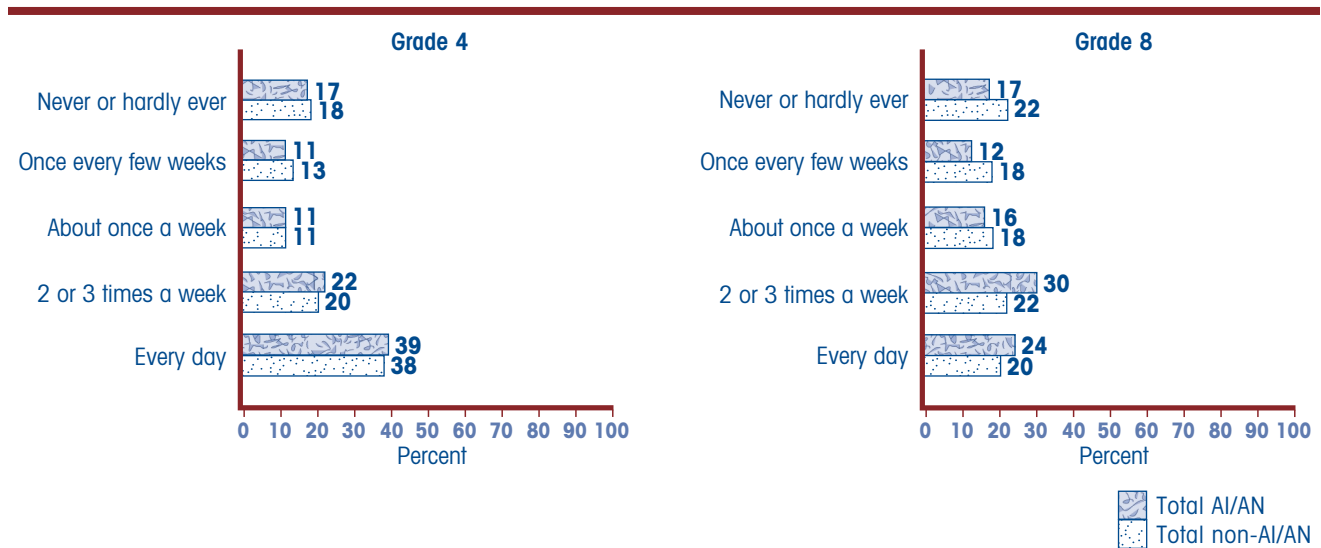
NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Family support for education

One measure of perceived family support for education was a question that asked “How often do you talk about things you have studied in school with someone in your family?” Both AI/AN and non-AI/AN students responded to a question on this topic, but the questions were not strictly comparable because the ordering of the response options differed across the two surveys.

Overall, 61 percent of AI/AN students in grade 4 and 54 percent in grade 8 reported talking with their families about things they have studied in school at least 2 or 3 times per week (figure 2-14). The corresponding percentages among non-AI/AN students were 58 percent at grade 4 and 42 percent at grade 8. There were no significant differences between AI/AN students at high density and low density schools at either grade (table A-21).

**Figure 2-14.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status and how often they talk about things they have studied in school with someone in their families: 2005



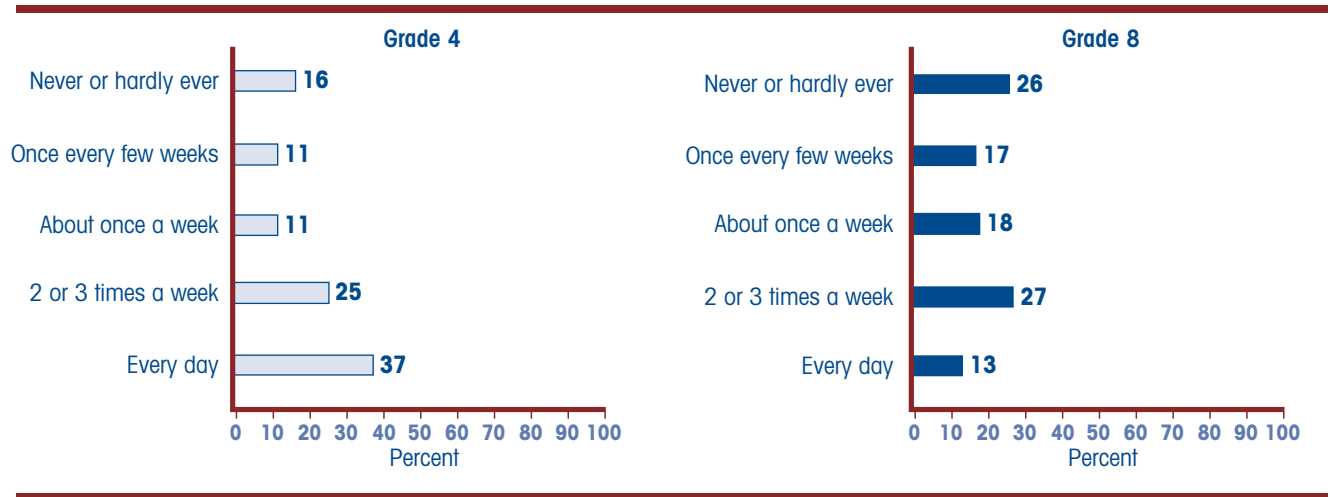
NOTE: Detail may not sum to totals because of rounding. Statistical comparisons between AI/AN students and non-AI/AN students are not appropriate because the survey questions posed to these two populations were slightly different. The AI/AN students responded to a question in which the response options were ordered from “Every day” to “Never or hardly ever.” The non-AI/AN students responded to a question in which the response options were ordered from “Never or hardly ever” to “Every day.”

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

A second measure of family support, which was only available for AI/AN students, was a question that asked “How often does someone in your family help you with your schoolwork?” Figure 2-15 shows that 37 percent of grade 4 students and 13 percent of grade 8 students reported that someone in their families

helped them with their schoolwork “every day,” while 16 percent of grade 4 students and 26 percent of grade 8 students reported that they “never or hardly ever” received such help. There were no significant differences in responses of students from high density and low density schools (table A-22).

**Figure 2-15.** Percentage of grade 4 and grade 8 American Indian/Alaska Native students, by how often someone in their families helps them with schoolwork: 2005



NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



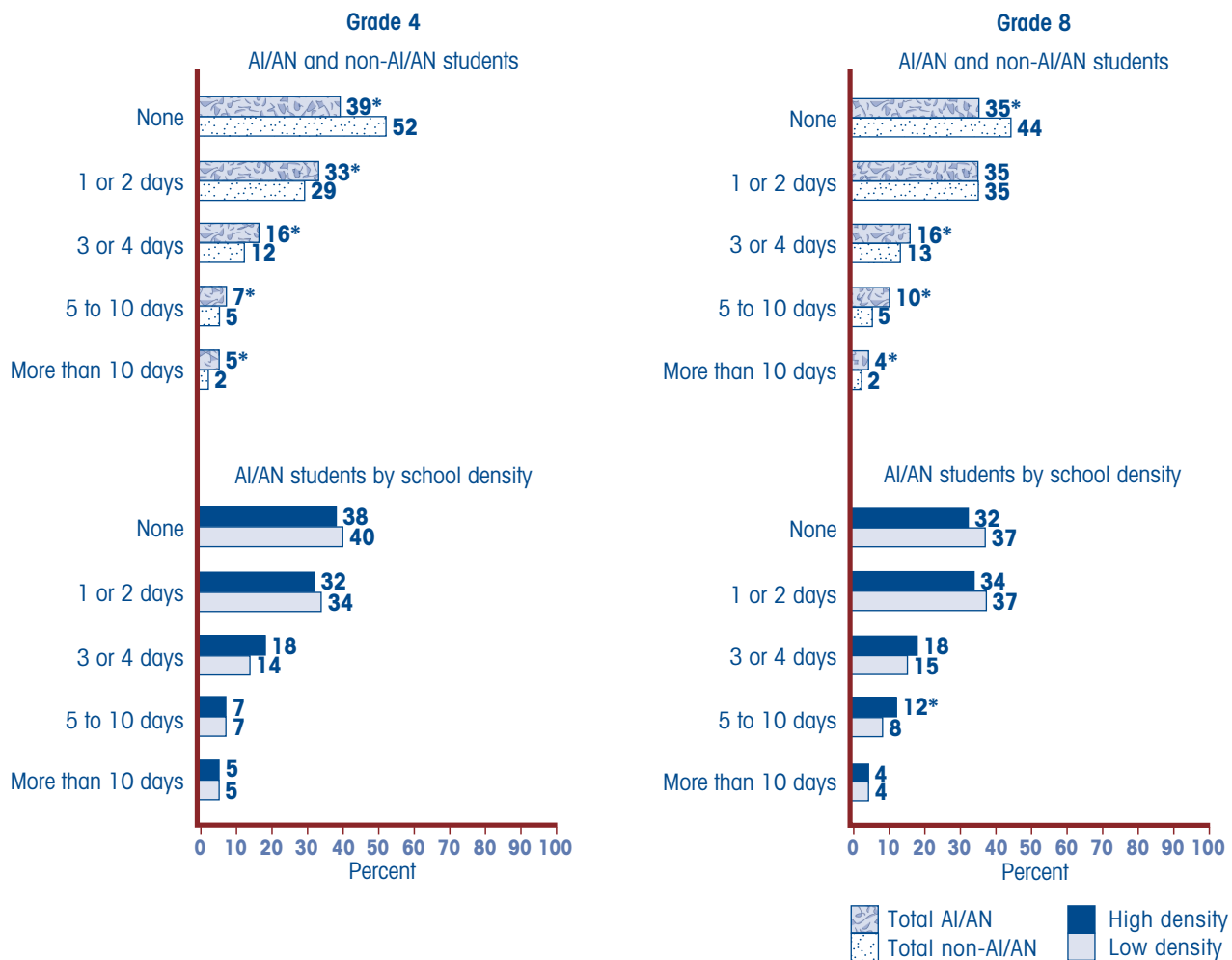
## School absences

The student survey included the question “How many days were you absent from school in the last month?” Figure 2-16 shows that 39 percent of grade 4 AI/AN students and 35 percent of grade 8 AI/AN students reported no absences in the last month. Thirty-three percent of AI/AN students at grade 4 and 35 percent at grade 8 reported being absent 1 or 2 days. At the other end of the spectrum, 5 percent of grade 4 students and 4 percent of grade 8 AI/AN students reported missing more than 10 days of school in the last month. By comparison, a higher percentage of

non-AI/AN students at each grade level reported no absences in the last month, and a lower percentage at each grade level reported being absent 3 or 4 days, 5 to 10 days, or more than 10 days in the last month.

There were few differences in self-reported student absenteeism between high density and low density schools. However, at grade 8, absences of 5 to 10 days in the last month were reported more often by AI/AN students from high density schools than by their peers in low density schools.

**Figure 2-16.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, the number of days they were absent from school in the last month, and school density: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

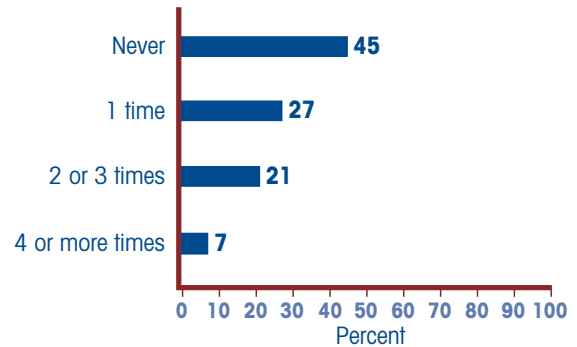
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## Academic counseling and extracurricular activities

Grade 8 students were asked how many times during the current school year they had talked to a teacher or school counselor about what they hoped to get out of school or what classes they should take. Figure 2-17 shows that 45 percent of all AI/AN students reported never talking to a teacher or counselor about these topics. There were no significant differences between responses of students from high density and low density schools (table A-24).

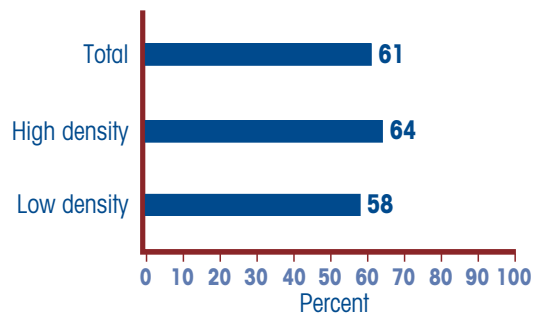
Extracurricular activities were represented by a question that asked grade 8 students if, during the current school year, they had played on a team or belonged to a club at school. As figure 2-18 shows, 61 percent of all AI/AN students responded affirmatively. No significant differences were observed between students from high density and low density schools.

**Figure 2-17.** Percentage of grade 8 American Indian/Alaska Native students, by the number of times during the school year they talked to a teacher or a school counselor about what they hope to get out of school or what classes they should take: 2005



NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Figure 2-18.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students who reported playing on a team or belonging to a club at school during the school year, by school density: 2005



NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



## Summary

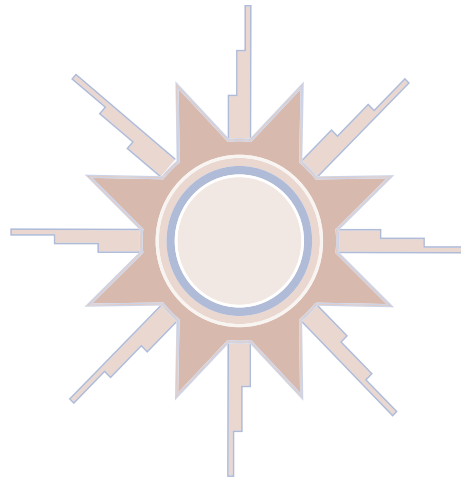
Fifty percent of all AI/AN students in grade 4 and 45 percent in grade 8 attend schools in which the AI/AN student population is 25 percent or more. AI/AN students at these high density schools are particularly concentrated in small towns and rural areas, and in the Mountain and South Central regions of the United States (based on Census divisions).

Compared to non-AI/AN students, AI/AN students are more concentrated in small towns and rural areas. Higher percentages of AI/AN students than non-AI/AN students are eligible for free or reduced-price school lunch under the National School Lunch Program, and higher percentages are classified as English language learners or students with disabilities.

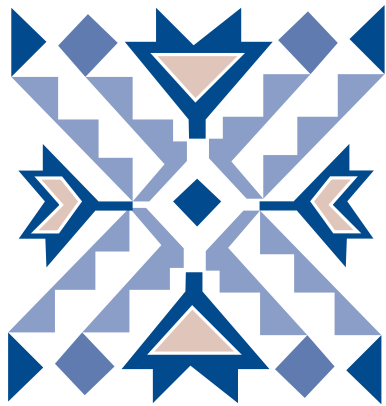
Among AI/AN students, a higher percentage of students at high density schools than at low density schools indicated that their families talked to one another in their traditional language, that they themselves participated in tribal or village activities, and that they knew about the traditions of their own tribes or villages.

Forty-nine percent of all grade 4 AI/AN students reported liking school “very much,” and 45 percent of grade 8 AI/AN students reported that what they are learning in school is preparing them “very much” for the life they want to lead in the future. There were very few significant differences between the responses from students at high density and students at low density schools in how they rated their performance in school or described their engagement with school.

At grade 8, about three-quarters of all AI/AN students reported a goal of going to college. Nearly three-quarters of the AI/AN students at each grade level reported talking to their families at least once a week about things they have studied at school, and nearly three-quarters of grade 4 AI/AN students reported getting family help with schoolwork at least once a week.



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## CHAPTER 3

### **Schools That Serve American Indian/Alaska Native Students**

This chapter presents basic demographic information about schools attended by American Indian/Alaska Native (AI/AN) students nationwide, including student body composition and school type. Where available, information about schools attended by non-AI/AN students is provided for comparison.

The extent of an AI/AN presence in the schools serving AI/AN students is also examined in this chapter, along with information on the forms of family outreach and the types of enrichment and extracurricular activities sponsored by these schools. Throughout the report, data have been disaggregated by high density and low density schools. A high density school is defined as having at least 25 percent of its students identified as AI/AN. A low density school is defined as having fewer than 25 percent AI/AN students.

#### **What are the characteristics of the schools attended by AI/AN students?**

In order to characterize the schools attended by AI/AN students, the National Indian Education Study (NIES) gathered information about the proportion of AI/AN students within a school, the size of the school, and the poverty level of the student body. In addition, school principals answered questions about school type, school funding related to AI/AN education, and various aspects of school climate.

## Composition and size of the student body

As described in Chapter 2, AI/AN students are about equally divided between high density and low density schools. Table 3-1 provides more detail about the concentrations of AI/AN students in schools serving AI/AN students. Thirty-one percent of grade 4 AI/AN students and 33 percent of grade 8 AI/AN students attended schools that had 5 percent or fewer AI/AN students in the student body. At the other end of the spectrum, 27 percent of grade 4 students and 25 percent of grade 8 students attended schools with more than 75 percent of AI/AN students.

**Table 3-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by attendance at schools with different proportions of AI/AN students in the student body: 2005

School percentage of AI/AN students	Grade 4	Grade 8
0–5	31	33
6–10	9	7
11–25	12	15
26–50	13	16
51–75	9	4
76–100	27	25

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

The average enrollment at schools serving AI/AN students in grade 4 was 435, while the average enrollment at schools serving AI/AN students in grade 8 was 570 (table 3-2). At grade 4, there was no significant difference in the average enrollment of the schools attended by AI/AN and non-AI/AN students. At grade 8, schools serving AI/AN students were significantly larger than schools serving non-AI/AN students. Also at grade 8, there were differences between high density and low density schools serving AI/AN students. Low density schools had a larger average enrollment than high density schools.

**Table 3-2.** Average enrollment of schools serving grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status and school density: 2005

Grade	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>	435	426	399	472
<b>Grade 8</b>	570*	469	396*	712

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN number indicates a comparison with total non-AI/AN.

An \* on the high density number indicates a comparison with low density. NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

## Students eligible for free and reduced-price school lunch

Students are eligible for free or reduced-price school lunch under the National School Lunch Program (NSLP) if their family income is at or below 185 percent of the poverty level. Table 3-3 shows the percentages of AI/AN and non-AI/AN students who attended schools with different concentrations of students eligible for free or reduced-price school lunch.

**Table 3-3.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status and attendance at schools with different proportions of students in the school who were eligible for free or reduced-price school lunch: 2005

School percentage of students eligible for free or reduced-price lunch	Grade 4		Grade 8	
	AI/AN	Non-AI/AN	AI/AN	Non-AI/AN
0–25	9*	31	15*	33
26–50	31	26	31	33
51–75	30	21	32	20
76–100	30	22	22	14

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the AI/AN percentage indicates a comparison with non-AI/AN.

NOTE: Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment. The NCES Common Core of Data (CCD), "Public Elementary Secondary School Universe Survey," 2003-04. Private school students excluded; private school data not available.

Overall, 60 percent of AI/AN students in grade 4 and 54 percent of AI/AN students in grade 8 attended schools where more than 50 percent of the student body were eligible for free or reduced-price school lunch. Among non-AI/AN students, 43 percent in grade 4 and 34 percent in grade 8 attended schools with these high concentrations of eligible students.

When this school poverty indicator is examined separately for students at high density schools, figure 3-1 shows that 84 percent of grade 4 students and 88 percent of grade 8 students attended schools where more than 50 percent of the students were eligible for free or reduced-price school lunch. In low density schools, only 41 percent of grade 4

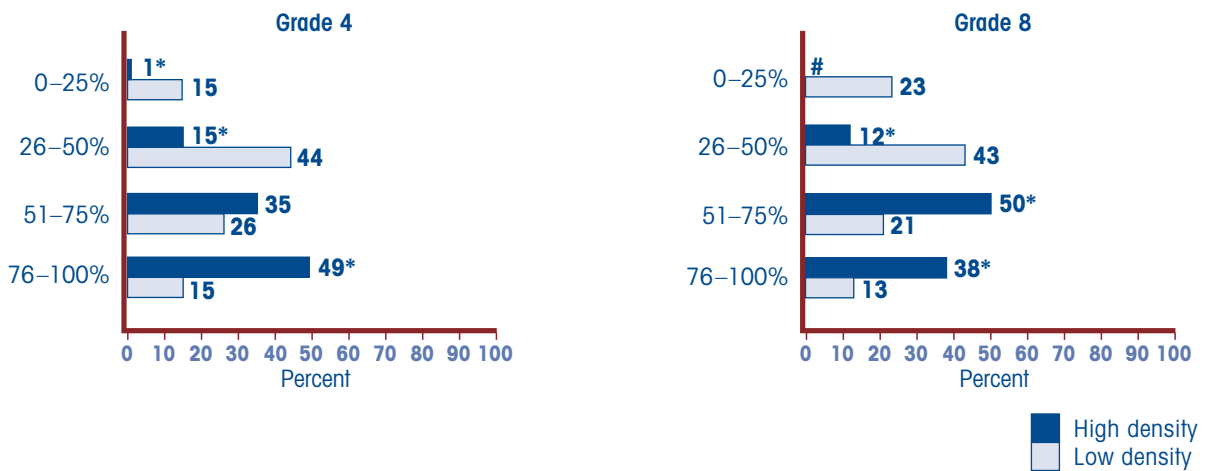
students and 34 percent of grade 8 students were at schools where more than 50 percent of the students were eligible for this school lunch program.

The information on school lunch program eligibility was obtained from the 2003-04 Common Core of Data (CCD). The 2003-04 CCD was the most current edition available when this report was produced. No information on school lunch program eligibility was available for private schools. Private school students represent less than 5 percent of the AI/AN student population and about 10 percent of the non-AI/AN student population.

See the Technical Notes for a more extended discussion of the NSLP program.

Among AI/AN students attending high density schools, over three-quarters of the students were in schools in which more than one-half of the student body was eligible for free or reduced-price school lunch.

**Figure 3-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, attending schools with different proportions of students in the school who are eligible for free or reduced-price school lunch, by school density: 2005



# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and the NCES Common Core of Data (CCD), "Public Elementary Secondary School Universe Survey," 2003-04. Private school students excluded; private school data not available.

## School type

Information about school type was derived from a question that asked principals to describe their school as a regular public school, charter public school, alternative school, Bureau of Indian Affairs (BIA) school, tribal contract/grant school, and/or other nonpublic school. The data were then compiled into two categories: regular public schools and all other schools. The “other school” category includes all options listed above except “regular public schools.”

Table 3-4 shows that among all AI/AN students, whether at high density schools or low density schools, the large majority attended regular public

Nearly 90 percent of AI/AN students attend regular public schools.

schools. Because the “other schools” category included many schools serving predominantly AI/AN communities (e.g., BIA and tribal contract/grant schools),

the percentage of students who were in regular public schools was lower at high density schools than at low density schools. At grade 8, for example, 96 percent of students at low density schools, but only 75 percent of students at high density schools, were in regular public schools.



**Table 3-4.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school type: 2005

School type	School density		
	Total	High	Low
<b>Grade 4</b>			
Regular public school	87	81*	94
Other school	13	19*	6
<b>Grade 8</b>			
Regular public school	86	75*	96
Other school	14	25*	4

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Regular public school includes schools that identified themselves as regular public schools only and as both regular public and something else. The other school category includes charter public schools, alternative schools, Bureau of Indian Affairs schools, and tribal contract/grant schools. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## School funding for AI/AN education

School funding for AI/AN education comes from a variety of sources, some of which are designated specifically for AI/AN students and some of which are intended to serve broader classifications of students (such as low income or bilingual students) where AI/AN students are represented disproportionately.

Among the funding sources surveyed, the U.S. Elementary and Secondary Education Act, No Child Left Behind, authorizes Titles I, II, III, and VII funds. Title I provides for the academic achievement of the disadvantaged. Title II supports the training and recruitment of high quality teachers and principals. Title III addresses language instruction for English language learners and immigrant students. Title VII supports American Indian, Native Hawaiian, and Alaska Native education. The remaining federal sources that were surveyed in the NIES school questionnaire are Impact Aid, Johnson-O'Malley Grants, and Alaska Native Education Programs.

Principals indicated which of these funding sources were received for the current school year. As shown in table 3-5, their responses indicated that Title I was the most common source of funding at both grade levels (85 percent of grade 4 AI/AN students and 67 percent of grade 8 AI/AN students). Title II funds were the next most common, followed by Title III or other bilingual or English as a Second Language (ESL) funds, Impact Aid Program funds, Title VII Indian Education Formula Grants, and Johnson-O'Malley Grants. See the Technical Notes for more information on these funding programs.

With the exception of Title III or other bilingual or ESL funds and Alaska Native Education Program funds, all AI/AN funding sources were reported more

frequently at high density schools than at low density schools. This was true at both grades. For example, 96 percent of grade 4 students and 86 percent of grade 8 students attended high density schools that received Title I funds. The corresponding percentages for students attending low density schools were 74 percent at grade 4 and 52 percent at grade 8.

Title I was the most common source of school funding related to AI/AN education. At high density schools, 96 percent of fourth-grade students and 86 percent of eighth-grade students attended schools receiving Title I funding.

**Table 3-5.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various sources of school funding: 2005

Sources of school funding	Total	School density	
		High	Low
<b>Grade 4</b>			
Title I funds	85	96*	74
Title II funds	63	70*	55
Title III or other bilingual or English as a Second Language funds	52	56	47
Impact Aid Program	40	61*	19
Title VII Indian Education Formula Grant	31	50*	12
Johnson-O'Malley Grant	32	53*	11
Title VII Discretionary Grant under Indian Education	9	15*	3
Alaska Native Education Programs	1	2	#
Other funding sources related to AI/AN education (e.g., grants, donations, etc.)	14	21*	6
<b>Grade 8</b>			
Title I funds	67	86*	52
Title II funds	54	72*	39
Title III or other bilingual or English as a Second Language funds	48	49	48
Impact Aid Program	33	61*	9
Title VII Indian Education Formula Grant	29	46*	15
Johnson-O'Malley Grant	29	54*	8
Title VII Discretionary Grant under Indian Education	9	17*	2
Alaska Native Education Programs	2	3	2
Other funding sources related to AI/AN education (e.g., grants, donations, etc.)	20	38*	5

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## School climate

Principals were asked the degree to which each of several factors related to school climate was considered to be a problem at their schools. Those factors included student absenteeism, student tardiness, student health problems, lack of parent involvement, student misbehavior in class, physical conflicts among students, and drug or alcohol use by students. The principals were asked to consider all students at the school for their responses, not specifically AI/AN students.

For reporting purposes, the responses have been combined into a single school-climate rating, summarizing the degree to which the principal reported problems in the school. Higher ratings indicate greater problems, and the maximum possible rating is 21. The average ratings, shown in figure 3-2, fall toward the middle of the range. However, at both grades 4 and 8, average ratings for students at high density schools were significantly higher than average ratings for students at low density schools. See the Technical Notes for details regarding the construction of the school-climate rating.

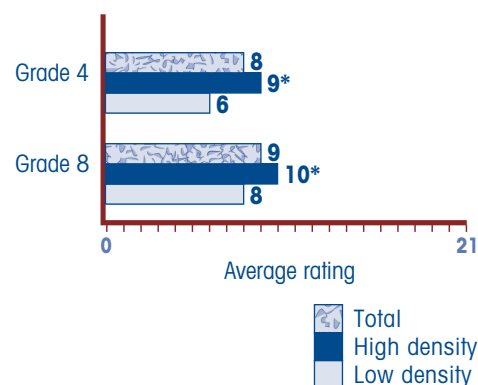
## What is the AI/AN presence in schools that serve AI/AN students?

To evaluate AI/AN presence in the schools, NIES considered both the extent to which representatives of local tribes or villages participated in school affairs and the proportions of AI/AN teachers and other AI/AN staff within the schools.

### Involvement of representatives from local tribes or communities

Principals were asked how often, and in what ways, representatives from local Indian tribes or Alaska Native communities—not employed by the school—interacted with the school. More specifically, principals were asked how often tribal or village representatives met with school or district officials on

**Figure 3-2.** Principals' average school-climate ratings at schools serving American Indian/Alaska Native (AI/AN) students, by grade level and school density: 2005



\* Significantly different ( $p < .05$ ) from low density schools.  
NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Higher school-climate ratings represent greater problems; maximum possible rating is 21.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



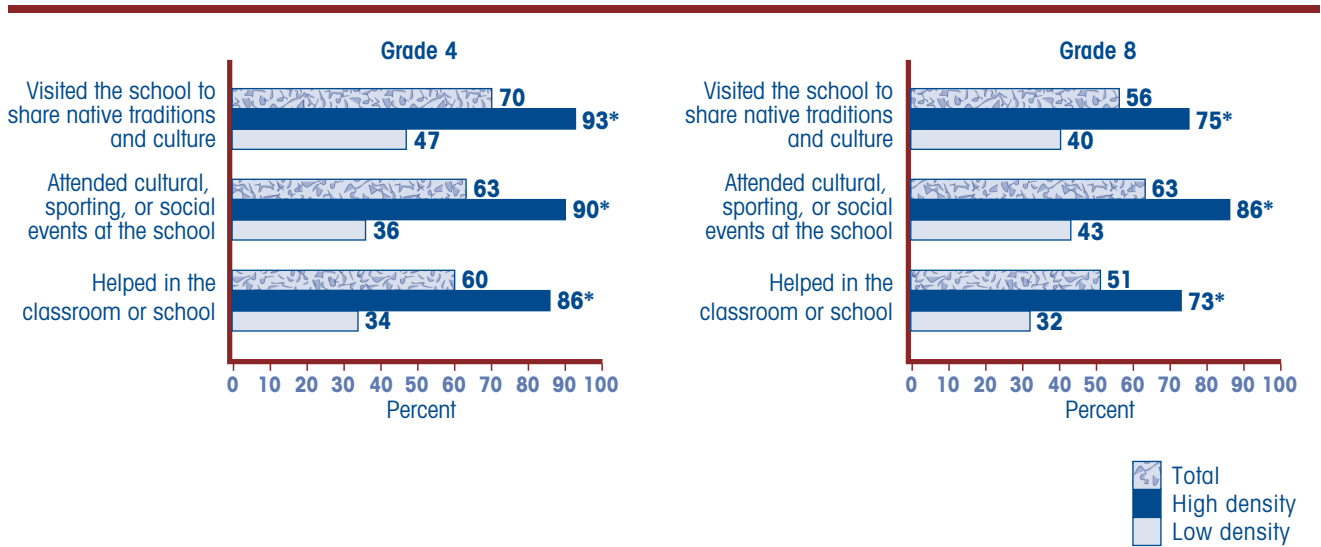
The forms of tribal or community participation that were reported most frequently are shown in figure 3-3. Seventy percent of grade 4 students and 56 percent of grade 8 students were at schools where the principal reported that tribal or community representatives visited the school to share native traditions or culture at least once during the specified time period. Sixty-three percent of students at each grade level were at schools where the principal reported that tribal or community representatives attended cultural, sporting, or social events at the school; and 60 percent

of grade 4 students and 51 percent of grade 8 students attended schools where the principal reported that tribal or community representatives helped in the classroom or school.

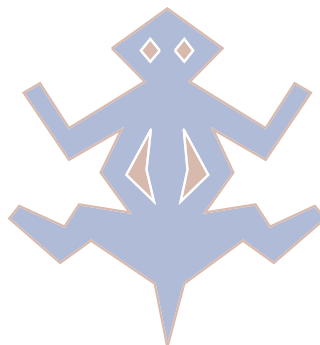
Compared with low density schools, high density schools reported much greater involvement from representatives of local tribes or Alaska Native communities.

For each activity and at both grade levels, more students at high density schools than at low density schools were at schools that reported participation by tribal or community members. See tables A-32 (for grade 4) and A-33 (for grade 8) for information on tribal or community participation in other types of school activities.

**Figure 3-3.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students attending schools that reported participation by tribal or Alaska Native community representatives in selected school activities at least once during the last two school years, by school density: 2005



\* Significantly different ( $p < .05$ ) from students attending low density schools.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



## AI/AN teachers and staff

Based on principals' responses, 52 percent of AI/AN students in grade 4 and 63 percent in grade 8 attended schools with 5 percent or fewer AI/AN teachers (table 3-6), while similar percentages—54 percent at grade 4 and 62 percent at grade 8—attended schools with 5 percent or fewer AI/AN staff other than teachers (table 3-7). The percentages of AI/AN teachers and staff working with the AI/AN student population varied greatly, however, between high density and low density schools and by grade.

At high density schools, 10 percent of grade 4 students and 36 percent of grade 8 students attended schools where 5 percent or fewer teachers were AI/AN,

while 37 percent of grade 4 students and 16 percent of grade 8 students attended schools where more than 50 percent of teachers were AI/AN. At low density schools, 94 percent of grade 4 students and 87 percent of grade 8 students attended schools in which 5 percent or fewer teachers were AI/AN.

At high density schools, 52 percent of grade 4 students and 33 percent of grade 8 students attended schools in which 50 percent or more of the school staff was AI/AN. At low density schools, 93 percent of grade 4 students and 90 percent of grade 8 students attended schools in which 5 percent or less of non-teaching staff was AI/AN.

**Table 3-6.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the percentage of AI/AN teachers in the school: 2005

Percentage of AI/AN teachers	School density		
	Total	High	Low
<b>Grade 4</b>			
0	30	#	59
1–5	22	10*	35
6–10	5	3	6
11–25	12	23*	1
26–50	13	25	#
51–75	6	13	#
76–100	12	25	#
<b>Grade 8</b>			
0	33	18*	46
1–5	30	18*	41
6–10	12	18	7
11–25	11	21*	3
26–50	6	10	2
51–75	5	11	#
76–100	2	5	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table 3-7.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the percentage of AI/AN school staff (other than teachers) in the school: 2005

Percentage of AI/AN school staff (other than teachers)	School density		
	Total	High	Low
<b>Grade 4</b>			
0	25	2*	49
1–5	29	14*	45
6–10	5	4	6
11–25	4	8	#
26–50	10	20	#
51–75	4	7	#
76–100	23	45	#
<b>Grade 8</b>			
0	30	10*	48
1–5	32	21*	42
6–10	5	7	3
11–25	6	8	5
26–50	10	20*	1
51–75	8	17*	1
76–100	8	17	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## How do schools attended by AI/AN students reach out to families?

With regard to family outreach, NIES considered the opportunities for communication offered to families by schools and the availability of school- or district-sponsored services for families.

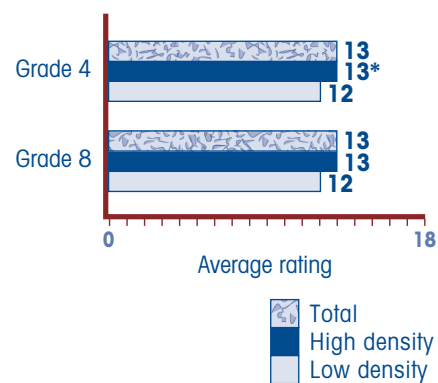
### Opportunities for communication between schools and families

To ascertain the opportunities for communication between schools and families, the principals were asked how often their schools provided each of the following forms of communication during the school year: teacher/family conferences; information sheets covering topics such as expectations, procedures, and calendars of events; written reports of student performance; events at school in which families are invited to participate; opportunities to participate in the formulation of school policies and improvement plans; and opportunities to share native or family histories and traditions as part of the instructional program. Principals could indicate whether each of these opportunities was never offered, offered 1 or 2 times, offered 3 or 4 times, or offered 5 or more times during the year.

An overall rating was constructed to summarize the extent of opportunities for communication. The maximum possible rating was 18. Thus, the average ratings for communication opportunities, shown in figure 3-4, indicate that a variety of opportunities for communication were being offered to families. See the Technical Notes for details regarding the construction of the communication opportunities rating.

The examination of opportunities for specific types of communication shows that some kinds of communication were very common (table A-37). Ninety-nine percent of AI/AN students at both grade levels attended schools that sent home written reports of children's performance at least three times a year. Ninety-eight percent of grade 4 students and 93 percent of grade 8 students attended schools that sent home information about school (such as expectations, procedures, and calendars of events) at least three times a year, while 97 percent of grade 4 students and 91 percent of grade 8 students attended schools that invited parents to participate in events at school at least three times a year.

**Figure 3-4.** Principals' average ratings for communication opportunities between schools and families, at schools serving American Indian/Alaska Native (AI/AN) students, by grade level and school density: 2005



\* Significantly different ( $p < .05$ ) from low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. High ratings represent greater opportunities for communication; maximum possible rating is 18. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

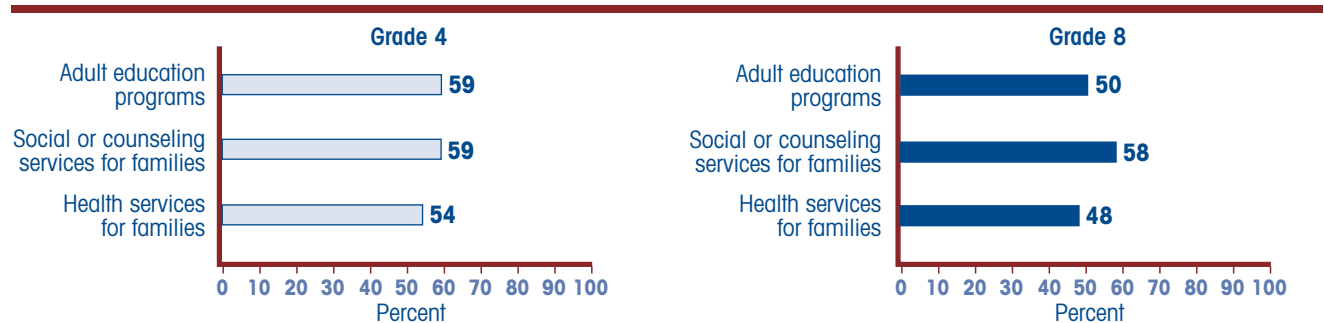
## Family services

The NIES School Questionnaire inquired about the availability of health services, social or counseling services, and adult education services offered by schools or districts, as well as the extent of participation by AI/AN families in these services. Many principals did not know the extent of participation by AI/AN families, so that information is not reported. Figure 3-5 shows that 59 percent of grade 4 AI/AN students and 50 percent of grade 8 AI/AN students attended schools that offered adult education programs. Social or counseling services for families were offered by schools serving 59 percent of grade 4 students and 58 percent of grade 8 students, while health services for families were offered by schools serving 54 percent of grade 4 students and 48 percent of grade 8 students. There were no significant differences between the percentages of students at high density and low density schools that offered any of these services (table A-38).

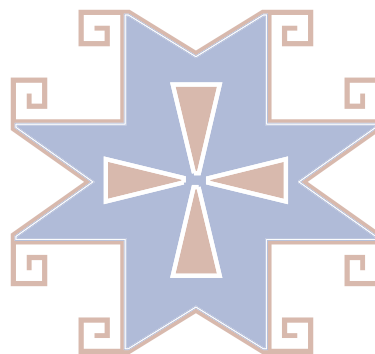
## What kinds of enrichment and extracurricular activities are offered by schools attended by AI/AN students?

Principals were asked about the extent to which AI/AN students participated in a variety of school-sponsored enrichment and extracurricular activities. Enrichment activities offered by a school go beyond the required academic program. They are not remedial, but are designed to help children maximize their individual potential. These activities included academic tutoring, enrichment programs focusing on problem-solving and cognitive skill development, enrichment programs focusing on reading and language arts, enrichment programs focusing on mathematics, enrichment programs focusing on science, instruction in students' AI/AN native language, extracurricular activities focusing on native culture, and other extracurricular activities (e.g., sports, music, etc.). Once again, many schools were unable

**Figure 3-5.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by availability of school- or district-sponsored family services: 2005



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



to provide information on the extent of participation, and only availability is reported here.

Table 3-8 provides information about enrichment and extracurricular activities that emphasize the linguistic and cultural heritage of AI/AN students. Overall, 37 percent of AI/AN students at grade 4 and 38 percent of AI/AN students at grade 8 attended schools where some sort of instruction in students' AI/AN language(s) was offered. (The survey questions did not distinguish the nature or extent of this language instruction.)

Fifty-one percent of students at grade 4 and 38 percent of students at grade 8 attended schools that provided extracurricular activities focused on native culture. Furthermore, these activities tended to be concentrated at schools with higher proportions of AI/AN students. In high density schools, for example, 58 percent of grade 4 students and 62 percent of grade 8 students received instruction in their AI/AN language, compared to 16 percent of grade 4 students and 18 percent of grade 8 students attending low density schools.

Among the school-sponsored enrichment and extracurricular activities that were not specifically tied to AI/AN culture, extracurricular activities (e.g., sports and music) and academic tutoring were offered most frequently. As table 3-9 shows, 92 percent of grade 4 AI/AN students and 96 percent of grade 8 AI/AN students attended schools offering extracurricular activities, while 88 percent of grade 4 students and 93 percent of grade 8 students attended schools offering academic tutoring.

The various enrichment programs were also fairly widespread. Reading and mathematics enrichment programs were the most common, with reading enrichment being offered to 77 percent of grade 4 and 73 percent of grade 8 AI/AN students; and mathematics enrichment being offered to 71 percent of grade 4 and 73 percent of grade 8 AI/AN students. There were few significant differences between high density and low density schools. However, at grade 4, more students at high density schools than at low density schools had access to extracurricular activities such as sports, music, and academic tutoring (table A-40).

**Table 3-8.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school-sponsored enrichment and extracurricular activities focusing on AI/AN language and culture: 2005

Enrichment and extracurricular activities	Total	School density	
		High	Low
<b>Grade 4</b>			
Instruction in students' AI/AN language(s)	37	58*	16
Extracurricular activities focusing on native culture	51	75*	27
<b>Grade 8</b>			
Instruction in students' AI/AN language(s)	38	62*	18
Extracurricular activities focusing on native culture	38	59*	21

\* Significantly different ( $p < .05$ ) from students attending low density schools.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table 3-9.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school-sponsored enrichment and extracurricular activities not specifically focusing on AI/AN language and culture: 2005

Enrichment and extracurricular activities	Grade 4	Grade 8
Other extracurricular activities (e.g., sports, music, etc.)	92	96
Academic tutoring	88	93
Enrichment programs focusing on reading and language arts	77	73
Enrichment programs focusing on mathematics	71	73
Enrichment programs focusing on problem-solving and cognitive skill development	74	68
Enrichment programs focusing on science	58	61

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Summary

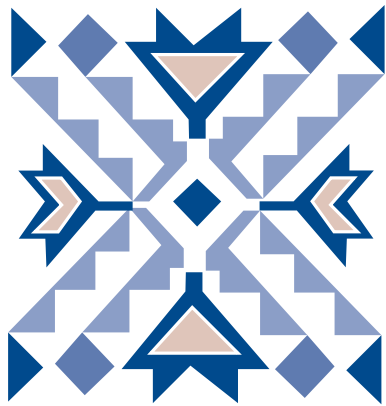
Nearly 90 percent of all AI/AN students attended regular public schools. About 40 percent at each grade level attended schools where AI/AN students accounted for 10 percent or less of the student population. At the same time, 27 percent of grade 4 AI/AN students and 25 percent of grade 8 AI/AN students attended schools where AI/AN students accounted for more than 75 percent of the student population.

Across a number of indicators, schools with low and high proportions of AI/AN students reported differences. Compared to students at low density schools, a higher percentage of students attended high density schools where more than 50 percent of the students were eligible for free or reduced-price school lunch, where the school received funding from sources related to AI/AN education (other than bilingual funds and

Alaska Native education funds, which did not favor high density schools), and where there was greater involvement in school activities by representatives from local Indian tribes or Alaska Native communities.

High density and low density schools reported similar practices in a number of areas, including the extent of communication opportunities with families, the availability of services for families, and the availability of school-sponsored enrichment or extracurricular activities. Within these categories, the main differences between high density and low density schools had to do with enrichment and extracurricular activities specifically related to AI/AN culture. At both grades 4 and 8, a higher percentage of students at high density schools than at low density schools had access to instruction in AI/AN languages and to extracurricular activities focusing on native culture.





## CHAPTER 4

### Teachers Who Serve American Indian/Alaska Native Students

This chapter discusses the characteristics of the teachers who provide reading and mathematics instruction to American Indian/Alaska Native (AI/AN) students nationally. The chapter begins with a focus on general teacher qualifications that may be associated with higher student performance, including certification, college majors aligned with one's teaching assignment, and years of teaching experience. (See Goldhaber and Brewer, 2000; Rivkin, Hanushek, and Kain, 2005; Rockoff, 2004; and Wayne and Youngs, 2003.) Here, teachers of AI/AN students are compared with teachers of non-AI/AN students. Similarities and differences between teachers of AI/AN students in high density schools (schools with 25 percent or more AI/AN student enrollment) and in low density schools are also discussed.

Later in the chapter, the amount of mobility in the teacher workforce serving AI/AN students is examined, and the ways in which these teachers report being specifically prepared to teach AI/AN students are reviewed. Throughout the chapter, the organization of information in tables and figures reflects the fact that both mathematics and reading/language arts are typically the responsibility of a single teacher at grade 4 and two separate subject area teachers at grade 8.

#### How qualified are the teachers who serve AI/AN students?

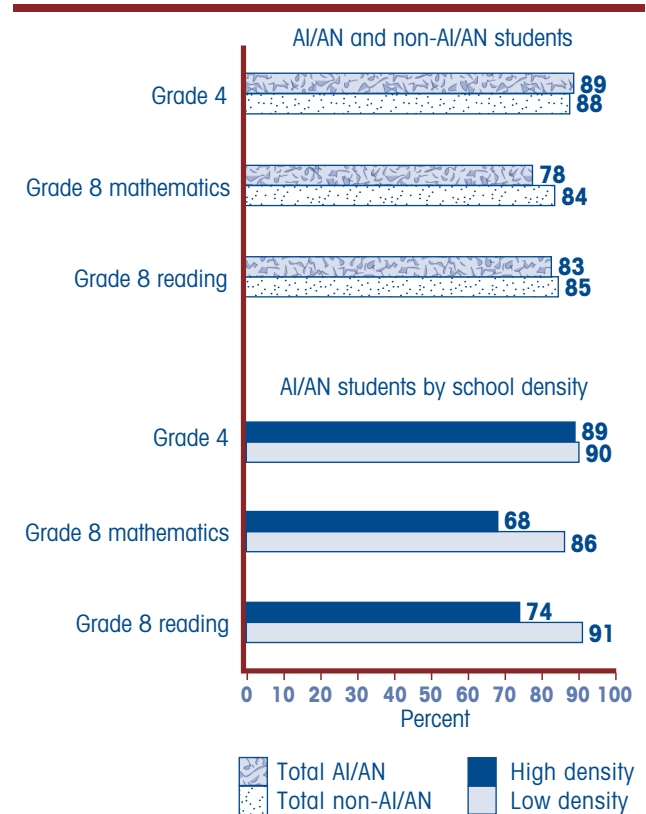
With regard to general teaching qualifications, the National Indian Education Study (NIES) investigated the teaching credentials held by teachers of AI/AN students as well as their academic preparation. The study also collected information on the number of years of teaching experience that these teachers had, both overall and in their assigned disciplines.

## Teaching certificates

Nationwide, large percentages of AI/AN and non-AI/AN students had teachers who reported having regular or advanced teaching certificates. (Regular or advanced certificates are given to teachers who have met the full requirements for certification in their states.) Figure 4-1 shows that 89 percent of AI/AN students and 88 percent of non-AI/AN students at grade 4 were taught by teachers with regular or advanced teaching certificates. For grade 8 mathematics, 78 percent of AI/AN students and 84 percent of non-AI/AN students had teachers with regular or advanced certificates. For grade 8 reading/language arts, 83 percent of AI/AN students and 85 percent of non-AI/AN students had teachers with this level of certification. None of the percent differences in teachers' certifications were statistically significant between AI/AN students and non-AI/AN students at grade 4 or grade 8.

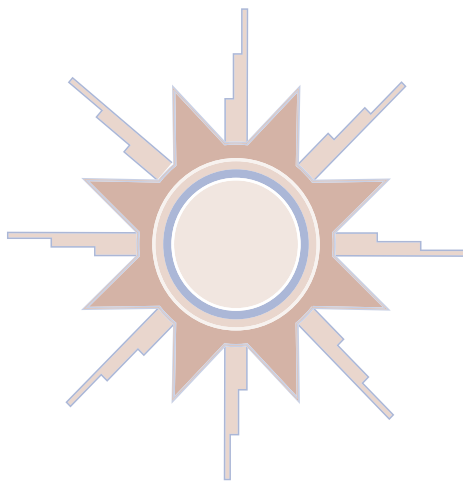
There were also no significant differences in teachers' certifications between AI/AN students in high density schools and AI/AN students in low density schools at either grade level. For more detail on the types of teaching certificates held by teachers, see tables A-41 through A-43.

**Figure 4-1.** Percentage of grade 4 and grade 8 students whose teachers hold regular or advanced teaching certificates, by American Indian/Alaska Native (AI/AN) status and school density: 2005



NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.





## Undergraduate majors

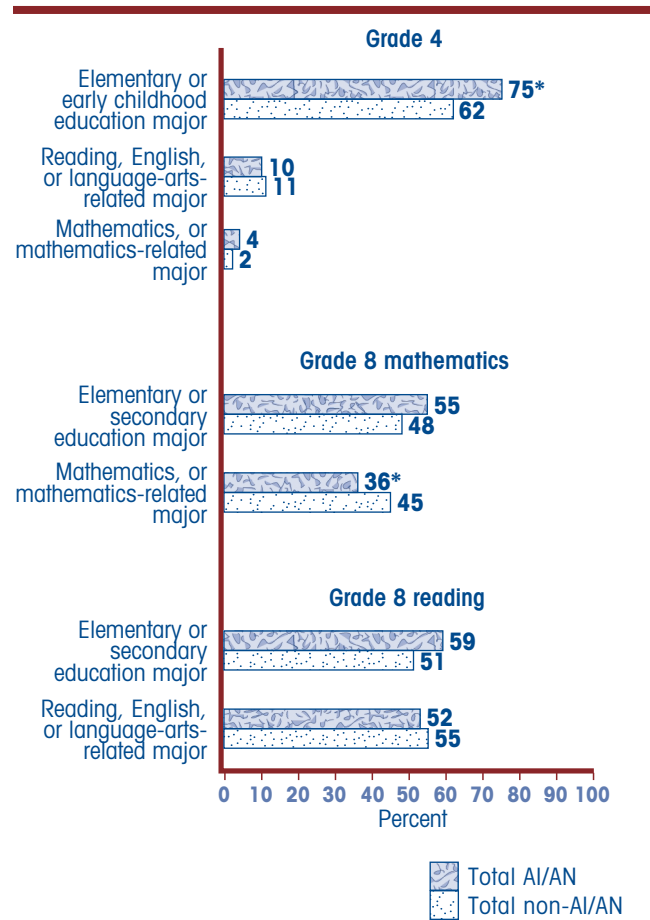
The NIES questionnaires asked teachers of AI/AN students to provide information on their undergraduate majors. Teachers could identify more than one major, so the categories presented in figure 4-2 are not mutually exclusive. At grade 4, where most teachers are generalists responsible for teaching multiple subjects, 75 percent of AI/AN students had teachers who reported majors in elementary/early childhood education. In comparison, a smaller percentage (62 percent) of non-AI/AN students at grade 4 had teachers who reported having this type of general education major.

When grade 4 AI/AN students are subdivided by school density, differences in teachers' majors are also observed. More students at high density schools than at low density schools had teachers who reported having elementary/early childhood education majors (table A-44).

At grade 8, the most common major reported by both mathematics and reading teachers of AI/AN students was still a general education major, despite the fact that most teachers at this grade level specialize in one subject. Fifty-five percent of grade 8 AI/AN students had mathematics teachers who reported having an undergraduate major in elementary/secondary education while 36 percent reported majors in mathematics, mathematics education, or another mathematics-related subject. Fifty-nine percent of grade 8 AI/AN students had reading/language arts teachers who reported having an undergraduate major in elementary/secondary education compared to 52 percent who reported majors in English, reading, language arts, or literacy education. Compared to AI/AN students, the percentages of non-AI/AN students at grade 8 whose teachers reported majors aligned with their subject area specialization were significantly higher for mathematics teachers (45 percent), but not for reading/language arts teachers (55 percent).

There were no significant differences in the majors reported by the teachers of grade 8 AI/AN students at high density and low density schools (table A-44). Tables A-44 and A-45 contain additional information on teachers' undergraduate and graduate majors and minors.

**Figure 4-2.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status and their teachers' undergraduate majors in selected subjects: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. NOTE: Teachers were surveyed only regarding the majors shown and also were permitted to identify more than one major. Percentages therefore do not sum to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

## Years of teaching experience

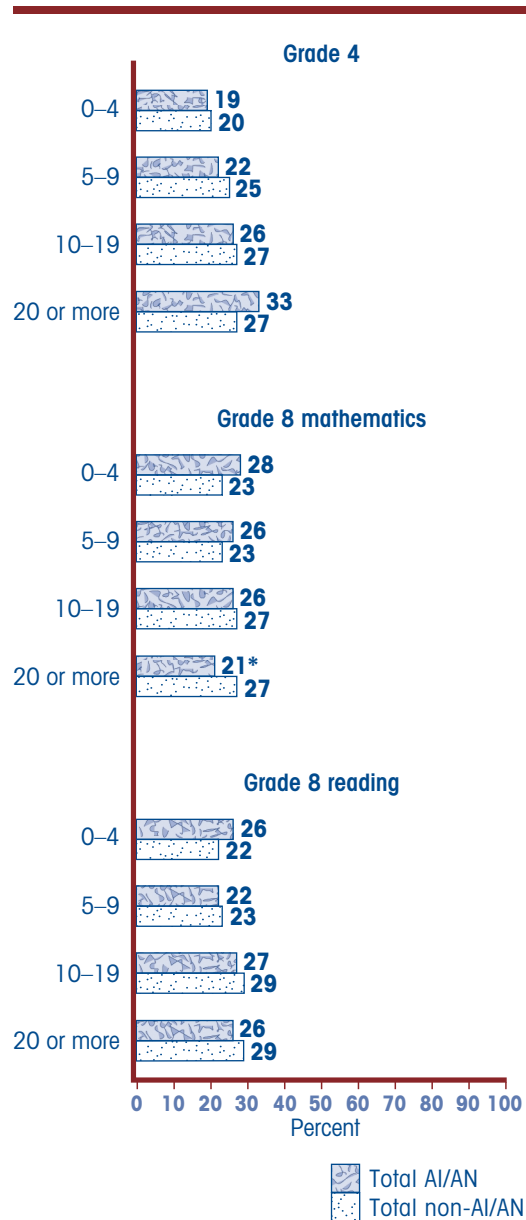
Teachers of both AI/AN and non-AI/AN students were fairly broadly distributed with respect to their total years of teaching experience. Teachers were asked to identify their years of teaching experiences as “0–4,” “5–9,” “10–19,” or “20 or more.” Nineteen percent of grade 4 AI/AN students had teachers with less than five years of experience, and 33 percent had teachers with 20 or more years of teaching experience (figure 4-3). Twenty-eight percent of grade 8 AI/AN students had mathematics teachers, and 26 percent had reading/language arts teachers, with less than five years of experience.

None of the categories of total teaching experience exhibited significant differences between AI/AN and non-AI/AN students, except for the category of grade 8 mathematics teachers with 20 or more years of experience. Twenty-one percent of AI/AN students had mathematics teachers with 20 or more years of experience, compared to 27 percent of non-AI/AN students.

Within the AI/AN population, there were no significant differences in teachers’ total years of teaching experience between students at high density and low density schools (table A-46).



**Figure 4-3.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status and their teachers’ total years of teaching experience: 2005



\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. NOTE: Teachers were surveyed only regarding the majors shown and also were permitted to identify more than one major. Percentages therefore do not sum to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

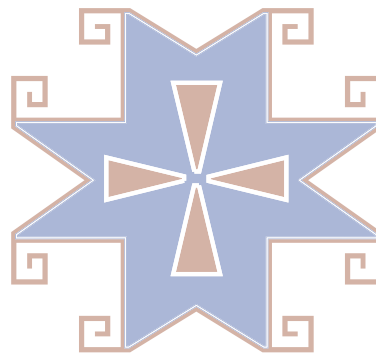
When the focus is narrowed to years of experience within the teacher's area of specialization, table 4-1 shows that 36 percent of grade 8 AI/AN students had mathematics teachers, and 33 percent had reading/language arts teachers, with fewer than 5 years of experience. The comparable percentages for non-AI/AN students (which were not significantly different than the percentages for AI/AN students) were 28 percent for mathematics and 31 percent for reading/language arts.

Among AI/AN students, more students at high density schools than at low density schools had grade 8 mathematics teachers with limited experience teaching in their area of specialization. Forty-eight percent of grade 8 students at high density schools, but only 25 percent of grade 8 students at low density schools, had mathematics teachers with less than five years of mathematics teaching experience. Differences in other categories of teaching experience between high density and low density schools were not significant for either mathematics or reading/language arts.

**Table 4-1.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and their teachers' years of teaching experience in their disciplines: 2005

Years teaching in discipline	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Mathematics</b>				
0-4	36	28	48*	25
5-9	27	25	21	32
10-19	25	26	20	28
20 or more	13*	21	11	14
<b>Reading</b>				
0-4	33	31	38	29
5-9	25	25	24	26
10-19	25	24	23	27
20 or more	17	21	15	18

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.  
 NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

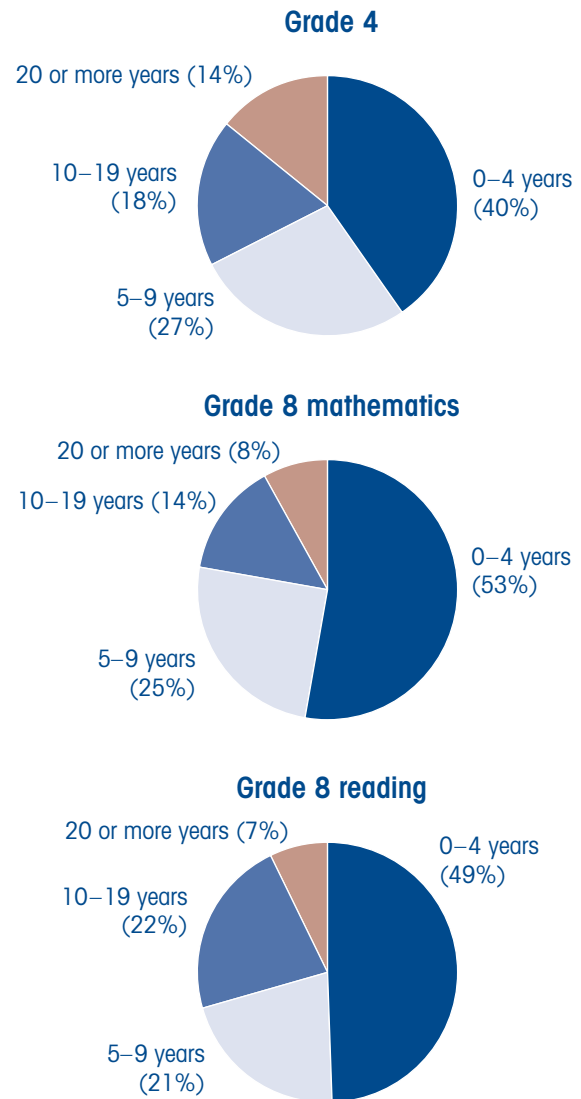


## How common is teacher turnover at schools that serve AI/AN students?

Survey responses from teachers indicated substantial rates of turnover at schools within their first five years of teaching. Among AI/AN students nationwide, 40 percent of grade 4 students had teachers who had been in their current schools for less than 5 years. Similarly, 53 percent of grade 8 AI/AN students had mathematics teachers, and 49 percent had reading/language arts teachers, with less than 5 years experience in their current schools (figure 4-4).

At the other end of the spectrum, 14 percent of grade 4 students had teachers who had been at their current schools for 20 years or more. In eighth grade, 8 percent of students had mathematics teachers, and 7 percent of students had reading/language arts teachers, who had been in their current schools for 20 years or more. Differences between high density and low density schools were not significant (table A-48).

**Figure 4-4.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by the number of years that their teachers have taught in their current schools: 2005



NOTE: Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## What are the racial and linguistic backgrounds of teachers of AI/AN students?

Teachers were asked about their own racial/ethnic background and about their familiarity with the AI/AN languages of their students. For race/ethnicity, teachers responded to two questions which were combined to generate the information shown in Table 4-2. One question asked whether the teacher was Hispanic or Latino; the other asked which racial/ethnic category or categories described the teacher best.

Overall, teachers with an AI/AN background (AI/AN only or AI/AN in combination) taught about one-fourth of AI/AN students at grade 4 and fewer at grade 8. Twenty-two percent of grade 4 students, 16 percent of grade 8 mathematics students, and 13 percent of grade 8 reading students had teachers who included AI/AN in describing themselves.

Responses indicate that more AI/AN students at high density schools than at low density schools were instructed in mathematics and reading/language arts by teachers whose own background was AI/AN. Forty percent of grade 4 students in high density schools had teachers who identified themselves as all or partly AI/AN, compared to 4 percent of grade 4 students at low density schools. At grade 8, mathematics teachers of 28 percent of students and reading/language arts teachers of 25 percent of students in high density schools identified themselves as all or partly AI/AN, compared to mathematics teachers of 6 percent and reading/language arts teachers of 3 percent of students in low density schools. Nevertheless, the majority of AI/AN students, even at high density schools, were being instructed by teachers who identified themselves as White.

**Table 4-2.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and their teachers' race/ethnicity: 2005

Teachers' race/ethnicity	Total	School density	
		High	Low
<b>Grade 4</b>			
White only	73	56*	89
AI/AN only	18	35*	1
AI/AN in combination	4	5	3
Other race/ethnicity	5	4	7
<b>Grade 8 mathematics</b>			
White only	76	65*	85
AI/AN only	11	19*	4
AI/AN in combination	6	9	2
Other race/ethnicity	8	7	9
<b>Grade 8 reading</b>			
White only	75	60*	88
AI/AN only	10	20*	1
AI/AN in combination	4	5	3
Other race/ethnicity	12	15	9

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. The race categories of "White" and "AI/AN only" exclude teachers who also reported Hispanic origin. The "AI/AN in combination" category includes teachers who selected AI/AN plus one or more other race/ethnicity categories. The "other race/ethnicity" category includes teachers who selected one or more of the following: Hispanic or Latino, Black or African American, Asian, or Native Hawaiian or other Pacific Islander. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

With regard to knowledge of AI/AN languages, 72 percent of grade 4 AI/AN students, 75 percent of grade 8 AI/AN students in mathematics, and 77 percent of grade 8 AI/AN students in reading/language arts were taught by teachers who did not speak or understand local AI/AN language(s) at all (table 4-3). Differences were significant when considering school density. For example, 47 percent of grade 4 students at high density schools had teachers who did not speak or understand the local AI/AN language at all, compared to 96 percent at low density schools. The corresponding percentages for grade 8 mathematics were 54 percent and 93 percent respectively; and for grade 8 reading/language arts they were 55 percent and 96 percent respectively.

At both grade levels, a higher percentage of students at high density schools than at low density schools had teachers who spoke and understood these languages to a small extent; and at grade 4, a higher percentage of students at high density schools had teachers who were native speakers. Nineteen percent of grade 4 students at high density schools had teachers who classified themselves as native speakers, compared to 1 percent at low density schools. At grade 8, the percentages of students at high density schools whose teachers were native speakers were 6 percent for mathematics teachers and 8 percent for reading/language arts teachers.

**Table 4-3.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers speak and understand at least one of the tribal/village languages spoken by AI/AN students at their schools: 2005

Extent to which teachers speak and understand at least one of the tribal/village languages spoken by AI/AN students at their schools	Total	School density	
		High	Low
<b>Grade 4</b>			
Not at all	72	47*	96
Small extent	14	24*	3
Moderate or large extent (but not a native speaker)	5	9	#
Native speaker	10	19*	1
<b>Grade 8 mathematics</b>			
Not at all	75	54*	93
Small extent	20	37*	5
Moderate or large extent (but not a native speaker)	2	3	1
Native speaker	3	6	1
<b>Grade 8 reading</b>			
Not at all	77	55*	96
Small extent	15	28*	3
Moderate or large extent (but not a native speaker)	5	10	#
Native speaker	4	8	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## How do teachers prepare themselves to teach AI/AN students?

Teachers answered a multipart question about the resources that they used to acquire knowledge and skills specific to teaching AI/AN students. While there was some variation by grade level and subject area, the most commonly reported resources were living and working in the community and teachers' own personal or family backgrounds and experiences. Reliance on living and working in the community was especially evident in high density schools, where teachers of 70 percent

of grade 4 students, 69 percent of grade 8 mathematics students, and 83 percent of grade 8 reading/language arts students reported this as a resource they used to at least a moderate extent (table 4-4). About one-half of the students at high density schools also had teachers who reported that classes and workshops, not taken as part of a degree program, helped them acquire knowledge and skills specific to teaching AI/AN students.

**Table 4-4.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various resources used by their teachers to acquire knowledge and skills specific to teaching AI/AN students: 2005

Types of resources used to at least a moderate extent	Total	School density	
		High	Low
<b>Grade 4</b>			
College courses taken as part of an undergraduate or graduate degree program	27	37*	18
Classes and workshops that were not taken as part of a degree program	31	48*	14
Independent reading and study	33	43*	24
Living and working in the community	48	70*	26
Locally sponsored cultural orientation program	20	35*	5
Personal or family background and experiences	39	65*	14
<b>Grade 8 mathematics</b>			
College courses taken as part of an undergraduate or graduate degree program	17	21	13
Classes and workshops that were not taken as part of a degree program	27	46*	11
Independent reading and study	29	42*	18
Living and working in the community	46	69*	25
Locally sponsored cultural orientation program	14	22*	6
Personal or family background and experiences	30	41*	21
<b>Grade 8 reading</b>			
College courses taken as part of an undergraduate or graduate degree program	24	34*	15
Classes and workshops that were not taken as part of a degree program	31	47*	17
Independent reading and study	44	61*	29
Living and working in the community	55	83*	29
Locally sponsored cultural orientation program	17	25*	10
Personal or family background and experiences	38	54*	25

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

Table 4-5 shows what resources teachers reported using to improve the academic performance of their AI/AN students. Consultation with other teachers in the school was the most frequently cited source at both grade levels and in both high density and low density schools. Overall, 64 percent of grade 4 students had teachers who reported consulting with their colleagues at school to improve AI/AN academic performance, as did teachers of 64 percent of grade 8 mathematics students and 69 percent of grade 8 reading/language arts students. The corresponding

percentages were 86, 89, and 94 for students in high density schools and 43, 42, and 47 for students in low density schools.

At high density schools, 76 percent of grade 4 students had teachers who reported using local resources, including libraries or local cultural centers, at some point during the current school year; and 78 percent of grade 8 students had reading/language arts teachers who turned to online websites and databases to find lesson plans or instructional strategies.

**Table 4-5.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various sources that their teachers used during the school year to obtain information about improving the academic performance of their AI/AN students: 2005

Types of information sources	Total	School density	
		High	Low
<b>Grade 4</b>			
Online websites or databases to find lesson plans, curricular materials, or instructional strategies	49	68*	30
Online websites or databases to find research reports or articles	44	61*	27
Professional journals	36	52*	20
In-service classes and workshops	46	71*	20
Local resources including libraries or local cultural centers	55	76*	33
Consultation with elders or other local experts	41	66*	17
Consultation with other teachers in school	64	86*	43
<b>Grade 8 mathematics</b>			
Online websites or databases to find lesson plans, curricular materials, or instructional strategies	38	57*	21
Online websites or databases to find research reports or articles	29	41*	18
Professional journals	31	46*	19
In-service classes and workshops	43	70*	21
Local resources including libraries or local cultural centers	35	51*	21
Consultation with elders or other local experts	41	65*	21
Consultation with other teachers in school	64	89*	42
<b>Grade 8 reading</b>			
Online websites or databases to find lesson plans, curricular materials, or instructional strategies	56	78*	36
Online websites or databases to find research reports or articles	44	59*	31
Professional journals	40	57*	25
In-service classes and workshops	49	75*	27
Local resources including libraries or local cultural centers	47	65*	32
Consultation with elders or other local experts	46	77*	19
Consultation with other teachers in school	69	94*	47

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

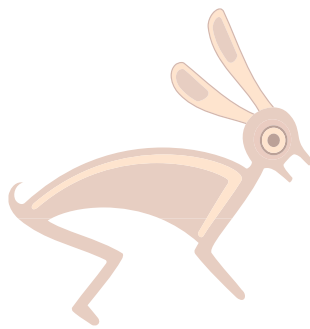
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



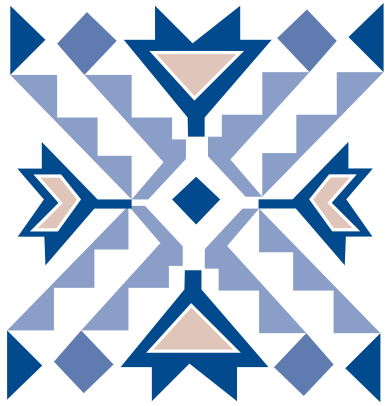
## Summary

The teachers of AI/AN students were surveyed to gather information about their general qualifications as teachers, as well as about their particular preparation for working with AI/AN students. Teacher qualification findings (general and subject area) were similar between AI/AN and non-AI/AN students. However, at grade 8, fewer AI/AN students than non-AI/AN students had mathematics teachers who had majored in the subject area they were teaching. Also at grade 8, more AI/AN students at high density schools than at low density schools had mathematics teachers with limited teaching experience (0–4 years) in their discipline.

With regard to teachers' personal backgrounds as well as their specific preparations for working with AI/AN students, there were differences between the teachers of students attending high density and low density schools. More students at high density schools had teachers who were American Indian or Alaska Native, and more had teachers who knew some words or phrases in one of the tribal/village languages spoken by the AI/AN students in their schools. Furthermore, for each of the types of resources and information sources surveyed, more students at high density schools than at low density schools had teachers who reported using the source/resource to enhance their work with the AI/AN student population.



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## CHAPTER 5

### **American Indian/Alaska Native Culture and Language in the Curriculum**

This chapter discusses the extent to which American Indian/Alaska Native (AI/AN) culture and language were integrated into the curriculum experienced by AI/AN students. Both teachers and school principals were asked to respond to questions about using curricular content with an AI/AN perspective. Teachers were queried about their use of native language in instruction as well as their use of specific instructional practices, such as assigning literature written by AI/AN authors or drawing on AI/AN cultural themes for mathematics. Consideration is given to the types of standards and assessments used in schools and classrooms attended by AI/AN students. Both teachers and principals brought their perspectives to the questions about standards, while teachers responded to questions on assessments used in the classroom.

## Is AI/AN culture and language incorporated into the classroom?

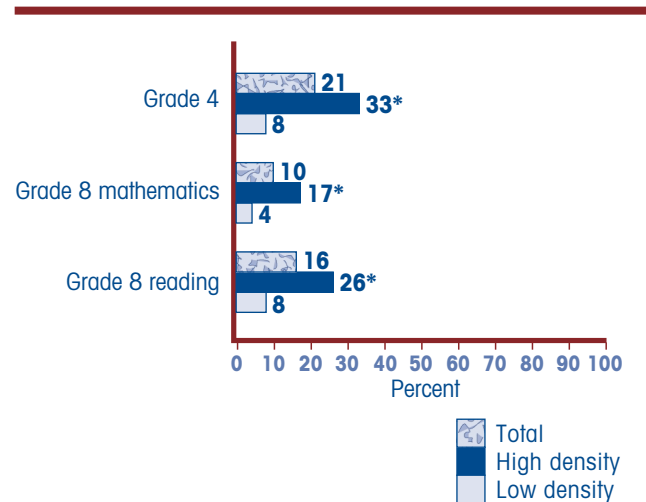
The National Indian Education Study (NIES) sought to collect information on the extent to which AI/AN language and culture were incorporated in the curriculum. Both teachers and principals were asked a fairly broad question: “To what extent is curricular content taught using an American Indian or Alaska Native perspective?” Teachers responded for their own classes, while principals responded for the school as a whole. Response options included the following: integrated into the daily curriculum; integrated into the curriculum extensively, but not on a daily basis; integrated into the curriculum occasionally; seldom integrated into the curriculum; and not integrated into the curriculum. For reporting purposes, responses of “integrated into the daily curriculum” and “integrated into the curriculum extensively, but not on a daily basis” were combined.

Survey respondents were not provided any further instructions beyond the wording of the questionnaires. In interpreting the meaning to the questions and response options, it is important to keep in mind that respondents may have had different interpretations of what it meant to have an AI/AN perspective and what it meant to integrate such a perspective into the curriculum. Figure 5-1 shows teachers’ responses, and principals’ responses are shown in figure 5-2.

At grade 4, teachers of 21 percent of all AI/AN students, and principals of 30 percent of all AI/AN students, reported integrating an AI/AN perspective into the curriculum on a daily or extensive basis. Such practices were more evident in high density schools than in low density schools. In high density schools, teachers of 33 percent of students, and principals of 54 percent of students, reported integrating an AI/AN perspective into the curriculum on a daily or extensive basis.

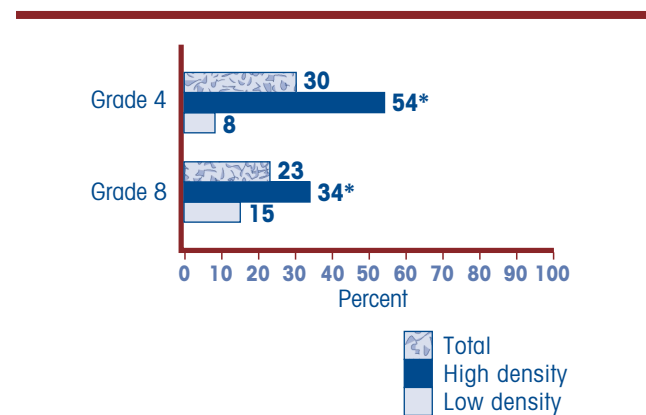
At eighth grade, 10 percent of all AI/AN students had mathematics teachers, 16 percent had reading/language arts teachers, and 23 percent had principals who reported daily or extensive integration of an AI/AN perspective. As at grade 4, more grade 8 students at high density schools than at low density schools had teachers and principals who reported daily or extensive use of an AI/AN perspective in the curriculum.

**Figure 5-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students whose teachers reported either daily, or extensive but not daily, use of an AI/AN perspective in instruction, by school density: 2005



\* Significantly different ( $p < .05$ ) from students attending low density schools. NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Figure 5-2.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students whose school principals reported either daily, or extensive but not daily, use of an AI/AN perspective in the school curriculum, by school density: 2005

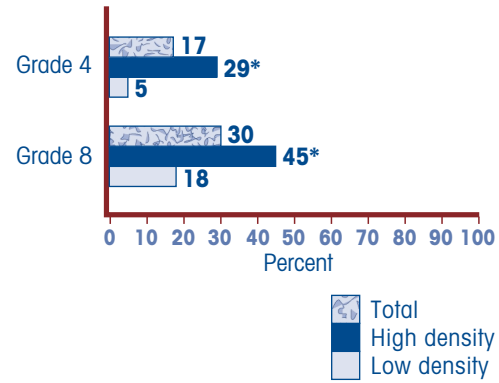


\* Significantly different ( $p < .05$ ) from students attending low density schools. NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Mathematics activities that reference AI/AN culture

Mathematics teachers were asked how often they framed mathematics problems using situations typical of AI/AN homes or communities, and how often they assigned activities that explicitly integrated mathematics with AI/AN cultural themes, such as teaching geometric concepts using traditional AI/AN symbols and designs. Teacher responses indicate some use of each of these instructional strategies, particularly in high density schools. Twenty-nine percent of grade 4 students and 45 percent of grade 8 students in high density schools had teachers who reported using mathematics problems that reflect situations typical of their communities at least once a month (figure 5-3). Sixteen percent of grade 4 students and 19 percent of grade 8 students had teachers who reported integrating explicit AI/AN cultural themes into their mathematics instruction on at least a monthly basis (figure 5-4).

**Figure 5-3.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students whose teachers reported at least monthly use of mathematics problems that reflect situations typical of AI/AN homes or communities, by school density: 2005

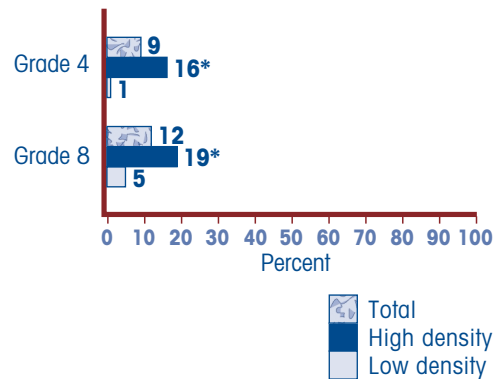


\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Figure 5-4.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students whose teachers reported at least monthly use of activities that integrate mathematics with AI/AN cultural themes, by school density: 2005



\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Reading and language arts activities that reference AI/AN culture

Reading/language arts teachers were asked how often they integrated AI/AN activities into their lessons. Examples of such activities include reading literature with AI/AN themes, reading literature written by AI/AN authors, and listening to AI/AN stories told in the oral tradition. The most widely reported practice was reading literature with AI/AN themes. Overall, 36 percent of grade 4 AI/AN students and 26 percent of grade 8 AI/AN students had teachers who reported assigning literature with AI/AN themes at least once a month (table 5-1).

For each of the culturally relevant reading/language arts activities surveyed, a higher percentage of grade 4

students attending high density schools had teachers who reported at least monthly use compared to students attending low density schools. For example, 36 percent of grade 4 students attending high density schools had teachers who reported using literature written by AI/AN authors at least once a month, compared to 9 percent at low density schools. For the majority of these reading/language arts activities, there were also statistically significant differences in the percentages of grade 8 students at high density and low density schools whose teachers reported at least monthly use.

**Table 5-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various reading/language arts activities integrating AI/AN culture that their teachers used at least monthly: 2005

Activities	Total	School density	
		High	Low
<b>Grade 4</b>			
Read literature with AI/AN themes	36	50*	22
Read literature written by AI/AN authors	22	36*	9
Listen to AI/AN stories told in the oral tradition	11	18*	4
Retell AI/AN stories in the oral tradition	9	16*	3
Study how to speak and read the students' AI/AN language	14	27*	1
<b>Grade 8</b>			
Read literature with AI/AN themes	26	40*	14
Read literature written by AI/AN authors	16	25*	9
Listen to AI/AN stories told in the oral tradition	11	19*	4
Retell AI/AN stories in the oral tradition	7	13*	2
Study how to speak and read students' AI/AN language	4	9	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

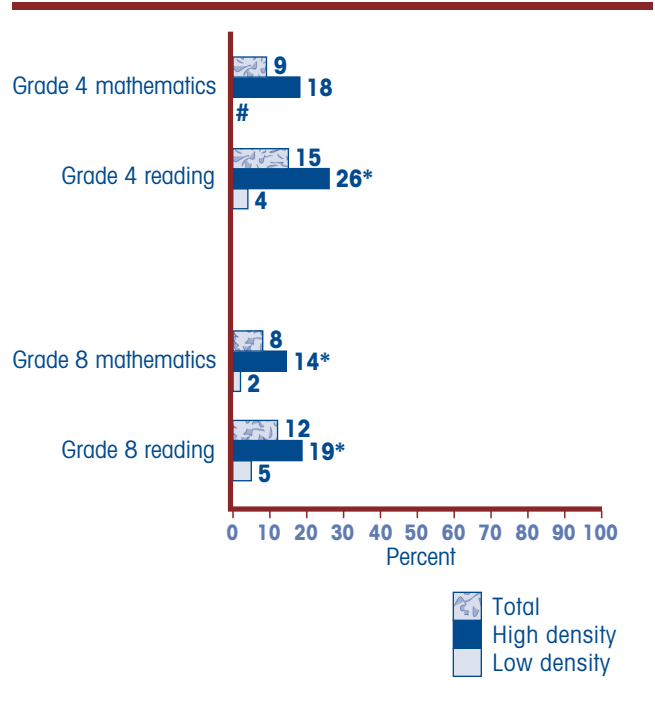
## Using AI/AN languages in Mathematics and Reading instruction

Teachers were asked whether they used their students' AI/AN languages to teach mathematics and reading/language arts. Response options included "Instruction is entirely in English," "primarily in English with occasional use of AI/AN words or phrases," "primarily in English with frequent use of AI/AN words or phrases," and "Instruction is primarily in the students' AI/AN language." For reporting purposes, the "occasional," "frequent," and "primary" response options were combined in Figure 5-5. Virtually no students had teachers who reported using AI/AN language as the primary mode of instruction in either subject area or grade.

In mathematics, 18 percent of grade 4 students and 14 percent of grade 8 students in high density schools had teachers who reported using AI/AN words or phrases at least occasionally. In reading, 26 percent of grade 4 students and 19 percent of grade 8 students in high density schools had teachers who reported such use. See Table A-61 for percentages by response categories.



**Figure 5-5.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students whose teachers reported using words or phrases from the students' AI/AN languages at least occasionally in mathematics instruction or reading/language arts instruction, by school density: 2005



# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## What standards shape instruction for AI/AN students?

Standards dictate what students must know and be able to do. Teachers were asked the extent to which each of several types of standards influenced their instruction. A response of “no influence” could be an indication that the standards in question were not available for their school.

Tables 5-2 and 5-3 show how often teachers of AI/AN students at grade 4 and grade 8 reported using state content standards or AI/AN content/cultural standards to plan lessons for mathematics and reading/language arts. Ninety percent of all grade 4 AI/AN students and 81 percent of all grade 8 AI/AN students had teachers who reported that state standards were used “a lot” in planning

mathematics lessons. The percentages were similar for reading/language arts teachers who reported using state standards to plan instruction (91 percent at grade 4; 80 percent in grade 8). By contrast, only a small fraction of students had teachers who reported using state or locally developed AI/AN standards “a lot” to shape instruction. Just 3 percent of all AI/AN students at grade 4, and 1 percent of all AI/AN students at grade 8, had teachers who reported using AI/AN standards this often in mathematics. For reading/language arts, 4 percent of grade 4 students and 2 percent of grade 8 students had teachers who reported using AI/AN standards “a lot.”

**Table 5-2.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their mathematics lessons: 2005

Use of standards in planning lessons	Total	School density	
		High	Low
<b>Grade 4</b>			
State content standards for mathematics			
Not at all	2	1	3
A little	2	1	2
Some	6	7	5
A lot	90	91	90
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	77	62*	93
A little	10	15*	5
Some	10	19*	1
A lot	3	4*	1
<b>Grade 8</b>			
State content standards for mathematics			
Not at all	2	5	#
A little	5	8	2
Some	11	11	11
A lot	81	75	87
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	86	76*	95
A little	8	12	4
Some	5	11*	1
A lot	1	1	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table 5-3.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their reading/language arts lessons: 2005

Use of standards in planning lessons	Total	School density	
		High	Low
<b>Grade 4</b>			
State content standards for reading/language arts			
Not at all	1	1	1
A little	2	#	3
Some	7	8	6
A lot	91	91	90
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	69	50*	89
A little	13	19*	7
Some	13	23*	3
A lot	4	8*	1
<b>Grade 8</b>			
State content standards for reading/language arts			
Not at all	3	5	2
A little	3	6	1
Some	13	9	17
A lot	80	79	80
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	81	67*	92
A little	12	19*	5
Some	6	10*	2
A lot	2	4	#

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

At high density schools, use of AI/AN content/cultural standards was reported more often. For example, 23 percent of grade 4 students at high density schools had teachers who reported using state or locally developed AI/AN standards “some” or “a lot” in mathematics, and 31 percent had teachers who reported this level of use in planning reading/language arts lessons.

Tables A-67 through A-70 contain comparable information from principals on the influence of standards on schools’ curriculum. Here again, very high percentages of AI/AN students (92 to 95 percent) had principals who reported that regular state standards had “much influence” on curriculum. At high density schools, state or locally developed AI/AN content/cultural standards were reported to have “much influence” by principals of 7 to 14 percent of AI/AN students, depending upon grade and subject area.

## What tools do teachers use to assess AI/AN students?

NIES looked at the kinds of assessments teachers used to evaluate student progress and plan appropriate instruction. For each type of assessment, teachers were asked to indicate whether they used the assessment “not at all” or to a “small,” “moderate,” or “large” extent. Responses for “moderate extent” and “large extent” have been combined in Table 5-4. As can be seen, more than three-quarters of all grade 4 AI/AN students had teachers who reported using standardized tests, tests supplied by textbook publishers, teacher-made tests, and oral responses of students to at least a moderate extent. About two-thirds of these students had teachers who reported using projects, worksheets, and portfolios as assessment tools. By

contrast, only 3 percent had teachers who reported at least moderate use of assessments developed by local AI/AN groups.

Findings were not significantly different between high density and low density schools, except in the areas of tests supplied by local textbook publishers and demonstrations or exhibitions. Eighty-seven percent of grade 4 students attending high density schools had teachers who reported using textbook tests, compared to 75 percent of students attending low density schools. Fifty-one percent of grade 4 students at high density schools had teachers who utilized demonstrations or exhibitions for assessment, compared to 37 percent at low density schools.

**Table 5-4.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and various assessment tools that their teachers used to evaluate student progress and plan appropriate instruction: 2005

Assessments used for evaluation and planning to at least a moderate extent	Total	School density	
		High	Low
Standardized state assessments	82	83	81
Other standardized tests (e.g., district-level)	78	77	80
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	81	87*	75
Teacher-made tests or quizzes	85	86	85
Assessments developed by local AI/AN groups	3	5	#
Individual or group projects	63	61	64
Worksheets	66	71	62
Oral responses of students during class discussions	85	89	82
Portfolios or work samples	64	69	60
Demonstrations or exhibitions	44	51*	37

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Teachers may report using several different assessment tools, so percentages do not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

Table 5-5 shows the assessment tools that were reported to have at least moderate use by teachers of grade 8 AI/AN students. Overall, teacher-made tests or quizzes were used most often. Eighty-eight percent of mathematics students and 90 percent of reading/language arts students had teachers who reported using this type of assessment. The second most commonly used assessment tool was students' oral responses during classroom discussion. Seventy-four percent of mathematics and 81 percent of reading/language arts students had teachers who reported using this tool. As at grade 4, moderate use of assessments developed by local AI/AN groups was reported by teachers of small

percentages of eighth-grade AI/AN students: 2 percent in the case of mathematics and 3 percent in the case of reading/language arts.

Similar to the grade 4 findings, there were no significant differences between high density and low density schools except in the case of textbook tests for mathematics. Seventy-two percent of AI/AN students in high density schools had mathematics teachers who reported at least moderate use of tests supplied by text-book publishers compared to 58 percent at low density schools.

**Table 5-5.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various assessment tools that their teachers used to evaluate student progress and plan appropriate instruction: 2005

Assessments used for evaluation and planning to at least a moderate extent	Total	School density	
		High	Low
<b>Mathematics</b>			
Standardized state assessments	69	67	72
Other standardized tests (e.g., district-level)	50	44	56
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	65	72*	58
Teacher-made tests or quizzes	88	86	90
Assessments developed by local AI/AN groups	2	2	1
Individual or group projects	37	41	32
Worksheets	61	62	61
Oral responses of students during class discussions	74	72	76
Portfolios or work samples	37	40	34
Demonstrations or exhibitions	26	29	24
<b>Reading</b>			
Standardized state assessments	69	68	69
Other standardized tests (e.g., district-level)	54	50	59
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	50	54	47
Teacher-made tests or quizzes	90	86	92
Assessments developed by local AI/AN groups	3	4	2
Individual or group projects	72	69	74
Worksheets	54	56	51
Oral responses of students during class discussions	81	77	84
Portfolios or work samples	63	60	66
Demonstrations or exhibitions	44	39	48

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Teachers may report using several different assessment tools, so percentages do not add to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

## Summary

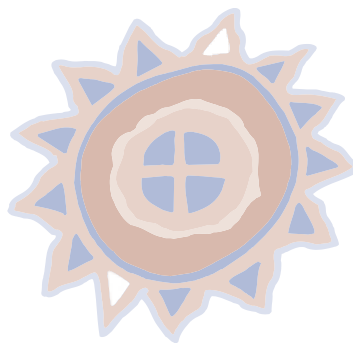
The NIES surveys sought to investigate the extent to which AI/AN students across the country were exposed to their native culture and language. Teachers and principals were queried about the use of an AI/AN perspective in curriculum and instruction. Reported use was more common at high density schools than at low density schools. Daily or extensive use of an AI/AN perspective in curriculum and instruction was reported by teachers of 33 percent of grade 4 students and principals of 54 percent of grade 4 students in high density schools. For grade 8 students at high density schools, 17 percent had mathematics teachers, 26 percent had reading/language arts teachers, and 34 percent had principals who reported such use.

With regard to specific instructional activities that reference AI/AN culture, mathematics teachers reported using problems that reflect situations typical of AI/AN homes and communities, and reading/language arts teachers reported assigning literature with AI/AN themes. These and similar culturally referenced classroom activities were used more frequently by the teachers of students in high density schools than by the teachers of students in low density schools.

Similarly, the use of students' AI/AN languages in instruction was reported more frequently by the teachers of students in high density schools.

Both teachers and principals of AI/AN students agreed that state standards had the greatest influence on planning instruction. State and locally developed AI/AN content and cultural standards were acknowledged as having “a lot” or “some” influence by the teachers and principals of only a small percentage of AI/AN students.

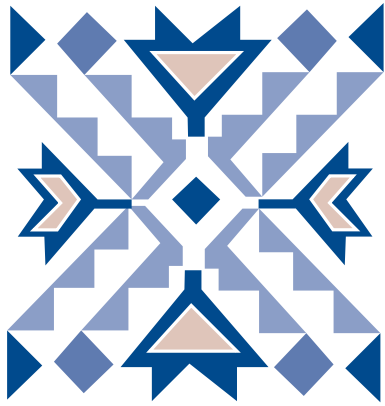
Finally, teachers were also surveyed regarding the use of a variety of assessment tools for evaluating student progress and planning appropriate instruction. Depending upon grade level and subject area, 74 to 90 percent of AI/AN students had teachers who reported at least moderate use of teacher-made tests or oral responses of students to assess progress and guide instruction. Eighty-two percent of students at grade 4 and 69 percent at grade 8 had teachers who reported using standardized state assessments in this manner, while only 2 to 3 percent at each grade level had teachers who reported using assessments developed by local AI/AN groups.



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# TECHNICAL NOTES

This section describes the procedures used for Part II of the 2005 National Indian Education Study (NIES).

## **Development of 2005 NIES survey instruments**

Questionnaires were developed for students at grades 4 and 8, their teachers, and their school principals. A Technical Review Panel (TRP), assembled to advise NIES, oversaw the development of the questionnaires. (For more information about the Technical Review Panel, see <http://nces.ed.gov/nation-reportcard/nies.asp>.) In addition, pilot testing and in-depth think-aloud interviews with respondents were conducted in 2004 to refine the questionnaires. (All of the survey questions were multiple choice, but the questionnaires did include a space at the end for respondents to write in any comments.)

The following themes were addressed by each group of respondents:

Students:

- Demographic characteristics
- Identification with and exposure to American Indian/Alaska Native (AI/AN) culture
- Perceptions about school and learning
- Involvement with school
- Family's role in student's education

Teachers:

- General qualifications for teaching
- Experience with AI/AN culture
- Preparation to teach AI/AN students
- General emphasis on AI/AN culture in curriculum
- Emphasis on AI/AN culture in reading and mathematics instruction
- Use of AI/AN languages in instruction

School principals:

- Demographic characteristics of students and staff
- School governance and funding
- Prevalence of conditions adversely affecting instruction
- Engagement with family and community
- General emphasis on AI/AN culture in curriculum
- Emphasis on AI/AN culture in reading and mathematics instruction

The number of questions in each questionnaire is shown in table TN-1. Grade 8 teachers who taught both language arts and mathematics answered only 24 questions in total because many questions for grade 8 teachers were the same in both subject areas.

Student questionnaires required approximately 10–15 minutes to complete, while teacher and school questionnaires could be completed in approx-

imately 20–25 minutes. Complete copies of the questionnaires can be found at <http://nces.ed.gov/nationsreportcard/nies.asp>.

**Table TN-1.** Number of survey questions, by type of questionnaire

Type of questionnaire	Number of questions
Student, grade 4	22
Student, grade 8	23
Teacher, grade 4	19
Teacher, grade 8 language arts	20
Teacher, grade 8 mathematics	20
School, grades 4 and 8	19

## Sampling procedures

The NIES was designed to produce information that was representative of all grade 4 and grade 8 AI/AN students in the United States. The AI/AN population represents about 1 percent of all U.S. students, or approximately 46,000 students at grade 4 and 45,000 students at grade 8.

The samples for the 2005 National Assessment of Educational Progress (NAEP) and NIES were interconnected, with the NAEP sample selected first. The school sampling frame used for both surveys was based on the Common Core of Data (CCD), augmented by the Private School Universe Survey (PSS).<sup>1</sup>

A two stage sampling process was used for NAEP. First schools were selected; then a random sample of students within each target grade level was selected at each school. School personnel had the opportunity to review the sample lists and identify any special education students or English language learners who should be excluded based on NAEP guidelines. Parents were notified of the assessment, but active consent for participation was only solicited if required by the school.

<sup>1</sup> The CCD is a program of the U.S. Department of Education's National Center for Education Statistics (NCES) that annually collects fiscal and non-fiscal data about all public schools, public school districts, and state education agencies in the United States. The PSS is also conducted by NCES and consists of a single survey that is completed by administrative personnel in private schools. It produces private school data comparable to the public school data in the CCD.



In 2005, the National Assessment of Educational Progress (NAEP) assessed approximately 14,500 AI/AN students at grades 4 and 8. These students were sampled from approximately 10,000 schools at grade 4 and 7,500 schools at grade 8. Because NIES Part I is essentially a reanalysis of the results from the NAEP reading and mathematics assessments, all AI/AN students who were selected to participate in the NAEP reading and mathematics assessments were automatically defined as being part of the NIES Part I sample.

For NIES Part II, the NAEP assessment sample served as a screening device to identify schools with AI/AN students. At the time that the NIES school sample was drawn, NAEP assessments had not yet taken place. Consequently, race data were still incomplete for some schools in the NAEP sample, either because the schools had not included race information on the student lists submitted to NAEP or because the schools were nonparticipating. Based on the best available data, the sampling frame for NIES was established as 3,200 schools at grade 4 and 2,900 schools at grade 8 that were thought likely to have at least one AI/AN student in the NAEP sample at the target grade.

The aim of the NIES Part II sample design was to subsample about 350 of these schools at each grade. For greater precision, the sample was stratified by type of school (public, private, and Bureau of Indian Affairs [BIA]); NIES region (Atlantic, North Central, South Central, Mountain, and Pacific); and location type (urban, suburban, and rural). In each selected school, all AI/AN students in the NAEP sample were included in the Part II sample.

Schools and students were free to participate in either NAEP or the NIES survey independently. Therefore, choosing not to participate in NAEP did not exclude a school or student from the NIES Part II survey, and response rates for the NIES Part II survey were not affected by NAEP response rates.

Thus, the samples for NIES Parts I and II overlapped, but were not identical. The samples were not designed to allow linking of the Part I achievement data and the Part II survey data in 2005. Further, the

NIES Part II design was to obtain a sample that was not only representative of all U.S. AI/AN students at grades 4 and 8, but would allow comparisons between AI/AN students at high density and low density schools, where density is defined as the proportion of AI/AN students enrolled. (High density schools have 25 percent or more AI/AN students; low density schools have fewer than 25 percent.) The sample was not designed to allow separate reporting by type of school (e.g., public, private, BIA).

From the NIES Part II sample of schools, about 80 grade 4 schools and 70 grade 8 schools were found to be ineligible when contacted. The majority of these ineligible schools were those for which confirmed race/ethnicity data had not been available at the time the NIES Part II school sample was drawn. In other cases, the eligible AI/AN students had transferred out of the sampled schools by the time the NIES Part II data were collected, or the students were determined by the schools to have been misidentified on school records.

After eliminating ineligible schools, about 550 eligible schools remained in the NIES Part II sample. The unweighted percentages of eligible schools by type were, approximately, 84 percent public, 4 percent private, and 12 percent BIA. About 480 of these eligible schools participated in the Part II survey. No student surveys were received from about one percent of the participating schools due to student absences or refusals. Because the student is the unit of analysis for NIES, teacher surveys or school principal surveys that could not be linked to specific students were not used in the analysis. Table TN-2 shows the approximate numbers of student surveys, teacher surveys, and school principal surveys that were used in the analyses for this report.

**Table TN-2.** Number of completed surveys used in analysis, by respondent type

Respondent type	Grade 4	Grade 8
Students	2,600	2,500
Teachers	480	820
School principals	240	230

NOTE: The numbers of students are rounded to the nearest hundred. The number of teachers and school principals are rounded to the nearest ten.

The weighted school response rates were 87 percent at grade 4 and 93 percent at grade 8. The weighted student response rates were 95 percent at grade 4 and 91 percent at grade 8. No separate samples were drawn for teachers or school principals. However, a weighted item response rate was calculated for teachers and school principals based on completed questionnaires using student weights since the student was the unit of analysis. Accordingly, at grade 4, completed questionnaires were obtained from school principals for 100 percent of students and from teachers for 99 percent of students. At grade 8, completed school questionnaires were obtained for 99 percent of students, completed mathematics teacher questionnaires were obtained for 93 percent of students, and completed reading teacher questionnaires were obtained for 94 percent of students.<sup>2</sup>

Unweighted response rates were as follows: 87 percent for grade 4 schools, 92 percent for grade 4 students, 87 percent for grade 8 schools, 89 percent for grade 8 students. Completed school questionnaires were obtained from principals for 100 percent of students at each grade. Completed teacher questionnaires were obtained for 99 percent of students at grade 4. At grade 8, completed mathematics teacher questionnaires were obtained for 96 percent of students, and completed reading teacher questionnaires were obtained for 95 percent of students.

Because the weighted school response rates for private schools failed to meet the NCES standard of 85 percent, nonresponse bias analyses were conducted. The nonresponse bias analyses were conducted for both schools and students, even though the weighted student response rates were high enough not to automatically trigger such analyses under the NCES standards. The bias analysis indicated that the relatively poor response rate of private schools, and the relatively poor student response rate in Alaska, had introduced some potential for nonresponse bias at both grades. However, it is important to remember that each of these groups constitutes a small percentage of the national AI/AN population (less

than 5 percent in the case of private schools and less than 10 percent in the case of Alaska Native students). Thus, for most characteristics of interest from the survey, the potential for nonresponse bias remains modest. The only evidence of bias found at the school level was for private schools; and since only about 5 percent of AI/AN students are in private schools, there is evidence of little bias in the overall results.

## Weighting

The general purpose of weighting is to adjust for the unequal probabilities of selection of schools and students, and to compensate for the effects of nonresponse by schools and students selected to participate.

The school probability of selection was a function of three factors: the NAEP selection, the probability of being retained for NIES part II, and the number of AI/AN students in the NAEP sample per school. Nonresponse adjustments at the school level attempted to mitigate the impact of differential response by school type (public, private, and BIA), region, and estimated percentage enrollment of AI/AN students. For student weights, nonresponse adjustments took account of differential response rates based on student age (above age for grade level or not) and English language learner status.

In order to partially counteract the negative impact of the low private school participation, a post-stratification adjustment was applied to the NIES Part II weights. The relative weighted proportions of students from public, private, and BIA schools, respectively, were adjusted to match those from the NIES Part I data. This not only ensured greater consistency between the findings of the two NIES components, but since these proportions were more reliably estimated from the NIES Part I data (which involved a far larger school sample than Part II), this weight adjustment increased the accuracy and reliability of the NIES Part II results.

<sup>2</sup> Ninety-three percent of grade 4 students and 90 percent of grade 8 students had school questionnaires completed by a principal or head of school. Furthermore, among the remainder, 4 to 6 percent had school questionnaires completed by an assistant principal, and 3 to 4 percent had school questionnaires completed by a school counselor, a teacher, or someone else.

The complex sample design of NIES Part II (with the added complexity of NAEP) resulted in a wide variability of student sample weights from the overall average weight. Sampling weights improve the validity of inferences to be drawn between the student samples and their respective populations by helping to ensure that the results of the survey are fully representative of the target population. For NIES, as for NAEP, weights are computed for both schools and students. The school weights become one component in calculating the student weights. The student weights are the weights used in analysis.

## Data collection procedures

NIES study representatives (NCES data collection contractor staff) visited the schools in April and May of 2005 to administer the Part II survey questionnaires. Students completed the questionnaires in group settings, proctored by the study representatives. In order to decrease the possibility that survey responses would be adversely affected by students' reading levels, the questions were read out loud to all grade 4 students and to grade 8 students who school staff thought might need assistance. In addition, the study representatives were available to answer any questions that students had as they worked on the questionnaires.

The NAEP background questionnaires, which form the basis for the non-AI/AN student data included in this report, were collected in a similar fashion. That is, students completed the questionnaires in a proctored group setting where questions were read out loud at grade 4 but not at grade 8 unless requested. Study representatives were available to answer any questions.

For both NIES and NAEP, teachers and school principals were asked to complete the questionnaires on their own, either prior to or during the visit from the study representative.

In order to maximize the resources available to this study, a different data collection procedure was used at about 20 percent of the NIES Part II schools, primarily schools that were remotely located and had only a few AI/AN students. In these cases, all of the survey materials were mailed to the schools, and the

schools were asked to administer the questionnaires and return them by mail. Detailed instructions were provided for identifying teachers and students to be surveyed, administering the student questionnaires, responding to questions from students, and labeling and returning survey materials. The goal was to keep the administration procedures as parallel as possible for mail schools and schools that were visited in person. Although mail mode was used at about 20 percent of the sampled schools (unweighted), these schools generally had only one or two sampled students. Consequently, only about 2 percent of the sampled students were at mail-mode schools. Comparisons by mode were limited given the extreme differences in sample sizes, but insofar as could be determined, there were no differences in the quality or completeness of the data obtained from mail-mode schools.

## Definitions of demographic variables

Most of the variables used in this report are based directly on questions from the student, teacher, and school questionnaires. The exact wording of these questions is available online at <http://nces.ed.gov/nationsreportcard/nies.asp>. Discussed next are demographic variables that take their meaning from other sources.

### High and low AI/AN density schools

Throughout the report, results are reported separately for students attending schools with high or low density, that is, high or low proportions of AI/AN students. The Office of Indian Education (OIE) defines high density schools as those in which 25 percent or more of the students are AI/AN. Schools in which less than 25 percent of the students are AI/AN are considered low density schools.

The percent AI/AN was calculated for this report by dividing the response to question 4 on the school questionnaire (How many AI/AN students are enrolled at your school?) by the response to question 3 (What is the total student enrollment at your school?). When responses from the questionnaire were missing or out of range, information was substituted from the CCD or the PSS.

## Region

NIES did not obtain information on the locations of students' homes. However, students are described in terms of the locations (regions and community types) of the schools they attend. The five regions that are used are Atlantic, North Central, South Central, Mountain, and Pacific. These regions are based on Census divisions or aggregations of Census divisions. The states contained in each region are shown in figure 2-2 in chapter 2.

## Community type

Three or four mutually exclusive community types are defined based on the physical location of the student's school (as provided by addresses in the CCD and the PSS) and on characteristics of the population in that location. Classification is based on three factors: (1) location within or outside a metropolitan area (as defined by standards of the U.S. Office of Management and Budget); (2) location in a city or town designated as either urban or rural (based on U.S. Census Bureau classifications); and (3) the population size of that city or town (also based on U.S. Census data). A metropolitan area typically includes at least one principal city with a population of at least 50,000 and adjacent areas that have economic and social ties with the urban center. Metropolitan areas are coterminous with county boundaries.

## Central city

The central city category includes large cities (principal cities of metropolitan areas having populations of at least 250,000) and mid-sized cities (principal cities of metropolitan areas having populations less than 250,000). Central city is a geographic term and is not synonymous with "inner city."

## Urban fringe/large town

The urban fringe category includes locations within metropolitan areas of large or mid-sized cities, in cities or towns classified as urban by the U.S. Census Bureau, but not qualifying as principal cities. The large town category includes locations outside metropolitan areas, in towns with populations of at least 25,000.

## Rural/small town

The rural category includes all locations within or outside statistical areas classified as rural by the U.S. Census Bureau. The small town category includes locations outside metropolitan areas, in towns with populations of at least 2,500, but less than or equal to 25,000.

Data for small towns and rural areas are combined in figure 2-3 but shown separately in table A-3.

## Eligibility for free/reduced-price school lunch

As part of the Department of Agriculture's National School Lunch Program, schools can receive cash subsidies and donated commodities in return for offering free or reduced-price lunches to eligible children. Based on available school records, students were classified as either currently eligible for free/reduced-price school lunch or not eligible. Eligibility for the program is determined by a student's family income in relation to the federally established poverty level. Free lunch qualification is set at 130 percent of the poverty level or below, and reduced-price lunch qualification is set at between 130 and 185 percent of the poverty level. (For the period July 1, 2004, through June 30, 2005, for a family of four, 130 percent of the poverty level was \$24,505, and 185 percent was \$34,873. See <http://www.fns.usda.gov/cnd/lunch> for more information.) The classification applies only to the school year when the survey was administered (i.e., the 2004–2005 school year) and is not based on eligibility in previous years. If school records were not available, the student was classified as "Information not available." If the school did not participate in the program, all students in that school were classified as "Information not available."

## English language learner and disability status

A student's designation as an English language learner (ELL) or as a student with a disability (SD) is based on school records. SD students included all students with either an Individualized Education Plan or Section 504 plan in place or with one in progress. Study representatives compiled this information when they visited the schools to conduct the surveys.

The NIES sample only included students who were able to respond to the student surveys either independently or with assistance from the survey's administrator. For example, the survey's administrator could read the survey out loud or could clarify the intent of the survey questions when asked. Some students with severe disabilities or very limited English proficiency were therefore excluded from the study results.

### School funding for AI/AN education

Several types of school funding relevant to AI/AN education are surveyed in this report. Titles I, II, III, and VII funds are all authorized under the U.S. Elementary and Secondary Education Act, No Child Left Behind. Title I funds are intended for improving the academic achievement of the disadvantaged. Title II provides funds for preparing, training, and recruiting high quality teachers and principals. Title III addresses language instruction for English language learners and immigrant students, and Title VII is designated for Indian, Native Hawaiian, and Alaska Native education.

Impact Aid, Johnson-O'Malley, and Alaska Native Education Programs are also federal funding programs. Impact Aid is provided to local school districts that include within their boundaries parcels of land that are owned by the Federal Government or that have been removed from the local tax rolls by the Federal Government, including Indian lands. The Johnson-O'Malley program provides supplemental educational aid for AI/AN students through contracts with tribes, tribal organizations, school districts, and state education agencies. Alaska Native Education Programs provide grants to help meet the unique educational needs of Alaska Natives and to support the development of supplemental educational programs to benefit Alaska Natives.

### Race/ethnicity

Teachers and students both completed the same two questions about race/ethnicity. In compliance with guidelines set by the Office of Management and Budget for all federal data collection, the first question asked whether or not a respondent was Hispanic or Latino. The second question asked respondents to

indicate "which of the following best describes you" and listed five race groups: White, Black or African American, Asian, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander. Respondents were instructed to mark all choices that applied.

Based on responses to these two questions, teachers were classified as "AI/AN only," "AI/AN plus at least one other race or ethnicity," "White," and "other." Students' self-identifications were classified as "AI/AN only," "AI/AN plus at least one other race or ethnicity," or "not AI/AN." All students in the NIES study were identified as AI/AN by school records. During data collection, some cases arose in which schools determined that students had been incorrectly classified as AI/AN. In those cases, the students were reclassified at the schools' direction, and they were not included in the NIES study.

### Development of composite variables

Three composite variables were developed for use in this report: literacy materials in the home, school climate, and school/family communication opportunities.

#### Literacy materials in the home

This variable was constructed from responses to four questions on the student questionnaires:

- Does your family get a newspaper at least four times a week? Yes/No
- Does your family get any magazines regularly? Yes/No
- How many books are there in your home? Few (0–10)/Enough to fill one shelf (11–25)/Enough to fill one bookcase (26–100)/Enough to fill several bookcases (more than 100)
- Is there an encyclopedia in your home? It could be a set of books, or it could be on the computer. Yes/No

Based on procedures used in previous NAEP assessments, scoring for the composite variable gave students 1 point for each "yes" response and 1 point for having more than 25 books. Students were then

classified as having 0 to 2 types of literacy materials, 3 types, or 4 types. The composite was set to “missing” if 2 or more of the component variables were missing.

### Average school climate rating

This variable was constructed from the responses to one question with seven subparts on the school questionnaire completed by principals:

Considering all of the students in your school, to what degree is each of the following a problem in your school?

- student absenteeism
- student tardiness
- student health problems
- lack of parent involvement
- student misbehavior in class
- physical conflicts among students
- drug or alcohol use by students.

For each area of concern, respondents indicated whether it was “not a problem,” “a minor problem,” “a moderate problem,” or “a serious problem.” These responses were given numeric values ranging from 0 (not a problem) to 3 (serious problem). To create an average school climate rating for each school, the non-missing responses for that school were averaged and then multiplied by 7, which was equivalent to the number of survey questions contributing to the variable. The resultant variable had values between 0 and 21.

### Average rating for communication opportunities between schools and families

Another question on the school questionnaire was used for this rating. This question had six subparts and read as follows:

In a typical school year, how often does your school provide each of the following opportunities for communication between school and families?

- teacher/family conferences (individual or group)
- information sent home about school such as expectations, procedures, calendars of events, etc.
- written reports (report cards) of child’s performance sent home
- events at school in which families are invited to participate
- opportunities to participate in formulation of school policies and improvement plans
- opportunities to share native or family histories and traditions as part of the instructional program

For each type of communication opportunity, respondents indicated whether, during the specified time frame, it was offered “never,” “1 or 2 times,” “3 or 4 times,” or “5 or more times.” These responses were given numeric values ranging from 0 (never) to 3 (5 or more times). To create an average communications opportunities rating for each school, the non-missing responses for that school were averaged and then multiplied by 6, which was equivalent to the number of survey questions contributing to the variable. The resultant variable had values between 0 and 18.

### Drawing inferences from the results

The reported statistics are estimates of population quantiles based on samples of students and are therefore subject to uncertainty. The magnitude of this uncertainty is reflected in the standard error of each of the estimates. When, for example, the percentages of certain groups are compared, the estimated standard error should be taken into account. Therefore, the comparisons are based on statistical tests that consider both the magnitude of the differences between the percentages and the estimated standard errors of the percentages being compared. Estimates based on smaller groups are likely to have relatively large standard errors. As a consequence, a numerical difference that seems large may not be statistically significant. Furthermore, differences of the same magnitude may or may not be statistically significant, depending on the size of the standard errors. The differences described in this report have been determined to be statistically significant at the .05 level with appropriate adjustments for multiple comparisons.

For the data in this report, all the estimates have corresponding standard errors of the estimates. These standard errors can be found in the Data Appendix.

### Variance estimation and tests of significance

Because of the complex sampling design, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate. Instead, a jackknife replication procedure is used to estimate standard errors. Replication methods involve constructing a number of subsamples, or replicates, from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. The replicate weights are used to compute the standard error of a given statistic.

The tests of significance used in the analyses for this report are based on Student's *t* statistics. The formula used to compute the Student's *t* statistic is as follows:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where *E*<sub>1</sub> and *E*<sub>2</sub> are the estimates of the two groups being compared, and *SE*<sub>1</sub> and *SE*<sub>2</sub> their respective standard error.

As the number of comparisons that are conducted at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance; that is, it will be erroneously identified as significantly different from zero. Even when there is no statistical difference at the .05 level between the percentages being compared, there is a 5 percent chance of getting a significant *t* value from sampling error alone. As the number of comparisons increases, the chance

of making this type of error increases. To hold the significance level for the set of comparisons at a particular level (e.g., .05), appropriate adjustments for multiple comparisons have been made in this report. The false discovery rate (FDR) procedure (Benjamini and Hochberg 1995) was used to control the certainty level.

Unlike the other multiple comparison procedures that control the familywise error rate (i.e., the probability of making even one false rejection in the set of comparisons), the FDR procedure controls the expected proportion of falsely rejected hypotheses.

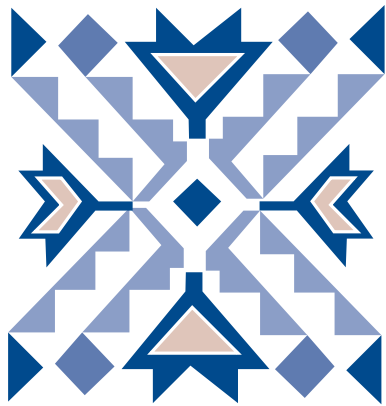
The Benjamini and Hochberg application of the FDR criterion can be described as follows. Let *q* be the number of significance tests made and let  $P(1) \leq P(2) \leq \dots \leq P(q)$  be the ordered significance levels of the *q* tests, from the smallest to the highest p-value. Let *a* be the combined significance level desired. The procedure compares *P*(*q*) with *a*, *P*(*q*-1) with  $a(q-1)/q$ , . . . , *P*(1) with  $a/q$ , stopping the comparisons with the largest *j* such that  $P(j) \leq aj/q$ . Reject all hypotheses corresponding to *P*(1) , . . . , *P*(*j*).

### Comparisons to non-AI/AN students

All estimates for AI/AN students in total, or subdivided by school density, are derived from the NIES Part II sample. Estimates for non-AI/AN students are derived from NAEP. Statistical comparisons between AI/AN students and non-AI/AN students are restricted to those questions that were asked in exactly the same way on the two surveys. For this limited set of variables, there were actually two estimates of total AI/AN distributions—one derived from the NIES Part II survey and one derived from NAEP. For consistency with the rest of the report, as indicated above, NIES Part II estimates for the AI/AN population were always chosen.

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# DATA APPENDIX

The Data Appendix contains estimates and standard errors for each of the tables and figures in the body of the report. In addition, some Data Appendix tables provide estimates and standard errors that support findings mentioned in the text of the report without accompanying tables or figures. Where this occurs, the text includes a reference to the relevant table in the Data Appendix.

**Table A-1.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density: 2005 [Estimates and standard errors for data discussed on page 5]

Grade	School density	
	High	Low
<b>Grade 4</b>	50 (3.0)	50 (3.0)
<b>Grade 8</b>	45 (4.3)	55 (4.3)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-2.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and region: 2005 [Estimates and standard errors for figure 2-2]

Region	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Mountain	29* (2.3)	7 (0.1)	38* (5.0)	20 (2.1)
South Central	27* (1.2)	18 (0.2)	32* (2.8)	22 (2.0)
Pacific	19 (1.5)	18 (0.2)	10* (2.7)	28 (2.4)
North Central	14* (1.7)	22 (0.2)	9* (2.1)	19 (2.6)
Atlantic	11* (2.2)	36 (0.2)	10 (4.3)	11 (1.9)
<b>Grade 8</b>				
Mountain	34* (2.7)	7 (0.1)	49* (5.6)	21 (2.5)
South Central	23* (1.8)	18 (0.2)	26 (3.9)	21 (3.0)
Pacific	20* (1.7)	17 (0.3)	10* (3.4)	29 (2.5)
North Central	13* (1.4)	23 (0.2)	9 (2.9)	17 (2.0)
Atlantic	9* (1.2)	36 (0.3)	6 (3.4)	12 (1.8)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-3.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and community type: 2005 [Estimates and standard errors for figure 2-3]

Community type	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Small town	20* (3.5)	6 (0.2)	27 (6.3)	13 (3.0)
Rural	29* (2.9)	18 (0.3)	48* (6.1)	11 (3.0)
Urban fringe/large town	32* (3.2)	44 (0.3)	23* (5.6)	42 (3.5)
Central city	18* (1.6)	32 (0.3)	3* (1.8)	33 (2.7)
<b>Grade 8</b>				
Small town	20* (3.7)	7 (0.3)	25 (7.2)	17 (3.4)
Rural	33* (4.1)	18 (0.2)	55* (6.7)	14 (3.1)
Urban fringe/large town	30* (3.0)	43 (0.4)	16* (5.3)	41 (3.8)
Central city	17* (1.4)	31 (0.4)	3* (2.4)	29 (2.8)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-4.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and eligibility for free or reduced-price school lunch: 2005 [Estimates and standard errors for figure 2-4]

Eligibility for free or reduced-price lunch	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Eligible	65* (2.7)	41 (0.3)	74* (4.3)	56 (2.4)
Not eligible	27* (1.9)	51 (0.3)	17* (2.3)	37 (2.7)
Data not available	8 (2.4)	8 (0.3)	9 (4.5)	6 (2.0)
<b>Grade 8</b>				
Eligible	64* (2.4)	36 (0.3)	81* (2.4)	50 (3.1)
Not eligible	33* (2.4)	56 (0.4)	17* (2.1)	45 (3.3)
Data not available	3* (1.0)	8 (0.3)	2 (1.2)	5 (1.4)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-5.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and highest level of education reported for either parent: 2005 [Estimates and standard errors for figure 2-5]

Highest level of education of either parent	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
Unknown	16 (1.2)	10 (0.1)	19 (1.5)	14 (1.8)
Did not finish high school	9 (1.2)	7 (0.1)	9 (1.5)	10 (1.8)
High school diploma or GED	21 (1.5)	17 (0.1)	20 (1.3)	21 (2.3)
Some education after high school	25 (1.5)	17 (0.1)	25 (1.2)	25 (2.4)
Graduated from college	29 (1.6)	48 (0.2)	27 (1.5)	31 (2.5)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding. GED option was provided on NIES survey but not on NAEP.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-6.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and the number of different types of literacy materials in their homes: 2005 [Estimates and standard errors for figure 2-6]

Number of different types of literacy materials	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
0-2	61* (1.6)	56 (0.2)	63 (1.9)	59 (2.6)
3	28 (1.6)	30 (0.2)	26 (1.4)	30 (2.8)
4	12 (1.0)	14 (0.1)	12 (1.1)	11 (1.9)
<b>Grade 8</b>				
0-2	47* (1.6)	40 (0.2)	54* (1.6)	41 (2.7)
3	31 (1.6)	34 (0.2)	28 (1.4)	34 (2.5)
4	22 (1.5)	25 (0.2)	18* (2.0)	25 (2.3)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding. Types of literacy materials include newspapers, magazines, encyclopedias, and more than 25 books.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-7.** Percentage of grade 4 and grade 8 students who reported that they have a computer at home that they use, by American Indian/Alaska Native (AI/AN) status and school density: 2005 [Estimates and standard errors for figure 2-7]

Grade	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>	69* (1.4)	86 (0.1)	62* (1.8)	76 (2.1)
<b>Grade 8</b>	72* (1.8)	90 (0.1)	60* (1.7)	81 (2.2)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-8.** Percentage of grade 4 and grade 8 students classified as English language learners, by American Indian/Alaska Native (AI/AN) status and school density: 2005 [Estimates and standard errors for figure 2-8]

Grade	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>	14* (2.1)	8 (0.2)	26*(3.9)	2 (0.7)
<b>Grade 8</b>	13* (1.9)	5 (0.1)	24*(3.5)	3 (1.1)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-9.** Percentage of grade 4 and grade 8 students classified as students with disabilities, by American Indian/Alaska Native (AI/AN) status and school density: 2005 [Estimates and standard errors for figure 2-9]

Grade	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>	17* (1.4)	9 (0.1)	14* (1.7)	19 (2.0)
<b>Grade 8</b>	15* (1.2)	9 (0.1)	14 (1.8)	15 (1.8)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-10.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and self-identification as AI/AN: 2005 [Estimates and standard errors for table 2-1]

Self-identification	Total	School density	
		High	Low
<b>Grade 4</b>			
Identifies as AI/AN only	44 (2.3)	57* (2.7)	31 (2.6)
Identifies as AI/AN in combination	42 (2.0)	31* (2.3)	52 (2.6)
Does not self-identify as AI/AN	14 (1.2)	12* (1.2)	17 (2.0)
<b>Grade 8</b>			
Identifies as AI/AN only	51 (2.4)	64* (3.6)	41 (2.7)
Identifies as AI/AN in combination	35 (2.0)	26* (3.0)	42 (2.3)
Does not self-identify as AI/AN	14 (1.3)	9* (1.9)	18 (1.6)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: All students were classified as AI/AN by school records. The category "Identifies as AI/AN in combination" includes students who identified themselves as Hispanic and AI/AN as well as students who selected AI/AN plus a second race. School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-11.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and self-reported extent of knowledge about their tribe or village: 2005 [Estimates and standard errors for table 2-2]

Knowledge about tribe or village	Total	School density	
		High	Low
Not very much	38 (1.5)	35* (1.7)	42 (2.7)
Some	41 (1.6)	40 (1.7)	42 (2.7)
A lot	21 (1.2)	26* (1.6)	16 (1.7)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-12.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and self-reported extent of knowledge about aspects of their tribe or village: 2005 [Estimates and standard errors for table 2-3]

Knowledge about	Total	School density	
		High	Low
Current events and issues important to tribe or village			
Poor	27 (2.0)	16* (1.9)	36 (2.8)
Fair	32 (1.5)	33 (1.8)	31 (2.2)
Good	34 (1.7)	42* (2.3)	28 (2.7)
Excellent	7 (0.8)	9 (1.3)	6 (1.0)
Traditions of tribe or village			
Poor	27 (1.7)	17* (2.2)	36 (2.5)
Fair	28 (1.6)	28 (2.3)	28 (2.2)
Good	32 (1.9)	40* (3.0)	26 (2.2)
Excellent	13 (1.3)	16* (2.2)	10 (1.4)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-13.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and attendance at ceremonies and gatherings given by members of their tribe or village: 2005 [Estimates and standard errors for table 2-4]

Attendance at ceremonies and gatherings	Total	School density	
		High	Low
<b>Grade 4</b>			
Never	36 (1.7)	31* (1.9)	42 (2.9)
Less than once a year	12 (1.0)	13 (1.0)	11 (1.7)
At least once a year	25 (1.3)	23 (1.6)	26 (2.3)
Several times a year	27 (1.2)	33* (1.5)	21 (2.2)
<b>Grade 8</b>			
Never	36 (2.3)	25* (2.7)	46 (3.0)
Less than once a year	17 (1.3)	16 (1.7)	17 (2.0)
At least once a year	23 (1.2)	24 (1.5)	22 (2.0)
Several times a year	24 (1.7)	35* (3.0)	15 (1.7)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-14.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency of participation in various tribal or village activities: 2005 [Estimates and standard errors for data discussed on page 17]

Participation in various tribal or village activities	Total	School density	
		High	Low
Gatherings of people from many tribes or villages (for example, a powwow or potlatch)			
Never	35 (2.1)	28 (3.6)	40 (2.8)
Less than once a year	17 (1.3)	20 (1.8)	15 (1.8)
At least once a year	26 (1.5)	27 (2.3)	25 (2.2)
Several times a year	22 (1.7)	25 (3.4)	19 (2.0)
Camps or lodges that teach about the traditions of the students' tribe or village			
Never	58 (1.9)	54 (3.0)	62 (2.7)
Less than once a year	19 (1.1)	18 (1.1)	20 (2.0)
At least once a year	15 (1.3)	18 (2.4)	13 (1.8)
Several times a year	7 (0.8)	10* (1.3)	5 (0.9)
Other community activities that teach about the traditions of the students' tribe or village (for example, weaving rugs or whale hunting)			
Never	57 (2.0)	52 (3.0)	61 (2.7)
Less than once a year	20 (1.5)	20 (1.9)	20 (2.2)
At least once a year	14 (1.1)	15 (1.6)	13 (1.5)
Several times a year	9 (1.2)	13* (2.0)	6 (1.3)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-15.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which students' families communicate in their traditional languages: 2005 [Estimates and standard errors for table 2-5]

Traditional language use within family	Total	School density	
		High	Low
<b>Grade 4</b>			
Never	41 (2.1)	29* (2.4)	54 (2.9)
Once in a while	31 (1.5)	29 (1.8)	33 (2.5)
About half of the time	12 (0.9)	16* (1.2)	8 (1.3)
All or most of the time	16 (1.3)	26* (1.9)	6 (1.3)
<b>Grade 8</b>			
Never	51 (2.6)	30* (3.4)	68 (2.9)
Once in a while	26 (2.2)	28 (3.2)	25 (2.6)
About half of the time	10 (1.1)	18* (1.9)	4 (0.9)
All or most of the time	12 (2.0)	24* (4.0)	3 (0.9)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-16.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and school-based opportunities to learn about their AI/AN culture in the past year: 2005 [Estimates and standard errors for table 2-6]

Opportunities to learn about AI/AN culture	Total	School density	
		High	Low
Class went on field trips or attended special events to learn about American Indians or Alaska Natives	45 (2.4)	47 (3.3)	44 (3.4)
Checked out books or videos about American Indians or Alaska Natives from the school library	45 (2.0)	43 (2.1)	48 (3.3)
Elders or other people from tribe or village came to school to teach about culture and traditions	29 (2.3)	39* (3.0)	19 (2.7)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table A-17.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school-based opportunities to learn about their AI/AN culture in the past year: 2005 [Estimates and standard errors for table 2-7]

Opportunities to learn about AI/AN culture	Total	School density	
		High	Low
Books, videos, or computer software with information about American Indian or Alaska Native history and traditions	50 (2.3)	60* (2.6)	42 (2.7)
Performances of traditional American Indian or Alaska Native music and dance	26 (3.0)	40* (5.7)	14 (2.9)
Class visits by elders or other people from tribe or village to share history and oral traditions	22 (2.7)	35* (5.2)	11 (2.0)
Craft demonstrations by members of tribe or village	21 (2.4)	35* (4.5)	10 (1.5)
Field trips to museums, traditional villages, or other places that tell about American Indian or Alaska Native history or traditions	17 (1.8)	27* (3.1)	9 (1.8)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-18.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and how much the students like school: 2005 [Estimates and standard errors for figure 2-10]

How much students like school	Total	School density	
		High	Low
Not at all	11 (1.0)	13 (1.1)	10 (1.6)
Not very much	9 (0.8)	10 (0.9)	9 (1.4)
A little	30 (1.5)	26* (1.5)	34 (2.2)
Very much	49 (1.9)	51 (2.2)	48 (3.2)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-19.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and how much the students believe that what they are learning in school will prepare them for the life they want to lead: 2005 [Estimates and standard errors for figure 2-11]

Extent school will prepare students for the life they want to lead	Total	School density	
		High	Low
Not at all	3 (0.5)	3 (0.7)	3 (0.7)
Only a little	11 (1.0)	10 (0.9)	11 (1.6)
A fair amount	41 (1.6)	39 (1.8)	44 (2.5)
Very much	45 (1.7)	48 (2.5)	42 (2.3)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-20.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and their goals in school: 2005 [Estimates and standard errors for figures 2-12 and 2-13]

Goal in school	Total	School density	
		High	Low
<b>Grade 4</b>			
Probably go to college	65 (1.6)	65 (1.6)	65 (2.8)
Probably graduate from high school, but not go to college	6 (0.7)	7 (0.9)	5 (1.1)
Probably won't graduate from high school	1 (0.2)	1 (0.2)	1 (0.3)
Don't know	28 (1.4)	27 (1.5)	29 (2.5)
<b>Grade 8</b>			
Probably go to college	77 (1.2)	74 (1.5)	79 (1.7)
Probably get job training after high school	8 (0.7)	10 (0.8)	7 (1.0)
Probably graduate from high school, but not get any more education after that	4 (0.7)	4 (1.0)	4 (0.9)
Probably won't graduate from high school	1 (0.2)	1 (0.3)	# (†)
Don't know	10 (0.8)	12 (1.0)	9 (1.3)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-21.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and how often they talk about things they have studied in school with someone in their families: 2005 [Estimates and standard errors for figure 2-14]

Talk about school studies with family	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Never or hardly ever	17 (1.1)	18 (0.1)	20 (1.4)	14 (1.7)
Once every few weeks	11 (1.0)	13 (0.1)	11 (0.9)	11 (1.8)
About once a week	11 (1.1)	11 (0.1)	12 (0.9)	10 (1.7)
2 or 3 times a week	22 (1.5)	20 (0.1)	21 (1.2)	22 (2.5)
Every day	39 (1.7)	38 (0.2)	36 (1.5)	43 (2.9)
<b>Grade 8</b>				
Never or hardly ever	17 (1.1)	22 (0.2)	19 (1.8)	15 (1.5)
Once every few weeks	12 (0.8)	18 (0.1)	14 (1.1)	11 (1.5)
About once a week	16 (1.0)	18 (0.1)	18 (1.0)	15 (1.7)
2 or 3 times a week	30 (1.2)	22 (0.2)	29 (1.4)	31 (2.0)
Every day	24 (1.2)	20 (0.1)	20 (1.4)	27 (2.1)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-22.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and how often someone in their families helps them with schoolwork: 2005 [Estimates and standard errors for figure 2-15]

Family help with schoolwork	Total	School density	
		High	Low
<b>Grade 4</b>			
Never or hardly ever	16 (1.2)	16 (1.4)	15 (1.9)
Once every few weeks	11 (1.0)	12 (1.1)	11 (1.7)
About once a week	11 (0.9)	10 (0.9)	11 (1.6)
2 or 3 times a week	25 (1.4)	23 (1.3)	28 (2.5)
Every day	37 (1.6)	39 (2.0)	35 (3.0)
<b>Grade 8</b>			
Never or hardly ever	26 (1.4)	26 (1.7)	25 (2.1)
Once every few weeks	17 (1.3)	18 (1.7)	16 (1.7)
About once a week	18 (1.2)	17 (1.6)	19 (1.9)
2 or 3 times a week	27 (1.5)	27 (1.8)	27 (2.4)
Every day	13 (1.3)	13 (1.4)	13 (1.9)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-23.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and the number of days they were absent from school in the last month: 2005 [Estimates and standard errors for figure 2-16]

Days absent in the last month	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
None	39* (1.3)	52 (0.2)	38 (1.4)	40 (2.6)
1 or 2 days	33* (1.5)	29 (0.2)	32 (1.1)	34 (2.8)
3 or 4 days	16* (1.1)	12 (0.1)	18 (0.9)	14 (2.0)
5 to 10 days	7* (0.7)	5 (0.1)	7 (0.7)	7 (1.2)
More than 10 days	5* (0.7)	2 (0.1)	5 (0.7)	5 (1.0)
<b>Grade 8</b>				
None	35* (1.8)	44 (0.2)	32 (2.4)	37 (2.4)
1 or 2 days	35 (1.7)	35 (0.2)	34 (2.1)	37 (2.3)
3 or 4 days	16* (1.1)	13 (0.1)	18 (1.2)	15 (1.9)
5 to 10 days	10* (0.7)	5 (0.1)	12* (1.0)	8 (0.9)
More than 10 days	4* (0.6)	2 (0.1)	4 (0.7)	4 (1.0)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-24.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the number of times during the school year they talked to a teacher or a school counselor about what they hope to get out of school or what classes they should take: 2005 [Estimates and standard errors for figure 2-17]

Talked to a teacher or counselor	Total	School density	
		High	Low
Never	45 (1.7)	50 (2.3)	41 (2.6)
1 time	27 (1.6)	25 (2.0)	29 (2.2)
2 or 3 times	21 (1.3)	18 (1.5)	23 (2.1)
4 or more times	7 (1.0)	8 (1.8)	6 (1.2)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-25.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students who reported playing on a team or belonging to a club at school during the school year, by school density: 2005 [Estimates and standard errors for figure 2-18]

Playing on a team or belonging to a club	Total	School density	
		High	Low
<b>Grade 8</b>	61 (1.9)	64 (3.0)	58 (2.7)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-26.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by attendance at schools with different proportions of AI/AN students in the student body: 2005 [Estimates and standard errors for table 3-1]

School percentage of AI/AN students	Grade 4	Grade 8
0–5	31 (2.2)	33 (2.6)
6–10	9 (1.6)	7 (1.7)
11–25	12 (1.9)	15 (3.4)
26–50	13 (2.8)	16 (3.7)
51–75	9 (1.7)	4 (2.0)
76–100	27 (3.9)	25 (4.0)

NOTE: Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-27.** Average enrollment of grade 4 and grade 8 students in schools serving American Indian/Alaska Native (AI/AN) students, by AI/AN status and school density: 2005 [Estimates and standard errors for table 3-2]

Grade	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>	435 (20.9)	426 (6.4)	399 (38.5)	472 (15.4)
<b>Grade 8</b>	570* (30.6)	469 (8.6)	396*(54.2)	712 (30.3)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-28.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and attendance at schools with different proportions of students in the school who are eligible for free or reduced-price school lunch: 2005 [Estimates and standard errors for table 3-3 and figure 3-1]

School percentage of students eligible for free or reduced-price lunch	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
0	1 (0.7)	1 (0.1)	1 (1.5)	# (†)
1–5	1* (0.6)	8 (0.5)	# (†)	1 (1.0)
6–10	2* (0.8)	6 (0.4)	# (†)	3 (1.4)
11–25	6* (1.5)	17 (0.5)	# (†)	10 (2.6)
26–50	31 (3.9)	26 (0.7)	15* (5.1)	44 (4.4)
51–75	30 (4.4)	21 (0.6)	35 (8.4)	26 (4.0)
76–100	30 (4.6)	22 (0.6)	49* (8.9)	15 (2.9)
<b>Grade 8</b>				
0	# (†)	1 (0.1)	# (†)	# (†)
1–5	1* (0.6)	6 (0.4)	# (†)	2 (1.0)
6–10	1* (0.7)	7 (0.4)	# (†)	2 (1.1)
11–25	12* (2.3)	19 (0.6)	# (†)	20 (3.5)
26–50	31 (3.2)	33 (0.6)	12* (4.4)	43 (4.1)
51–75	32 (5.2)	20 (0.6)	50 (11.5)	21 (3.7)
76–100	22 (4.4)	14 (0.4)	38 (11.1)	13 (2.7)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-29.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school type: 2005 [Estimates and standard errors for table 3-4]

School type	Total	School density	
		High	Low
<b>Grade 4</b>			
Regular public school	87 (1.9)	81* (2.9)	94 (2.0)
Other school	13 (1.9)	19* (2.9)	6 (2.0)
<b>Grade 8</b>			
Regular public school	86 (2.8)	75* (4.9)	96 (1.5)
Other school	14 (2.8)	25* (4.9)	4 (1.5)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Regular public school includes schools that identified themselves as regular public schools only and as both regular public and something else. The other school category includes charter public schools, alternative schools, Bureau of Indian Affairs schools, and tribal contract/grant schools. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-30.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various sources of school funding: 2005 [Estimates and standard errors for table 3-5]

Sources of school funding	Total	School density	
		High	Low
<b>Grade 4</b>			
Title I funds	85 (2.2)	96* (2.3)	74 (3.6)
Title II funds	63 (3.7)	70* (6.8)	55 (3.6)
Title III or other bilingual or English as a Second Language funds	52 (3.8)	56 (6.3)	47 (3.6)
Impact Aid Program	40 (3.7)	61* (6.4)	19 (3.2)
Title VII Indian Education Formula Grant	31 (3.3)	50* (5.8)	12 (2.7)
Johnson-O'Malley Grant	32 (2.5)	53* (4.9)	11 (2.0)
Title VII Discretionary Grant under Indian Education	9 (2.2)	15* (4.4)	3 (0.2)
Alaska Native Education Programs	1 (0.8)	2 (1.6)	# (†)
Other funding sources related to AI/AN education (e.g., grants, donations, etc.)	14 (3.2)	21* (5.8)	6 (2.1)
<b>Grade 8</b>			
Title I funds	67 (4.1)	86* (6.5)	52 (4.4)
Title II funds	54 (4.6)	72* (7.9)	39 (4.5)
Title III or other bilingual or English as a Second Language funds	48 (4.2)	49 (7.2)	48 (4.7)
Impact Aid Program	33 (3.9)	61* (6.9)	9 (2.6)
Title VII Indian Education Formula Grant	29 (3.3)	46* (6.5)	15 (3.2)
Johnson-O'Malley Grant	29 (4.2)	54* (7.9)	8 (2.5)
Title VII Discretionary Grant under Indian Education	9 (2.7)	17* (5.2)	2 (1.0)
Alaska Native Education Programs	2 (1.0)	3 (1.8)	2 (1.1)
Other funding sources related to AI/AN education (e.g., grants, donations, etc.)	20 (4.3)	38* (9.1)	5 (2.3)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-31.** Principals' average school-climate ratings for grades 4 and 8, by school density: 2005 [Estimates and standard errors for figure 3-2]

Grade	Total	School density	
		High	Low
<b>Grade 4</b>	8 (0.3)	9* (0.6)	6 (0.3)
<b>Grade 8</b>	9 (0.4)	10* (0.7)	8 (0.3)

\* Significantly different ( $p < .05$ ) from low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Higher school climate ratings represent greater problems, maximum possible rating is 21.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-32.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and frequency of involvement of tribal or Alaska Native community representatives in various school activities over the last two school years: 2005 [Estimates and standard errors for figure 3-3, grade 4]

Frequency of tribal involvement in various school activities	Total	School density	
		High	Low
<b>Visit the school to share native traditions and culture</b>			
Never	25 (2.9)	6* (2.9)	44 (4.8)
1–2 times	38 (4.0)	40 (7.3)	35 (4.7)
3 or more times	32 (4.0)	53* (7.3)	11 (3.4)
Don't know	5 (1.2)	# †	10 (2.5)
<b>Attended cultural, sporting, or social events at the school</b>			
Never	20 (2.5)	5* (2.6)	35 (4.1)
1–2 times	10 (2.3)	9 (3.7)	12 (2.8)
3 or more times	52 (3.6)	81* (5.0)	24 (4.5)
Don't know	17 (2.6)	5* (3.3)	29 (3.8)
<b>Help in the classroom or school</b>			
Never	28 (3.3)	10* (3.7)	46 (4.7)
1–2 times	18 (2.4)	19 (4.2)	17 (3.7)
3 or more times	42 (3.5)	67* (5.5)	17 (3.7)
Don't know	11 (1.7)	3* (2.4)	20 (2.8)
<b>Do fundraising or other support activities for the school</b>			
Never	37 (3.5)	19* (5.4)	56 (3.8)
1–2 times	16 (2.8)	19 (4.9)	12 (2.8)
3 or more times	28 (4.3)	48* (7.1)	8 (3.2)
Don't know	19 (3.4)	14 (5.8)	24 (3.5)
<b>Attend conferences with school personnel with or on behalf of parents</b>			
Never	42 (4.4)	26* (6.9)	57 (4.1)
1–2 times	22 (4.3)	34* (7.8)	11 (2.7)
3 or more times	18 (3.3)	27* (6.0)	9 (2.9)
Don't know	18 (3.1)	14 (4.7)	23 (3.6)
<b>Attend school board meetings (not as a board member)</b>			
Never	25 (3.1)	17* (4.1)	32 (4.0)
1–2 times	13 (2.9)	19 (5.1)	8 (2.5)
3 or more times	25 (4.4)	50* (8.3)	1 (0.9)
Don't know	37 (3.2)	15* (5.3)	59 (4.2)
<b>Serve as a member of the school board</b>			
Never	48 (3.6)	16* (5.0)	81 (3.0)
1–2 times	13 (2.7)	25* (5.5)	1 (1.4)
3 or more times	25 (4.6)	49 (7.7)	# †
Don't know	14 (2.4)	10 (3.9)	18 (2.8)
<b>Meet with school or district officials on education issues</b>			
Never	26 (2.9)	7* (3.0)	44 (4.2)
1–2 times	27 (3.7)	39* (7.3)	15 (3.4)
3 or more times	22 (3.6)	34* (6.6)	11 (3.4)
Don't know	25 (3.1)	19 (5.3)	30 (3.8)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table A-33.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency of involvement of tribal or Alaska Native community representatives in various school activities over the last two school years: 2005 [Estimates and standard errors for figure 3-3, grade 8]

Frequency of tribal involvement in various school activities	Total	School density	
		High	Low
<b>Visit the school to share native traditions and culture</b>			
Never	37 (4.9)	23* (8.4)	49 (4.7)
1–2 times	29 (3.5)	32 (5.9)	26 (4.3)
3 or more times	27 (3.9)	43* (7.9)	13 (2.7)
Don't know	7 (1.7)	2* (1.4)	12 (3.0)
<b>Attended cultural, sporting, or social events at the school</b>			
Never	18 (2.2)	5* (3.1)	28 (3.7)
1–2 times	12 (3.8)	13 (7.1)	11 (3.0)
3 or more times	50 (4.4)	73* (8.2)	32 (4.1)
Don't know	20 (3.1)	8* (4.0)	29 (3.5)
<b>Help in the classroom or school</b>			
Never	37 (4.2)	21* (7.7)	50 (4.4)
1–2 times	16 (3.3)	21 (6.9)	11 (2.7)
3 or more times	35 (5.0)	52* (10.2)	21 (3.7)
Don't know	12 (2.2)	6* (2.6)	18 (3.2)
<b>Do fundraising or other support activities for the school</b>			
Never	40 (4.1)	21* (6.1)	56 (4.6)
1–2 times	14 (3.4)	18 (6.7)	10 (2.9)
3 or more times	25 (3.8)	44* (7.5)	9 (2.2)
Don't know	21 (3.8)	18 (6.4)	24 (3.7)
<b>Attend conferences with school personnel with or on behalf of parents</b>			
Never	49 (4.3)	36* (7.0)	61 (5.1)
1–2 times	13 (3.1)	13 (5.3)	13 (3.1)
3 or more times	16 (2.9)	28* (5.5)	7 (2.7)
Don't know	21 (3.6)	23 (6.4)	19 (3.4)
<b>Attend school board meetings (not as a board member)</b>			
Never	23 (3.4)	14 (6.8)	30 (3.4)
1–2 times	13 (2.5)	17 (5.8)	10 (3.1)
3 or more times	27 (4.4)	51* (8.1)	6 (2.6)
Don't know	38 (3.5)	18* (6.2)	54 (3.9)
<b>Serve as a member of the school board</b>			
Never	55 (4.5)	31* (7.7)	74 (4.3)
1–2 times	10 (2.4)	17* (4.6)	5 (2.0)
3 or more times	22 (4.6)	46* (9.0)	3 (1.6)
Don't know	13 (2.3)	6* (3.0)	19 (3.2)
<b>Meet with school or district officials on education issues</b>			
Never	28 (3.8)	9* (6.0)	44 (4.6)
1–2 times	22 (3.3)	32* (6.4)	13 (2.8)
3 or more times	33 (4.6)	48* (8.8)	19 (4.3)
Don't know	18 (2.7)	11* (4.0)	24 (3.8)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-34.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the percentage of AI/AN teachers in school: 2005 [Estimates and standard errors for table 3-6]

Percentage of AI/AN teachers	School density		
	Total	High	Low
<b>Grade 4</b>			
0	30 (2.5)	# †	59 (3.8)
1–5	22 (3.0)	10* (4.1)	35 (3.9)
6–10	5 (1.6)	3 (1.9)	6 (2.5)
11–25	12 (3.5)	23* (6.9)	1 (0.9)
26–50	13 (3.1)	25 (6.4)	# †
51–75	6 (2.1)	13 (4.3)	# †
76–100	12 (3.9)	25 (6.8)	# †
<b>Grade 8</b>			
0	33 (3.0)	18* (5.0)	46 (4.5)
1–5	30 (3.8)	18* (5.6)	41 (4.5)
6–10	12 (3.5)	18 (6.5)	7 (3.2)
11–25	11 (3.1)	21* (5.9)	3 (1.9)
26–50	6 (2.3)	10 (4.7)	2 (1.6)
51–75	5 (2.2)	11 (4.9)	# †
76–100	2 (2.2)	5 (4.7)	# †

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-35.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the percentage of AI/AN school staff (other than teachers): 2005 [Estimates and standard errors for table 3-7]

Percentage of AI/AN school staff (other than teachers)	Total	School density	
		High	Low
<b>Grade 4</b>			
0	25 (2.0)	2* (1.4)	49 (3.8)
1–5	29 (3.6)	14* (4.7)	45 (4.1)
6–10	5 (1.9)	4 (2.8)	6 (2.7)
11–25	4 (2.1)	8 (3.9)	# (†)
26–50	10 (2.4)	20 (4.9)	# (†)
51–75	4 (1.6)	7 (3.3)	# (†)
76–100	23 (4.0)	45 (6.5)	# (†)
<b>Grade 8</b>			
0	30 (3.3)	10* (4.6)	48 (4.3)
1–5	32 (4.1)	21* (7.2)	42 (4.1)
6–10	5 (1.5)	7 (3.5)	3 (1.6)
11–25	6 (3.2)	8 (6.0)	5 (2.8)
26–50	10 (3.2)	20* (6.9)	1 (1.1)
51–75	8 (3.3)	17* (6.4)	1 (1.1)
76–100	8 (2.4)	17 (5.1)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-36.** Principals' average ratings for communication opportunities between schools and families for grades 4 and 8, by school density: 2005 [Estimates and standard errors for figure 3-4]

Grade	Total	School density	
		High	Low
<b>Grade 4</b>	13 (0.1)	13* (0.2)	12 (0.1)
<b>Grade 8</b>	13 (0.2)	13 (0.5)	12 (0.2)

\* Significantly different ( $p < .05$ ) from low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. High ratings represent greater opportunities for communication; maximum possible rating is 18.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-37.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency of communication opportunities between schools and families in a typical year: 2005 [Estimates and standard errors for data discussed on page 35]

Frequency of various opportunities for school/family communication	Total	School density	
		High	Low
<b>Grade 4</b>			
Written reports of child's performance			
Never	# (†)	# (†)	# (†)
1 or 2 times	1 (0.6)	1 (1.1)	1 (0.7)
3 or 4 times	59 (3.7)	60 (6.4)	58 (3.8)
5 or more times	40 (3.8)	39 (6.6)	41 (3.7)
Information sent home			
Never	# (†)	# (†)	# (†)
1 or 2 times	2 (0.8)	# (†)	4 (1.6)
3 or 4 times	7 (2.6)	9 (4.8)	5 (2.1)
5 or more times	91 (2.7)	91 (4.8)	91 (2.3)
Families invited to participate in events at school			
Never	# (†)	# (†)	# (†)
1 or 2 times	3 (1.6)	4 (3.1)	1 (0.7)
3 or 4 times	13 (2.8)	12 (4.3)	15 (3.5)
5 or more times	84 (2.5)	84 (3.6)	83 (3.5)
Teacher/family conferences			
Never	# (†)	# (†)	# (†)
1 or 2 times	41 (3.9)	24* (5.8)	59 (4.2)
3 or 4 times	45 (4.5)	58* (7.2)	31 (4.2)
5 or more times	14 (2.7)	18 (5.2)	11 (2.4)
Opportunity to participate in formulation of school policies			
Never	3 (1.2)	3 (2.1)	2 (1.2)
1 or 2 times	41 (3.7)	43 (6.6)	38 (3.9)
3 or 4 times	32 (4.6)	37 (8.0)	27 (3.5)
5 or more times	24 (3.6)	16 (5.6)	32 (3.5)
Opportunity to share native or family histories or traditions			
Never	14 (2.2)	4* (2.6)	24 (3.5)
1 or 2 times	59 (4.1)	59 (6.9)	60 (4.2)
3 or 4 times	17 (3.2)	25* (5.5)	10 (3.0)
5 or more times	9 (2.3)	13 (4.0)	6 (2.0)

(See notes at end of table.)

**Table A-37.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency of communication opportunities between schools and families in a typical year: 2005 [Estimates and standard errors for data discussed on page 35]—Continued

Frequency of various opportunities for school/family communication	Total	School density	
		High	Low
<b>Grade 8</b>			
Written reports of child's performance			
Never	# (†)	# (†)	# (†)
1 or 2 times	1 (0.6)	1 (1.2)	# (†)
3 or 4 times	31 (4.3)	38 (8.3)	25 (4.1)
5 or more times	68 (4.4)	60 (8.3)	75 (4.1)
Information sent home			
Never	# (†)	# (†)	# (†)
1 or 2 times	7 (3.0)	8 (5.9)	6 (2.1)
3 or 4 times	19 (3.9)	20 (7.1)	18 (3.7)
5 or more times	74 (4.7)	71 (9.1)	76 (4.0)
Families invited to participate in events at school			
Never	# (†)	# (†)	# (†)
1 or 2 times	9 (3.0)	10 (5.5)	8 (2.2)
3 or 4 times	23 (3.9)	23 (7.4)	23 (3.5)
5 or more times	68 (4.4)	67 (7.5)	69 (3.9)
Teacher/family conferences			
Never	# (†)	# (†)	# (†)
1 or 2 times	32 (3.9)	22 (7.8)	40 (3.7)
3 or 4 times	42 (4.1)	55 (8.6)	30 (4.1)
5 or more times	27 (3.8)	23 (6.9)	30 (4.3)
Opportunity to participate in formulation of school policies			
Never	6 (2.8)	8 (6.0)	4 (1.8)
1 or 2 times	33 (4.7)	25 (8.9)	40 (4.3)
3 or 4 times	34 (3.9)	45 (7.8)	24 (4.1)
5 or more times	27 (3.6)	22 (7.1)	32 (3.8)
Opportunity to share native or family histories or traditions			
Never	35 (4.1)	24 (6.9)	45 (4.2)
1 or 2 times	43 (4.3)	42 (7.1)	44 (4.4)
3 or 4 times	14 (3.1)	21 (6.0)	8 (2.4)
5 or more times	8 (2.7)	13 (5.3)	4 (1.9)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-38.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and availability of school- or district-sponsored family services: 2005 [Estimates and standard errors for figure 3-5]

School or district sponsored family services	Total	School density	
		High	Low
<b>Grade 4</b>			
Adult education programs	59 (4.6)	57 (7.6)	60 (4.3)
Social or counseling services for families	59 (3.8)	62 (6.7)	57 (4.4)
Health services for families	54 (4.2)	55 (7.2)	54 (4.7)
<b>Grade 8</b>			
Adult education programs	50 (4.3)	41 (8.7)	57 (3.9)
Social or counseling services for families	58 (4.5)	55 (8.5)	61 (4.3)
Health services for families	48 (4.6)	44 (8.7)	52 (4.1)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-39.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school-sponsored enrichment and extracurricular activities focusing on AI/AN language and culture: 2005 [Estimates and standard errors for table 3-8]

Enrichment and extracurricular activities	Total	School density	
		High	Low
<b>Grade 4</b>			
Instruction in students' AI/AN language(s)	37 (4.0)	58* (6.1)	16 (3.1)
Extracurricular activities focusing on native culture	51 (4.2)	75* (6.1)	27 (4.4)
<b>Grade 8</b>			
Instruction in students' AI/AN language(s)	38 (4.5)	62* (8.0)	18 (2.9)
Extracurricular activities focusing on native culture	38 (4.0)	59* (7.7)	21 (3.2)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-40.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school-sponsored enrichment and extracurricular activities not specifically focusing on AI/AN language and culture: 2005 [Estimates and standard errors for table 3-9]

Enrichment and extracurricular activities	Total	School density	
		High	Low
<b>Grade 4</b>			
Other extracurricular activities (e.g., sports, music, etc.)	92 (1.8)	97* (2.1)	86 (2.8)
Academic tutoring	88 (2.2)	93* (3.0)	82 (3.3)
Enrichment programs focusing on reading and language arts	77 (3.7)	78 (6.3)	75 (4.0)
Enrichment programs focusing on mathematics	71 (4.2)	73 (6.7)	70 (4.3)
Enrichment programs focusing on problem-solving and cognitive skill development	74 (4.1)	78 (6.2)	70 (4.5)
Enrichment programs focusing on science	58 (4.2)	60 (6.7)	55 (4.1)
<b>Grade 8</b>			
Other extracurricular activities (e.g., sports, music, etc.)	96 (1.5)	97 (2.8)	95 (1.5)
Academic tutoring	93 (1.7)	93 (3.6)	93 (1.5)
Enrichment programs focusing on reading and language arts	73 (2.7)	71 (5.5)	75 (3.2)
Enrichment programs focusing on mathematics	73 (3.0)	76 (5.6)	71 (3.6)
Enrichment programs focusing on problem-solving and cognitive skill development	68 (4.1)	64 (7.1)	72 (4.1)
Enrichment programs focusing on science	61 (4.3)	64 (7.6)	58 (4.0)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-41.** Percentage of grade 4 students, by American Indian/Alaska Native (AI/AN) status, school density, and types of teaching certificates held by their teachers: 2005 [Estimates and standard errors for figure 4-1, grade 4]

Type of teaching certificate	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
Regular or standard state certificate or advanced professional certificate	89 (2.1)	88 (0.3)	89 (4.0)	90 (2.1)
Probationary certificate (the initial certificate issued after satisfying all requirements except the completion of a probationary period)	6 (2.0)	5 (0.2)	7 (3.7)	5 (1.4)
Provisional or other type of certificate given to persons who are still participating in what the state calls an "alternative certification program"	2* (0.5)	3 (0.1)	2 (0.9)	1 (0.5)
Temporary certificate (requires some additional college coursework and/or student teaching before regular certification can be obtained)	1 (0.5)	1 (0.1)	# (†)	2 (0.9)
Emergency certificate or waiver (issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching)	1 (0.5)	# (†)	1 (1.0)	# (†)
No certificate	1 (0.6)	2 (0.2)	# (†)	2 (1.2)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.

**Table A-42.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and types of teaching certificates held by their mathematics teachers: 2005 [Estimates and standard errors for figure 4-1, grade 8 mathematics]

Type of teaching certificate	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
Regular or standard state certificate or advanced professional certificate	78 (3.3)	84 (0.4)	68 (6.0)	86 (2.7)
Probationary certificate (the initial certificate issued after satisfying all requirements except the completion of a probationary period)	8 (1.8)	5 (0.3)	8 (3.1)	8 (2.0)
Provisional or other type of certificate given to persons who are still participating in what the state calls an "alternative certification program"	5 (1.6)	5 (0.2)	6 (2.9)	4 (1.5)
Temporary certificate (requires some additional college coursework and/or student teaching before regular certification can be obtained)	1 (0.6)	2 (0.2)	1 (1.0)	1 (0.6)
Emergency certificate or waiver (issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching)	4 (2.8)	1 (0.1)	8 (6.1)	# (†)
No certificate	5 (2.8)	3 (0.2)	10 (6.0)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

**Table A-43.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and types of teaching certificates held by their reading teachers: 2005 [Estimates and standard errors for figure 4-1, grade 8 reading]

Type of teaching certificate	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
Regular or standard state certificate or advanced professional certificate	83 (3.1)	85 (0.4)	74 (6.6)	91 (1.7)
Probationary certificate (the initial certificate issued after satisfying all requirements except the completion of a probationary period)	5 (1.1)	5 (0.2)	5 (1.9)	5 (1.4)
Provisional or other type of certificate given to persons who are still participating in what the state calls an "alternative certification program"	4 (1.2)	4 (0.2)	5 (2.3)	3 (1.1)
Temporary certificate (requires some additional college coursework and/or student teaching before regular certification can be obtained)	1 (0.5)	2 (0.2)	1 (1.2)	# (†)
Emergency certificate or waiver (issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching)	5 (3.3)	1 (0.1)	9 (7.1)	# (†)
No certificate	3 (2.7)	3 (0.2)	5 (5.8)	1 (0.8)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Reading Assessment.



**Table A-44.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and their teachers' undergraduate major and/or minor (selected subjects): 2005 [Estimates and standard errors for figure 4-2]

Undergraduate major and/or minor	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Elementary or early childhood education				
Major	75* (2.6)	62 (0.4)	84*(3.7)	66(3.2)
Minor	7* (1.4)	12 (0.3)	5 (1.8)	9(1.7)
Mathematics or mathematics related				
Major	4* (1.0)	2 (0.1)	2 (0.9)	5(1.8)
Minor	14* (1.9)	8 (0.2)	15 (3.1)	14(2.4)
Reading, English, or language arts related				
Major	10 (1.4)	11 (0.4)	7 (1.9)	12(2.4)
Minor	40* (2.9)	27 (0.4)	43 (4.9)	36(3.2)
<b>Grade 8 mathematics</b>				
Elementary or secondary education				
Major	55 (3.6)	48 (0.5)	54 (6.1)	56(4.0)
Minor	14 (2.1)	19 (0.4)	12 (3.8)	16(2.8)
Mathematics or mathematics related				
Major	36* (3.9)	45 (0.5)	34 (7.4)	37(3.5)
Minor	53* (3.3)	63 (0.7)	53 (6.0)	53(3.4)
<b>Grade 8 reading</b>				
Elementary or secondary education				
Major	59 (3.6)	51 (0.6)	57 (6.5)	62(3.7)
Minor	14 (1.9)	18 (0.5)	12 (3.8)	16(2.5)
Reading, English, or language arts related				
Major	52 (4.6)	55 (0.6)	49 (8.0)	55(3.7)
Minor	49 (3.0)	46 (0.6)	48 (5.9)	50(2.9)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Teachers were surveyed only regarding the majors and minors shown and also were permitted to identify more than one major or minor at each level of schooling. Percentages therefore do not sum to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

**Table A-45.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and their teachers' graduate major and/or minor (selected subjects): 2005 [Estimates and standard errors for data referenced on page 41]

Graduate major and/or minor	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
Elementary or early childhood education				
Major	47 (3.4)	41 (0.5)	42 (5.4)	53 (4.3)
Minor	18*(2.8)	9 (0.3)	26*(5.5)	11 (2.3)
Mathematics or mathematics related				
Major	3 (0.9)	1 (0.1)	2 (1.0)	4 (1.7)
Minor	14*(2.6)	6 (0.2)	13 (4.0)	14 (3.5)
Reading, English, or language arts related				
Major	21*(3.1)	11 (0.3)	22 (4.8)	20 (4.2)
Minor	38*(3.4)	17 (0.3)	46*(5.8)	31 (4.0)
<b>Grade 8 mathematics</b>				
Elementary or secondary education				
Major	56*(3.9)	40 (0.6)	55 (6.8)	56 (4.2)
Minor	12 (2.3)	11 (0.4)	9 (4.3)	15 (3.0)
Mathematics or mathematics related				
Major	27 (4.1)	23 (0.5)	25 (7.0)	28 (4.6)
Minor	40 (4.5)	30 (0.6)	44 (7.9)	36 (4.4)
<b>Grade 8 reading</b>				
Elementary or secondary education				
Major	53*(4.2)	37 (0.5)	54 (6.9)	53 (4.9)
Minor	17 (3.2)	11 (0.4)	21 (5.4)	14 (3.0)
Reading, English, or language arts related				
Major	37 (3.8)	35 (0.6)	36 (6.9)	38 (4.4)
Minor	42*(3.4)	30 (0.5)	43 (6.4)	41 (4.1)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Teachers were surveyed only regarding the majors and minors shown and also were permitted to identify more than one major or minor at each level of schooling. Percentages therefore do not sum to 100.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

**Table A-46.** Percentage of grade 4 and grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and their teachers' total years of teaching experience: 2005 [Estimates and standard errors for figure 4-3]

Total years teaching experience	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Grade 4</b>				
0–4	19 (2.0)	20 (0.4)	16 (3.1)	21 (2.9)
5–9	22 (2.3)	25 (0.3)	25 (3.7)	19 (3.0)
10–19	26 (2.8)	27 (0.4)	20 (4.3)	31 (3.3)
20 or more	33 (3.6)	27 (0.4)	39 (6.0)	28 (3.5)
<b>Grade 8 mathematics</b>				
0–4	28 (4.4)	23 (0.5)	36 (7.9)	20 (3.7)
5–9	26 (3.9)	23 (0.5)	25 (7.0)	27 (3.6)
10–19	26 (3.4)	27 (0.6)	23 (5.7)	28 (3.4)
20 or more	21* (2.1)	27 (0.5)	17 (2.9)	24 (3.3)
<b>Grade 8 reading</b>				
0–4	26 (4.1)	22 (0.5)	30 (7.5)	22 (2.8)
5–9	22 (3.6)	23 (0.6)	22 (6.9)	22 (3.1)
10–19	27 (3.1)	29 (0.6)	25 (5.1)	29 (3.6)
20 or more	26 (3.1)	29 (0.6)	23 (5.2)	27 (3.7)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

**Table A-47.** Percentage of grade 8 students, by American Indian/Alaska Native (AI/AN) status, school density, and their teachers' years of teaching experience in their disciplines: 2005 [Estimates and standard errors for table 4-1]

Years teaching in discipline	Total		AI/AN students by school density	
	AI/AN	Non-AI/AN	High	Low
<b>Mathematics</b>				
0–4	36 (4.1)	28 (0.6)	48* (7.7)	25 (3.6)
5–9	27 (3.0)	25 (0.5)	21 (4.8)	32 (3.3)
10–19	25 (3.3)	26 (0.5)	20 (5.4)	28 (3.3)
20 or more	13* (1.8)	21 (0.5)	11 (3.1)	14 (2.4)
<b>Reading</b>				
0–4	33 (4.2)	31 (0.5)	38 (8.1)	29 (2.9)
5–9	25 (3.6)	25 (0.6)	24 (7.4)	26 (2.7)
10–19	25 (2.8)	24 (0.5)	23 (5.1)	27 (3.4)
20 or more	17 (2.9)	21 (0.5)	15 (4.9)	18 (3.2)

\* Indicates a statistically significant comparison where  $p < .05$ . An \* on the total AI/AN percentage indicates a comparison with total non-AI/AN. An \* on the high density percentage indicates a comparison with low density. NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study; and National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment and 2005 Reading Assessment.

**Table A-48.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the number of years that their teachers have taught in their current schools: 2005 [Estimates and standard errors for figure 4-4]

Years teaching at current school	Total	School density	
		High	Low
<b>Grade 4</b>			
0–4	40 (3.1)	34 (5.4)	46 (3.7)
5–9	27 (2.9)	30 (5.0)	25 (3.1)
10–19	18 (2.2)	19 (3.7)	17 (2.2)
20 or more	14 (2.3)	16 (4.0)	12 (2.2)
<b>Grade 8 mathematics</b>			
0–4	53 (4.6)	60 (8.2)	48 (3.9)
5–9	25 (3.8)	20 (6.7)	30 (3.6)
10–19	14 (2.3)	15 (4.4)	12 (2.0)
20 or more	8 (1.5)	5 (1.8)	10 (2.3)
<b>Grade 8 reading</b>			
0–4	49 (4.5)	52 (8.1)	46 (4.0)
5–9	21 (3.7)	17 (6.8)	25 (2.9)
10–19	22 (2.9)	24 (5.6)	21 (2.8)
20 or more	7 (1.5)	7 (3.0)	7 (1.8)

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-49.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and their teachers' race/ethnicity: 2005 [Estimates and standard errors for table 4-2]

Teacher race/ethnicity	Total	School density	
		High	Low
<b>Grade 4</b>			
White only	73 (3.3)	56* (5.1)	89 (1.9)
Black or African American only	2 (0.6)	1 (0.6)	2 (1.1)
Hispanic or Latino only	1 (0.4)	1 (0.6)	1 (0.4)
Asian only	1 (0.4)	# (†)	1 (0.7)
American Indian or Alaska Native only	18 (2.9)	35* (4.7)	1 (0.5)
Native Hawaiian or other Pacific Islander only	1 (1.0)	2 (1.8)	1 (0.6)
Multi-race/ethnicity, including AI/AN	4 (1.2)	5 (2.3)	3 (0.7)
Multi-race/ethnicity, not including AI/AN	1 (0.6)	# (†)	2 (1.1)
<b>Grade 8 mathematics</b>			
White only	76 (3.2)	65* (5.7)	85 (2.4)
Black or African American only	2 (0.6)	1 (0.7)	2 (0.9)
Hispanic or Latino only	1 (0.3)	# (†)	1 (0.5)
Asian only	2 (1.0)	2 (2.0)	2 (0.9)
American Indian or Alaska Native only	11 (2.4)	19* (4.6)	4 (1.7)
Native Hawaiian or other Pacific Islander only	# (†)	# (†)	# (†)
Multi-race/ethnicity, including AI/AN	6 (1.8)	9 (3.7)	2 (1.0)
Multi-race/ethnicity, not including AI/AN	4 (1.2)	3 (2.0)	4 (1.3)
<b>Grade 8 reading</b>			
White only	75 (3.8)	60* (7.6)	88 (2.4)
Black or African American only	3 (2.7)	5 (5.8)	2 (0.9)
Hispanic or Latino only	2 (0.6)	3 (1.1)	1 (0.5)
Asian only	3 (1.9)	4 (4.0)	1 (0.7)
American Indian or Alaska Native only	10 (2.4)	20* (4.8)	1 (0.3)
Native Hawaiian or other Pacific Islander only	# (†)	# (†)	# (†)
Multi-race/ethnicity, including AI/AN	4 (1.2)	5 (2.3)	3 (1.2)
Multi-race/ethnicity, not including AI/AN	4 (1.4)	3 (2.2)	4 (1.6)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Race categories exclude Hispanic origin. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-50.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers speak and understand at least one of the tribal/village languages spoken by AI/AN students at their schools: 2005 [Estimates and standard errors for table 4-3]

Extent to which teachers speak and understand at least one of the tribal/village languages spoken by AI/AN students at their schools	Total	School density	
		High	Low
<b>Grade 4</b>			
Not at all	72 (3.3)	47* (5.1)	96 (1.3)
Small extent	14 (1.6)	24* (3.4)	3 (1.1)
Moderate extent	4 (1.4)	7 (2.7)	# (†)
Large extent (but not a native speaker)	1 (0.7)	3 (1.3)	# (†)
Native speaker	10 (2.8)	19* (4.8)	1 (0.6)
<b>Grade 8 mathematics</b>			
Not at all	75 (3.0)	54* (5.7)	93 (1.9)
Small extent	20 (3.0)	37* (6.7)	5 (1.7)
Moderate extent	2 (0.8)	2 (1.6)	1 (0.6)
Large extent (but not a native speaker)	# (†)	1 (0.7)	# (†)
Native speaker	3 (1.6)	6 (3.2)	1 (0.6)
<b>Grade 8 reading</b>			
Not at all	77 (3.1)	55* (5.6)	96 (1.3)
Small extent	15 (3.7)	28* (7.6)	3 (1.2)
Moderate extent	1 (0.5)	1 (1.1)	# (†)
Large extent (but not a native speaker)	4 (2.9)	8 (6.1)	# (†)
Native speaker	4 (1.1)	8 (2.1)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-51.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various resources used by their teachers to acquire knowledge and skills specific to teaching AI/AN students: 2005 [Estimates and standard errors for table 4-4]

Types of resources used to at least a moderate extent	Total	School density	
		High	Low
<b>Grade 4</b>			
College courses taken as part of an undergraduate or graduate degree program	27 (2.6)	37* (4.0)	18 (2.8)
Classes and workshops that were not taken as part of a degree program	31 (3.6)	48* (6.2)	14 (2.6)
Independent reading and study	33 (2.7)	43* (4.4)	24 (3.0)
Living and working in the community	48 (3.1)	70* (4.0)	26 (3.0)
Locally sponsored cultural orientation program	20 (3.2)	35* (5.3)	5 (1.6)
Personal or family background and experiences	39 (3.0)	65* (4.9)	14 (2.1)
<b>Grade 8 mathematics</b>			
College courses taken as part of an undergraduate or graduate degree program	17 (2.1)	21 (3.8)	13 (2.5)
Classes and workshops that were not taken as part of a degree program	27 (3.1)	46* (6.2)	11 (1.9)
Independent reading and study	29 (4.0)	42* (7.6)	18 (3.2)
Living and working in the community	46 (3.5)	69* (5.4)	25 (3.7)
Locally sponsored cultural orientation program	14 (2.9)	22* (5.8)	6 (1.6)
Personal or family background and experiences	30 (3.6)	41* (6.3)	21 (3.0)
<b>Grade 8 reading</b>			
College courses taken as part of an undergraduate or graduate degree program	24 (3.1)	34* (5.9)	15 (2.2)
Classes and workshops that were not taken as part of a degree program	31 (2.5)	47* (4.9)	17 (2.7)
Independent reading and study	44 (3.3)	61* (5.9)	29 (3.4)
Living and working in the community	55 (3.0)	83* (4.7)	29 (3.8)
Locally sponsored cultural orientation program	17 (2.7)	25* (5.2)	10 (2.5)
Personal or family background and experiences	38 (3.7)	54* (7.1)	25 (3.4)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-52.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and the number of times during the school year their teachers used various sources to obtain information about improving the academic performance of their AI/AN students: 2005 [Estimates and standard errors for table 4-5, grade 4]

Types of information sources	Total	School density	
		High	Low
<b>Online websites or databases to find lesson plans, curricular materials, or instructional strategies</b>			
Never	51 (3.2)	32* (4.4)	70 (3.3)
1 or 2 times	19 (2.3)	20 (3.6)	17 (2.6)
3 or 4 times	14 (1.9)	20* (3.0)	8 (1.9)
5 or more times	16 (3.0)	27* (5.0)	5 (1.8)
<b>Online websites or databases to find research reports or articles</b>			
Never	56 (3.5)	39* (4.4)	73 (3.8)
1 or 2 times	24 (3.3)	33* (5.1)	16 (2.7)
3 or 4 times	10 (1.7)	13* (2.8)	6 (1.8)
5 or more times	10 (1.5)	15* (2.4)	5 (1.7)
<b>Professional journals</b>			
Never	64 (3.4)	48* (5.1)	80 (2.9)
1 or 2 times	21 (2.2)	27* (3.7)	16 (2.7)
3 or 4 times	10 (2.6)	18* (4.9)	2 (0.8)
5 or more times	4 (1.1)	7* (1.9)	2 (0.9)
<b>In-service classes and workshops</b>			
Never	54 (3.1)	29* (4.1)	80 (2.9)
1 or 2 times	22 (2.1)	29* (3.0)	16 (2.6)
3 or 4 times	12 (2.2)	22* (4.1)	3 (1.0)
5 or more times	11 (2.9)	20* (5.0)	2 (1.0)
<b>Local resources including libraries or local cultural centers</b>			
Never	45 (2.7)	24* (3.9)	67 (2.8)
1 or 2 times	30 (2.5)	34 (4.4)	26 (2.7)
3 or 4 times	13 (1.8)	20* (3.5)	5 (1.4)
5 or more times	12 (2.7)	23* (4.6)	2 (0.9)
<b>Consultation with elders or other local experts</b>			
Never	59 (3.0)	34* (4.7)	83 (2.4)
1 or 2 times	23 (2.3)	32* (4.4)	13 (2.0)
3 or 4 times	10 (1.8)	18* (3.5)	2 (1.3)
5 or more times	9 (2.7)	16* (4.9)	1 (0.7)
<b>Consultation with other teachers in school</b>			
Never	36 (2.5)	14* (3.3)	57 (3.4)
1 or 2 times	27 (2.3)	26 (3.9)	27 (2.8)
3 or 4 times	14 (1.6)	19* (2.7)	9 (1.8)
5 or more times	24 (2.9)	41* (5.0)	7 (1.7)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table A-53.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the number of times during the school year their mathematics teachers used various sources to obtain information about improving the academic performance of their AI/AN students: 2005 [Estimates and standard errors for table 4-5, grade 8 mathematics]

Types of information sources	Total	School density	
		High	Low
Online websites or databases to find lesson plans, curricular materials, or instructional strategies			
Never	62 (4.2)	43* (7.8)	79 (2.9)
1 or 2 times	21 (3.2)	31* (6.7)	13 (2.3)
3 or 4 times	10 (2.2)	14 (4.2)	6 (1.8)
5 or more times	7 (1.5)	13* (2.8)	2 (0.7)
Online websites or databases to find research reports or articles			
Never	71 (3.9)	59* (7.0)	82 (3.1)
1 or 2 times	15 (2.9)	22 (5.7)	9 (1.7)
3 or 4 times	9 (2.2)	12 (4.0)	7 (2.2)
5 or more times	5 (1.5)	8 (2.8)	2 (0.8)
Professional journals			
Never	69 (4.3)	54* (7.9)	81 (3.0)
1 or 2 times	22 (3.4)	28 (6.7)	16 (2.8)
3 or 4 times	9 (2.9)	17* (5.7)	2 (1.1)
5 or more times	1 (0.4)	1 (0.6)	1 (0.5)
In-service classes and workshops			
Never	57 (3.3)	30* (4.6)	79 (3.2)
1 or 2 times	27 (3.8)	36* (7.7)	18 (3.1)
3 or 4 times	10 (3.0)	20* (6.5)	2 (0.7)
5 or more times	7 (2.7)	14* (5.5)	1 (0.4)
Local resources including libraries or local cultural centers			
Never	65 (3.8)	49* (7.5)	79 (2.7)
1 or 2 times	24 (3.5)	32 (7.6)	16 (2.4)
3 or 4 times	8 (2.1)	13 (4.2)	4 (1.4)
5 or more times	3 (1.4)	6 (2.9)	1 (0.5)
Consultation with elders or other local experts			
Never	59 (3.3)	35* (5.5)	79 (3.3)
1 or 2 times	24 (3.4)	39* (6.7)	10 (2.0)
3 or 4 times	10 (3.1)	15 (6.6)	5 (1.4)
5 or more times	8 (1.8)	11 (3.5)	5 (2.0)
Consultation with other teachers in school			
Never	36 (2.8)	11* (2.9)	58 (3.7)
1 or 2 times	25 (2.6)	30 (5.4)	20 (2.6)
3 or 4 times	17 (3.0)	24 (6.2)	11 (2.0)
5 or more times	22 (3.2)	35* (6.3)	10 (3.2)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-54.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and the number of times during the school year their reading/language arts teachers used various sources to obtain information about improving the academic performance of their AI/AN students: 2005 [Estimates and standard errors for table 4-5, grade 8 reading]

Types of information sources	Total	School density	
		High	Low
Online websites or databases to find lesson plans, curricular materials, or instructional strategies			
Never	44 (3.6)	22* (5.5)	64 (3.4)
1 or 2 times	26 (4.1)	25 (7.7)	26 (3.2)
3 or 4 times	17 (3.6)	30* (6.9)	6 (1.6)
5 or more times	13 (2.8)	23* (5.2)	4 (0.9)
Online websites or databases to find research reports or articles			
Never	56 (3.4)	41* (5.6)	69 (3.3)
1 or 2 times	22 (2.5)	23 (4.7)	21 (2.8)
3 or 4 times	12 (2.0)	16* (3.5)	8 (1.8)
5 or more times	10 (2.1)	19* (4.1)	2 (0.6)
Professional journals			
Never	60 (2.9)	43* (4.8)	75 (3.4)
1 or 2 times	26 (3.0)	32 (6.0)	20 (3.1)
3 or 4 times	7 (2.3)	12 (4.5)	4 (1.7)
5 or more times	6 (2.2)	13* (4.6)	1 (0.6)
In-service classes and workshops			
Never	51 (3.1)	25* (5.3)	73 (2.6)
1 or 2 times	29 (3.7)	37 (7.7)	22 (2.3)
3 or 4 times	12 (2.8)	21* (5.5)	4 (1.6)
5 or more times	8 (3.3)	17* (7.0)	1 (0.5)
Local resources including libraries or local cultural centers			
Never	53 (3.6)	35* (7.1)	68 (3.1)
1 or 2 times	30 (3.5)	36 (6.8)	24 (3.0)
3 or 4 times	12 (2.1)	19* (4.1)	6 (1.9)
5 or more times	5 (1.2)	9* (2.4)	2 (0.8)
Consultation with elders or other local experts			
Never	54 (3.3)	23* (4.5)	81 (2.9)
1 or 2 times	20 (2.1)	31* (4.1)	11 (2.0)
3 or 4 times	18 (3.8)	35* (7.1)	3 (1.4)
5 or more times	8 (1.7)	11 (3.8)	5 (1.4)
Consultation with other teachers in school			
Never	31 (2.2)	6* (2.4)	53 (3.7)
1 or 2 times	28 (2.9)	28 (5.1)	28 (3.5)
3 or 4 times	15 (2.9)	21 (5.7)	10 (2.0)
5 or more times	26 (2.7)	45* (5.5)	9 (2.2)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-55.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers reported use of an AI/AN perspective in instruction: 2005 [Estimates and standard errors for figure 5-1]

Extent of use of AI/AN perspective	Total	School density	
		High	Low
<b>Grade 4</b>			
Not integrated	10 (1.4)	4* (1.3)	16 (2.2)
Seldom integrated	21 (2.4)	16 (4.0)	26 (3.2)
Integrated occasionally	48 (2.9)	46 (4.5)	50 (3.5)
Integrated extensively, not daily	10 (1.4)	14* (2.5)	6 (1.3)
Integrated daily	11 (2.8)	19* (4.9)	3 (1.0)
<b>Grade 8 mathematics</b>			
Not integrated	47 (4.1)	35 (7.6)	57 (3.7)
Seldom integrated	22 (2.6)	18 (3.8)	25 (2.7)
Integrated occasionally	21 (4.1)	30 (8.0)	13 (2.1)
Integrated extensively, not daily	5 (1.5)	8 (3.1)	3 (1.0)
Integrated daily	5 (1.8)	9 (3.5)	2 (0.9)
<b>Grade 8 reading</b>			
Not integrated	17 (3.3)	13 (6.0)	21 (3.0)
Seldom integrated	25 (2.6)	19 (4.9)	32 (3.1)
Integrated occasionally	41 (4.4)	43 (8.3)	40 (3.9)
Integrated extensively, not daily	13 (2.0)	20* (4.0)	6 (1.7)
Integrated daily	4 (1.2)	6 (2.3)	1 (0.9)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-56.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their school principals reported use of an AI/AN perspective in curriculum: 2005 [Estimates and standard errors for figure 5-2]

Extent of use of AI/AN perspective	Total	School density	
		High	Low
<b>Grade 4</b>			
Not integrated	2 (0.7)	# (†)	4 (1.3)
Seldom integrated	17 (2.9)	10* (3.8)	24 (4.1)
Integrated occasionally	51 (4.2)	37* (6.3)	64 (4.1)
Integrated extensively, not daily	13 (2.8)	19* (5.2)	7 (2.1)
Integrated daily	17 (4.3)	35* (7.5)	1 (0.5)
<b>Grade 8</b>			
Not integrated	7 (1.7)	2* (2.0)	10 (2.7)
Seldom integrated	21 (3.7)	9* (5.8)	31 (4.8)
Integrated occasionally	49 (4.9)	55 (9.5)	44 (4.7)
Integrated extensively, not daily	15 (3.6)	22 (6.5)	8 (2.6)
Integrated daily	8 (2.5)	11 (4.4)	6 (2.5)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-57.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which their teachers used various mathematics activities integrating AI/AN culture: 2005 [Estimates and standard errors for figures 5-3 and 5-4, grade 4]

Frequency using various activities	Total	School density	
		High	Low
Solve mathematics problems that reflect situations typical of AI/AN students' homes or communities			
Never	63 (3.3)	46* (4.9)	80 (2.6)
Less than once a month	20 (2.2)	25* (3.2)	15 (2.4)
At least once a month	9 (1.9)	17* (3.4)	2 (0.9)
At least once a week	8 (1.5)	13* (2.8)	3 (1.1)
Complete activities that integrate mathematics with AI/AN themes (for example, use traditional symbols and designs to teach geometric concepts)			
Never	61 (2.9)	46* (4.3)	76 (2.7)
Less than once a month	30 (2.5)	37* (4.4)	23 (2.7)
At least once a month	6 (1.6)	11* (2.8)	1 (0.6)
At least once a week	2 (0.8)	5 (1.6)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-58.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which their teachers used various mathematics activities integrating AI/AN culture: 2005 [Estimates and standard errors for figures 5-3 and 5-4, grade 8]

Frequency using various activities	Total	School density	
		High	Low
Solve mathematics problems that reflect situations typical of AI/AN students' homes or communities			
Never	42 (3.2)	35 (6.2)	48 (3.9)
Less than once a month	28 (3.0)	21 (4.7)	34 (3.8)
At least once a month	13 (2.6)	18 (4.6)	10 (2.3)
At least once a week	17 (2.5)	27* (5.1)	8 (1.6)
Complete activities that integrate mathematics with AI/AN themes (for example, use traditional symbols and designs to teach geometric concepts)			
Never	60 (3.4)	50 (6.6)	69 (3.3)
Less than once a month	28 (3.0)	31 (5.9)	26 (3.0)
At least once a month	7 (1.4)	11 (2.6)	4 (1.4)
At least once a week	5 (1.6)	8 (3.3)	1 (0.6)
Study traditional AI/AN systems of dealing with mathematical concepts (for example, systems of counting, estimating, recording quantities)			
Never	74 (3.8)	69 (6.8)	78 (2.9)
Less than once a month	19 (3.0)	22 (5.3)	16 (2.5)
At least once a month	3 (0.9)	1 (0.6)	5 (1.6)
At least once a week	4 (1.7)	8 (3.4)	1 (0.9)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-59.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which their teachers used various reading/language arts activities integrating AI/AN culture: 2005 [Estimates and standard errors for table 5-1, grade 4]

Frequency using various activities	Total	School density	
		High	Low
Read literature with AI/AN themes			
Never	4 (0.8)	3 (1.1)	4 (1.2)
Less than once a month	60 (2.9)	47* (4.2)	74 (2.8)
At least once a month	25 (2.4)	30* (3.6)	20 (2.5)
At least once a week	11 (2.6)	20* (4.6)	2 (0.7)
Read literature written by AI/AN authors			
Never	12 (1.4)	7* (1.7)	17 (2.1)
Less than once a month	65 (3.1)	57* (4.8)	74 (3.0)
At least once a month	17 (2.7)	24* (4.6)	9 (2.0)
At least once a week	6 (1.4)	11 (2.6)	# (†)
Listen to AI/AN stories told in the oral tradition			
Never	39 (2.3)	28* (3.3)	50 (2.9)
Less than once a month	50 (2.7)	54 (4.7)	47 (3.0)
At least once a month	8 (1.5)	13* (2.6)	4 (1.2)
At least once a week	3 (0.9)	5 (1.6)	# (†)
Retell AI/AN stories in the oral tradition			
Never	44 (2.7)	30* (3.7)	57 (3.3)
Less than once a month	47 (3.0)	54* (4.6)	40 (3.4)
At least once a month	7 (1.5)	11* (2.9)	3 (0.9)
At least once a week	2 (0.7)	4 (1.4)	# (†)
Study how to speak and read the students' AI/AN language			
Never	71 (3.4)	53* (5.2)	89 (1.9)
Less than once a month	15 (2.8)	21 (5.0)	10 (1.8)
At least once a month	4 (1.3)	6 (2.5)	1 (0.7)
At least once a week	10 (2.2)	21 (4.0)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-60.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and frequency with which their teachers used various reading/language arts activities integrating AI/AN culture: 2005 [Estimates and standard errors for table 5-1, grade 8]

Frequency using various activities	Total	School density	
		High	Low
Read literature with AI/AN themes			
Never	8 (2.0)	10 (4.2)	6 (1.3)
Less than once a month	66 (3.9)	50* (6.9)	80 (2.9)
At least once a month	22 (3.3)	33* (6.1)	12 (2.4)
At least once a week	5 (1.1)	7 (2.2)	2 (0.9)
Read literature written by AI/AN authors			
Never	17 (3.9)	17 (7.3)	17 (2.7)
Less than once a month	67 (4.2)	59 (7.7)	74 (3.1)
At least once a month	14 (2.2)	21* (3.9)	8 (2.0)
At least once a week	2 (1.0)	4 (2.0)	1 (0.7)
Listen to AI/AN stories told in the oral tradition			
Never	54 (3.9)	42* (7.3)	65 (3.6)
Less than once a month	35 (3.5)	39 (6.1)	31 (3.4)
At least once a month	7 (1.6)	11 (2.8)	4 (1.6)
At least once a week	4 (2.7)	8 (5.8)	# (†)
Retell AI/AN stories in the oral tradition			
Never	58 (4.2)	46* (8.0)	69 (3.2)
Less than once a month	35 (4.0)	41 (8.0)	29 (3.1)
At least once a month	6 (1.6)	10* (3.1)	2 (0.9)
At least once a week	2 (0.9)	3 (2.0)	# (†)
Study how to speak and read the students' AI/AN language			
Never	84 (3.6)	69* (7.2)	97 (1.0)
Less than once a month	12 (2.6)	22* (5.1)	3 (1.0)
At least once a month	# (†)	# (†)	# (†)
At least once a week	4 (2.8)	9 (5.9)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-61.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which teachers use their students' AI/AN languages to teach mathematics: 2005 [Estimates and standard errors for figure 5-5]

Language of instruction	Total	School density	
		High	Low
<b>Grade 4</b>			
Instruction is entirely in English.	91 (2.2)	82* (3.9)	100 (0.2)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included occasionally.	7 (1.8)	14 (3.4)	# (†)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included frequently.	2 (0.8)	4 (1.7)	# (†)
Instruction is primarily in the students' AI/AN language.	# (†)	# (†)	# (†)
<b>Grade 8</b>			
Instruction is entirely in English.	92 (2.2)	86 (4.4)	98 (1.2)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included occasionally.	7 (2.1)	12 (4.3)	2 (1.2)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included frequently.	1 (0.5)	2 (1.0)	# (†)
Instruction is primarily in the students' AI/AN language.	# (†)	# (†)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-62.** Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which teachers use their students' AI/AN languages to teach reading/language arts: 2005 [Estimates and standard errors for figure 5-5]

Language of instruction	Total	School density	
		High	Low
<b>Grade 4</b>			
Instruction is entirely in English.	85 (2.4)	74* (4.2)	96 (1.4)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included occasionally.	11 (2.2)	18* (3.8)	4 (1.4)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included frequently.	4 (1.3)	8 (2.7)	# (†)
Instruction is primarily in the students' AI/AN language.	# (†)	# (†)	# (†)
<b>Grade 8</b>			
Instruction is entirely in English.	88 (1.7)	81* (3.4)	95 (1.8)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included occasionally.	10 (1.7)	15* (3.4)	5 (1.8)
Instruction is primarily in English, but words or phrases from the students' AI/AN language are included frequently.	2 (0.8)	3 (1.5)	# (†)
Instruction is primarily in the students' AI/AN language.	# (†)	# (†)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table A-63.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their mathematics lessons: 2005 [Estimates and standard errors for table 5-2, grade 4]

Use of standards in planning lessons	Total	School density	
		High	Low
State content standards for mathematics			
Not at all	2 (0.6)	1 (0.7)	3 (0.8)
A little	2 (0.6)	1 (0.5)	2 (1.2)
Some	6 (1.4)	7 (2.4)	5 (1.6)
A lot	90 (1.6)	91 (2.5)	90 (2.0)
District content standards for mathematics			
Not at all	7 (1.5)	8 (2.4)	6 (1.6)
A little	4 (1.2)	5 (2.0)	2 (1.0)
Some	12 (2.1)	13 (3.2)	10 (2.3)
A lot	78 (2.3)	74 (3.4)	82 (3.1)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
Not at all	86 (2.3)	78* (3.8)	95 (1.6)
A little	5 (1.4)	8 (2.2)	3 (1.4)
Some	7 (1.5)	12* (2.9)	1 (0.3)
A lot	1 (0.6)	2 (1.1)	# (†)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	77 (3.3)	62* (5.1)	93 (1.8)
A little	10 (1.8)	15* (3.2)	5 (1.6)
Some	10 (2.9)	19* (5.1)	1 (0.3)
A lot	3 (0.8)	4* (1.3)	1 (0.6)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-64.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their mathematics lessons: 2005 [Estimates and standard errors for table 5-2, grade 8]

Use of standards in planning lessons	Total	School density	
		High	Low
State content standards for mathematics			
Not at all	2 (2.7)	5 (5.8)	# (†)
A little	5 (2.9)	8 (6.2)	2 (0.8)
Some	11 (1.9)	11 (2.9)	11 (2.1)
A lot	81 (3.0)	75 (5.3)	87 (2.2)
District content standards for mathematics			
Not at all	9 (3.3)	18* (6.9)	1 (0.7)
A little	5 (2.8)	8 (6.0)	2 (1.0)
Some	15 (2.9)	18 (5.3)	13 (2.4)
A lot	71 (3.3)	56* (6.2)	83 (2.4)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
Not at all	87 (2.9)	77* (5.5)	96 (0.9)
A little	6 (1.8)	10 (3.5)	3 (0.9)
Some	6 (1.9)	12* (3.9)	1 (0.5)
A lot	# (†)	# (†)	# (†)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	86 (2.8)	76* (5.2)	95 (1.4)
A little	8 (2.0)	12 (3.8)	4 (1.3)
Some	5 (1.9)	11* (3.8)	1 (0.5)
A lot	1 (0.4)	1 (0.8)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-65.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their reading/language arts lessons: 2005 [Estimates and standard errors for table 5-3, grade 4]

Use of standards in planning lessons	Total	School density	
		High	Low
State content standards for reading/language arts			
Not at all	1 (0.3)	1 (0.4)	1 (0.5)
A little	2 (0.7)	# (†)	3 (1.3)
Some	7 (1.4)	8 (2.3)	6 (1.6)
A lot	91 (1.5)	91 (2.5)	90 (2.0)
District content standards for reading/language arts			
Not at all	5 (1.2)	6 (1.8)	3 (1.5)
A little	4 (1.2)	5 (2.1)	2 (1.0)
Some	11 (1.4)	9 (2.0)	12 (2.3)
A lot	81 (2.1)	80 (3.2)	82 (3.2)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
Not at all	82 (2.3)	70* (3.8)	93 (1.9)
A little	8 (1.4)	12* (2.4)	4 (1.3)
Some	8 (1.8)	14* (3.2)	3 (1.3)
A lot	2 (0.7)	4 (1.4)	# (†)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	69 (3.1)	50* (4.7)	89 (2.2)
A little	13 (1.7)	19* (3.0)	7 (1.8)
Some	13 (2.8)	23* (4.8)	3 (1.0)
A lot	4 (1.2)	8* (2.3)	1 (0.4)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-66.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which their teachers used various standards in planning their reading/language arts lessons: 2005 [Estimates and standard errors for table 5-3, grade 8]

Use of standards in planning lessons	Total	School density	
		High	Low
State content standards for reading/language arts			
Not at all	3 (2.7)	5 (5.8)	2 (0.9)
A little	3 (2.7)	6 (5.7)	1 (0.6)
Some	13 (1.9)	9 (2.5)	17 (2.9)
A lot	80 (3.4)	79 (5.5)	80 (2.9)
District content standards for reading/language arts			
Not at all	10 (3.4)	18 (7.2)	2 (1.0)
A little	5 (2.8)	7 (5.9)	3 (1.1)
Some	17 (2.5)	14 (4.1)	20 (3.2)
A lot	68 (3.7)	61 (7.2)	75 (3.3)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
Not at all	84 (3.0)	74* (5.6)	93 (1.8)
A little	9 (2.0)	14 (4.0)	5 (1.2)
Some	5 (1.5)	8 (2.6)	2 (1.4)
A lot	2 (1.0)	4 (2.0)	# (†)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
Not at all	81 (3.4)	67* (6.3)	92 (1.8)
A little	12 (2.4)	19* (4.8)	5 (1.2)
Some	6 (1.5)	10* (2.7)	2 (1.3)
A lot	2 (0.9)	4 (2.0)	# (†)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-67.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and extent to which school principals report that various standards influence their schools' mathematics curricula: 2005 [Estimates and standard errors for grade 4 mathematics data discussed on page 57]

Type of standards	Total	School density	
		High	Low
State content standards for mathematics			
No influence	2 (1.2)	4 (2.3)	1 (0.7)
Small influence	1 (0.8)	# (†)	3 (1.6)
Moderate influence	4 (1.6)	7 (3.3)	1 (0.8)
Much influence	92 (2.2)	89 (4.0)	95 (2.0)
District content standards for mathematics			
No influence	5 (2.0)	8 (3.8)	1 (1.0)
Small influence	1 (0.7)	2 (1.4)	# (†)
Moderate influence	9 (2.4)	11 (4.4)	6 (2.2)
Much influence	85 (3.1)	79 (5.3)	92 (2.5)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
No influence	63 (4.5)	43* (7.6)	83 (3.6)
Small influence	24 (3.7)	32* (6.7)	15 (3.2)
Moderate influence	10 (3.5)	19* (6.5)	1 (1.4)
Much influence	3 (1.6)	6 (3.1)	1 (0.5)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
No influence	56 (3.9)	34* (7.2)	78 (4.0)
Small influence	26 (3.7)	37* (7.8)	15 (2.8)
Moderate influence	13 (3.8)	23* (7.1)	3 (1.9)
Much influence	5 (1.4)	7 (2.2)	4 (1.9)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-68.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which school principals report that various standards influence their schools' mathematics curricula: 2005  
 [Estimates and standard errors for grade 8 mathematics data discussed on page 57]

Type of standards	Total	School density	
		High	Low
State content standards for mathematics			
No influence	1 (0.4)	# †	1 (0.7)
Small influence	2 (2.5)	5 (5.6)	# †
Moderate influence	4 (1.4)	3 (1.9)	5 (2.1)
Much influence	93 (3.0)	92 (5.9)	94 (2.2)
District content standards for mathematics			
No influence	6 (2.9)	6 (5.6)	5 (2.2)
Small influence	2 (1.0)	4 (2.2)	# †
Moderate influence	11 (3.4)	20 (7.4)	3 (1.8)
Much influence	81 (4.3)	70 (8.6)	91 (2.8)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
No influence	63 (4.2)	54 (6.6)	71 (4.2)
Small influence	22 (3.9)	25 (6.8)	20 (3.7)
Moderate influence	11 (3.1)	16 (5.5)	7 (2.9)
Much influence	3 (1.8)	5 (3.6)	2 (1.3)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
No influence	56 (4.2)	40* (7.2)	70 (4.2)
Small influence	28 (4.8)	37 (8.6)	22 (4.0)
Moderate influence	8 (2.4)	12 (4.5)	4 (1.7)
Much influence	8 (2.6)	12 (5.1)	4 (2.2)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-69.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and extent to which school principals report that various standards influence their schools' reading/language arts curricula: 2005 [Estimates and standard errors for grade 4 reading data discussed on page 57]

Type of standards	Total	School density	
		High	Low
State content standards for reading/language arts			
No influence	2 (0.7)	# †	3 (1.5)
Small influence	2 (1.1)	2 (2.2)	1 (0.7)
Moderate influence	2 (0.9)	2 (1.5)	2 (0.9)
Much influence	95 (1.6)	95 (2.6)	95 (2.0)
District content standards for reading/language arts			
No influence	4 (1.7)	6 (3.3)	1 (1.0)
Small influence	2 (1.1)	3 (2.2)	# †
Moderate influence	9 (2.5)	10 (4.4)	7 (2.3)
Much influence	86 (3.2)	80 (5.4)	91 (2.5)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
No influence	52 (4.5)	32* (7.5)	73 (3.8)
Small influence	27 (3.9)	32 (7.2)	23 (3.7)
Moderate influence	17 (4.0)	31* (6.9)	3 (1.9)
Much influence	3 (1.6)	6 (3.2)	1 (0.5)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
No influence	44 (4.1)	21* (5.9)	66 (4.3)
Small influence	32 (4.4)	39 (8.6)	26 (4.0)
Moderate influence	15 (3.8)	26* (6.4)	5 (2.2)
Much influence	9 (2.5)	14 (4.9)	4 (1.8)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-70.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and extent to which school principals report that various standards influence their schools' reading/language arts curricula: 2005 [Estimates and standard errors for grade 8 reading data discussed on page 57]

Type of standards	Total	School density	
		High	Low
State content standards for reading/language arts			
No influence	# †	# †	# †
Small influence	3 (2.6)	5 (5.7)	1 (0.7)
Moderate influence	6 (1.9)	5 (2.8)	6 (2.3)
Much influence	92 (3.3)	90 (6.3)	93 (2.4)
District content standards for reading/language arts			
No influence	6 (3.1)	8 (6.0)	4 (2.0)
Small influence	3 (1.4)	4 (2.8)	1 (0.7)
Moderate influence	10 (2.9)	18 (6.2)	4 (1.5)
Much influence	82 (3.9)	70 (7.8)	91 (2.6)
AI/AN content/cultural standards developed by the Bureau of Indian Affairs			
No influence	51 (4.2)	37* (6.0)	62 (4.2)
Small influence	35 (4.5)	42 (7.8)	29 (3.9)
Moderate influence	11 (2.9)	16 (5.0)	7 (2.8)
Much influence	4 (1.8)	5 (3.8)	2 (1.3)
AI/AN content/cultural standards developed by the state or by a local education agency or council			
No influence	47 (4.1)	33* (7.0)	59 (4.5)
Small influence	35 (4.6)	40 (8.4)	30 (3.9)
Moderate influence	9 (2.7)	15 (5.1)	5 (2.0)
Much influence	9 (2.7)	12 (5.3)	5 (2.4)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.



**Table A-71.** Percentage of grade 4 American Indian/Alaska Native (AI/AN) students, by school density and various assessment tools that their teachers used to evaluate student progress and plan appropriate instruction: 2005 [Estimates and standard errors for table 5-4]

Assessments used for evaluation and planning to at least a moderate extent	Total	School density	
		High	Low
Standardized state assessments	82 (2.0)	83 (3.4)	81 (2.5)
Other standardized tests (e.g., district-level)	78 (2.1)	77 (3.9)	80 (2.6)
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	81 (2.5)	87* (3.7)	75 (3.0)
Teacher-made tests or quizzes	85 (2.1)	86 (3.6)	85 (2.4)
Assessments developed by local AI/AN groups	3 (0.9)	5 (1.8)	# (†)
Individual or group projects	63 (3.2)	61 (5.3)	64 (3.1)
Worksheets	66 (2.8)	71 (5.0)	62 (3.3)
Oral responses of students during class discussions	85 (2.1)	89 (3.2)	82 (2.8)
Portfolios or work samples	64 (3.1)	69 (4.9)	60 (3.8)
Demonstrations or exhibitions	44 (3.2)	51* (4.8)	37 (3.2)

† Not applicable. Standard error of the estimate cannot be accurately determined.

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

**Table A-72.** Percentage of grade 8 American Indian/Alaska Native (AI/AN) students, by school density and various assessment tools that their teachers used to evaluate student progress and plan appropriate instruction: 2005 [Estimates and standard errors for table 5-5]

Assessments used for evaluation and planning to at least a moderate extent	Total	School density	
		High	Low
<b>Mathematics</b>			
Standardized state assessments	69 (4.1)	67 (8.1)	72 (3.5)
Other standardized tests (e.g., district-level)	50 (3.5)	44 (6.3)	56 (3.8)
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	65 (3.1)	72* (5.0)	58 (3.4)
Teacher-made tests or quizzes	88 (2.3)	86 (4.1)	90 (2.0)
Assessments developed by local AI/AN groups	2 (0.7)	2 (1.3)	1 (0.6)
Individual or group projects	37 (3.4)	41 (7.0)	32 (3.1)
Worksheets	61 (3.3)	62 (5.5)	61 (3.4)
Oral responses of students during class discussions	74 (3.8)	72 (7.6)	76 (3.0)
Portfolios or work samples	37 (3.7)	40 (7.2)	34 (3.2)
Demonstrations or exhibitions	26 (3.8)	29 (7.5)	24 (3.1)
<b>Reading</b>			
Standardized state assessments	69 (2.9)	68 (5.4)	69 (2.8)
Other standardized tests (e.g., district-level)	54 (3.0)	50 (6.2)	59 (3.2)
Tests supplied by textbook publishers (e.g., end of unit or chapter tests)	50 (3.7)	54 (6.8)	47 (3.1)
Teacher-made tests or quizzes	90 (3.0)	86 (6.0)	92 (1.9)
Assessments developed by local AI/AN groups	3 (1.0)	4 (1.8)	2 (1.1)
Individual or group projects	72 (2.5)	69 (4.8)	74 (2.8)
Worksheets	54 (3.6)	56 (6.0)	51 (3.4)
Oral responses of students during class discussions	81 (3.8)	77 (7.6)	84 (2.6)
Portfolios or work samples	63 (3.4)	60 (6.3)	66 (3.5)
Demonstrations or exhibitions	44 (3.0)	39 (5.4)	48 (3.2)

\* Significantly different ( $p < .05$ ) from students attending low density schools.

NOTE: School density indicates the proportion of AI/AN students enrolled. High density schools have 25 percent or more AI/AN students. Low density schools have less than 25 percent. Standard errors of the estimates appear in parentheses.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2005 National Indian Education Study.

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