

A Comparison of the College Outcomes of AP and Dual Enrollment Students | In Progress

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Context

- + Research has indicated that a rigorous high school curriculum is a strong predictor of college success and is:
 - positively related to standardized test scores
 - positively related to college enrollment rates
 - positively related to four-year graduation rates
 - negatively related to remediation rates
- + One way of delivering rigor is through providing college level courses to high school students. Two examples are:
 - Dual enrollment
 - Advanced Placement

AP and Dual Enrollment

+ Similarities

- Both expose students to college level work
- Both allow students to earn college credits while in high school

+ Differences

- Dual enrollment performance is based on a course grade while AP scores are based on a standardized exam.
- AP students take the course in a high school setting with other high school students. Dual enrollment may take place either at the high school or at a local college.
- Success rates may vary. For example, in Florida, 94% of dual enrollment students earn postsecondary credit compared to 41% for AP students.

AP Research

- + AP Exam scores are positively related to college grades
- + AP students exempted from introductory courses perform as well or better in the subsequent course
- + Compared to non-AP students, AP students scoring 3 or higher have
 - higher retention rates
 - higher first year GPA (FYGPA)
 - higher graduation rates

Dual Enrollment Research

- + Dual enrollment is less researched than AP
 - More difficult to obtain data
- + In general, the research conducted is limited to a few colleges or college systems
- + Research comparing dual enrollment students to non-dual enrollment students is generally positive, finding that dual enrollment students have:
 - a higher likelihood of enrolling in a 4-year school
 - a smaller decline in grades from high school to college
 - a higher likelihood of persisting

Sample

- + Determine dual enrollment participation using data from the National Student Clearinghouse (NSC)
 - College enrollment prior to high school graduation is used as a proxy for dual enrollment participation
- + Students who graduated high school in 2006 and took the SAT, reported their HSGPA, gender, ethnicity, and parental education level
- + Students who took both AP and dual enrollment were eliminated
- + National Student Clearinghouse (NSC) data was used for enrollment, persistence, and graduation, while the National SAT Validity database was used for FYGPA

Research Question, Covariates, and Outcomes

How is AP and dual enrollment (DE) participation related to subsequent college success ?

+ Five participation groups

- No AP, No DE
- AP < 3
- AP \geq 3
- DE at 2-yr school
- DE at 4-yr school

+ Covariates

- SAT Section Scores (CR, M, W)
- HSGPA
- Gender
- Racial / Ethnic Identity
- Highest Parental Education

+ Outcomes

- 4-yr College enrollment
- First year GPA (FYGPA)
- Persistence to 4th year
- Graduation in 4 and 6 years

Sample Characteristics

	4-Year Enrollment	FYGPA	Persistence and Graduation
n	1,063,616	128,623	728,968
No AP/ DE	54.0%	36.2%	45.2%
AP < 3	13.4%	14.1%	14.7%
AP >= 3	27.9%	44.3%	35.6%
DE at 2-Yr	3.5%	4.1%	3.1%
DE at 4-Yr	1.2%	1.3%	1.4%

Procedure

- + Regression techniques were used to model the expected change in the outcome variable given changes in the predictor variables
 - This allows us to control for predictor variables other than AP and dual enrollment participation that are related to college outcomes (such as SAT scores)
 - Linear regression was used for FYGPA (a practically continuous outcome) and logistic regression was used for the dichotomous outcomes such as graduation
 - Means of outcomes, such as FYGPA, were estimated for non-AP, non-DE takers, AP takers, and DE takers

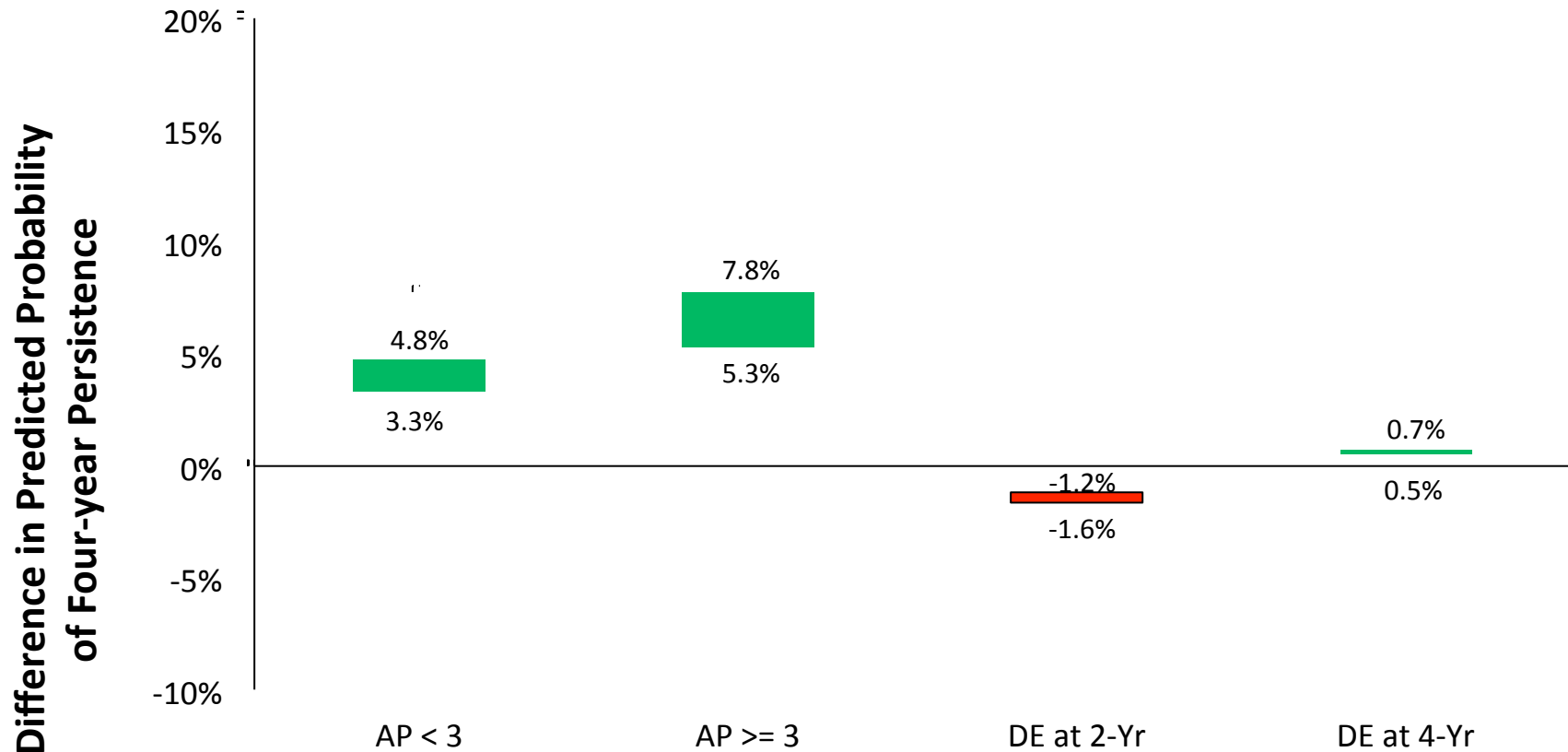
Estimated* 4-Year College Enrollment Rates Compared to Students not taking AP or Dual Enrollment



*: The range is the minimum and maximum expected four-year college enrollment rates by:

- racial / ethnic identity for females of parents with at most a bachelor's degree;
- gender for White students of parents with at most a bachelor's degree; and
- parental education level for White female students.

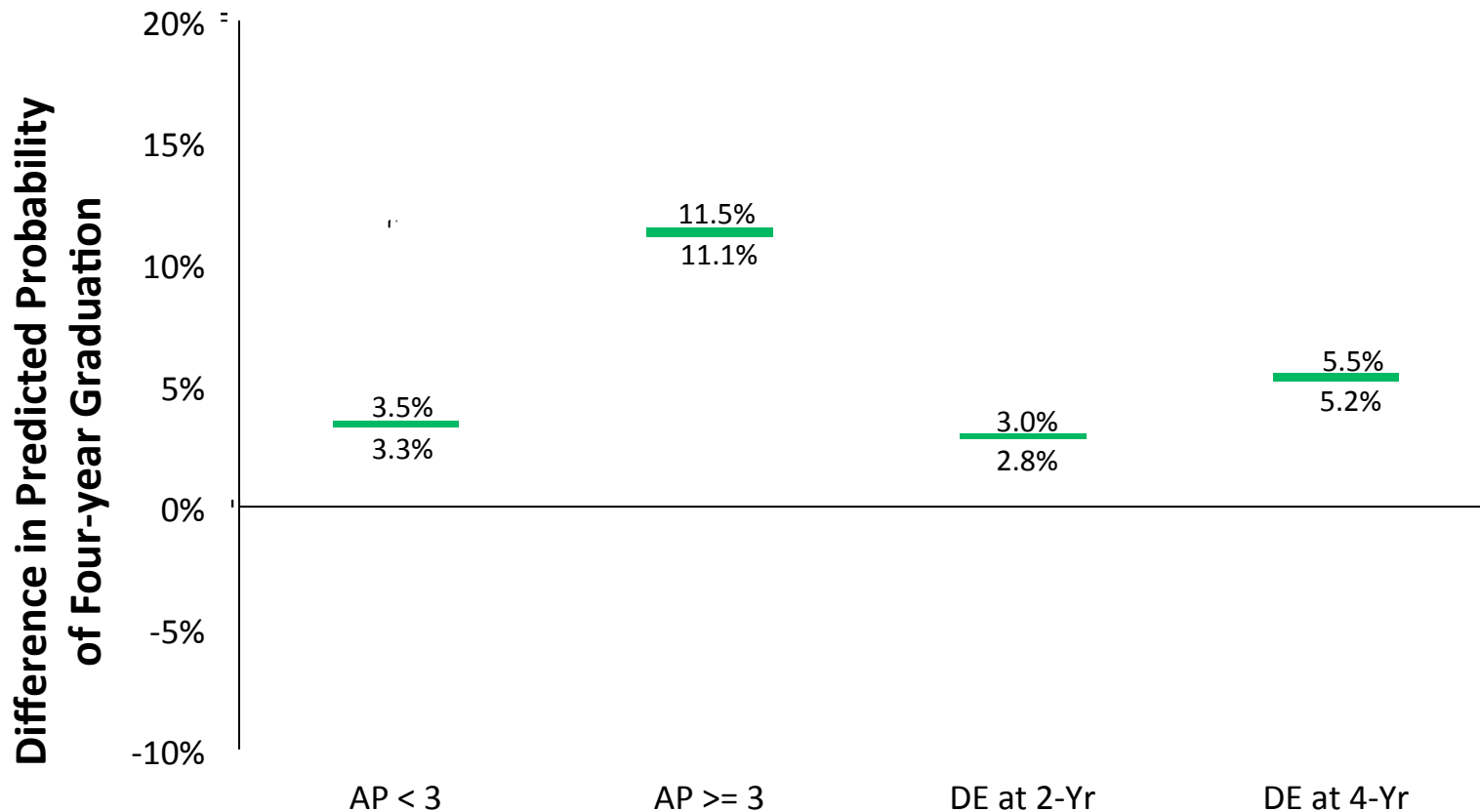
Estimated* Rates of Persistence to 4th Year Compared to Students not taking AP or Dual Enrollment



*: The range is the minimum and maximum expected four-year college persistence rates by:

- racial / ethnic identity for females of parents with at most a bachelor's degree;
- gender for White students of parents with at most a bachelor's degree; and
- parental education level for White female students.

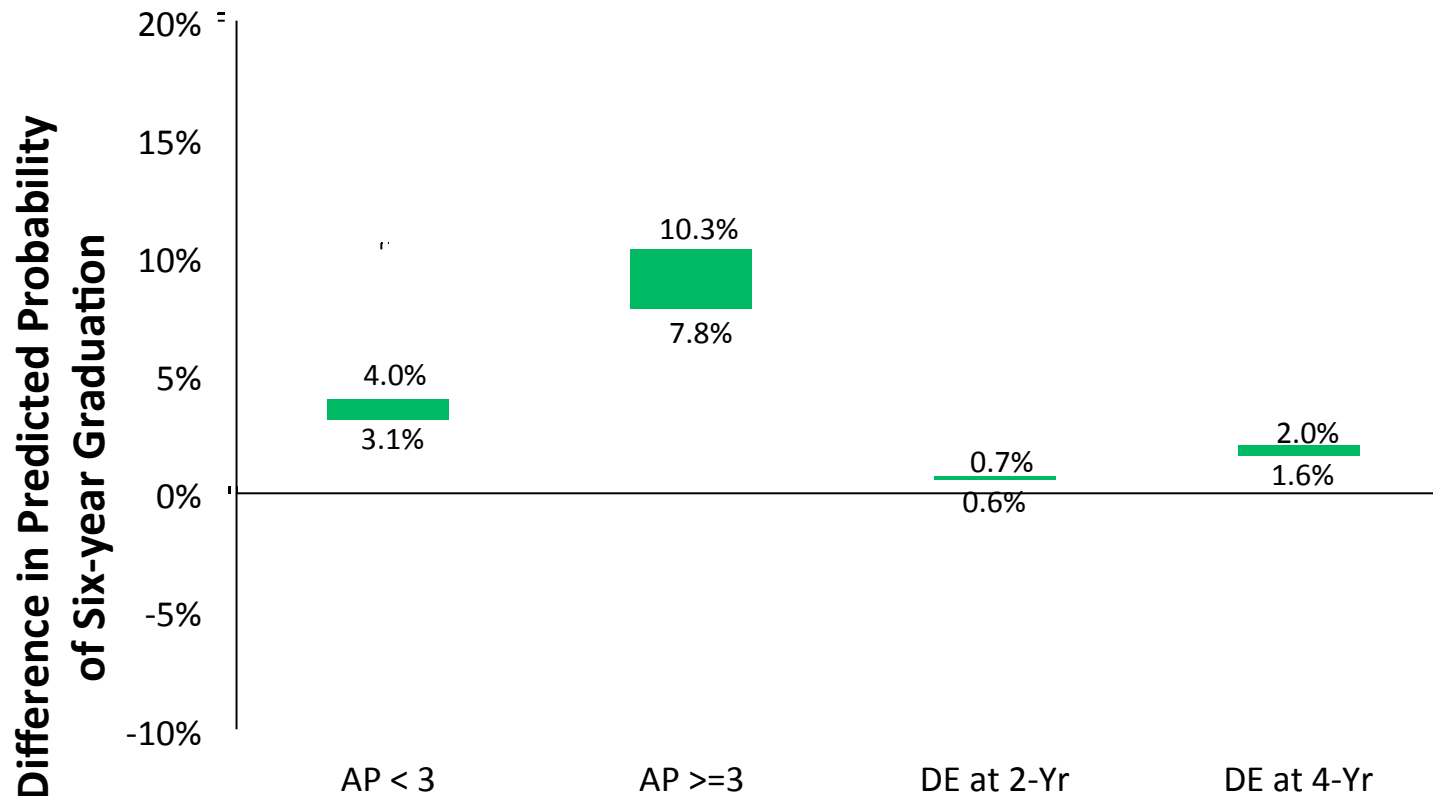
Estimated* 4-Year Graduation Rates Compared to Students not taking AP or Dual Enrollment



*: The range is the minimum and maximum expected four-year college graduation rates by:

- racial / ethnic identity for females of parents with at most a bachelor's degree;
- gender for White students of parents with at most a bachelor's degree; and
- parental education level for White female students.

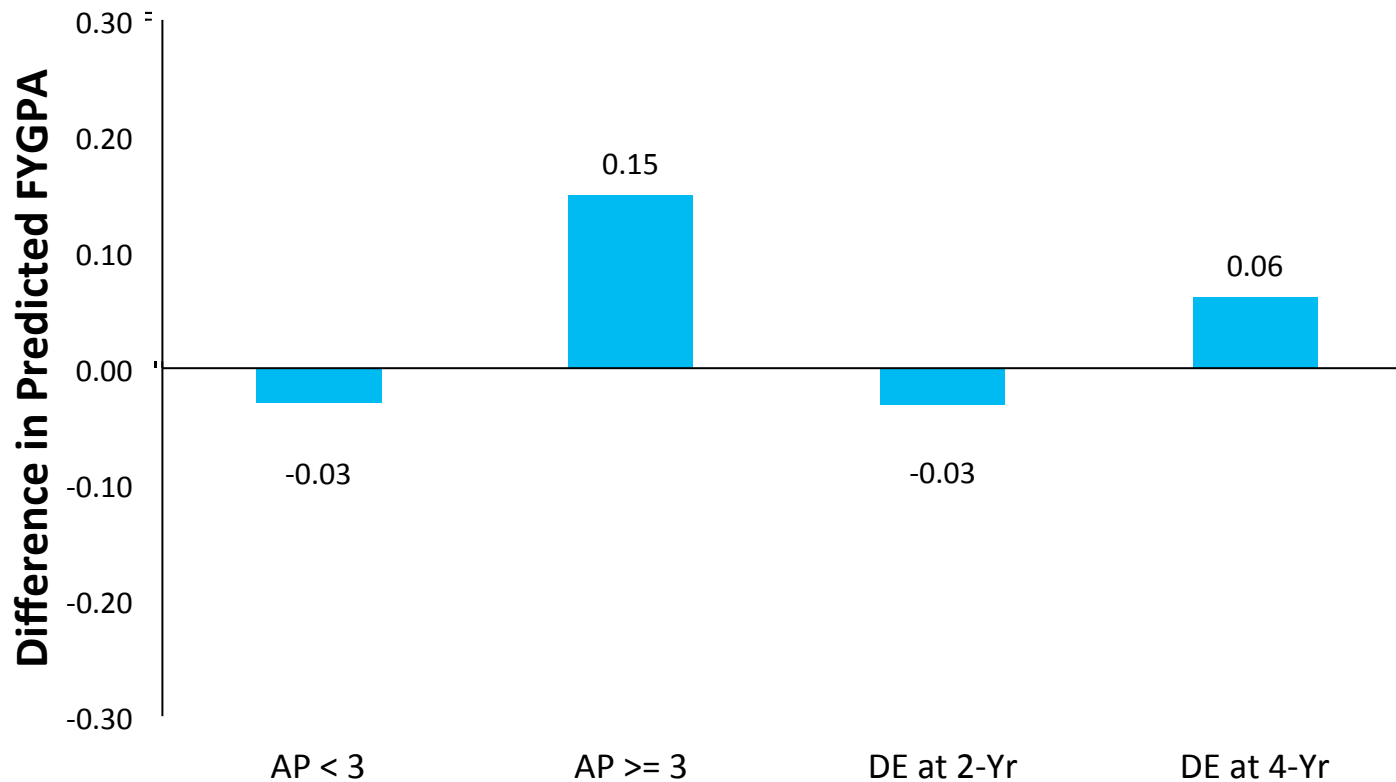
Estimated* 6-Year Graduation Rates Compared to Students not taking AP or Dual Enrollment



*: The range is the minimum and maximum expected four-year college graduation rates by:

- racial / ethnic identity for females of parents with at most a bachelor's degree;
- gender for White students of parents with at most a bachelor's degree; and
- parental education level for White female students.

Estimated* FYGPA Compared to Students not taking AP or Dual Enrollment



*: The expected first-year college grade point average (FYGPA).

Limitations

- + Dual enrollment participation was determined using NSC records and matching errors would cause inaccuracies
- + Some dual enrollment courses might have a vocational or career oriented focus
- + No grade or subject information is available for the dual enrollment courses
- + All analyses required the student to have taken the SAT, reported his/her HSGPA and responded to demographic questionnaire items
- + We could not control for motivation, which may have differed between dual enrollment and AP students