

National Indian Education Study 2007

PART II

The Educational Experiences of American Indian and
Alaska Native Students in Grades 4 and 8
Statistical Analysis Report



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Student Artwork on the cover:
Happy Dreams of School
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The National Indian Education Study (NIES) is a two-part study designed to describe the condition of education for American Indian and Alaska Native students in the United States. The study is sponsored by the Office of Indian Education and conducted by the National Center for Education Statistics for the U.S. Department of Education. NIES is authorized under Executive Order 13336, *American Indian and Alaska Native Education*, which was enacted in 2004 to improve education efforts for American Indian and Alaska Native students nationwide. (See <http://www.whitehouse.gov/news/releases/2004/04/20040430-10.html> for details.)

Part II of the NIES is a survey that provides information on the educational experiences of the fourth- and eighth-grade American Indian and Alaska Native students who participated in the National Assessment of Educational Progress (NAEP) assessments. The survey is reported separately from Part I and includes information on the integration of native language and culture into school and classroom activities.

Part I of the NIES is conducted through NAEP and provides in-depth information on the academic performance of fourth- and eighth-grade American Indian and Alaska Native students in reading and mathematics.

Conducted in 2005 and 2007, NIES provides data on nationally representative samples of American Indian and Alaska Native students from public, private, and Bureau of Indian Education schools. It is a reliable source of data on American Indian and Alaska Native students, especially for researchers, educators, administrators, and policymakers who address the educational needs of these students. NIES is advised by a technical review panel; its members (listed on the back of this report) come from across the country and include educators and researchers selected for their expertise in American Indian and Alaska Native education.

NAEP is a congressionally authorized project of the National Center for Education Statistics (NCES) within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP.

NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement and relevant variables is collected. The privacy of individual students and their families is protected, and the identities of participating schools are not released.

Executive Summary

This report presents information about the educational, home, and community experiences of American Indian and Alaska Native (AI/AN) fourth- and eighth-grade students that was collected during the National Indian Education Study (NIES) of 2007. AI/AN students represent about 1 percent of the student population in the United States. Approximately 10,000 AI/AN students in 1,700 schools at grade 4 and 11,000 AI/AN students from 1,800 schools at grade 8 participated in the study. Surveys were completed by students, their teachers, and their school administrators.

The three major areas of findings that are described in this report include: characteristics of AI/AN students, characteristics of their teachers and schools, and the integration of native language and culture in their homes and schools. Some of the major findings are highlighted below.

Social and demographic information provides insights into the AI/AN student population

Location. Higher percentages of AI/AN fourth-graders (56 percent) and eighth-graders (54 percent) attended schools in the South Central and Mountain regions than in other regions. In the Mountain region, higher percentages of AI/AN students (40 to 46 percent across grades) attended schools in which at least 25 percent of the students were AI/AN (“high density” schools) than attended low density schools (19 percent).

Families and Homes. A higher percentage of AI/AN students (about 58 percent) were eligible for free school lunch compared to their non-AI/AN peers (about 34 percent). A lower percentage of AI/AN students (about 75 percent) than non-AI/AN students (about 89 percent) said they had access to a computer in their homes.

Language. A higher percentage of AI/AN students in high density schools (about 20 percent) than in low density schools (about 10 percent) reported that a language other than English was spoken in their homes all or most of the time. A higher percentage of students in Bureau of Indian Education (BIE) schools (35 percent) than in public schools (about 12 percent) reported the same.

Teachers and school administrators describe the context in which AI/AN students learn

Teachers’ Backgrounds. While nearly 80 percent of AI/AN students overall were taught by teachers who identified themselves as White, a higher percentage of AI/AN students in BIE schools (about 40 to 60 percent across grades) than in public schools (5 to 9 percent) were taught by AI/AN teachers. Also, a higher percentage of students in BIE schools (20 to 29 percent) than in public schools (about 3 percent) were taught by teachers who said they were fluent native language speakers.

School Characteristics and Climate. A higher percentage of AI/AN students in high density schools (55 to 64 percent across grades) than in low density schools (12 to 21 percent) attended schools where more than three-quarters of the student body was eligible for free/reduced-price school lunch. Higher percentages of students in high density schools (15 to 35 percent) than in low density schools (2 to 12 percent) had administrators who indicated serious problems with student absenteeism, student tardiness, lack of family involvement, and low expectations.

Homes, communities, and schools provide opportunities for integration of AI/AN language and culture

Homes and Communities. Exposure to native language at home most of the time occurred more frequently for students in BIE schools (about 41 percent) than for students in public schools (about 17 percent). A higher percentage of eighth-graders in high density schools (44 percent) than in low density schools (27 percent) said that they participated in AI/AN ceremonies or gatherings several times a year.

Teachers and Schools. Although nearly 90 percent of AI/AN students overall had teachers who provided instruction entirely in English, a higher percentage of students in high density schools (16 to 20 percent) than in low density schools (about 2 percent) had teachers who reported occasional use of AI/AN language in their instruction. A higher percentage of students in BIE schools (72 to 97 percent) than in public schools (26 to 63 percent) had school administrators who said that students received instruction on a variety of topics related to their native cultures.

Introduction

This report, Part II of the National Indian Education Study (NIES), presents the results gathered from questionnaires completed by American Indian and Alaska Native (AI/AN) students at grades 4 and 8, their teachers, and the administrators of the schools that serve them. The findings provide a snapshot of the educational experiences of AI/AN fourth- and eighth-graders.

Context and Purpose

In response to Executive Order 13336 of 2004, the inaugural two-part NIES was conducted in 2005 under the direction of the National Center for Education Statistics (NCES) on behalf of the U.S. Department of Education, Office of Indian Education (OIE). The 2005 NIES reports (Rampey, Lutkus, and Weiner 2006; Stancavage et al. 2006), along with *Status and Trends in the Education of American Indians and Alaska Natives* (Freeman and Fox 2005), marked significant milestones for NCES in reporting the academic achievement and educational experiences of AI/AN students. This current report, along with its companion Part I (which focuses on the performance results of AI/AN students on the NAEP 2007 reading and mathematics assessments), extends the NIES project and its goal of accurately reporting on the education status and progress of American Indian and Alaska Native students.

Concordant with the explicit purpose of the Executive Order,¹ the primary purpose of Part II is to present data related to tribal traditions, languages, and cultures that might affect students' educational attainment. In addition, the NIES reports present findings that are of interest to education researchers and are potentially relevant to the research capacity and collaborative provisions of the Executive Order.²

Collection of Data

The NIES survey administered questionnaires for the following participant groups:

- grade 4 students,
- grade 8 students,
- teachers of the participating students at each grade level, and
- administrators of the schools from which the students were selected.

The survey included questions to measure the extent to which AI/AN students were exposed to native languages and cultures. In addition, a space was provided at the end of each survey for respondents' comments.

For further information about the questionnaires and how they were administered, refer to the Technical Notes of this report. The questionnaires can be viewed online at http://nces.ed.gov/nationsreportcard/nies/nies_2007/n0004.asp.

Participation

The NIES Part II sample was designed to produce information representative of the target population of all fourth- and eighth-grade AI/AN students in the United States. The sample selection for NIES took place in conjunction with the sampling activities for the 2007 NAEP assessments at grades 4 and 8. Sampling proceeded in two stages: first, schools were selected, and then fourth- and eighth-grade students were selected at

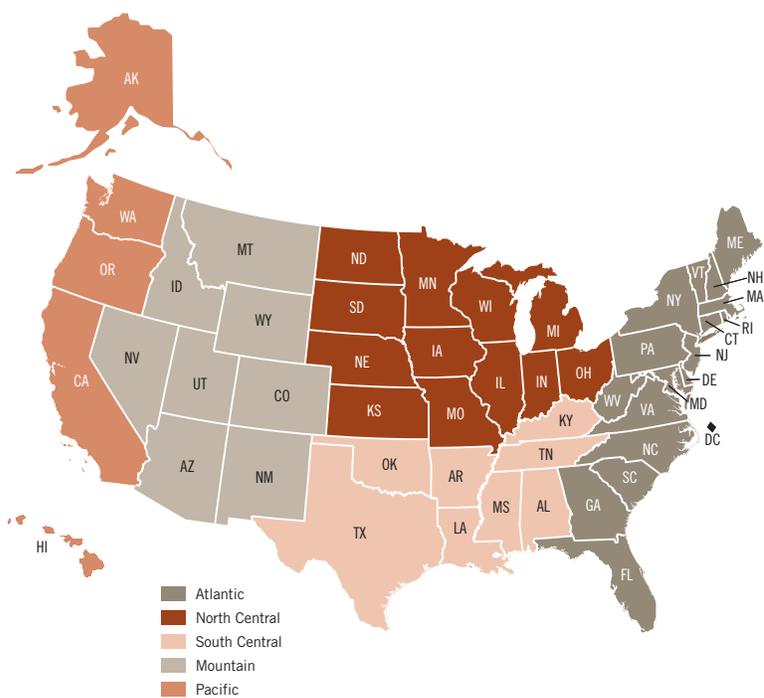
¹ The purpose of this order is to assist American Indian and Alaska Native students in meeting the challenging academic standards of the No Child Left Behind Act of 2001 (Public Law 107-110) in a manner that is consistent with tribal traditions, languages, and cultures.

² Sec. 4. Enhancement of Research Capabilities of Tribal-Level Educational Institutions. The Secretary of Education and the Secretary of the Interior shall consult with the entities set forth in section 2(a) of this order and tribally controlled colleges and universities to seek ways to develop and enhance the capacity of tribal governments, tribal universities and colleges, and schools and educational programs serving American Indian and Alaska Native students and communities to carry out, disseminate, and implement education research, as well as to develop related partnerships or collaborations with non-tribal universities, colleges, and research organizations.

each school. Approximately 41,000 fourth-graders and 49,000 eighth-graders across the United States were identified by official school records as AI/AN; these students comprised the NIES sampling frame.

The NAEP sample included about 13,000 AI/AN students from approximately 1,900 schools at grade 4 and 15,000 AI/AN students from 2,000 schools at grade 8. The three types of schools in the sample were public, private, and Bureau of Indian Education (BIE) schools. The sample consisted of approximately 94 percent public schools, 1 percent private schools, and 5 to 6 percent BIE schools at grades 4 and 8. All BIE schools in the United States were included in this study.

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 attended. The five regions shown on the map below were defined for the NIES study and are based on Census divisions or aggregations of Census divisions.



NIES questionnaires were completed by about 10,000 grade 4 students from 1,700 schools and 11,000 grade 8 students from 1,800 schools (table 1). Also responding to the survey were about 3,000 grade 4 teachers, 4,600 grade 8 teachers, 1,700 grade 4 school administrators, and 1,800 grade 8 school administrators associated with these students. Some school administrators responded for both grade 4 and grade 8.

The weighted school response rates were 88 percent at grade 4 and 90 percent at grade 8. The weighted school response rates by school type were as follows: at fourth grade, 90 percent for public schools and 80 percent for BIE schools; at eighth grade, 91 percent for public schools and 88 percent for BIE schools. Private school results were not reported for either grade 4 or grade 8 due to insufficient sample size.

The weighted student response rates were 85 percent at grade 4 and 82 percent at grade 8. The weighted student response rates by school type were as follows: at fourth grade, 85 percent for public schools and 85 percent for BIE schools; at eighth grade, 82 percent for public schools and 83 percent for BIE schools. Nonresponse bias analyses were conducted because the unrounded student response rates for both grades 4 and 8 failed to meet the NCES standard of 85 percent. These analyses concluded that the potential effect of nonresponse bias on the survey estimates would be very slight. See the Technical Notes for additional information.

Table 1. Number of completed NIES questionnaires, by grade and respondent type: 2007

| Respondent type | Grade 4 | Grade 8 |
|-----------------------|---------|---------|
| Students | 10,000 | 11,000 |
| Teachers | 3,000 | 4,600 |
| School administrators | 1,700 | 1,800 |

NOTE: The numbers of students are rounded to the nearest thousand, and the numbers of teachers and school administrators are rounded to the nearest hundred. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2007 National Indian Education Study.

Presentation of Results

This report presents findings in three major chapters:

- *American Indian and Alaska Native Students* focuses on basic demographic information about AI/AN students, including geographic location, the types of schools they attend, socioeconomic and learning factors, and home support for learning.
- *Teachers and Schools of American Indian and Alaska Native Students* provides information about the teachers and schools that serve AI/AN students, including the racial/ethnic and linguistic backgrounds of teachers, and the characteristics of the schools, including staffing and school climate.

- *Integration of American Indian and Alaska Native Language and Culture* presents survey results showing the extent of students' knowledge of their tribe or group, the use of tribal languages within the home and at school, teachers' integration of culture and language into the classroom, and students' exposure to their AI/AN community and culture.

The data for this report come from the responses to survey questions, and the results are presented as percentages. The unit of analysis is always the student; therefore, the findings are presented as percentages of students. Because the sample was not designed to be representative of teachers or school administrators, the results from the teachers' and schools' survey questions are presented in terms of their students: for example, "The percentage of grade 4 AI/AN students whose teachers speak and understand a native language."

In addition, results are disaggregated by grade (4 or 8) and in some instances by subject (reading/language arts or mathematics) depending upon the specific questionnaire item being discussed.

This report compares the results for AI/AN students attending high density schools (those in which at least 25 percent of the students are AI/AN) with those for students attending low density schools (those in which less than 25 percent of the students are AI/AN), and makes comparisons between the results for AI/AN students attending public and BIE schools.

To provide readers with a broader context, the first two chapters of this report compare results for AI/AN students with those of their non-AI/AN counterparts. These particular comparisons are based on information collected as part of the 2007 NAEP assessments at grades 4 and 8. The reader should note that although questionnaire results are available from the 2005 NIES study, this report does not compare 2007 results to 2005. In 2005, NIES questionnaires were administered to students in a subsample of NAEP schools. The 2005 NIES administration occurred after the NAEP administration window. In 2007, on the other hand, NIES questionnaires were administered during the same time period as NAEP to AI/AN students in all NAEP schools (not just a subsample). Because of these changes and the revision of

many of the questionnaire items between 2005 and 2007, the two years' results are not directly comparable.

Findings are reported based on a statistical significance level set at .05 with appropriate adjustments for multiple comparisons. In the tables and figures of this report, the symbol (*) is used to indicate that one percentage is significantly different from another; that is, the difference is greater than the margin of error.³ Where the text indicates a difference between two percentages (e.g., one percentage is higher or lower than another), that difference is statistically significant. The reader is cautioned to rely on the reported differences in the text and tables rather than on the apparent magnitude of any difference. 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.

Cautions in Interpretation

Although comparisons are made between the results for AI/AN students attending high density and low density schools, for AI/AN students attending public and BIE schools, and for AI/AN and non-AI/AN students, this should not be interpreted as evidence that the density of the AI/AN school population, the school type, or the race/ethnicity of the students 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 NAEP or 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.

This report is based on NIES Part II survey results, not an experimental or quasi-experimental study. The survey information, however, characterizes the extent to which tribal languages and cultures are integrated into the education of AI/AN students. Thus, NIES provides a context for further study and understanding of AI/AN students' educational experiences.

³ All BIE schools serving fourth- and/or eighth-grade students were included in this study; they are census samples. For comparisons between a group within the BIE census and a group in a non-census sample (e.g., the public school sample), single-population *t*-tests are conducted reflecting the fact that only one of the estimates is subject to uncertainty.