



National Initiatives on K-12 STEM Education

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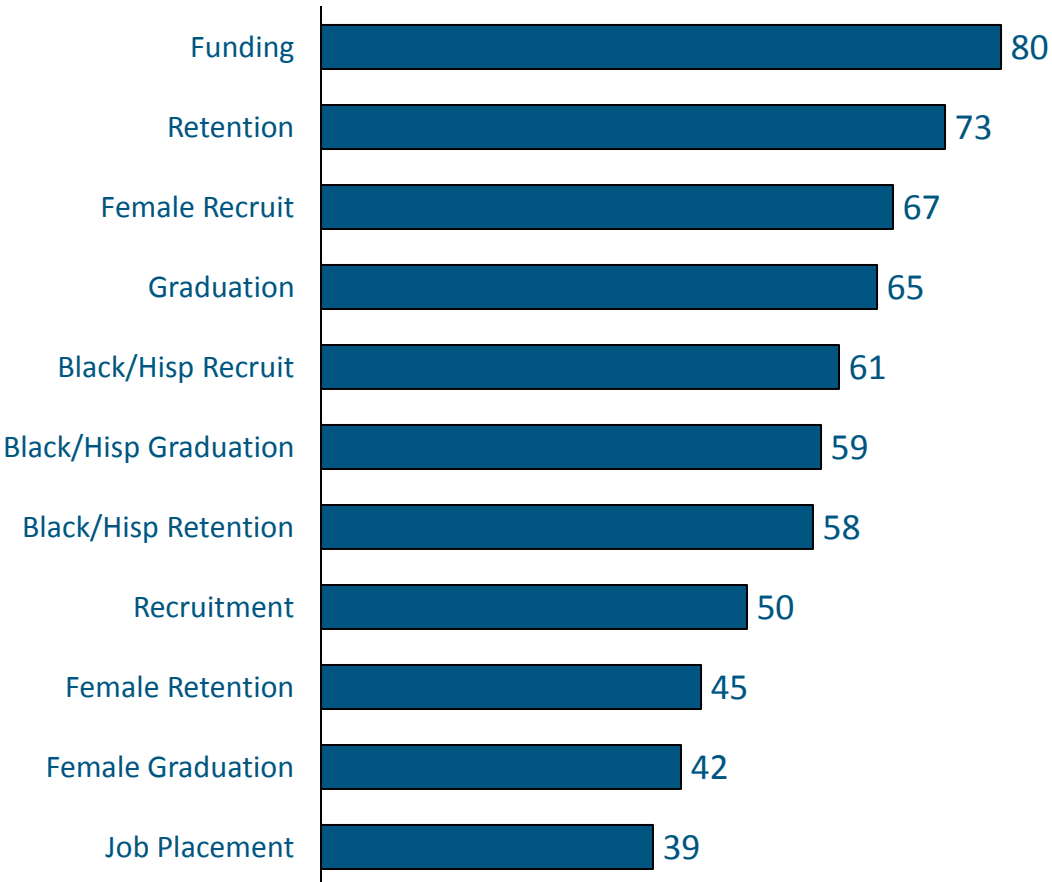
The College Board's mission is to connect students to college success and opportunity. We are a not-for-profit membership organization committed to excellence and equity in education.

- A \$5 million grant made from Google as part of their Global Impact Awards to [DonorsChoose.org](https://www.donorschoose.org) will enable public high schools across the country to start approximately **500 new AP math and science courses and to encourage traditionally underrepresented minority and female students** who demonstrate strong academic potential to enroll and explore these areas of study and related careers.

- New Computer Science course/assessment being developed in collaboration with NSF to broaden participation in CS, especially by women and underrepresented minorities
- Anchors the *CS10K* Project, which aims to prepare 10,000 CS teachers in 10,000 high schools across the US
- AP CS courses serve as a focal point for efforts by code.org, Google, and HE institutions to support policy and teacher prep

ASEE/CB Survey: Five-Year Goals for Engineering Program

How important are the following goals ...?



↑
100%

Other Goals Indicated:

- Graduate school enrollment
- Entrepreneurship training
- Better prepared incoming students
- Experiential or Global Experience
- Improve physical space
- Curricular changes/flexibility
- Research productivity
- Online delivery
- PD for faculty/staff
- Visibility of program

of those indicating recruitment...

- Average increase of 61% of undergraduate enrollment over the last 5 years
- Average intended increase of 44% of undergraduate enrollment in the next 5 years

Note: Importance is defined as a rating of 8, 9, or 10 on an 11-pt scale.
All Respondents (n=96)

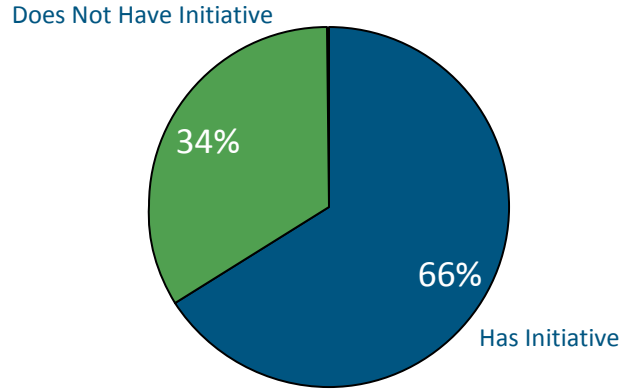


90% of Engineering Deans Reported Having an Outreach Program Geared Toward High School Students

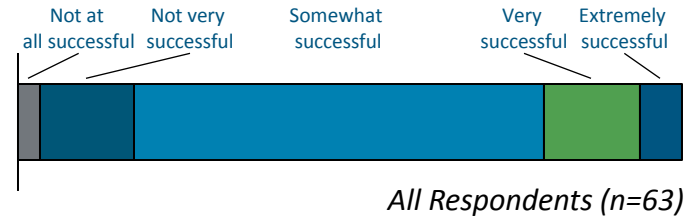


Smaller percentages report having programs geared toward underrepresented students with varying degrees of success

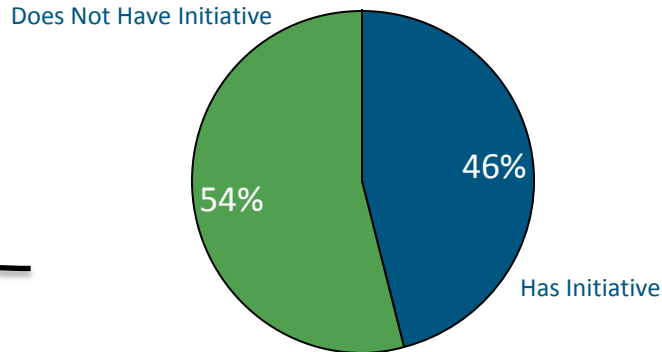
Programs to Increase Female Students



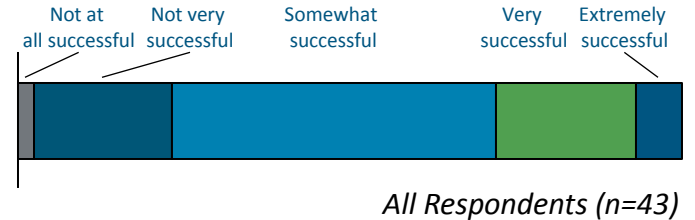
How successful has the initiative been?



Programs to Increase Black/Hispanic Students



How successful has the initiative been?



All Respondents (n=96)



High School Students Are Interested In Engineering



- Engineering is the second highest intended major chosen by PSAT students and the third highest major chosen by SAT students
- Only 17% of intended engineering majors are women and 29% are underrepresented minorities

Top 10 Intended Majors

Major Categories	Number of Students	Pct
Health Professions and Related Clinical services	262,528	19%
Business Management, Marketing, and Related Support Services	157,745	11%
Engineering	132,275	10%
Visual and Performing Arts	98,725	7%
Undecided	96,486	7%
Biological and Biomedical Sciences	93,771	7%
Psychology	65,319	5%
Education	62,119	4%
Security and Protective Services	44,364	3%
Communication, Journalism and Related Programs	38,011	3%

Women Selecting Engineering



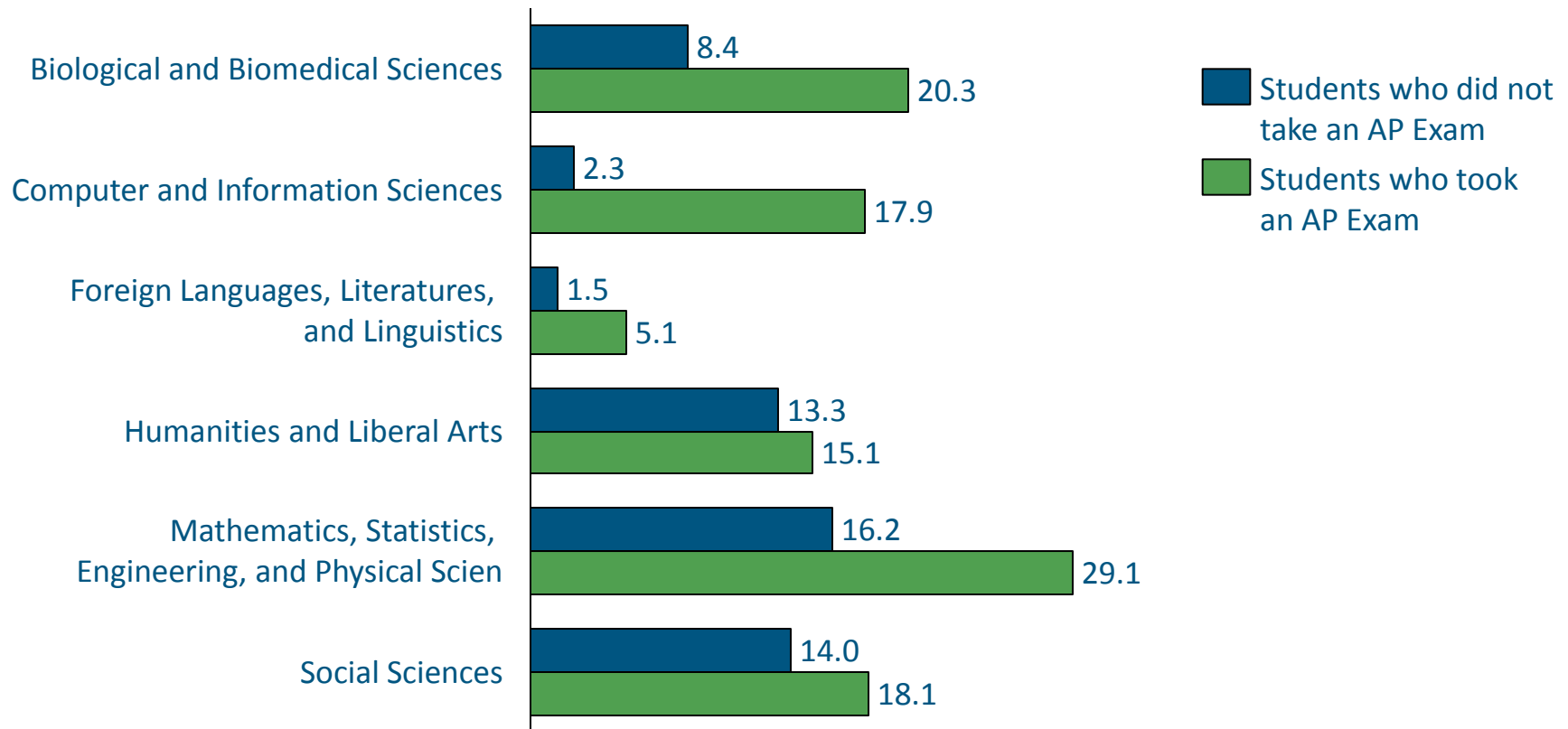
When & How Do Women Select Engineering?

- 79% of female engineering majors decided to pursue engineering in their **junior or senior year of high school**
- Majority identified **specific classes, curricular, or co-curricular activities** as when they learned about engineering as a major or profession

Students who took an AP Exam in a particular content area were **more likely to major in a related discipline in college** than students who did not take an AP Exam in that content area



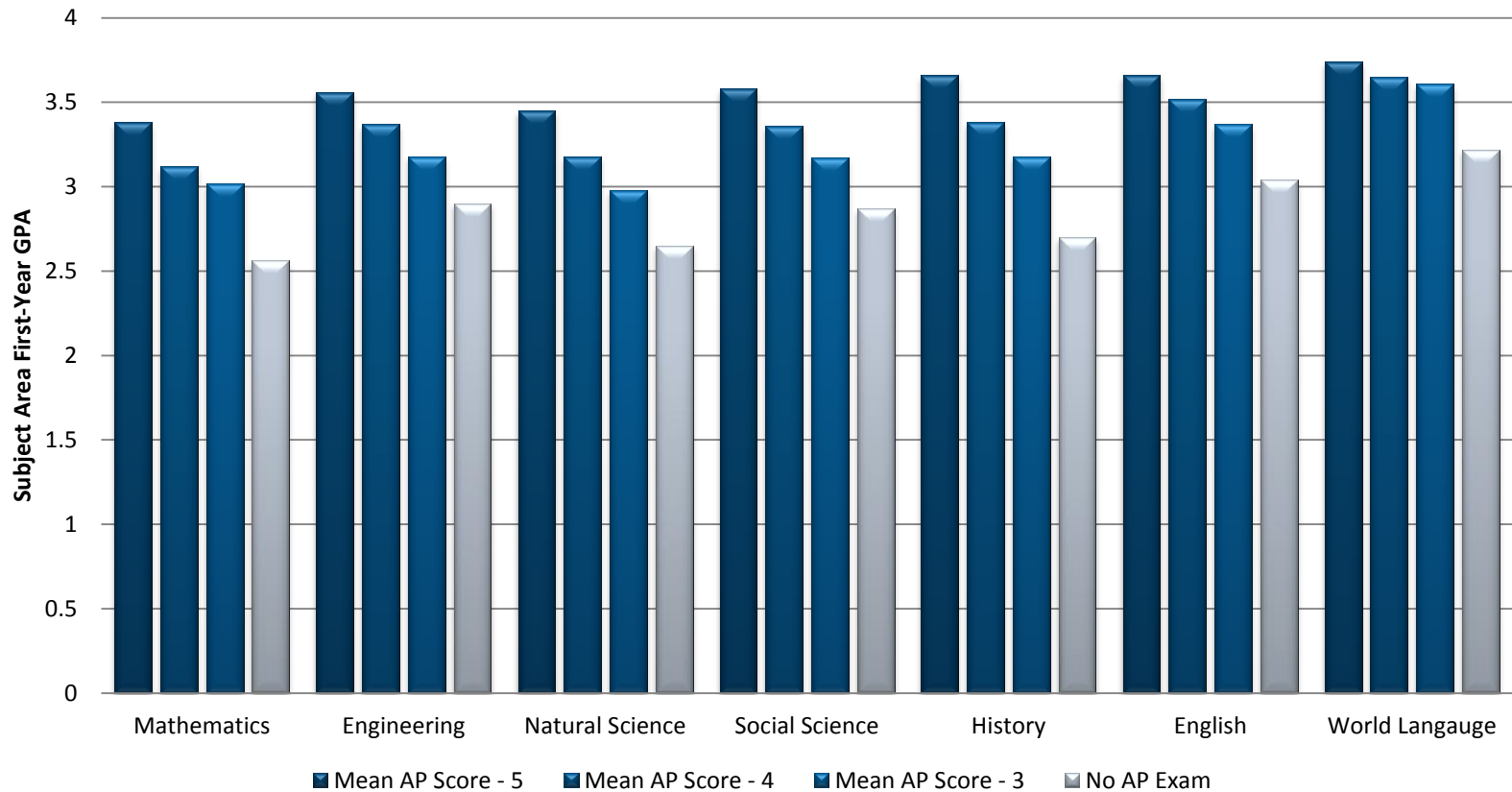
The Percentage Of Students Majoring In A Specific Domain By AP Participation



Students with a mean AP exam grade of 3 or better significantly outperformed non-AP examinees in the relevant subject area



Mean Subject Area GPA for AP and Non-AP Exam Takers

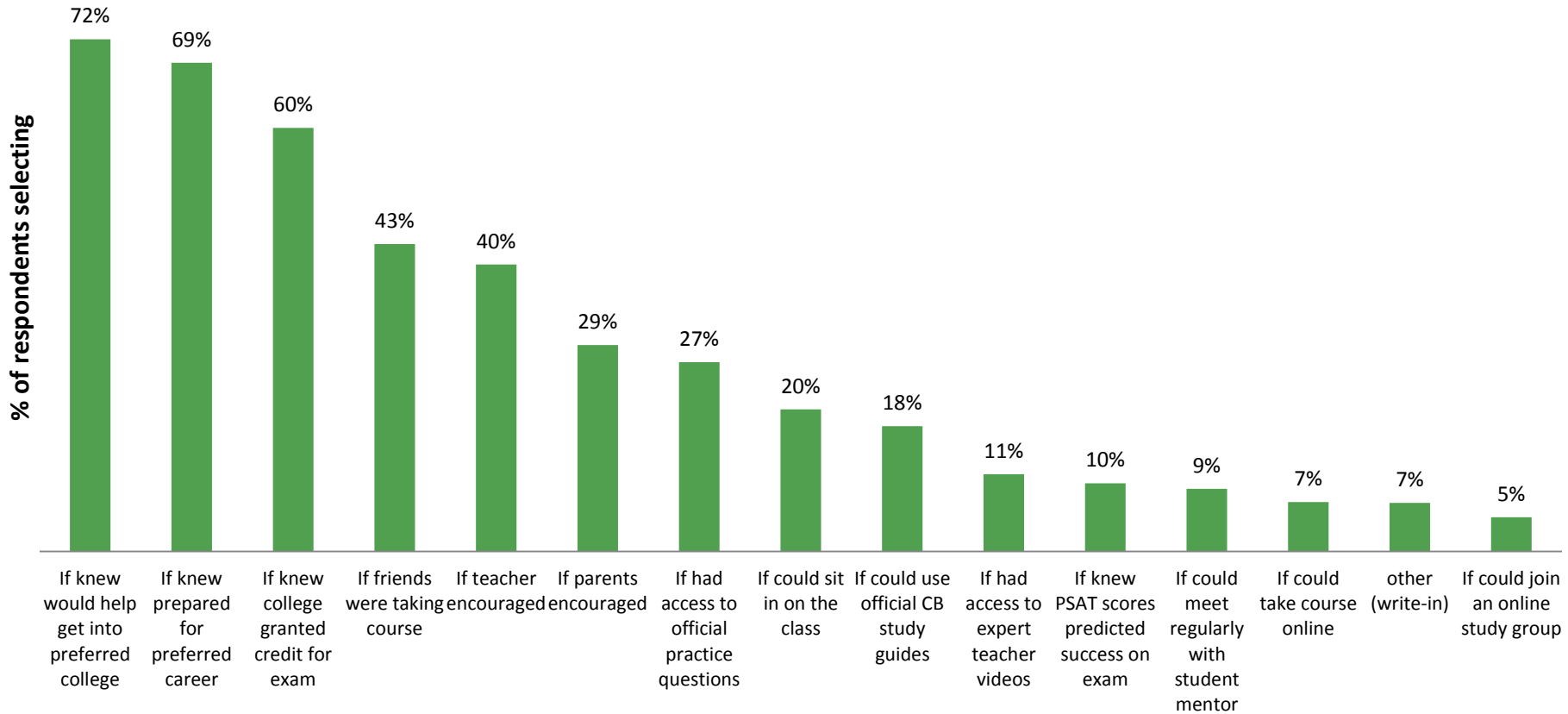


Top 3 Drivers of Student Participation in AP - Admissions, Career Preparation, Credit



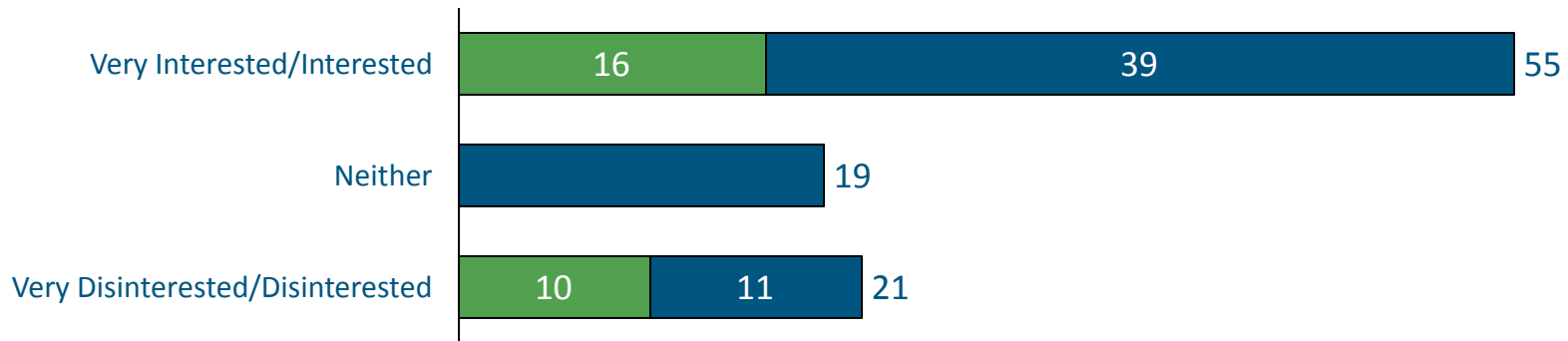
Let's say that you were trying to decide whether to take a specific AP course. Which of the following would most encourage you to enroll?

Please select no more than five.



Source: 2012 Student Market Research
 Respondents whose schools offer AP
 AP students n = 1,139
 Won't take AP n = 80

58% are Very Interested or Interested in AP Engineering



Engineering Enrollment by Interest

Very Interested	25,099
Interested	51,289
Neither Interested Nor Disinterested	26,296
Disinterested	16,885
Very Disinterested	11,795

One program is categorized as disinterested but later wrote “it seems there is probably more support for intro to engineering than I had thought.”



How Open Would Your Institution Be To Allowing Students To Earn Credit Towards The Engineering Major?



42% Thought That Their Institution Would Be Extremely To Very Open

