

Washington State Board of Education

Transcript Analysis



Purpose

- The purpose of this study is to provide an analysis of transcript information that will enable the SBE to generalize about the course-taking patterns of Washington State high school students.

Sampling Procedure

- Stratified Random Sample
 - Districts were selected based on total enrollment for each county in Washington State.
 - All 39 counties had at least one district selected.
 - To ensure variance, we selected districts with higher math and science requirements, because there are fewer in the state.
 - Districts requiring the minimum number of math and science credits were then selected using a random number array.
 - We did not include schools OSPI identified as home-based schools, learning centers, special education schools, technical skills centers, parent partnership schools, night schools, and schools located in justice centers.
 - After eliminating these schools from the list, we selected high schools using a random number array.
 - 96 schools from the original sample participated; 4 schools were added as replacements.

Sampling Procedure

	Entire Population* (n = 504)	Sample (n = 100)
Enrollment	637 (5-3142)	790 (26-3142)
Free/Reduced Lunch	35%	34%
Amer Ind/Ala Native	3%	3%
Asian	8%	5%
Black	6%	4%
Hispanic	14%	13%
White	68%	75%

Transcript Collection

- Researchers collected transcripts from the 100 high schools for the 2008 graduating seniors.
 - Sent a letter from the SBE describing the purpose of the study
 - Followed up with contact to principals
 - Offered assistance and/or a stipend to complete request
 - Promised a report to the district and high school about school-level results

Transcript Analysis

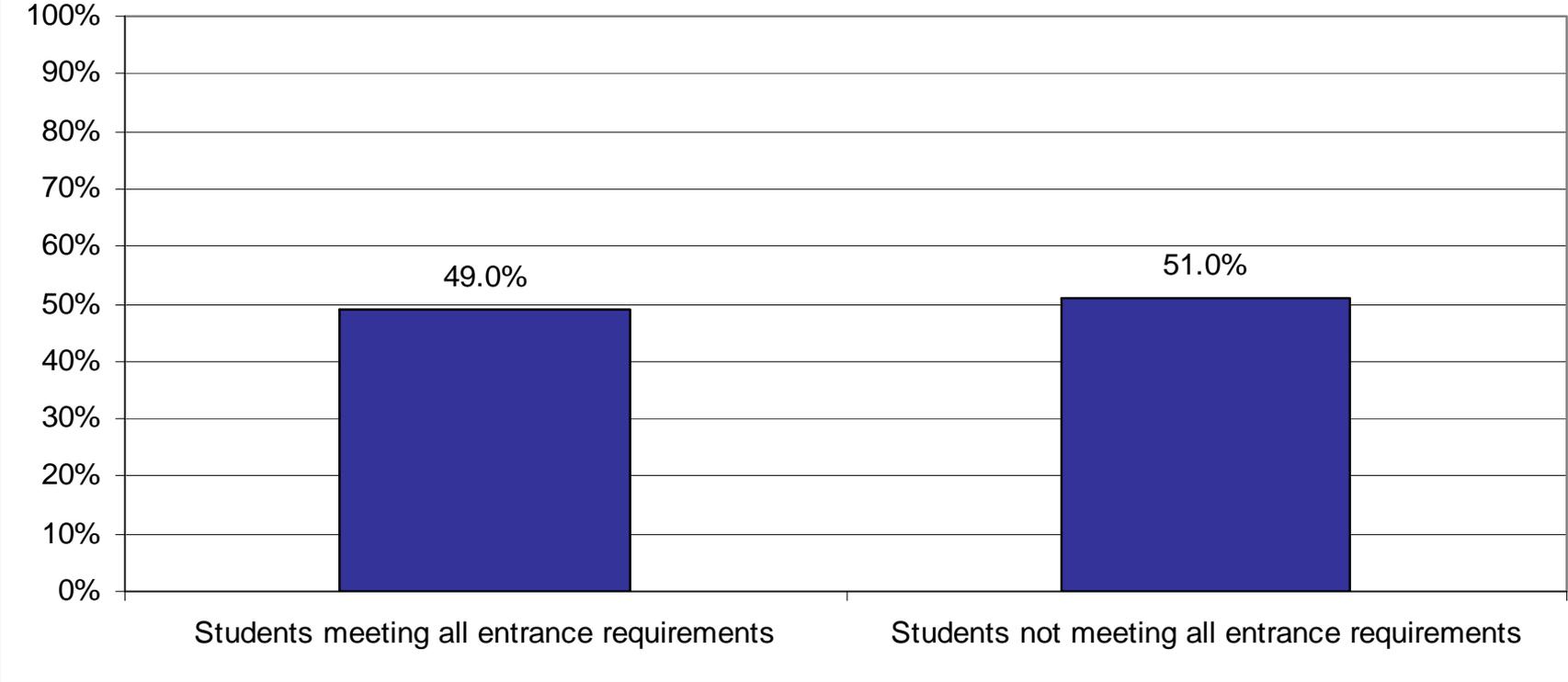
- Transcripts (n = 9587) were coded and analyzed to determine the percentage of students at each school meeting or exceeding minimum HEC Board college entrance requirements:
 - 4 years of English, which must include three years of literature
 - 3 years of mathematics, which must include an introduction to trigonometry - usually advanced algebra or integrated mathematics III satisfies this requirement
 - 3 years of social studies
 - 2 years of science, which must include at least one year of laboratory science
 - 2 years of foreign language
 - 1 year of fine arts
- Additional coding was added to answer all the questions posed by the SBE.

Literature Review

- Studies point to the positive association between advanced course-taking and improved academic achievement (Chaney, Burgdorf & Atash, 1997; Meyer 1998; Bottoms & Feagin, 2003; Council of Great City Schools, 2003).
- Students taking more advanced math courses were found to be attending college and earning degrees at the same rate, regardless of race or socioeconomic status (Adelman, 2006; Stern & Pavelchek, 2006).
- Algebra in particular is the “gate-keeper” for student access to the upper level high school math and science courses, which are drivers of college readiness and completion (Evan, Gray & Olchefske, 2006).

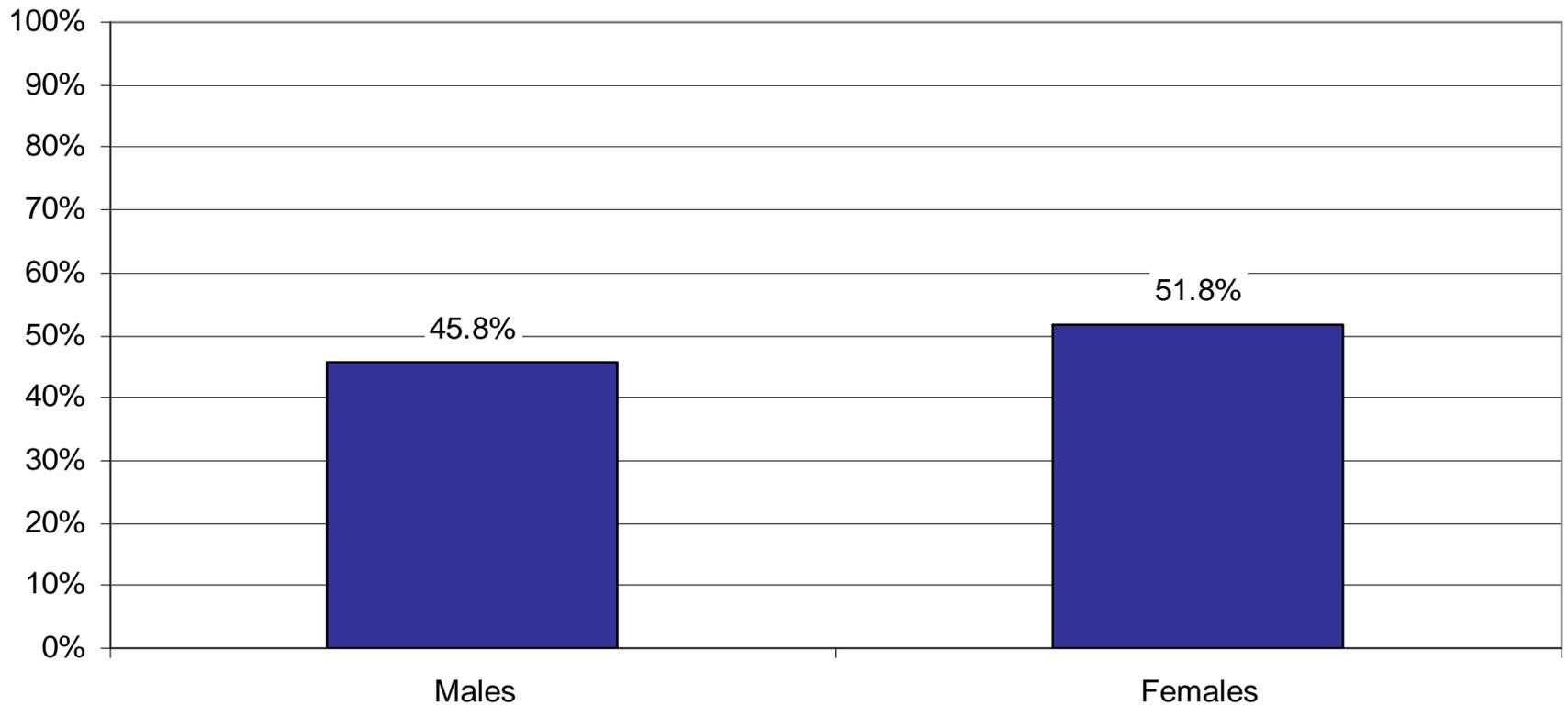
Research Question #1

Percent of Washington students taking courses that meet the minimum, public four-year Washington college admissions standards



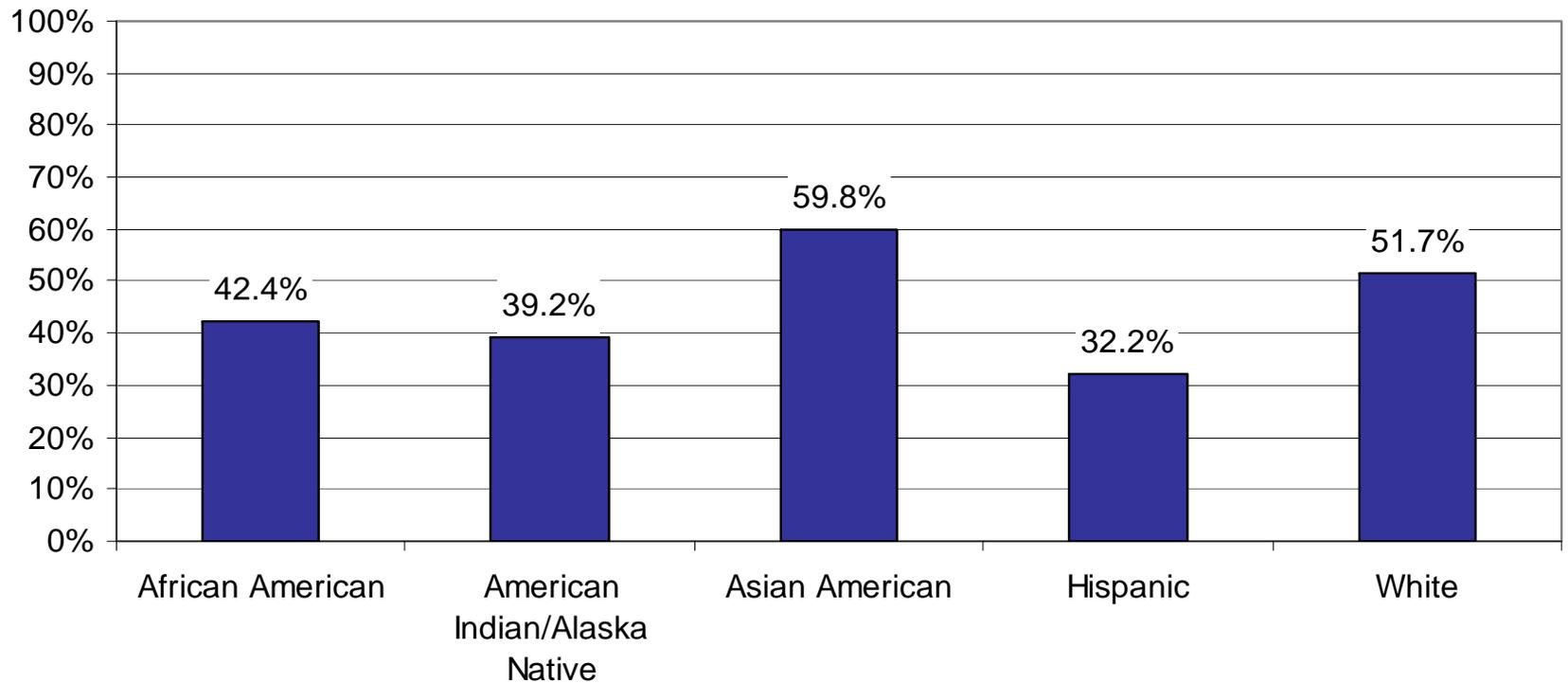
Research Question #1

Percent of Washington students taking courses that meet the minimum, public four-year Washington college admissions standards by gender



Research Question #1

Percent of Washington students taking courses that meet the minimum, public four-year Washington college admissions standards by ethnicity

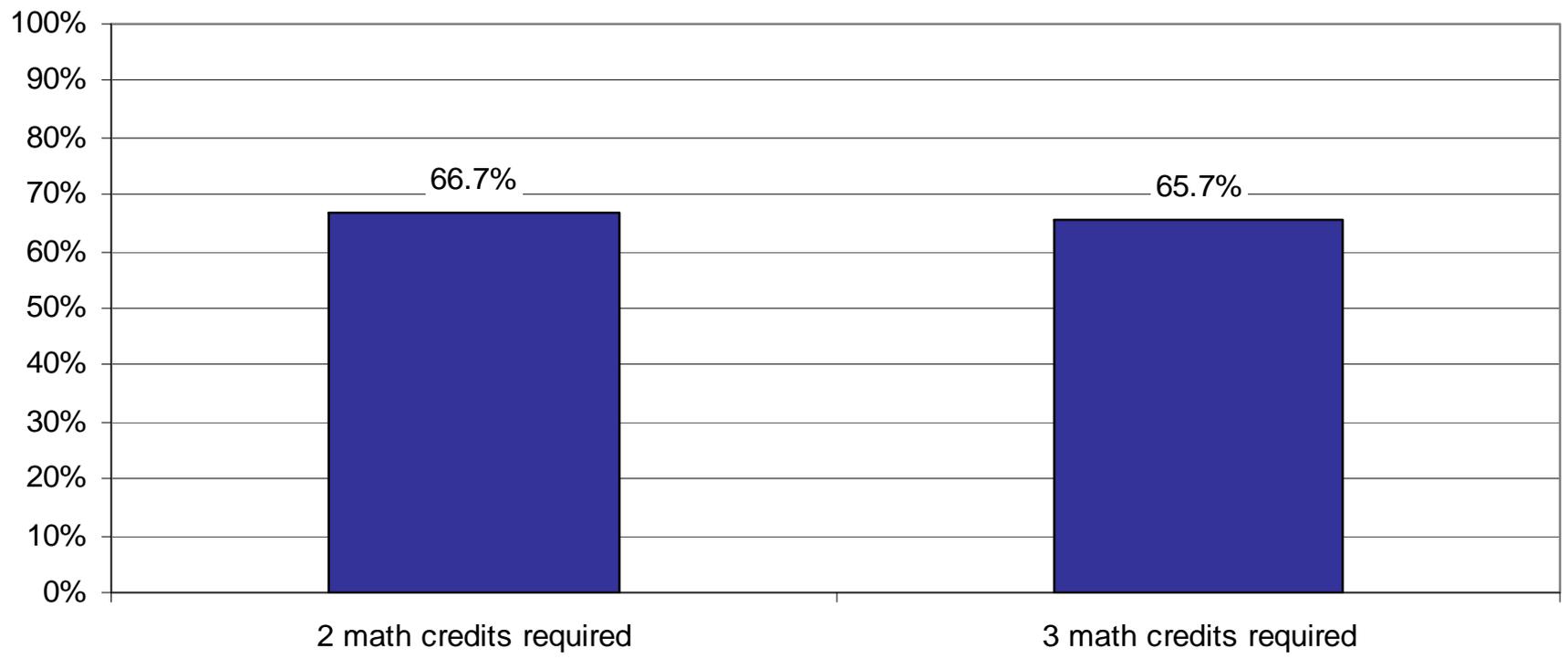


Research Question 1A and 1B

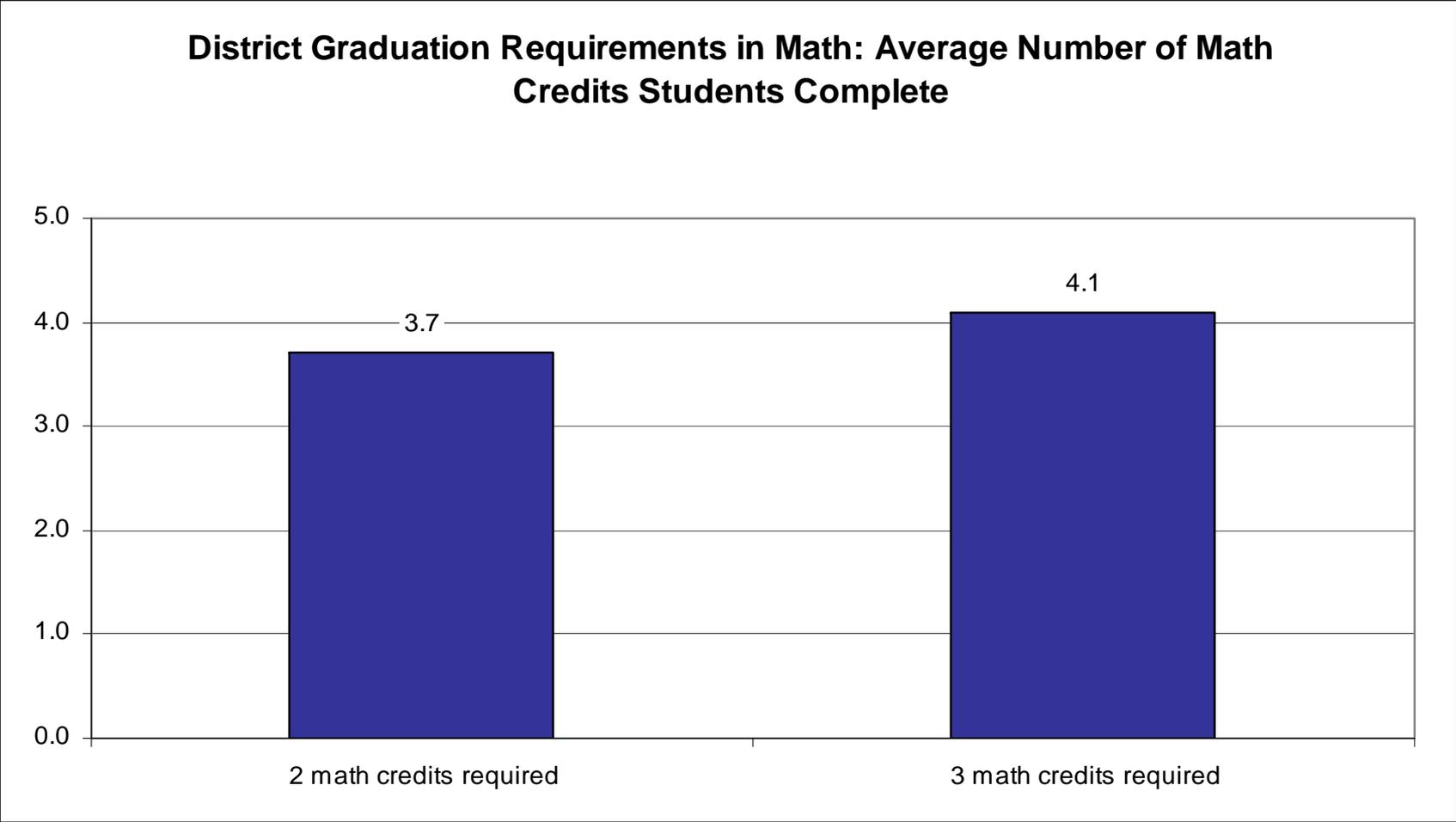
- What is the relationship between districts that require more than the state minimum requirements in math and science, and the number of students who take courses that meet the minimum, public four-year Washington college admissions standards?
- Relationship between districts that require only the state minimum requirements in math and science.
- *Controlling for poverty, there is no significant difference in college eligibility rates between districts that require the State minimum graduation requirements and those that require more math and science beyond the minimum requirements.*

Research Question 1A and 1B

District Graduation Requirements in Math: Percent of Students who Meet the Minimum, Public Four-Year Washington College Admissions Standards in Math

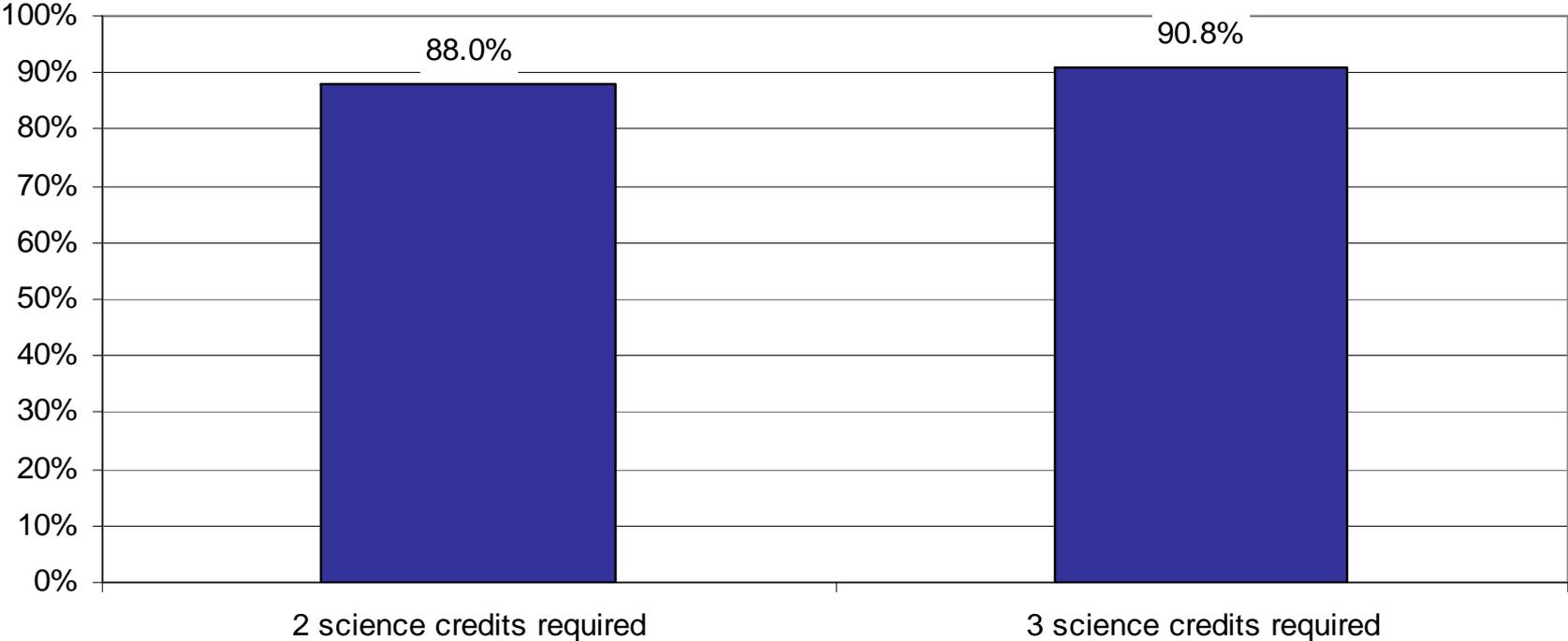


Research Question 1A and 1B

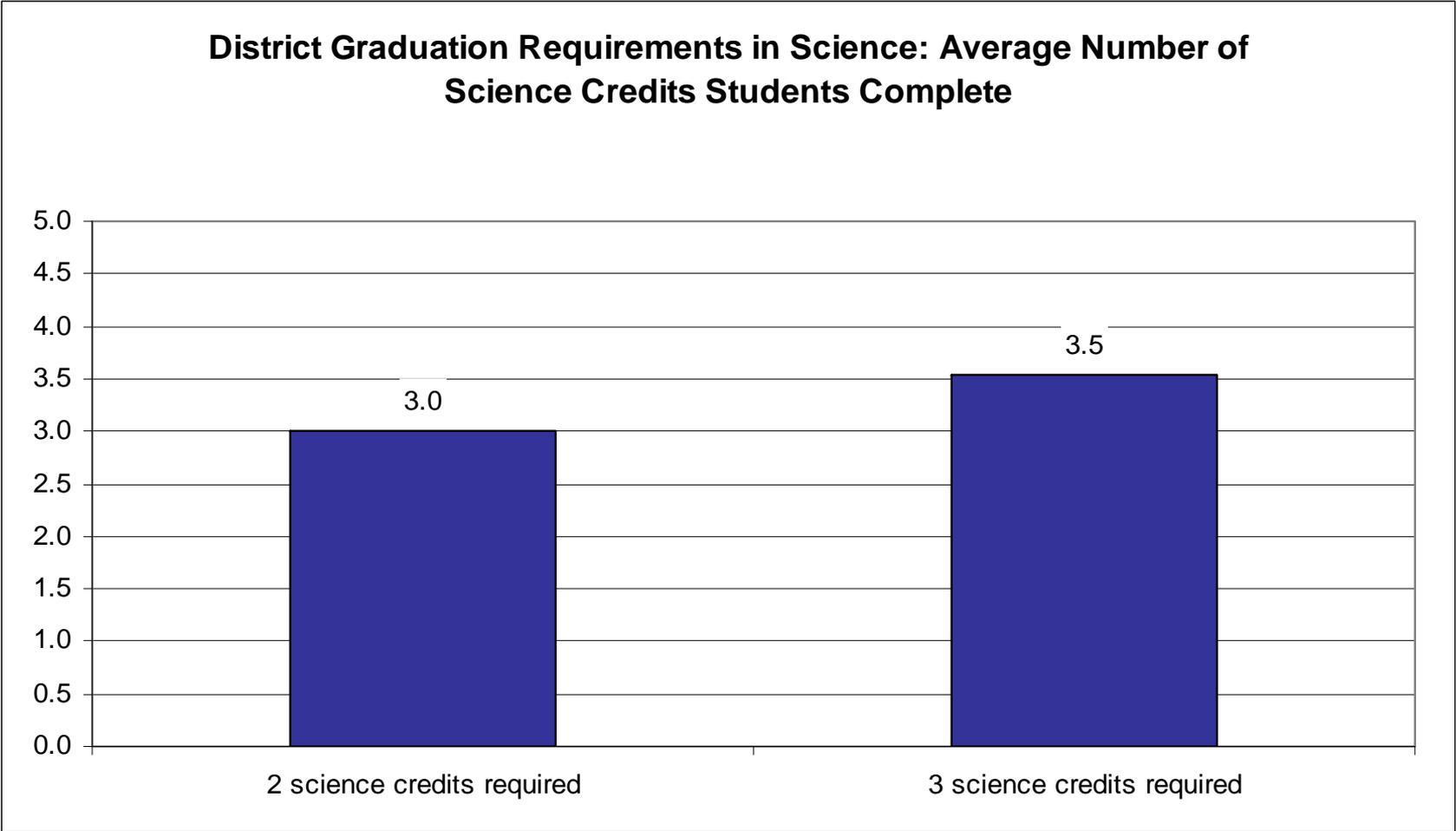


Research Question 1A and 1B

District Graduation Requirements in Science: Percent of Students who Meet the Minimum, Public Four-Year Washington College Admissions Standards in Science



Research Question 1A and 1B

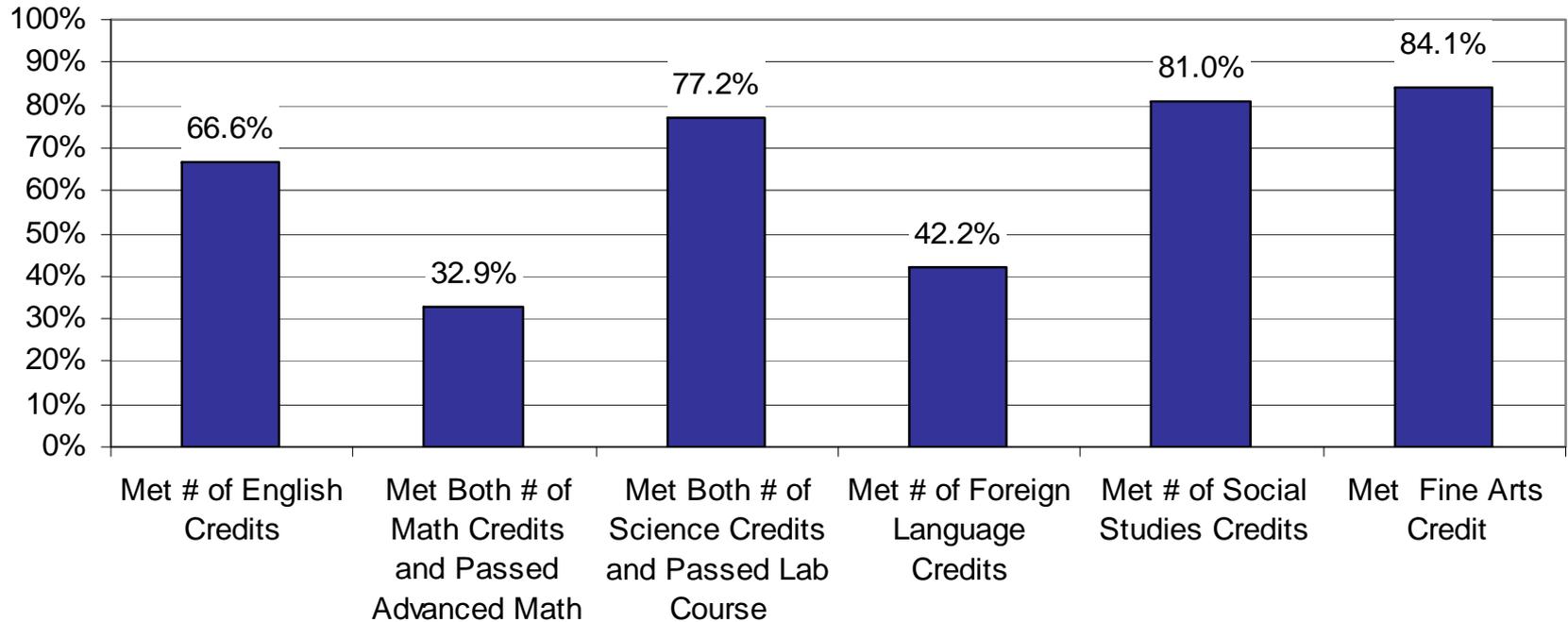


Research Question 1C

- What required college admissions courses are most frequently not taken?

Research Question 1C

Course Taking Patterns of Students NOT Meeting Minimum, Public Four-Year Washington College Admissions Standards in all Areas: What Required College Admissions Courses are Most Frequently Not Taken?

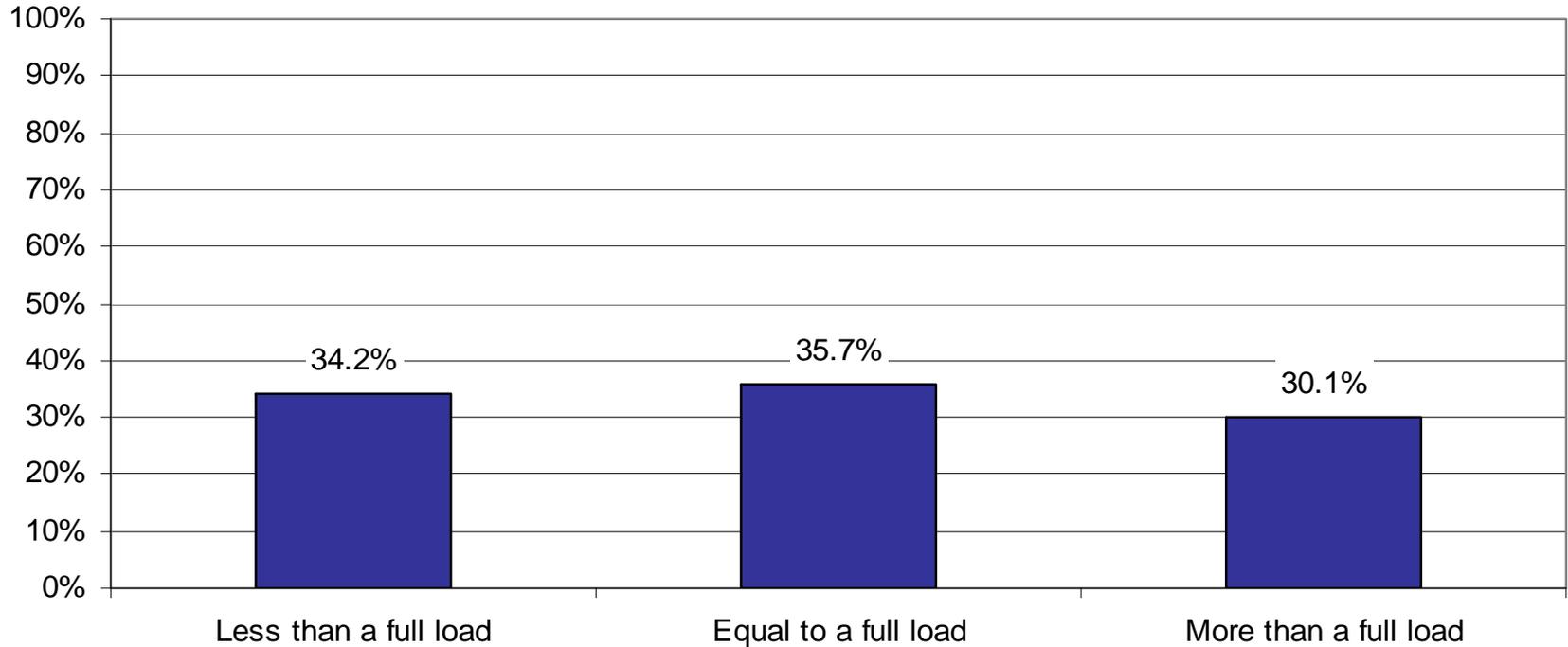


Research Question 2

- What does a typical senior schedule look like, how many credits are seniors taking, and what types of courses?
 - Number of credits for full load (Mean = 6.40)

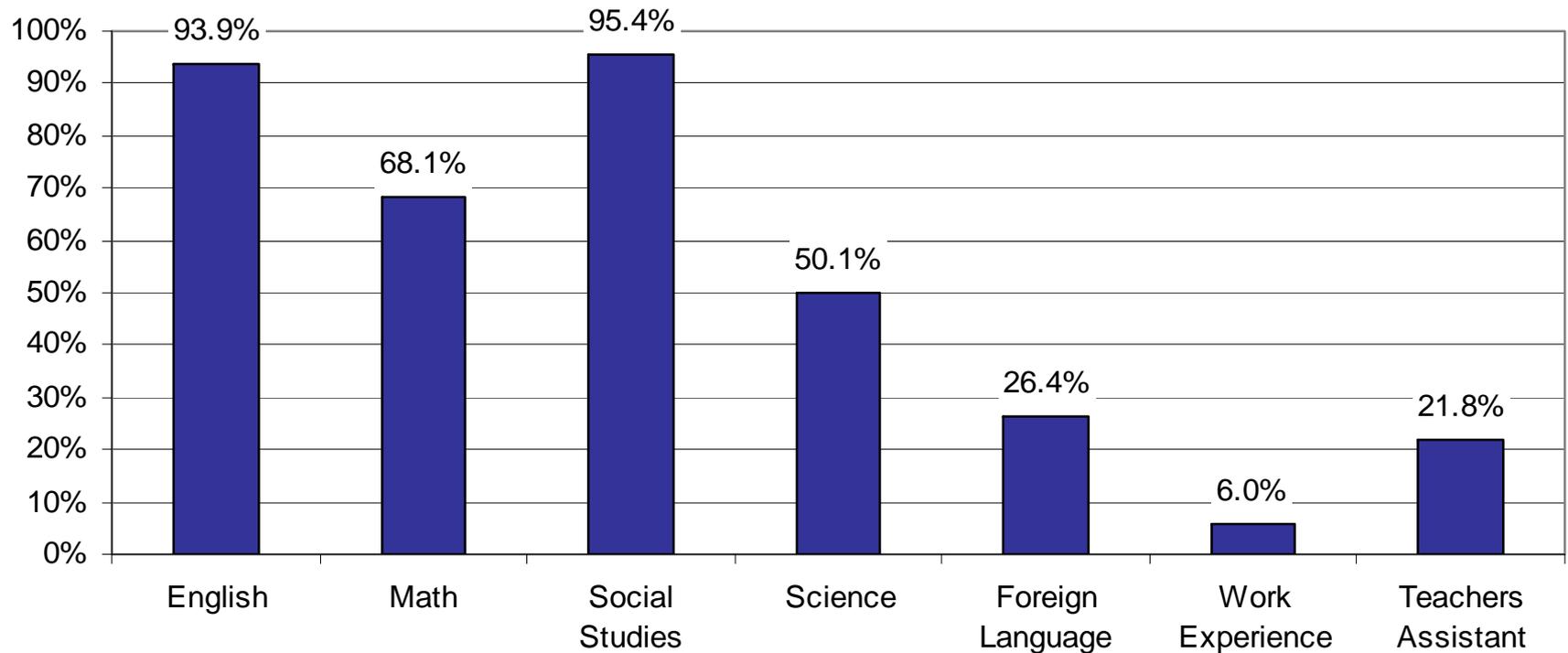
Research Question 2

Percent of Seniors Taking Less Than, Equal To, or a Full Load of Classes



Research Question 2

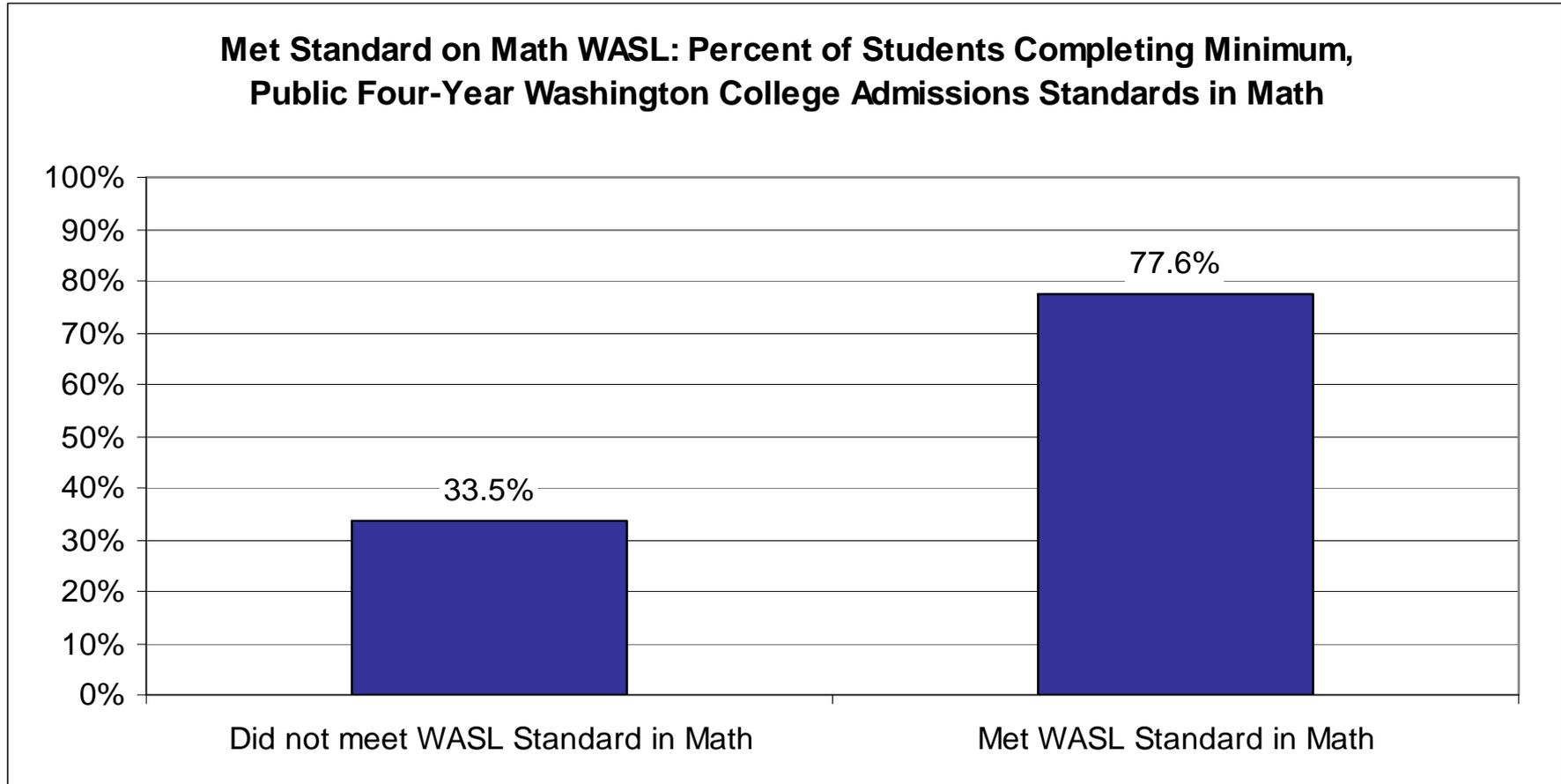
Percent of Seniors Taking Each Course in Senior Year



Research Question #3

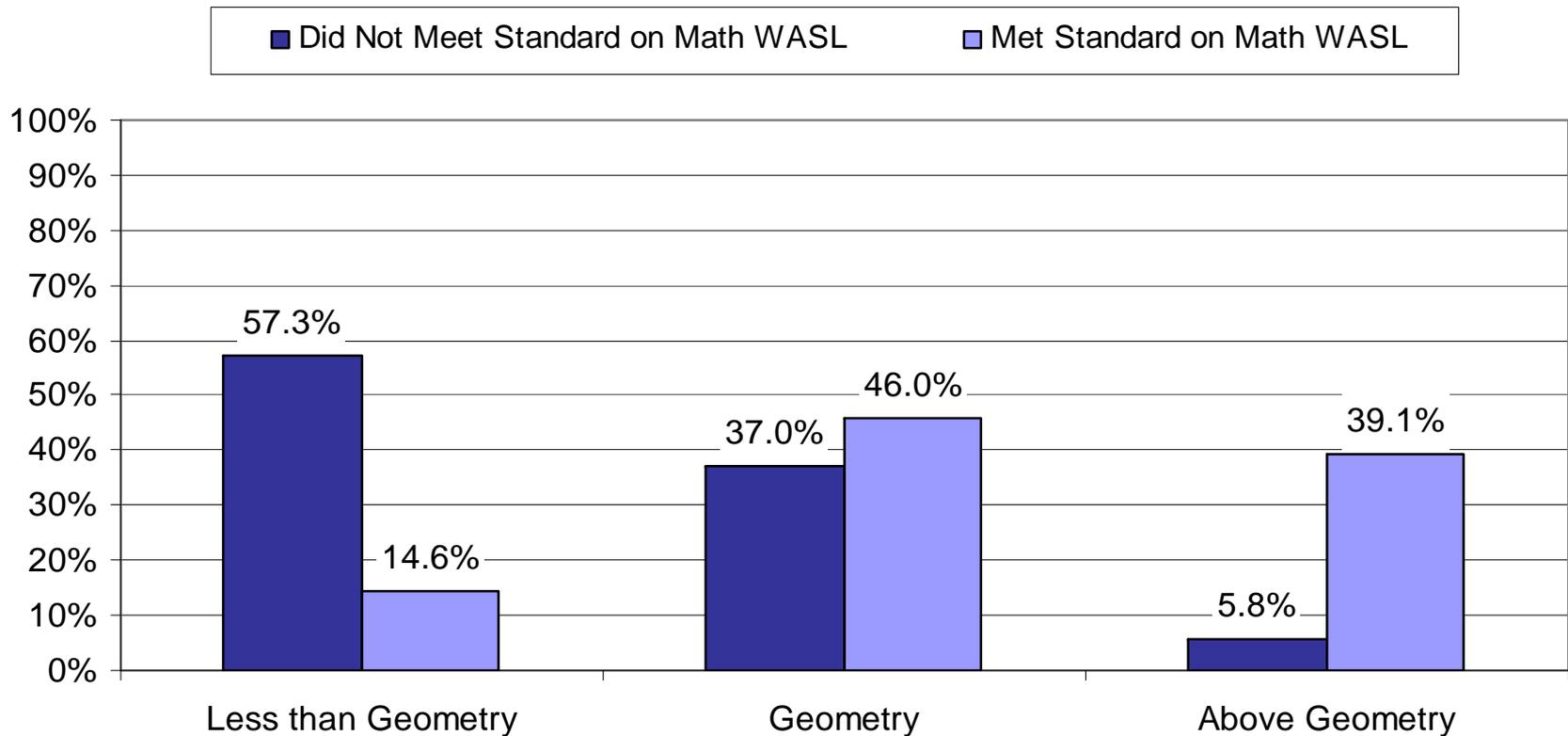
- How do course-taking patterns differ for students who meet standard on the math, reading, writing, and science Washington Assessment of Student Learning (WASL) and those who don't?
 - There is a significant difference between percent of students who were (and were not) college eligible in math based on meeting standard on Math WASL ($p < .001$).
 - There is a significant difference between the percent of students who were (and were not) college eligible in science based on meeting standard on Science WASL ($p < .001$).

Research Question #3



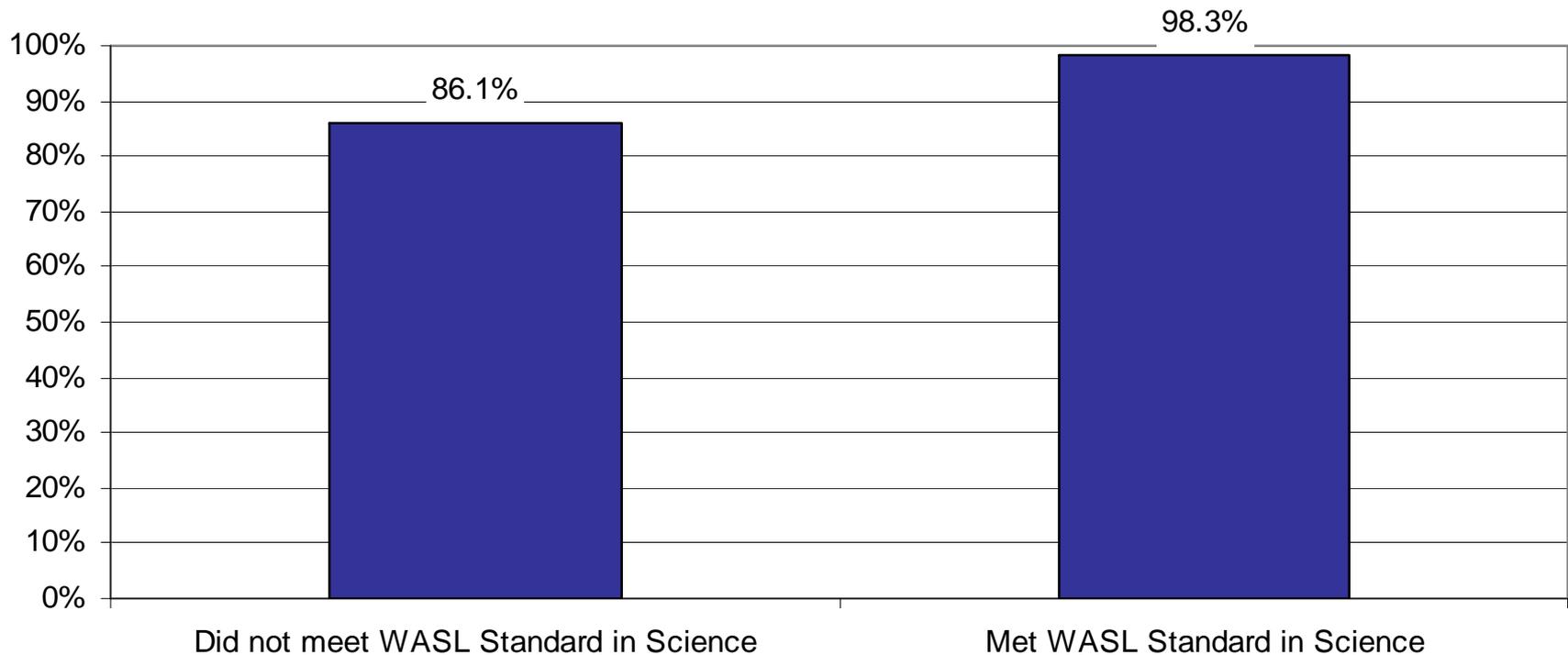
Research Question #3

Course Taking Patterns by Sophomore Year: Percent of Students Meeting Standard on Math WASL



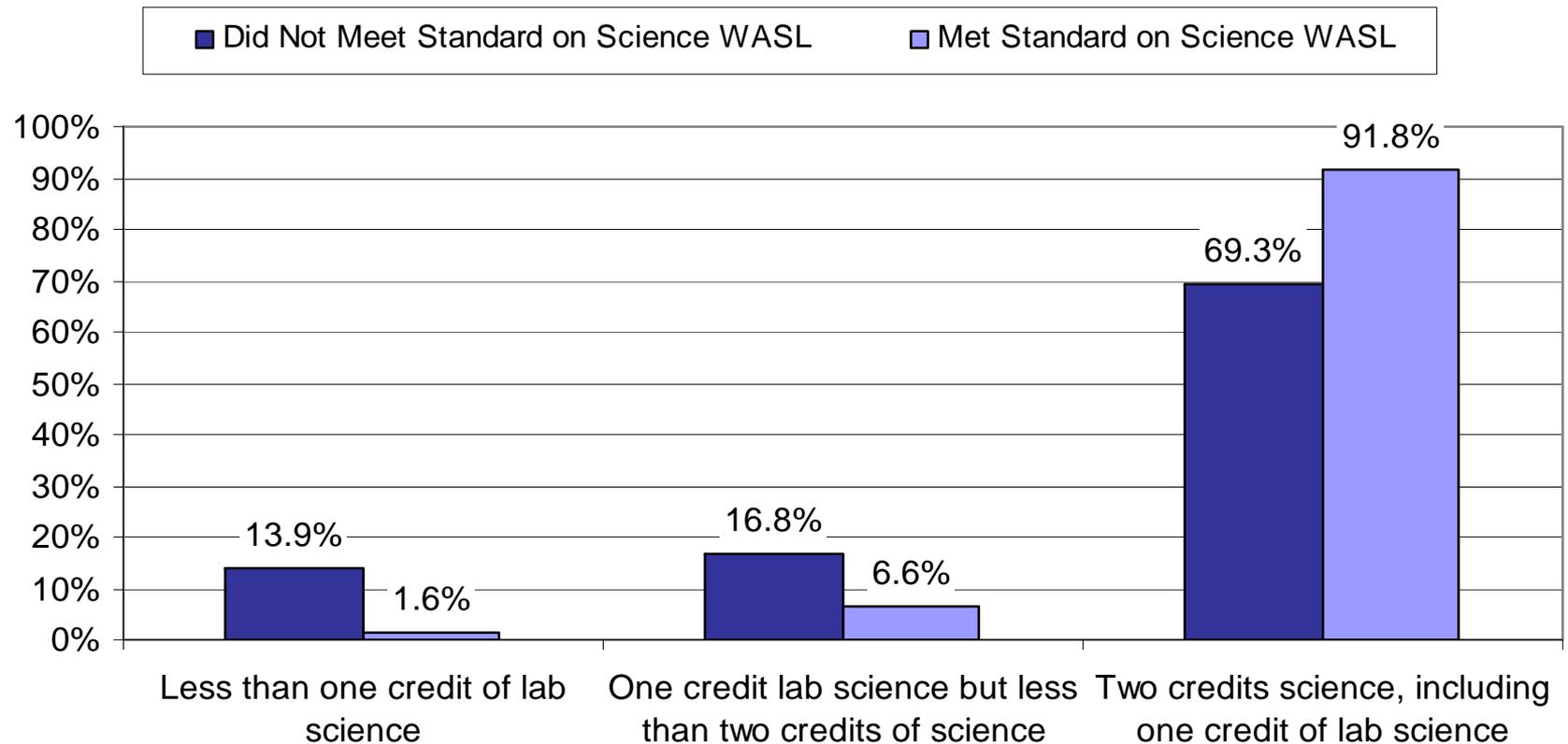
Research Question #3

Met Standard on Science WASL: Percent of Students Completing Minimum, Public Four-Year Washington College Admissions Standards in Science



Research Question #3

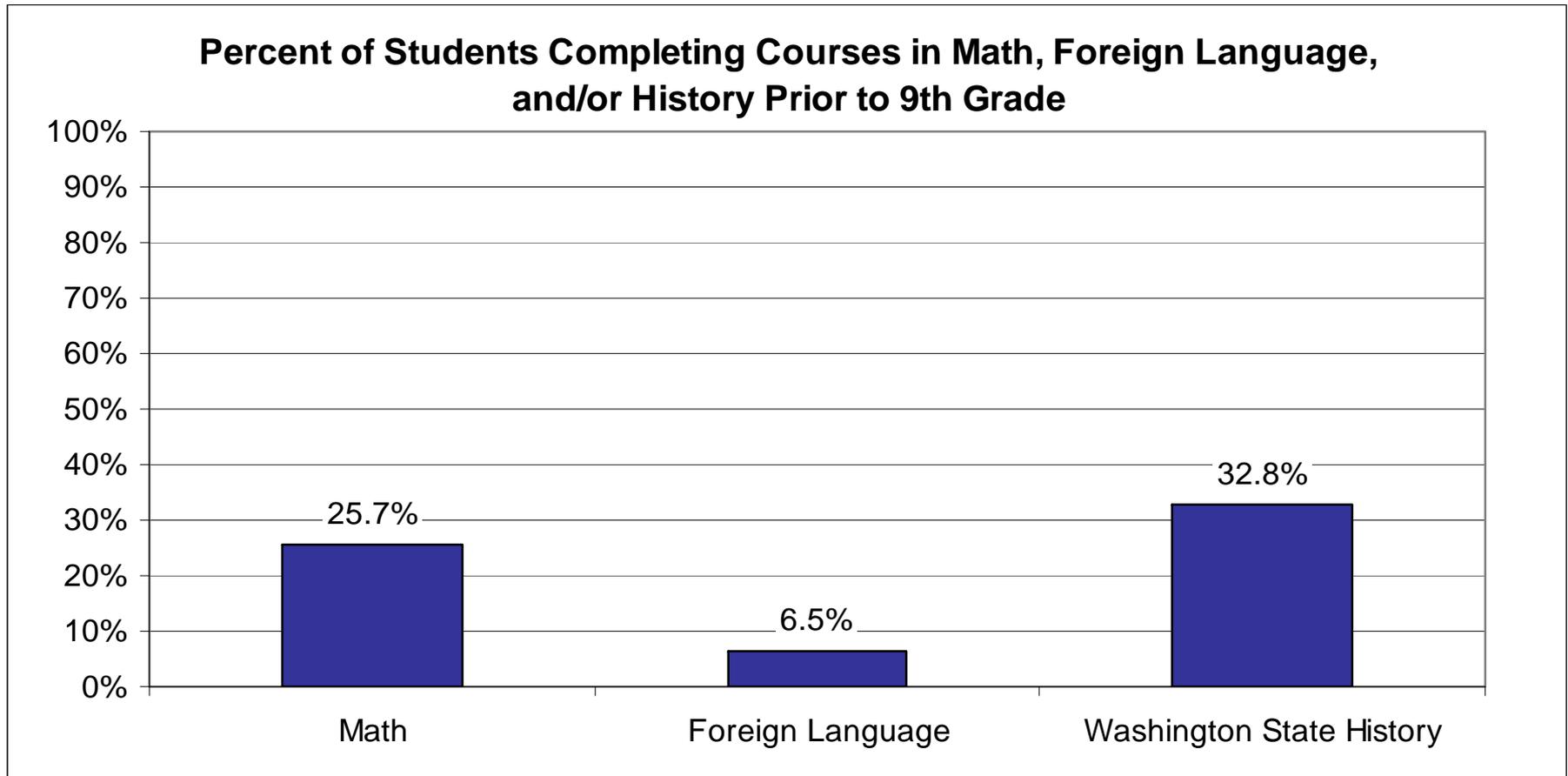
Course Taking Patterns by Sophomore Year: Percent of Students Meeting Standard on Science WASL



Research Question 4

- How many students earn high school credits in math and world language prior to entering ninth grade?

Research Question 4

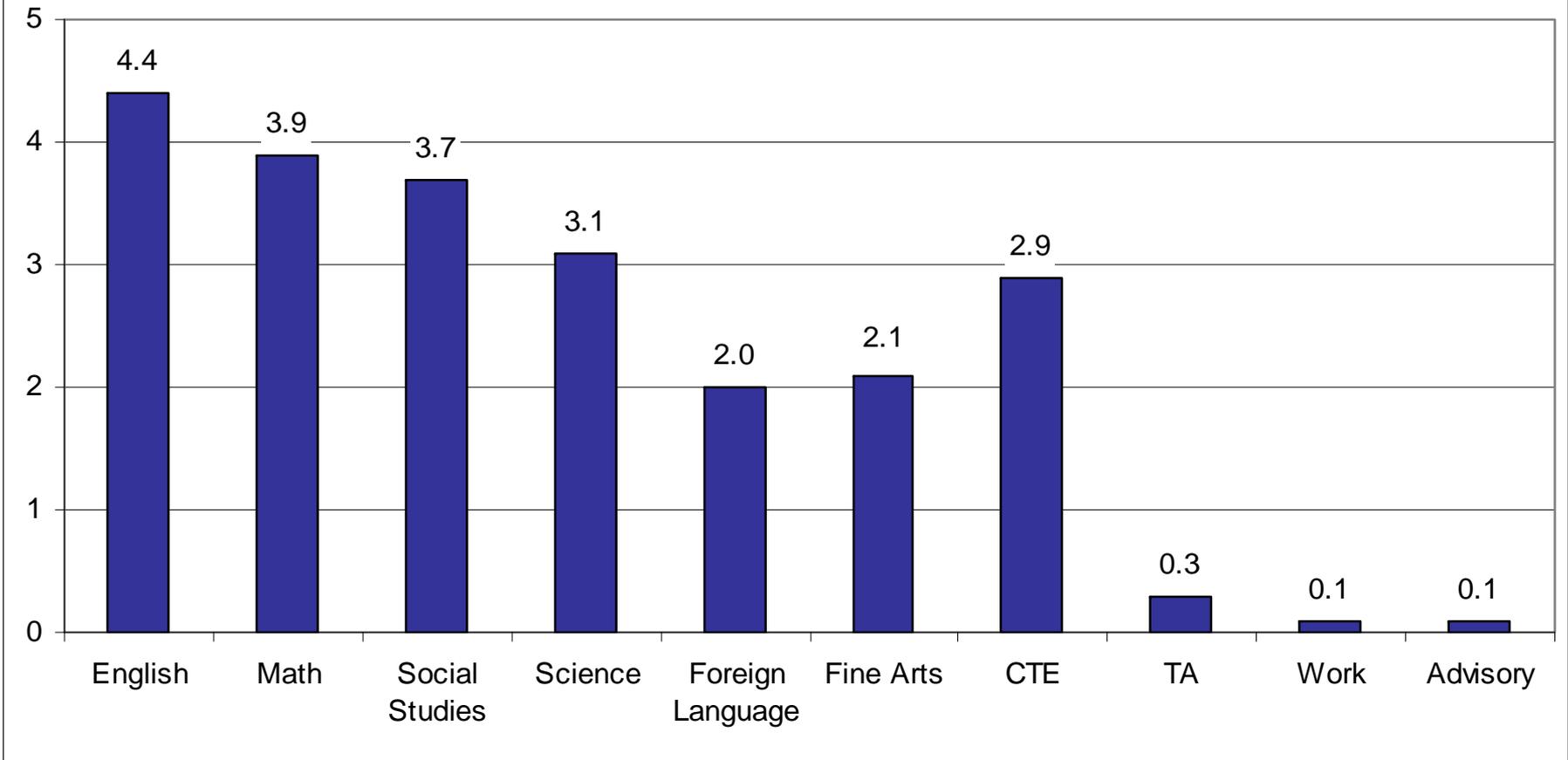


Research Question 5

- How many credits in each subject area required for high school graduation (e.g., occupational education) are students actually taking?

Research Question 5

Mean Number of Credits Taken in Each Subject Area



Research Question 6

- What is the relationship between the number of credits required for graduation at the district level and the number of credits students actually take?
 - Mean number of credits earned (Mean = 27.0)
 - Mean number of credits possible (Mean = 26.7)
 - Refer to report for analyses

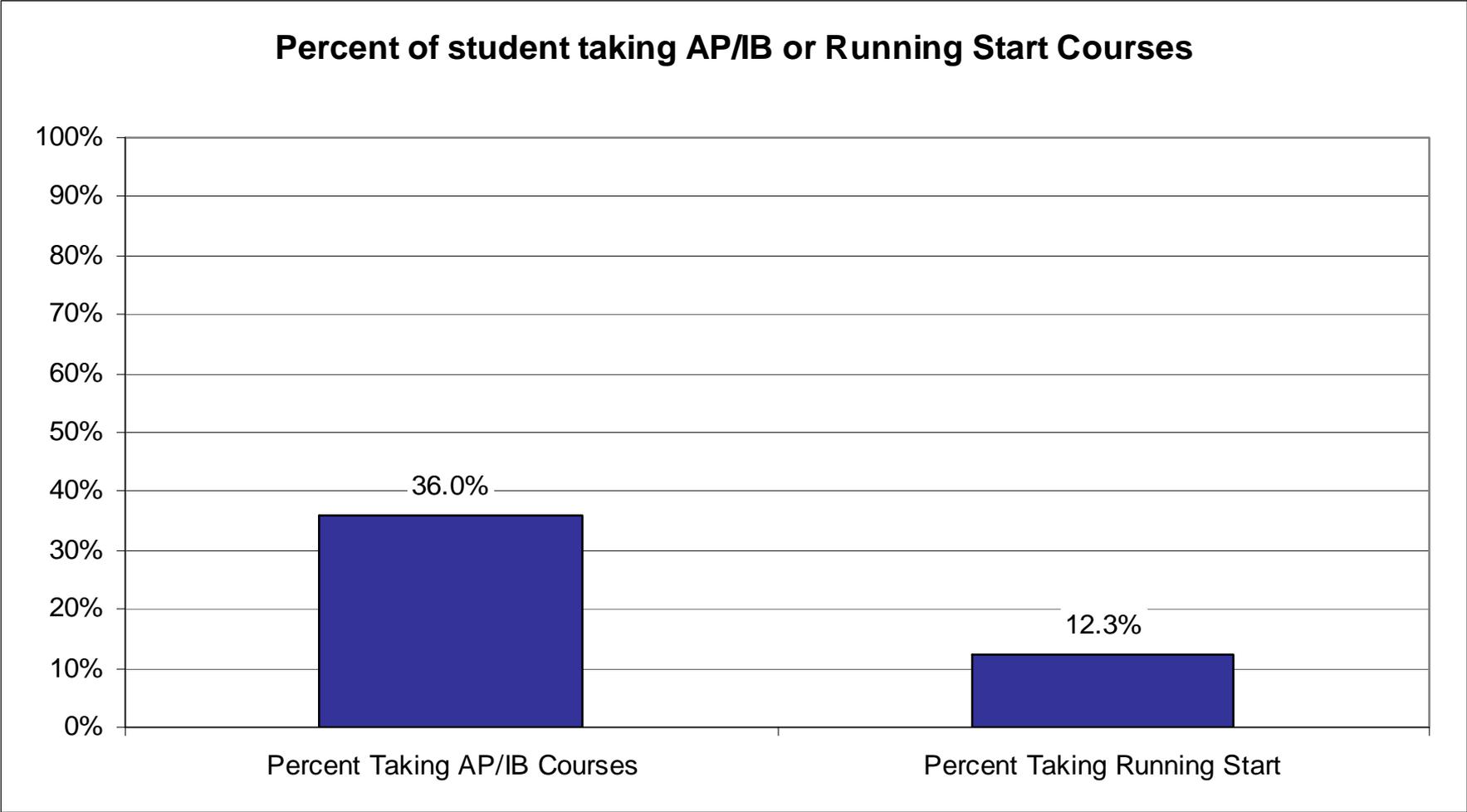
Research Question #7

- What courses are students taking in each subject area?
 - Qualitative Analysis: Results integrated throughout

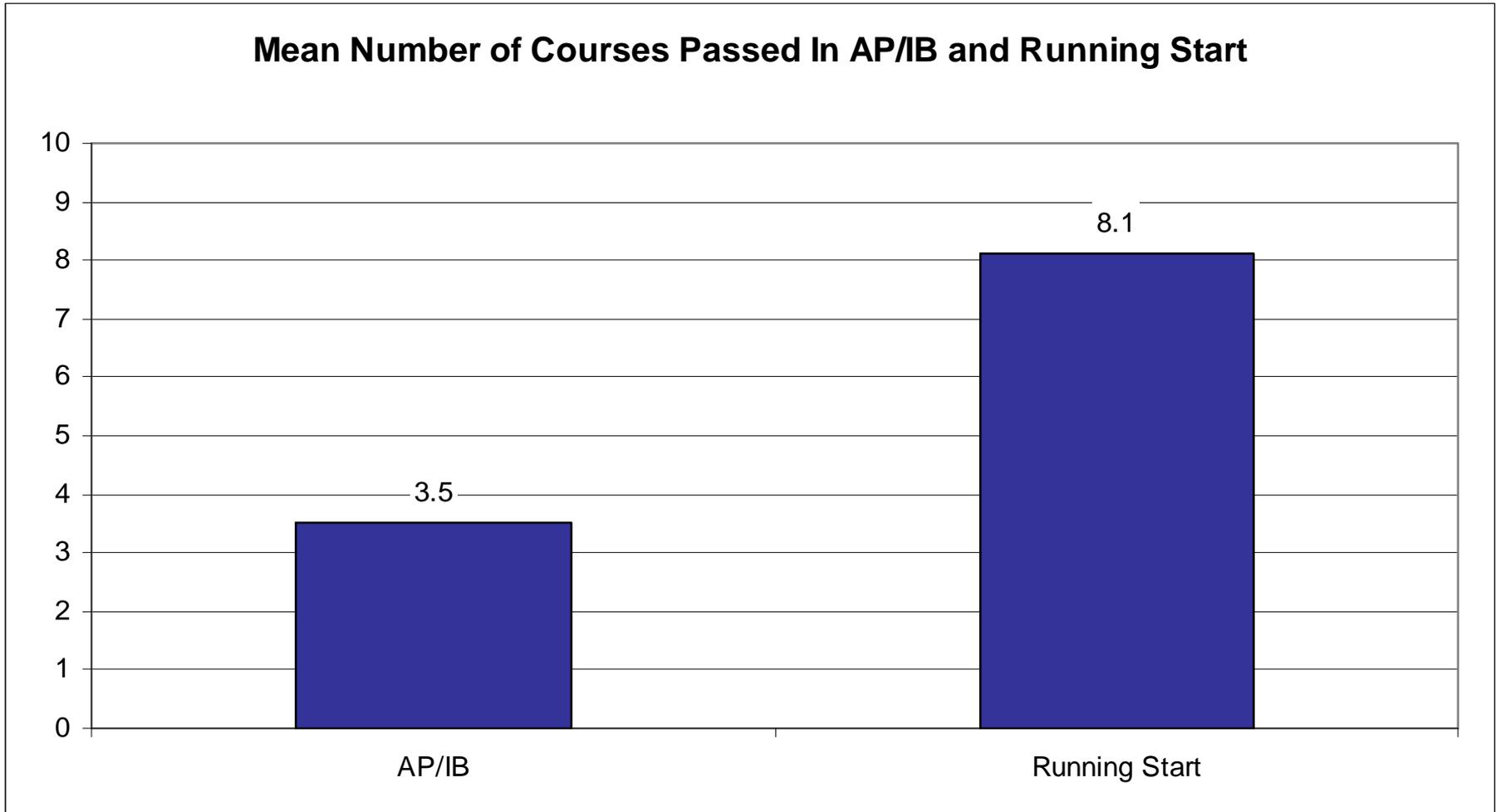
Research Question #8

- What percentage of honors courses (Advanced Placement, IB) are students taking, and in what types of districts are these courses likely to be available?

Research Question #8



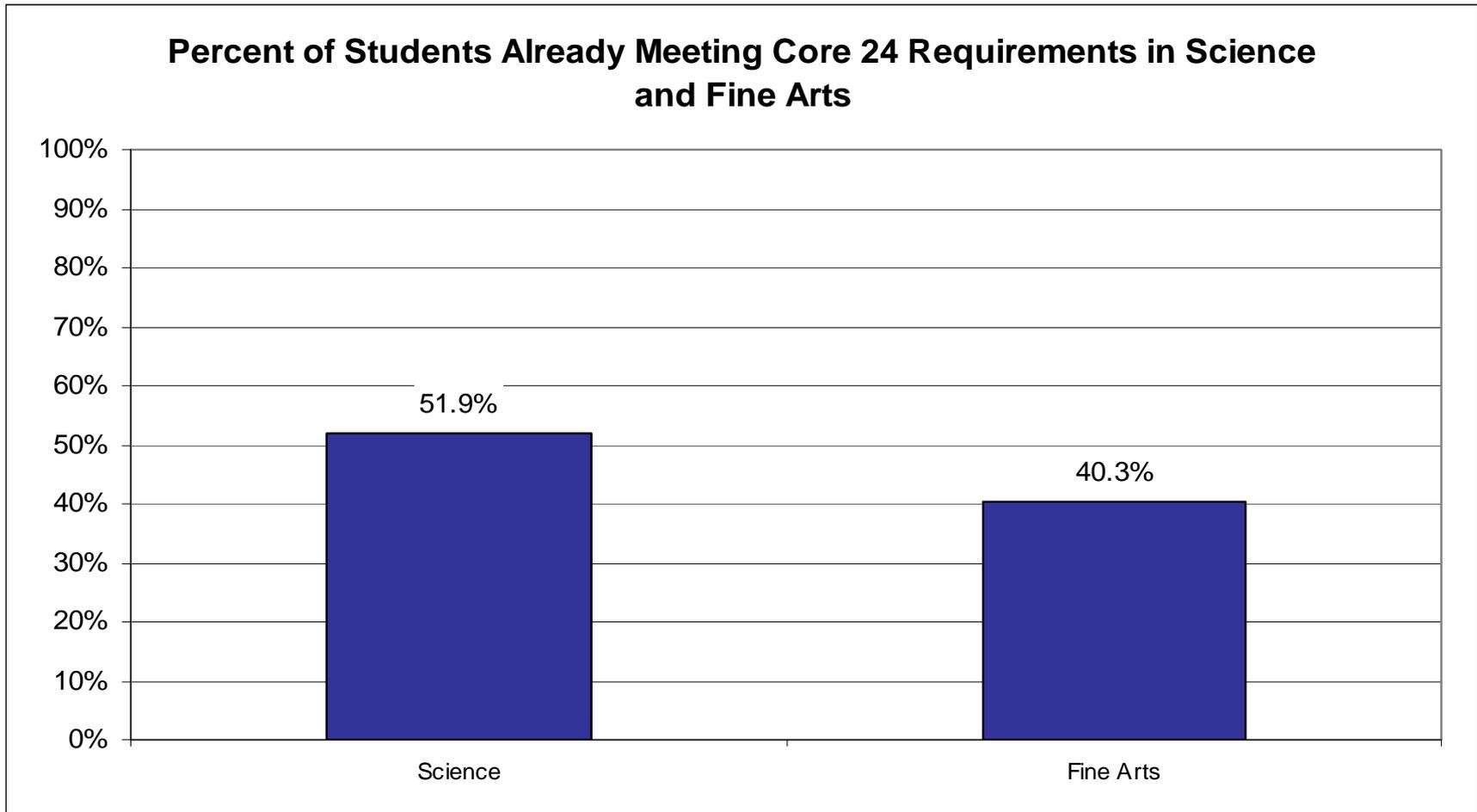
Research Question #8



Research Question #9

- What differences emerge if the responses to each of these questions is cross referenced by gender and race?
 - Initial analyses on Question #1
 - Refer to report for additional analyses

Additional Analyses



Conclusions/Implications

- Approximately 49% of students are college eligible based on course taking patterns.
- There are no significant differences in course taking patterns based on district graduation requirements.
 - There is large variation among district in the types of courses students take.
 - Districts with higher graduation requirements do not require students to meet a set standard. Many of the additional courses are elective or lower level courses (e.g. Algebra 1 spread over two years)
- Merely requiring a certain number of credits is not likely to impact college eligibility rates; stating minimum level of attainment is key.
- Students who take the more rigorous courses in math and science are more likely to meet standard on the WASL.