

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
Grade 4	435	426	399	472
Grade 8	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

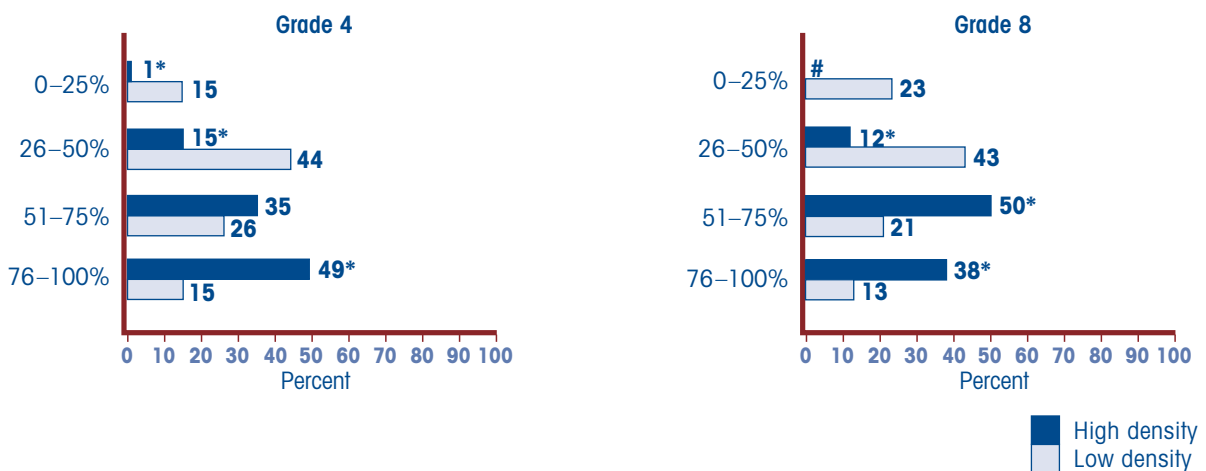
students and 34 percent of grade 8 students were at schools where more than 50 percent of the students were eligible for this school lunch program.

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.

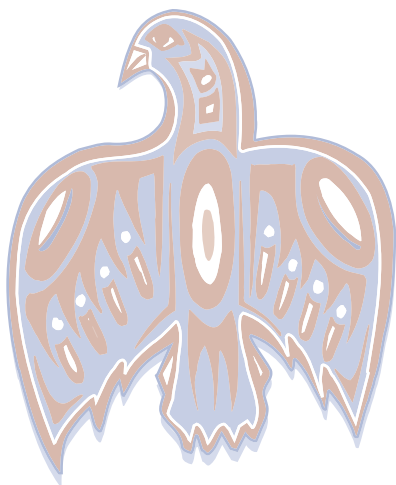


Table 3-4. Percentage of grade 4 and grade 8 American Indian/Alaska Native (AI/AN) students, by school density and school type: 2005

School type	School density		
	Total	High	Low
Grade 4			
Regular public school	87	81*	94
Other school	13	19*	6
Grade 8			
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
Grade 4			
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
Grade 8			
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.

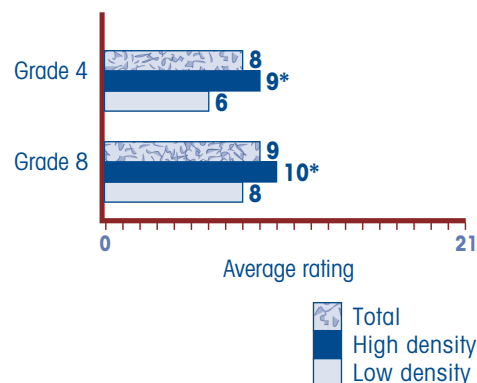
What is the AI/AN presence in schools that serve AI/AN students?

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.

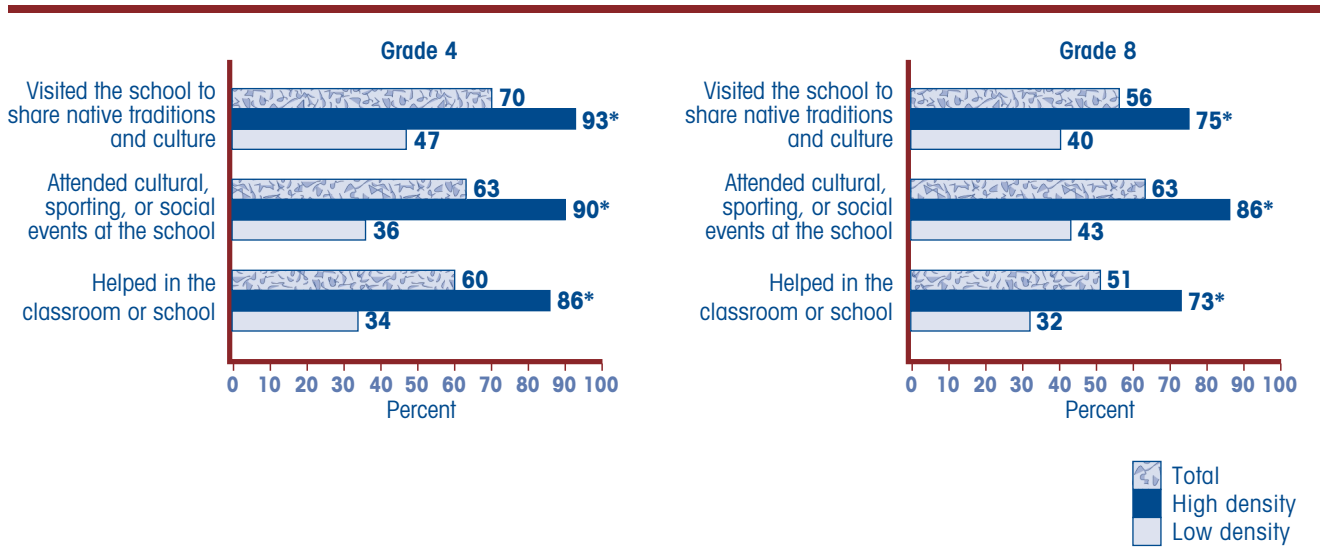
The forms of tribal or community participation that were reported most frequently are shown in figure 3-3. Seventy percent of grade 4 students and 56 percent of grade 8 students were at schools where the principal reported that tribal or community representatives visited the school to share native traditions 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.

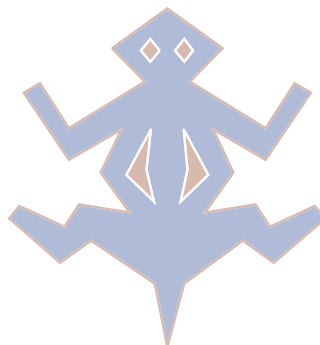
Compared with low density schools, high density schools reported much greater involvement from representatives of local tribes or Alaska Native communities.

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
Grade 4			
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	#
Grade 8			
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
Grade 4			
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	#
Grade 8			
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.

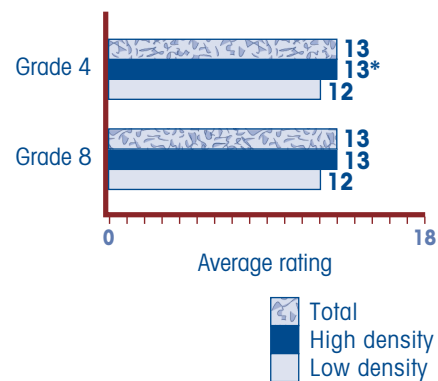
Opportunities for communication between schools and families

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.

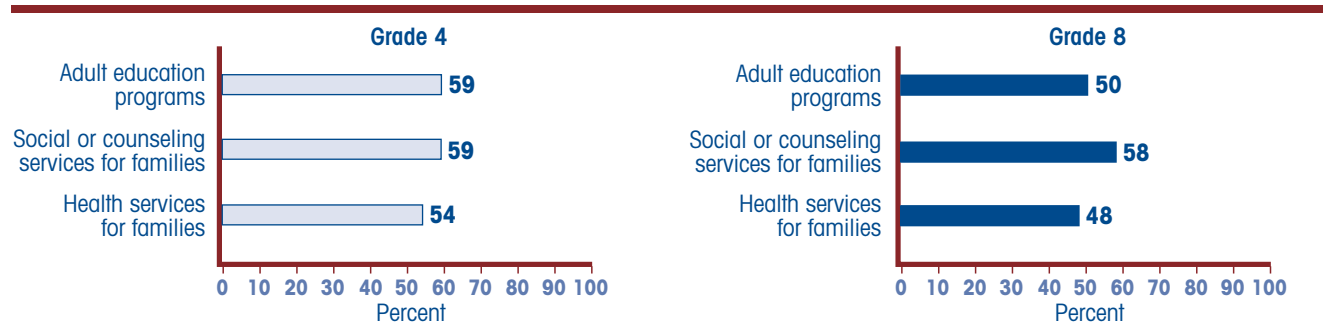
Family services

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).

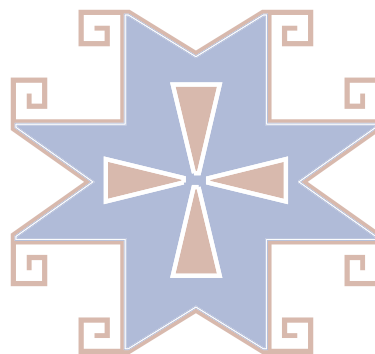
What kinds of enrichment and extracurricular activities are offered by schools attended by AI/AN students?

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
Grade 4			
Instruction in students' AI/AN language(s)	37	58*	16
Extracurricular activities focusing on native culture	51	75*	27
Grade 8			
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

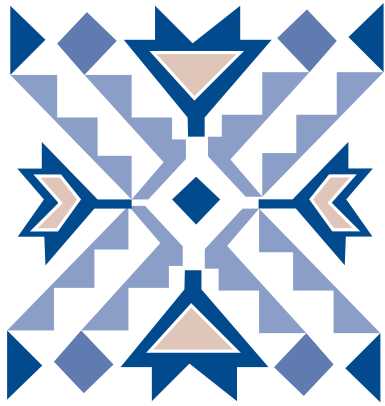
Nearly 90 percent of all AI/AN students attended regular public schools. About 40 percent at each grade level attended schools where AI/AN students accounted for 10 percent or less of the student population. At the same time, 27 percent of grade 4 AI/AN students and 25 percent of grade 8 AI/AN students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

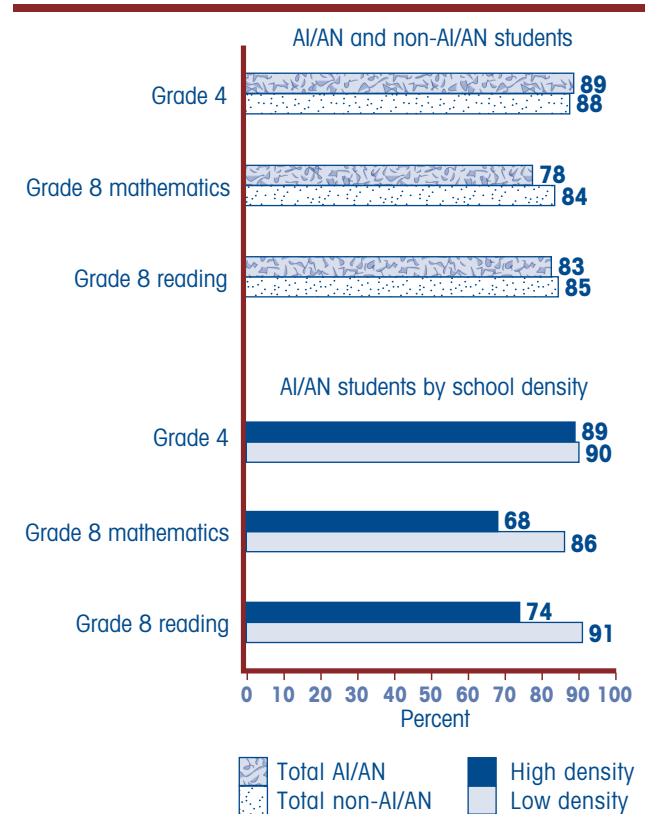
With regard to general teaching qualifications, the National Indian Education Study (NIES) investigated the teaching credentials held by teachers of AI/AN students as well as their academic preparation. The study also collected information on the number of years of teaching experience that these teachers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

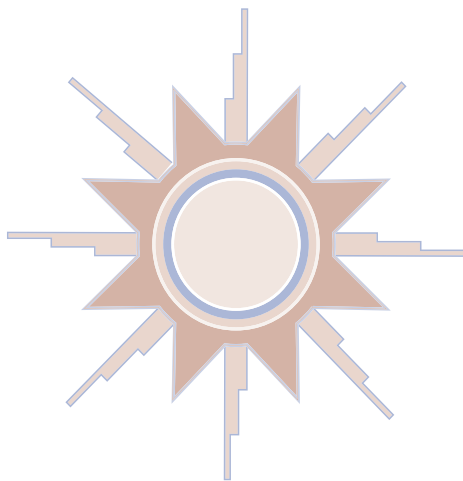
There were also no significant differences in teachers' certifications between AI/AN students in high density schools and AI/AN students in low density schools at either grade level. For more detail on the types of teaching certificates held by teachers, see tables A-41 through A-43.

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

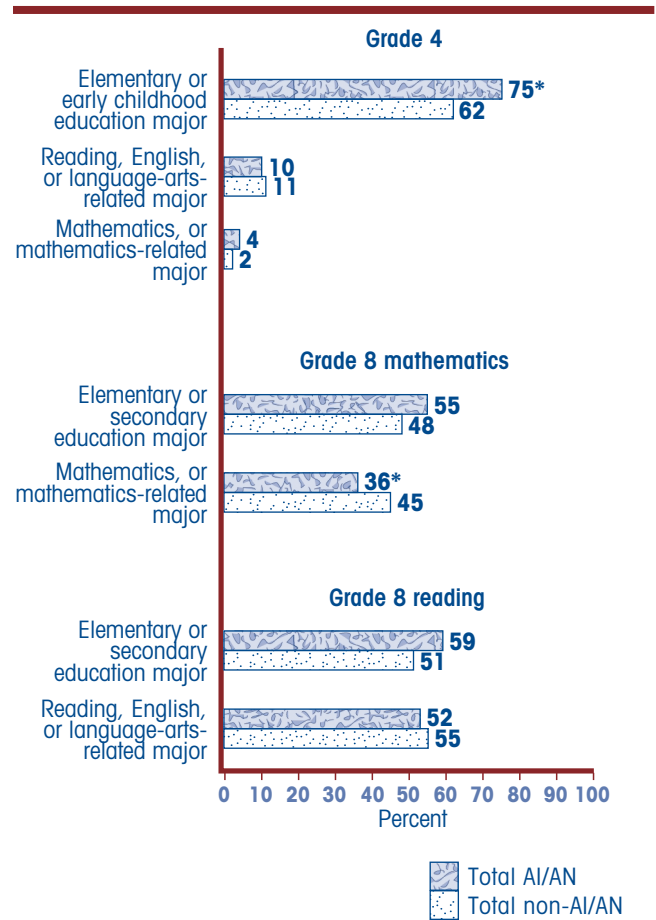
The NIES questionnaires asked teachers of AI/AN students to provide information on their undergraduate majors. Teachers could identify more than one major, so the categories presented in figure 4-2 are not mutually exclusive. At grade 4, where most teachers are generalists responsible for teaching multiple 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

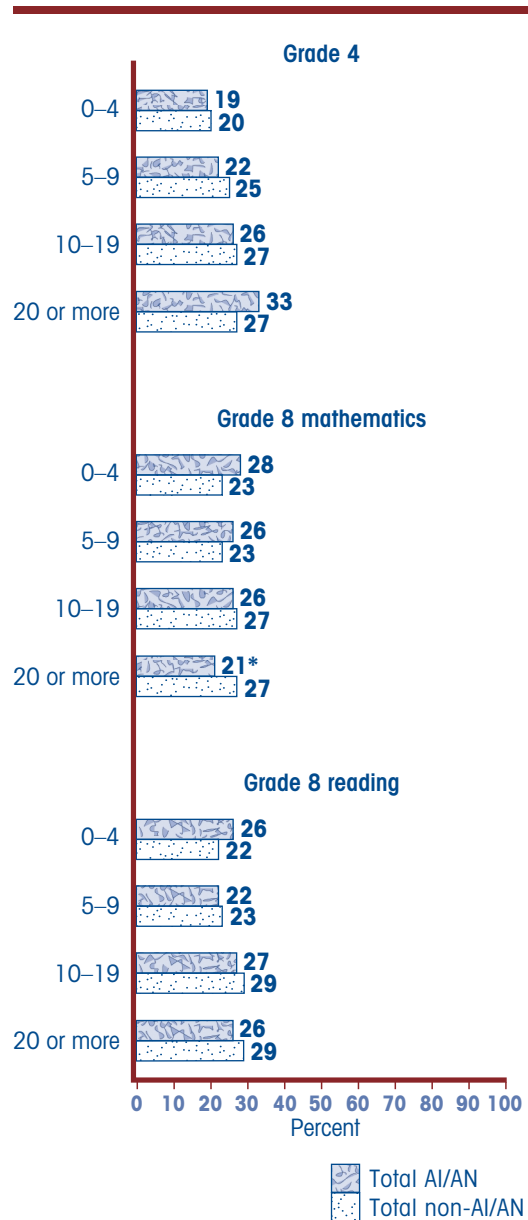
Teachers of both AI/AN and non-AI/AN students were fairly broadly distributed with respect to their total years of teaching experience. Teachers were asked to identify their years of teaching experiences as “0–4,” “5–9,” “10–19,” or “20 or more.” Nineteen percent of grade 4 AI/AN students had teachers 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.

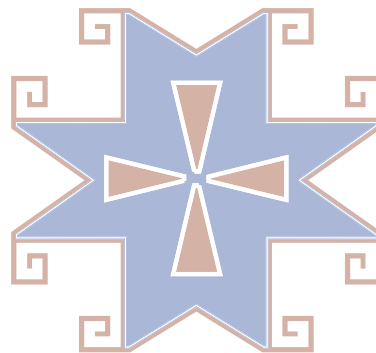
When the focus is narrowed to years of experience within the teacher's area of specialization, table 4-1 shows that 36 percent of grade 8 AI/AN students had mathematics teachers, and 33 percent had reading/language arts teachers, with fewer than 5 years of experience. The comparable percentages for non-AI/AN 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
Mathematics				
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
Reading				
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.

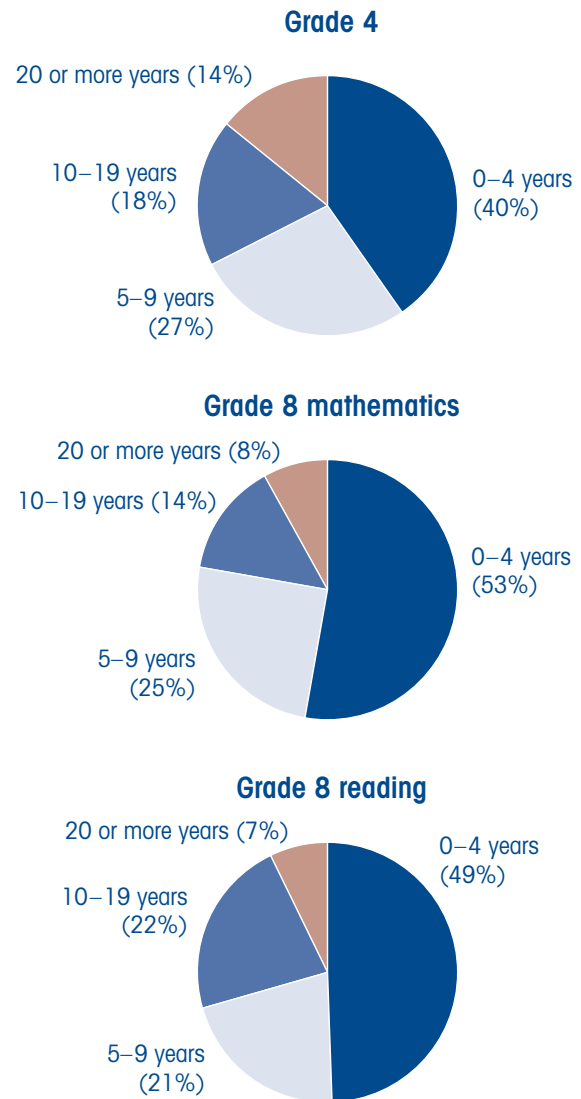


How common is teacher turnover at schools that serve AI/AN students?

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
Grade 4			
White only	73	56*	89
AI/AN only	18	35*	1
AI/AN in combination	4	5	3
Other race/ethnicity	5	4	7
Grade 8 mathematics			
White only	76	65*	85
AI/AN only	11	19*	4
AI/AN in combination	6	9	2
Other race/ethnicity	8	7	9
Grade 8 reading			
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
Grade 4			
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
Grade 8 mathematics			
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
Grade 8 reading			
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
Grade 4			
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
Grade 8 mathematics			
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
Grade 8 reading			
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
Grade 4			
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
Grade 8 mathematics			
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
Grade 8 reading			
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.

