

1.1.b Preparation for College

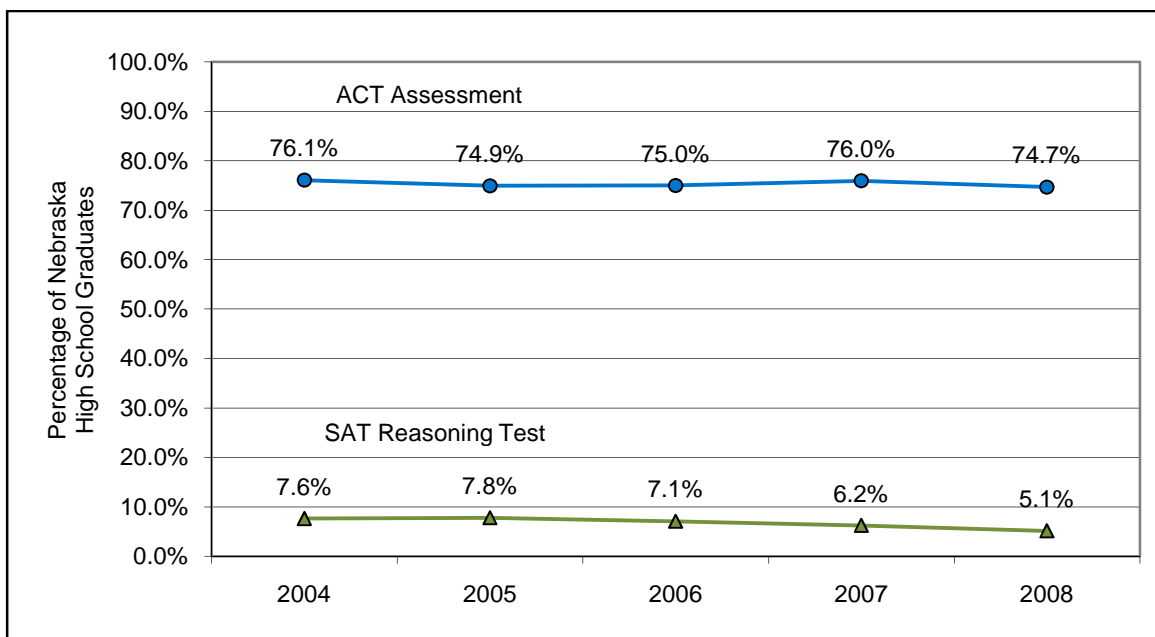
Increase the proportion of Nebraska high school graduates who are adequately prepared to enroll in postsecondary education and proceed through degree completion.

The results of the ACT Assessment and the SAT Reasoning Test™ are summarized in this section as indicators of the extent to which Nebraska high school graduates are prepared academically to enter and proceed through postsecondary education. Of particular interest are (1) the estimated percentages of Nebraska high school graduates who are prepared for college-level coursework and (2) the significantly higher average ACT scores achieved by students who take the “core” high school courses recommended to prepare them for college.

Nebraska Participation Rates for the ACT Assessment and the SAT Reasoning Test

- The ACT Assessment is the predominant college entrance exam available to measure the extent to which Nebraska students are prepared for academic coursework beyond high school. As shown in [Figure 1.1.b.1](#), 74.7% of the Nebraska high school students in the graduating class of 2008 took the ACT Assessment. In comparison, 5.1% of the students took the SAT Reasoning Test.
- As also illustrated in [Figure 1.1.b.1](#), the participation rates for the ACT Assessment and the SAT Reasoning Test were, respectively, 1.4 and 2.5 percentage points lower in 2008 than in 2004, which is the baseline for this annual progress report. (See [Table A4.1](#) in [Appendix 4](#) for supporting data.)

Figure 1.1.b.1
Percentages of Nebraska High School Graduates
Who Took the ACT Assessment and/or the SAT Reasoning Test
2004–2008¹

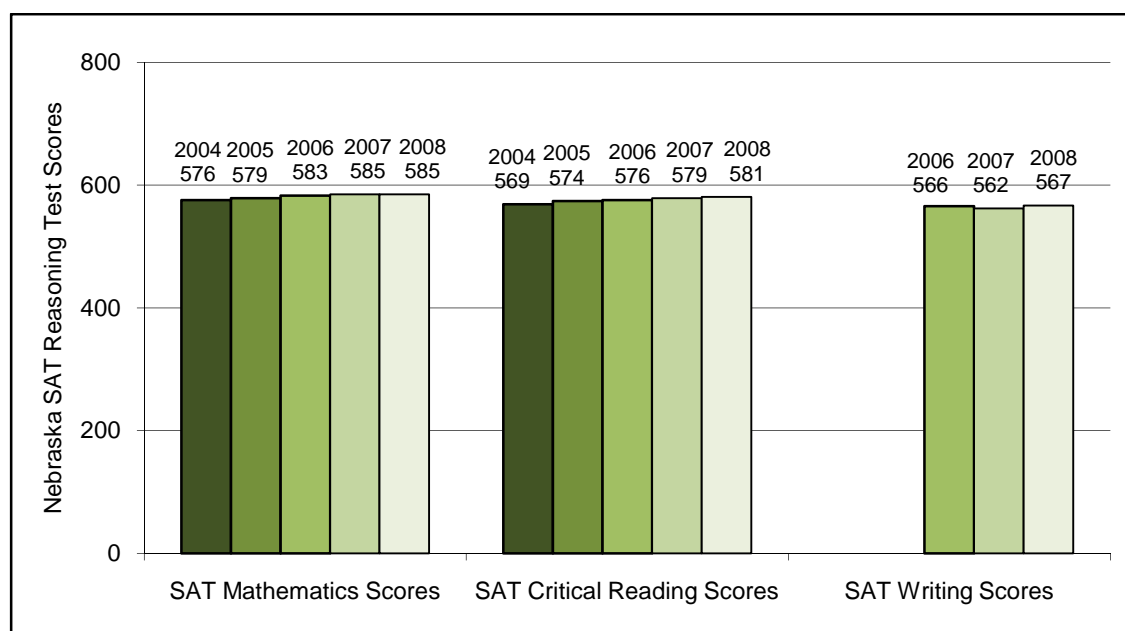


¹Data Sources: ACT, Inc., College Examination Board and the Nebraska Department of Education. See [Table A4.1](#) in [Appendix 4](#) for supporting data.

Nebraska SAT Reasoning Test Scores

- The three components of the SAT Reasoning Test measure achievement in mathematics, critical reading and writing. As shown in [Figure 1.1.b.2](#), the average mathematics and critical reading scores of Nebraska high school students were, respectively, nine and twelve points higher in 2008 than in 2004, which were when the baselines for this report were established. The average score in writing has increased one point since this test component was introduced in 2006.

Figure 1.1.b.2
Nebraska Average SAT Reasoning Test Scores¹
2004–2008



¹Data Source: College Examination Board, State Reports, 2004, 2005, 2006, 2007 and 2008.

- As shown in [Table 1.1.b.1](#), the average math, critical reading and writing scores of Nebraska high school students who took the SAT continued to be well above the national averages in 2008. However, given the relatively small sample of self-selected students who were tested, no conclusions can be drawn based on this finding or the fact that average SAT scores of Nebraska students have increased.

Table 1.1.b.1
National and Nebraska Average SAT Reasoning Test Scores¹
2002–2008

Year	Mathematics Scores		Critical Reading Scores		Writing Scores	
	National Average	Nebraska Average	National Average	Nebraska Average	National Average	Nebraska Average
2004	518	576	508	569	Not applicable	
2005	520	579	508	574	Not applicable	
2006	518	583	503	576	497	566
2007	515	585	502	579	494	562
2008	515	585	502	581	494	567

¹Data Source: College Examination Board, State Reports, 2004–2008.

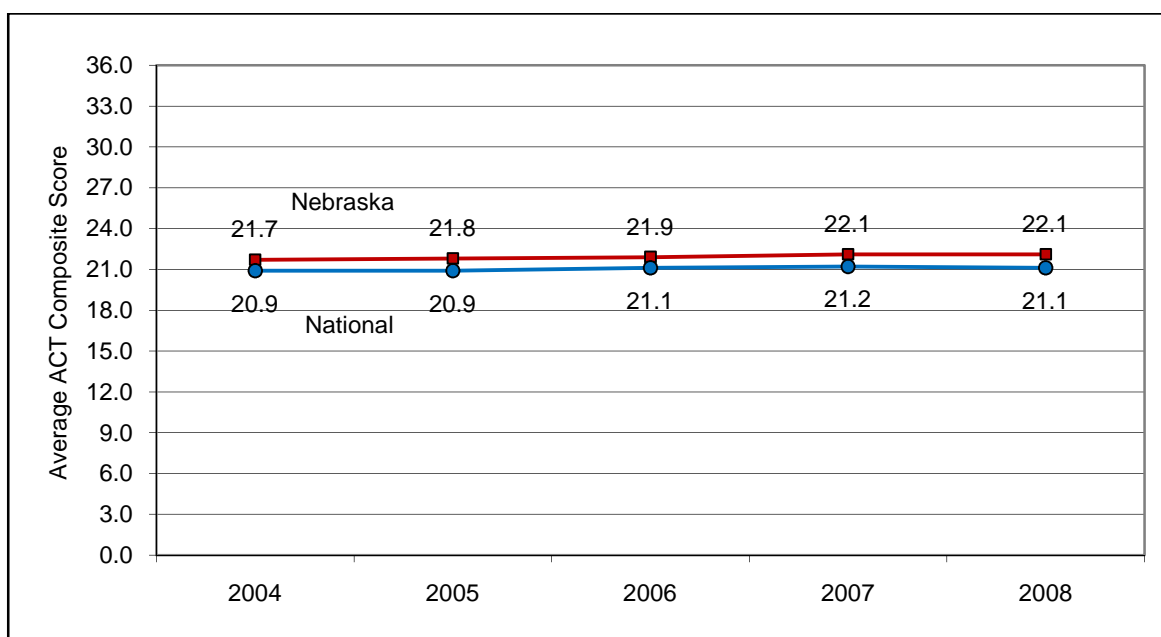
Nebraska ACT Assessment Scores

The ACT Assessment consists of four curriculum-based achievement tests in English, reading, mathematics and science. A student's scores on each of these tests is reported on a 36-point scale. A composite score is reported on a 36-point scale to reflect the student's overall performance on the series of four tests.

- As shown in [Figure 1.1.b.3](#), the average ACT composite score for Nebraska high school students in the graduating class of 2008 was 22.1, up from 21.7 in 2004, which is the baseline for this report.
- As also shown in the figure below, Nebraska's average composite score continued to be above the national average for the graduating class of 2008.
- Based on information from ACT, Inc., Nebraska had the highest average composite score among the 15 states where 70% or more of the 2008 high school graduates took the ACT Assessment. However, direct state-to-state comparisons are generally not advisable.¹

Figure 1.1.b.3

Comparison of Nebraska and National Average ACT Composite Scores for the High School Graduating Classes of 2004–2008¹

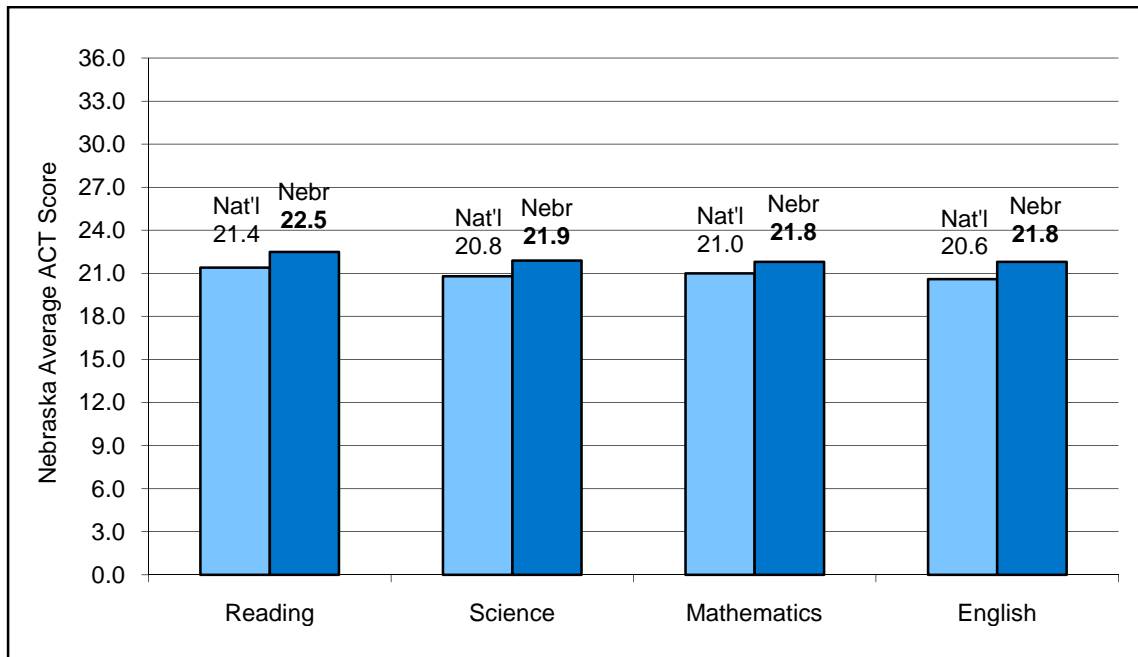


¹Data Source: ACT High School Profile Reports for Nebraska, 2004–2008.

¹The ACT Assessment is administered in all 50 states, and it is the predominant college entrance exam taken in about 25 states. Nationally, 1,421,941 (or about 43%) of the students in the high school graduating class of 2008 took the ACT Assessment. Each year, average ACT scores are reported for every state, but state-to-state comparisons are not advisable for several reasons. Currently, Colorado, Illinois and Michigan are the only states where the ACT Assessment is administered to all students who will graduate from high school. In all other states, the students who take the ACT are self-selected and, as a result, do not necessarily represent the total student populations of their states. Furthermore, the percentages of students who take the ACT vary greatly from one state to another, as do other factors that affect student achievement, such as the quality of school systems and the demographic and socio-economic characteristics of students and their families. For these reasons, specific state-to-state comparisons are not included in this report.

- Figure 1.1.b.4 shows that Nebraska students in the 2008 graduating class scored above the national average on each of the subject-area tests that constitute the ACT Assessment.
- Following the national trend, the average ACT scores of Nebraska's high school graduates were slightly higher in reading than in science, mathematics and English.

Figure 1.1.b.4
Comparison of National and Nebraska Average ACT Scores
in Reading, Science, Mathematics and English
for the Graduating Class of 2008¹



¹Data Source: ACT High School Profile Report for Nebraska, 2008

ACT College Readiness Benchmark Scores

Based on research conducted by ACT, Inc., students are prepared to succeed in entry-level college courses if their scores on the ACT Assessment meet or exceed ACT College Readiness Benchmark Scores. A *benchmark score is the minimum score needed on an ACT subject-matter test to indicate that a student has a 50% chance of earning a B or higher or about a 75% chance of earning a C or higher in related entry-level, credit-bearing college courses.* Corresponding to the subject-matter tests that constitute the ACT Assessment, these courses include freshmen English composition, college algebra, college biology and first-year college courses in the social sciences. For each college course or subject area, the ACT subject-area test and College Readiness Benchmark Score are:

<u>College Course or Area</u>	<u>ACT Subject-Area Test</u>	<u>College Readiness Benchmark Score¹</u>
English Composition	English	18
Social Science	Reading	21
Algebra	Mathematics	22
Biology	Science	24

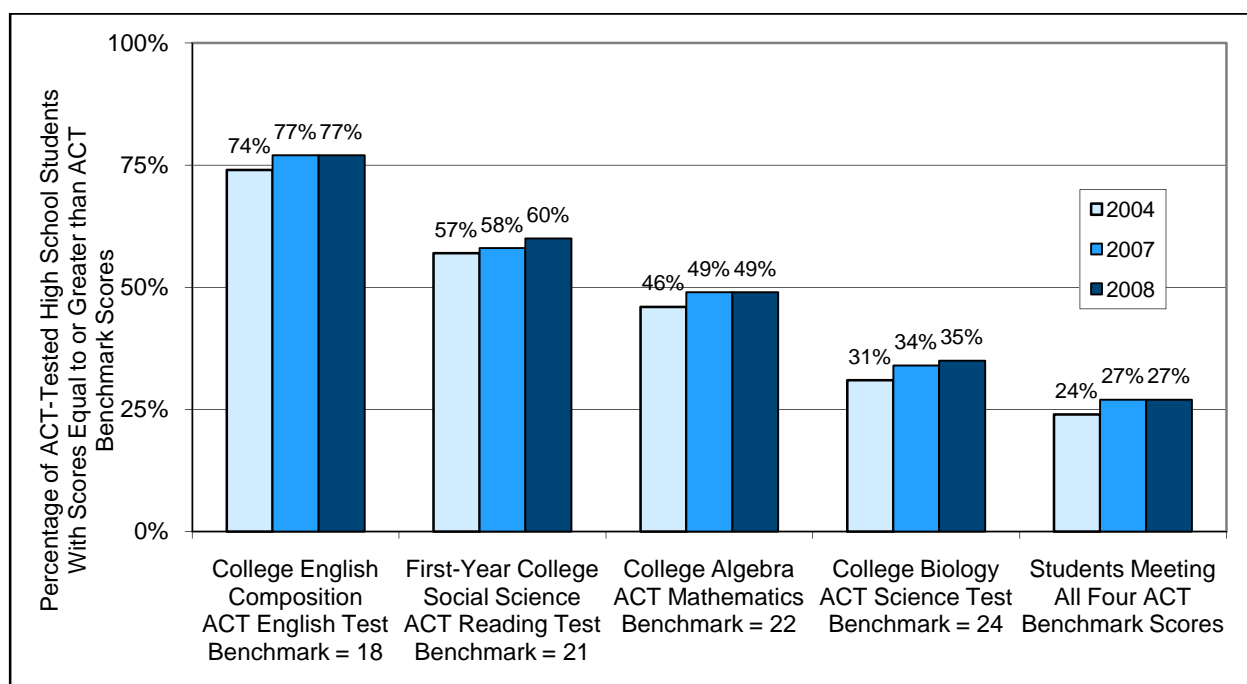
¹Source: ACT High School Profile Report for Nebraska, 2008.

Percentages of Nebraska ACT-Tested Students Ready for College-Level Coursework

- Based on the data summarized in [Figure 1.1.b.5](#), 77% of the ACT-tested Nebraska high school graduates in 2008 met or exceeded the College Readiness Benchmark Score of 18 on the ACT English test, indicating that there is a relatively high probability that these students will earn at least a C in college-level English composition courses.
- In comparison, 60% met or exceeded the College Readiness Benchmark Score of 21 on the reading test, indicating probable success in entry-level social science courses; 49% met or exceeded the mathematics benchmark score of 22 for college algebra; and only 35% met or exceeded the science benchmark score of 24 for college-level biology.
- Between 2004 and 2008, the percentages of Nebraska students who met or exceeded ACT College Readiness Benchmarks on the English, reading, mathematics and science tests increased by three percentage points.

Figure 1.1.b.5

Percentages of ACT-Tested Students Meeting ACT College Readiness Benchmarks That Indicate Sufficient Preparation for College-Level Courses. Nebraska High School Graduating Classes: 2007 & 2008 Compared to 2004 Baseline¹



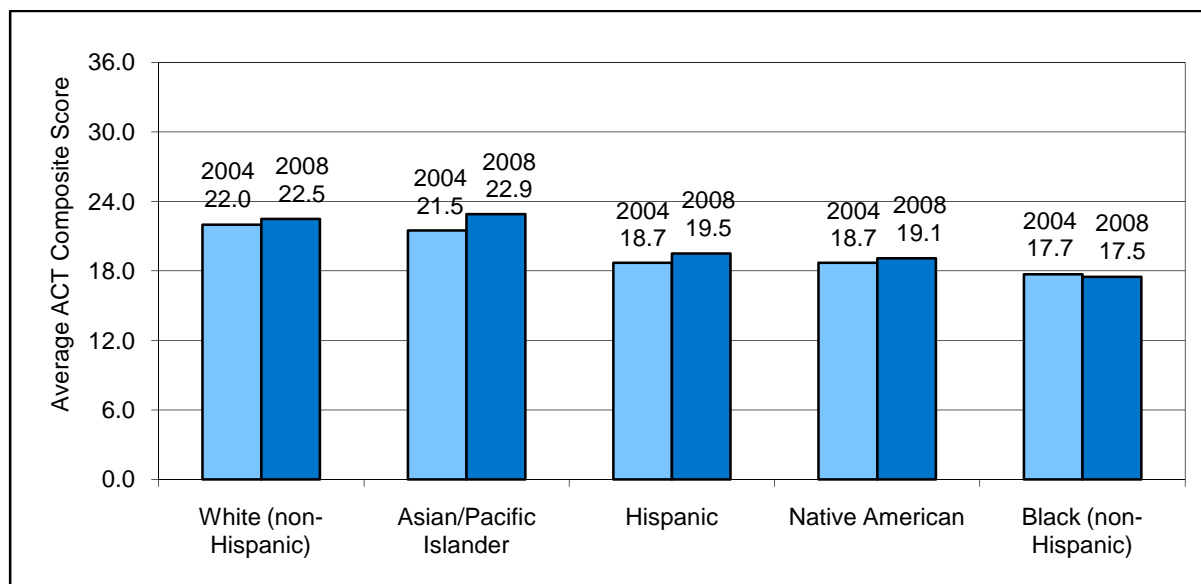
¹Source: ACT High School Profile Report for Nebraska, 2008. A benchmark score is the minimum score needed on an ACT subject-matter test to indicate that the student has a 50% chance of earning a B or higher or about a 75% chance of earning a C or higher in corresponding entry-level, credit-bearing college courses.

- Additional data reveals that the percentages of Nebraska students who met or exceeded ACT College Readiness Benchmarks were six to nine percentage points higher than reported national percentages for 2008. (See [Table A4.2](#) in [Appendix 4](#) for supporting data.)
- However, as shown in [Figure 1.1.b.5](#) above, **only 27% of Nebraska's high school graduates in the class of 2007 or the class of 2008 met or exceeded the ACT College Readiness Benchmarks in all four subject areas included in the ACT Assessment.**

ACT Composite Scores and College Readiness Percentages by Race/Ethnicity

- Average ACT composite scores and the percentages of students who meet or exceed ACT College Readiness Benchmark Scores vary significantly by race/ethnicity.
- As shown in [Figure 1.1.b.6](#), the average composite scores for Hispanics, Native Americans and black non-Hispanics who graduated from Nebraska high schools in 2004 or 2008 were lower than the average composite scores of their white non-Hispanic and Asian/Pacific Islander classmates.
- [Figure 1.1.b.6](#) also shows that the average composite scores of Asians/Pacific Islanders increased by almost one and one-half points between 2004 and 2008. The average scores of white non-Hispanics, Hispanics and Native Americans also increased by four- to eight-tenths of a point. However, the average composite score for black non-Hispanics was two-tenths of a point lower in 2008 than it was in 2004.

Figure 1.1.b.6
Nebraska Average ACT Composite Scores by Race/Ethnicity
2008 Compared to 2004 Baseline¹



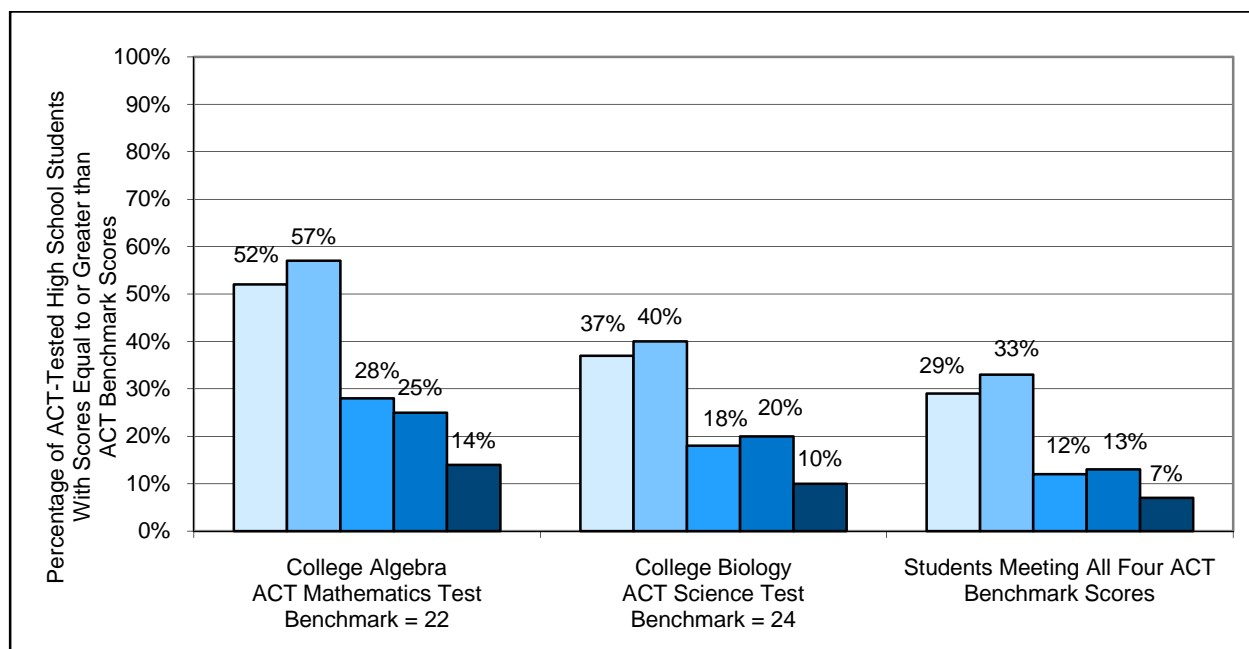
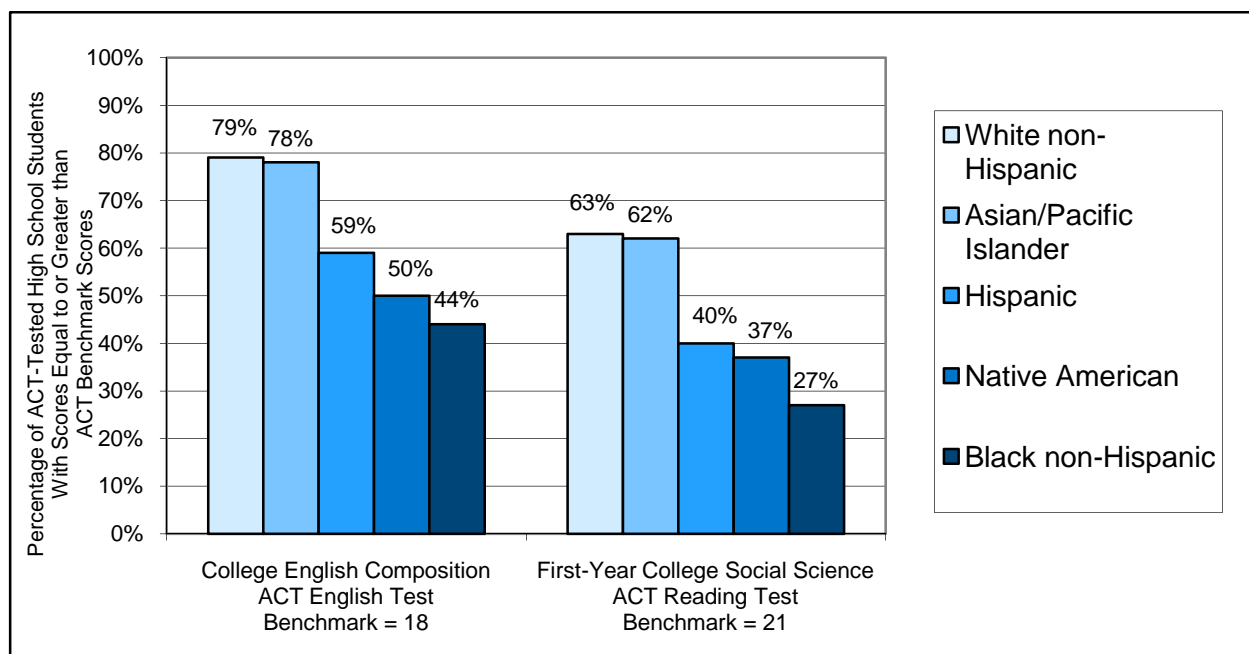
¹Source: ACT High School Profile Report for Nebraska, 2008.

- Based on the data for the graduating class of 2008 summarized in [Figure 1.1.b.7](#) on the next page, significantly lower percentages of Hispanics, Native Americans and black non-Hispanics are sufficiently prepared for college-level coursework, compared to their white or Asian/Pacific Islander classmates.
- For example, only 28% of the ACT-tested Hispanics in the class of 2008 met or exceeded the ACT College Readiness Benchmark Score in mathematics, indicating that they were sufficiently prepared to earn at least a C in college algebra, compared to 52% of the white students and 57% of the Asian/Pacific Islander students. Similarly, only 25% of the ACT-tested Native Americans and 14% of the black non-Hispanics met or exceeded the benchmark score in mathematics.
- As shown on the next page, the same pattern of percentages is evidenced for the ACT tests in English, reading, mathematics and science, even though the percentages of students who met or exceeded the ACT College Readiness Benchmarks vary by subject matter area.

- In addition, the following chart shows that only 12% of Hispanics, 13% of Native Americans and 7% of blacks in the graduating class of 2008 met or exceeded the ACT College Readiness Benchmarks for all four subject-matter tests.

Figure 1.1.b.7

Percentages of ACT-Tested High School Students in the Graduating Class of 2008 Who Met or Exceeded ACT College Readiness Benchmark Scores That Indicate Sufficient Preparation for College-Level Courses by Race/Ethnicity¹



¹Source: ACT High School Profile Report for Nebraska, 2008. A benchmark score is the minimum score needed on an ACT subject-matter test to indicate that the student has a 50% chance of earning a B or higher or about a 75% chance of earning a C or higher in corresponding entry-level, credit-bearing college courses.

The Importance of the ACT-Recommended High School Core Curriculum

ACT, Inc. defines the core, college-preparatory high school curriculum (or what is simply called “the core”) as consisting of four years of English and three or more years each of social studies, science, and mathematics (beginning with Algebra I). Specifically, the core is defined as consisting of the following courses:

- 4 years of English (English 9, English 10, English 11, and English 12)
- 3 years of Math (selected from Algebra I, Algebra II, Geometry, Trigonometry, and Calculus)
- 3 years of Social Sciences (selected from American History, World History, American Government, Economics, Geography, and Psychology)
- 3 years or more of Natural Sciences (selected from General/Physical/Earth Science, Biology, Chemistry, and Physics)

When students register to take the ACT Assessment, they are asked to report the courses they have taken or plan to take before they graduate from high school. Based on the combinations of courses that students report they have taken or plan to take, ACT, Inc. conducts research to determine how taking the core—or more than the core—is related to scores on the ACT Assessment and academic achievement in college.

- The research conducted by ACT, Inc. has repeatedly confirmed that students who complete the high school core generally score higher on the ACT Assessment and are more likely to successfully progress through postsecondary education programs than students who do not complete the core courses recommended for students preparing to go to college.
- Furthermore, recent research conducted by ACT, Inc. indicates that students who take rigorous courses beyond the recommended minimum number of core courses are even more likely to be ready for college than students who take the minimum core. This research also indicates that students whose coursework beyond the core includes advanced courses in mathematics, such as trigonometry or calculus, as well as courses in biology, chemistry and physics, are the likeliest of all high school students to be ready for college-level coursework.¹

Consequently, it is important to monitor the average ACT composite scores of students who report that they completed the core—or more than the core—compared to the scores of students who report taking less than the minimum core courses.

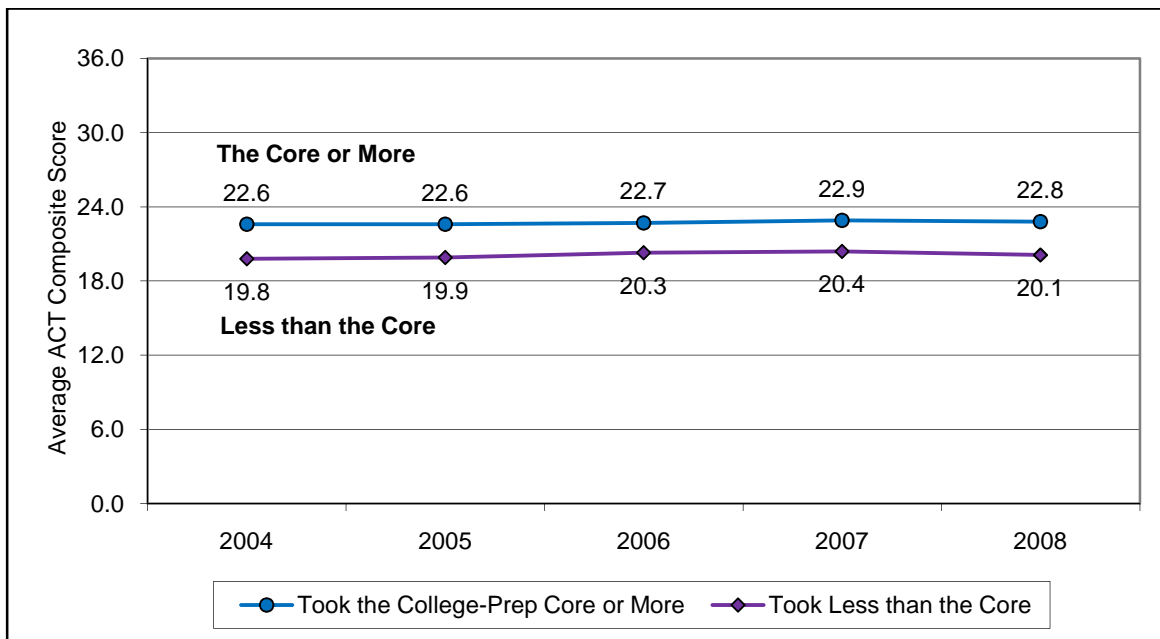
Nebraska ACT Composite Scores of Students Who Take the ACT-Recommended Core and Students Who Take Less than the Core Curriculum

- As shown in Figure 1.1.b.8 on the next page, Nebraska students who have taken or plan to take the core college preparatory courses—or more than the core—in high school have consistently scored higher on the ACT than the students who have completed or plan to complete less than the minimum core.
- Of the ACT-tested students in the class of 2008, those who took the core or more had an average composite score of 22.8 compared to an average score of 20.1 for the students who reported that they took courses that did not meet the minimum core requirements.

¹Executive Summary, *Crisis at the Core: Preparing All Students for College and Work*, ACT, Inc., 2005, page 3.

- As also evidenced in [Figure 1.1.b.8](#), the average ACT composite score for the students who took the core or more increased by three-tenths of a point between 2004 and 2007, whereas the average score for students who took less than the core increased by six-tenths of a point. The reports provided by ACT do not explain why the average ACT composite score of Nebraska students who have taken less than the core has improved to a slightly greater degree than the average composite score of students who have completed the core or more.
- The data summarized in [Figure 1.1.b.8](#) provides strong evidence that taking the college-preparatory curriculum continues to have a positive effect on ACT composite scores and improves a student’s chances for achieving academic success in college-level courses.
- Furthermore, as shown in [Figure 1.1.b.9](#) on the next page, the average ACT composite score is higher for students who complete the core than for students who take less than the core, regardless of race/ethnicity. Note: In Nebraska, high school graduation requirements are set by each school district individually and may or may not include “the core” as defined by ACT, Inc.

Figure 1.1.b.8
Nebraska Average ACT Composite Scores of Students Who Took
the College-Preparatory Core and Students Who Took Less than the Core
2004–2008¹



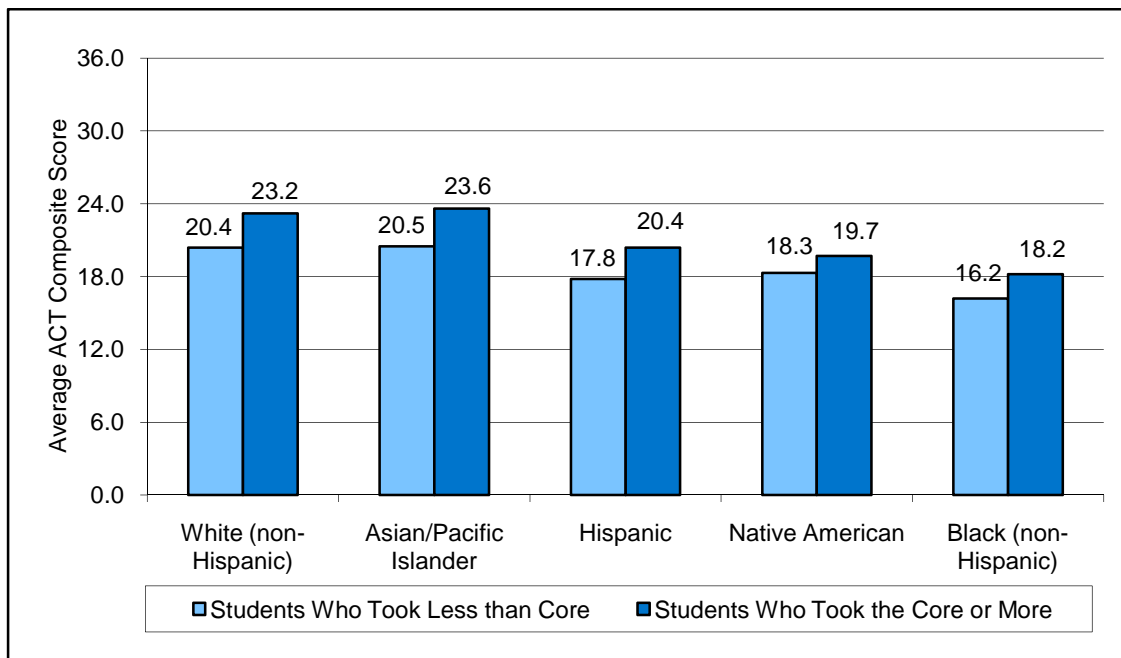
¹Data Source: ACT High School Profile Reports for Nebraska, 2004–2008. ACT, Inc. defines the core college-preparatory high school curriculum (or what is simply called “the core”) as consisting of four years of English and three or more years each of social studies, science, and mathematics (beginning with Algebra I).

- Taking “the core or more” helps students of every race/ethnicity.

Within each of the five racial/ethnic groups, the average ACT composite score was higher for the students in the graduating class of 2008 who took the college-preparatory core than the average score for students who took less than the core, as illustrated in [Figure 1.1.b.9](#).

Figure 1.1.b.9

2008 Nebraska ACT Composite Scores for Students Who Took the College-Preparatory Core or More and Students Who Took Less than the Core by Race/Ethnicity¹



¹Data Source: ACT High School Profile Report for Nebraska, 2008. Numbers of students tested: White (non-Hispanic) 12,839, Asian/Pacific Islander 292, Hispanic 585, Native American 96, black (non-Hispanic) 508.

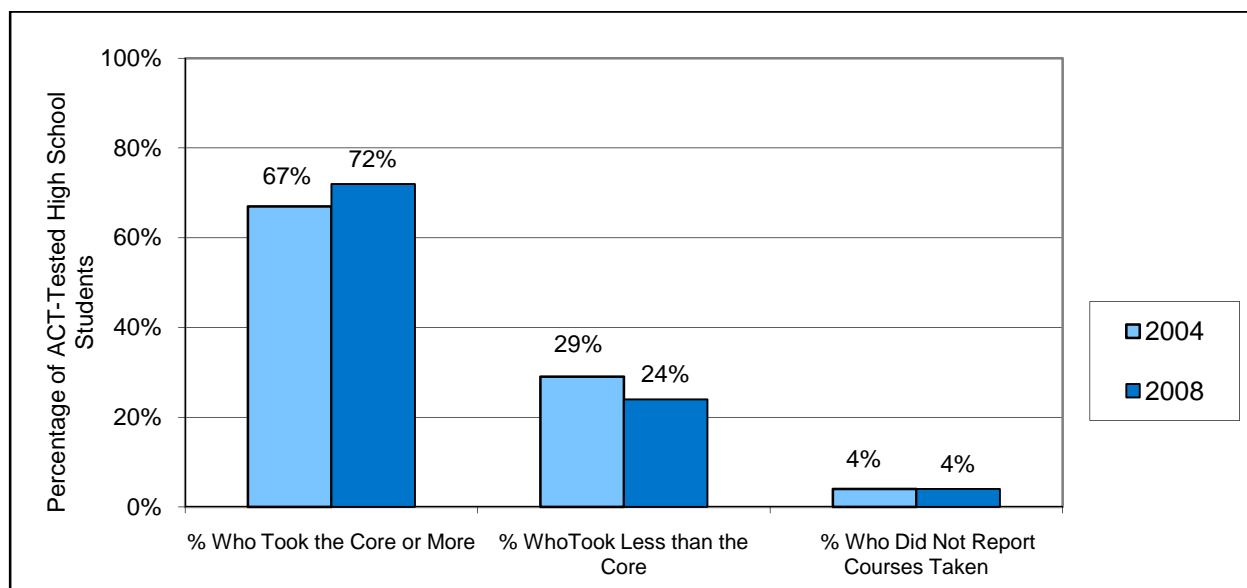
The Percentage of Nebraska ACT-Tested Students Who Take the Core or More

As mentioned earlier in this section, the students themselves report the courses they have taken and plan to take before they graduate from high school when they register for the ACT Assessment. Self reporting may make the data less accurate and/or reliable. The percentage of ACT-tested students who reported the courses they took or planned to take in high school significantly decreased from 96% in 2004 to 87% in 2007, making it difficult to interpret the percentages of students who took the core or more or who took less than the core curriculum. However, in 2008, 96% of the Nebraska students reported the courses they took or planned to take before graduation. As a result, it is possible to directly compare the percentage of students in the class of 2008 who took the core or more to the percentage of 2004 high school graduates who took the core or more.

- A direct comparison of 2004 and 2008 percentages indicates that the percentage of high school students who take the core or more noticeably increased over the past five years. As shown in [Figure 1.1.b.10](#) on the following page, the percentage of students who have reported that they took the core or more was five percentage points higher in 2008 than in 2004. Conversely, the percentage of students who said that they took less than the core was five percentage points lower.

Figure 1.1.b.10

**Percentages of Nebraska's ACT-Tested Students Who Reported
the Courses They Had Taken or Expected to Take
Before They Graduated from High School
2008 Compared to 2004 Baseline¹**

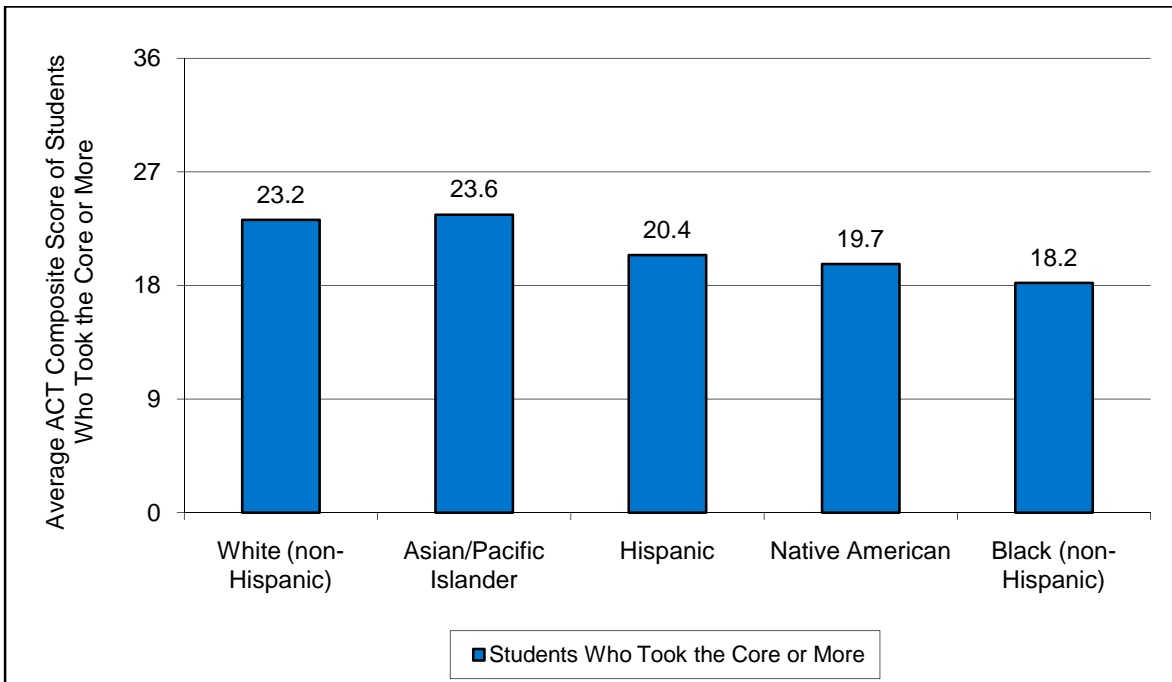
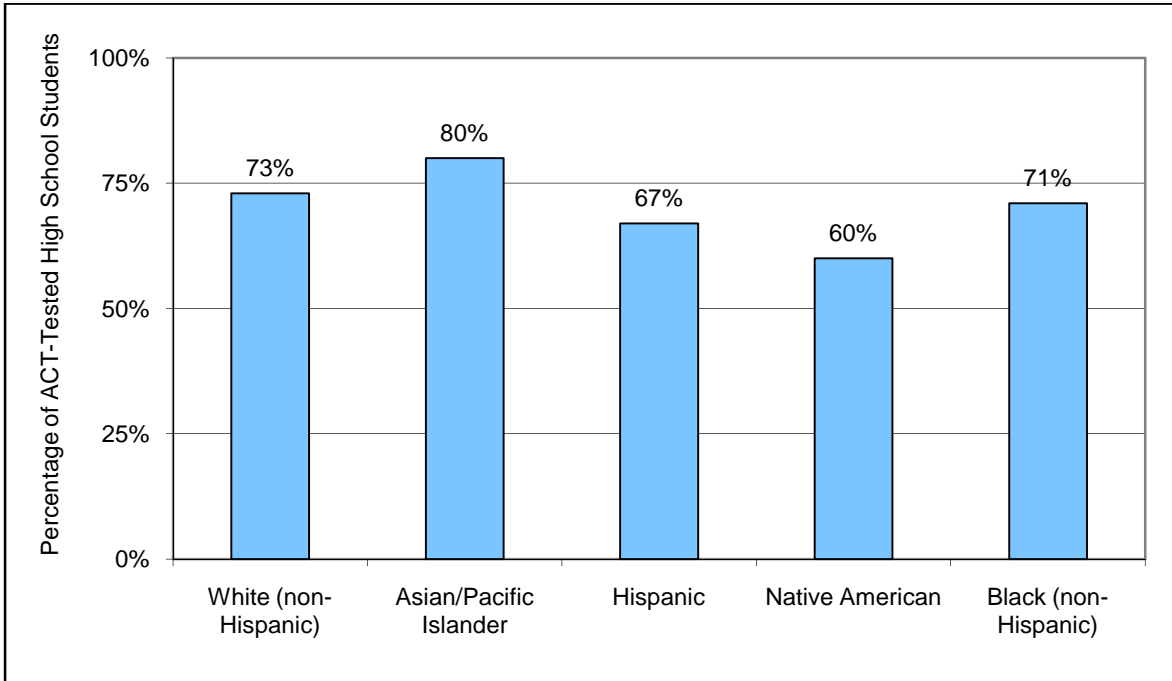


¹Data Source: ACT High School Profile Report for Nebraska, 2007. See [Table A4.3](#) in [Appendix 4](#) for supporting data.

- Other data for the Nebraska high school class of 2008, summarized in [Figure 1.1.b.11](#) on the next page, show that there is a strong, direct relationship between the percentage of students who take the core or more and average ACT composite when racial/ethnic groups are compared, except in the case of the black non-Hispanic students.
- For white non-Hispanics, Asian/Pacific Islanders, Hispanics and Native Americans, the higher the percentage of students who took the core or more, the higher the average composite score for the racial/ethnic group.
- On the other hand, a higher percentage of black non-Hispanics reported taking the core or more than did the students in three of the four other racial/ethnic groups, but the average ACT composite for black non-Hispanics was the lowest reported for the five racial/ethnic groups. There is no explanation for this finding, but it is most likely due to self reporting errors in the data collection process.

Figure 1.1.b.11

Percentage of Nebraska ACT-Tested Students in the Graduating Class of 2008 Who Took the College-Preparatory Core or More Compared to the Average ACT Composite Score of Students Who Took the Core or More by Race/Ethnicity¹



¹Data Source: ACT High School Profile Report for Nebraska, 2008. Numbers of students tested: White (non-Hispanic) 13,788, Asian/Pacific Islander 323, Hispanic 712, Native American 124, black (non-Hispanic) 575, no information on race/ethnicity 1,051.