Summarizing Research on the Relationships Between the Number of APs, AP Performance, and College Outcomes

June 2023
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Introduction
Some students may feel pressure to take as many APs as possible to maximize the benefits of taking AP and to help them stand out in the college admissions process. Other students may be dissuaded from taking any AP Exams at all, believing that benefits only come from taking many APs. To shed light on the question of whether there is an optimal number of APs for college success, we studied relationships among the number of AP Exams taken, the number of AP Exams with scores of 3 or higher, and measures of success in college. In these analyses, we gave particular attention to the incremental gains in college student outcomes associated with increasing AP participation and performance one exam at a time to address questions regarding an “ideal number” of AP Exams for college success. ¹

Methodology
We follow three cohorts of high school graduates who attended more than 100 unique colleges and universities around the country. In our analysis, we look at college performance by number of AP Exams taken and number of AP Exams where students scored a 3 or higher and control for academic achievement measured by SAT scores and high school grade point average, demographic factors (gender, race/ethnicity, and parental education), number of APs offered at a student’s high school, and cohort year.

Results
The figure below shows that students taking their first and second AP Exams and those accruing their first or second credit-granting AP Exam scores of 3 or higher experience the largest predicted incremental gains in four-year degree completion. After taking and performing well on more than five AP Exams, predicted incremental gains in degree completion begin to level off and lose statistical significance. When we examine grades in college (not shown) we see a similar pattern of the largest benefits accruing to first or second AP and tapering off after five APs.

![Graph showing incremental gains in degree completion](image)

Notes: Solid lines denote that the estimate for a given number of AP Exams is statistically significant from the estimate for one fewer AP Exam. Dotted lines denote that these estimates are not statistically significant from each other.

Takeaways
This research shows that the largest predicted boost in college grades and on-time degree completion comes from moving a student from 0 to 1 AP and from 1 to 2 APs. Introducing students to the rigors of AP courses is strongly associated with future college success and is associated with the largest return on college outcomes. We also show that taking and performing well on more than five AP Exams does not markedly alter first-year college grades and four-year degree completion.² This is important information for students, counselors, and higher education professionals to better understand potential benefits of taking multiple AP Exams.

¹ The research highlighted is based upon a paper by Beard, Hsu, Ewing, and Godfrey (2019) appearing in Educational Measurement: Issues and Practice on October 10, 2019. Contact research@collegeboard.org to request a copy of the full paper.

² These findings are consistent with smaller scale, localized research by Kretchmar & Farmer (2013) that explored a similar question.