

Determinants of Students' Success: the Role of Advanced Placement and Dual Enrollment Programs

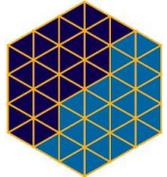
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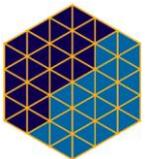
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Evidence from Florida

- **Study 1:** Assess relative power of AP and DE for predicting students' college access (PSE enroll; First PSE at 4yr college) and success (5-yr BA degree)
 - Focus DE academic (not vocational) and AP course (not exam)
- **Study 2:** Examine the causal effect of DE and the effect of DE college Algebra
 - Quasi-experimental method: Regression Discontinuity



Florida AP and DE Background

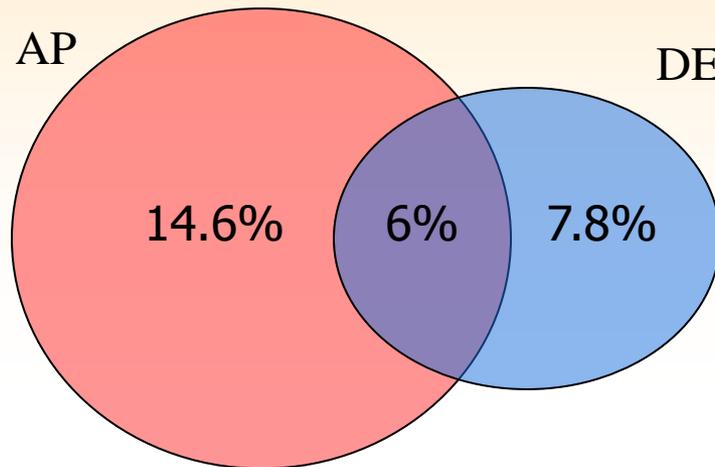
	Dual Enrollment	Advanced Placement
Course experience	<ul style="list-style-type: none">-Actual College Course-College credit: passing grade in course	<ul style="list-style-type: none">-HS “college-level” course-College credit: satisfactory score in (optional) standardized exam
Instructor qualification requirements	College faculty	Public school teacher
Finance	State pays for tuition, fees, and books	<ul style="list-style-type: none">State pays for AP course and books-AP exam fee reimbursement for all students-AP exam performance incentives (for teachers & districts)



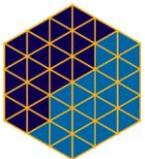
(Selected comparative dimensions)

Florida Administrative Data

- Two public HS senior cohorts (2000 & 2001); aprox 230,000 students
 - Student transcripts in HS & college (till 2006)
 - National Student Clearinghouse data (enrollment only)
- Participation rate:



No AP or DE= 72%

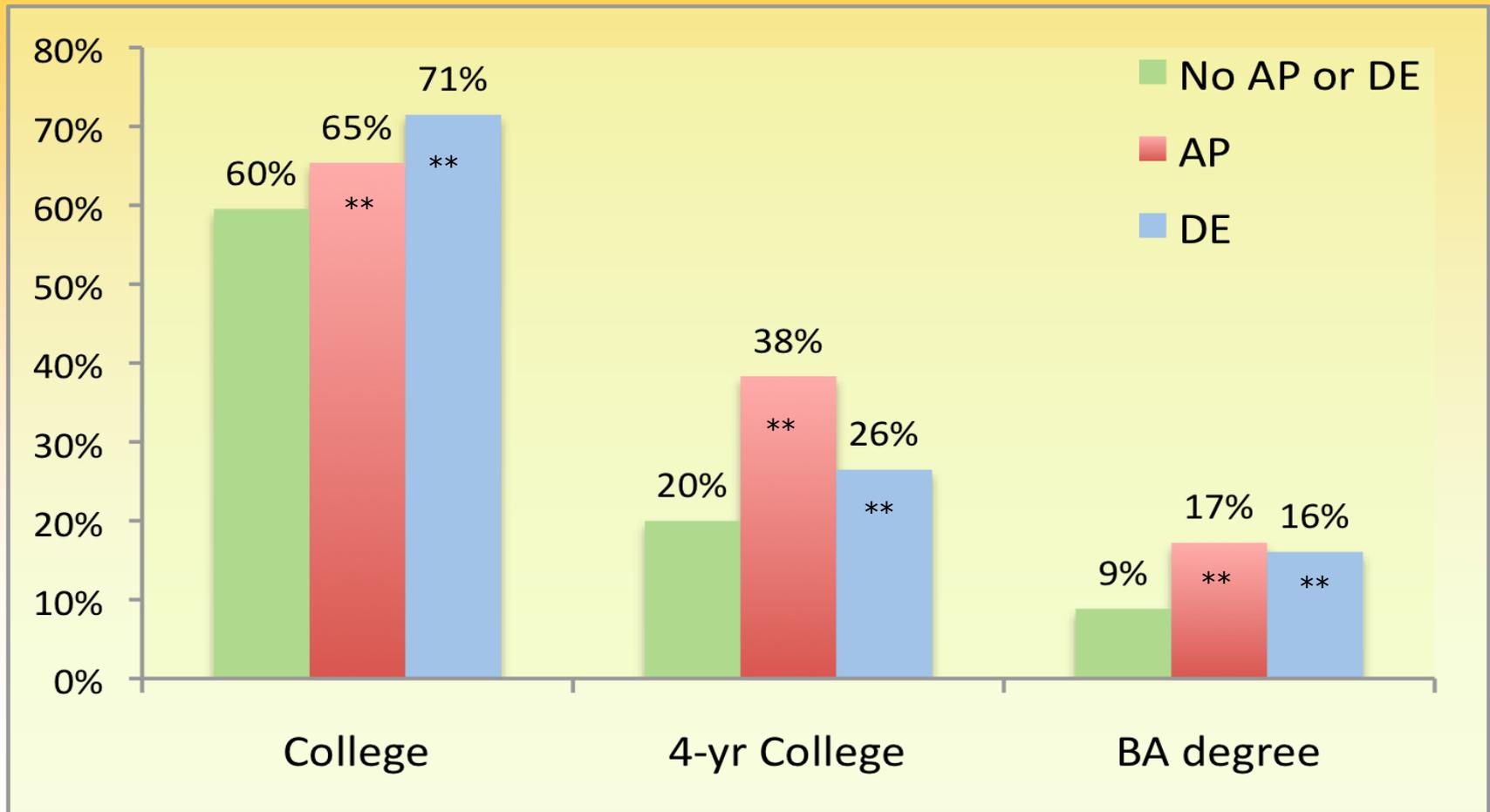


Descriptive Portrait of AP & DE students

	DE only	AP only	DE&AP	None
Female	63.4%	56.8%	62.1%	47.9%
White	78.4%	59.3%	77.7%	50.3%
Minority (Black & Hispanic)	18.7%	35.6%	16.7%	47.5%
Economically disadvantaged	26.4%	28.2%	17.4%	50.5%
Reading scores (FCAT, 10 th)	325	334	346	289
Math scores (FCAT, 10 th)	334	344	357	299
<i>DE course location</i>				
DE at both Community College & High school	58.2%	<i>n/a</i>	62.3%	<i>n/a</i>
DE at Community College only	36.8%	<i>n/a</i>	33.2%	<i>n/a</i>
DE at High School only	5.1%	<i>n/a</i>	4.5%	<i>n/a</i>
Students	17,746	30,033	13,042	163,236

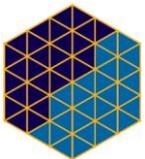


Study 1: Predictive effect of AP and DE

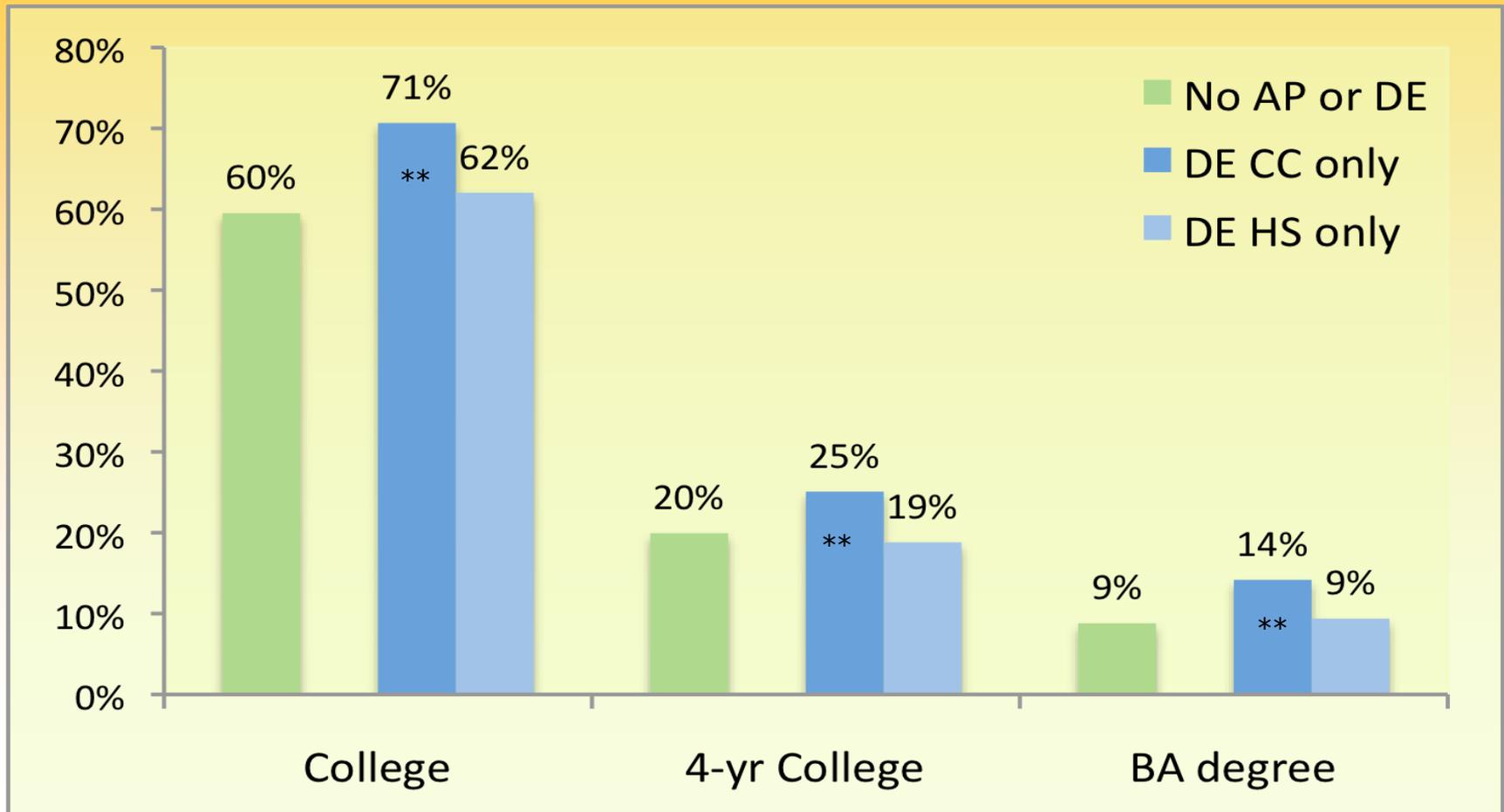


** Significant at 1%

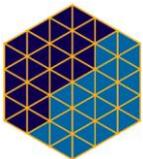
Regression control for student characteristics (including prior measures of achievement: 10th grade FCAT standardized scores and GPA), and high school and district characteristics.



Study 1: Predictive DE effect by location



** Significant at 1%



- DE effect is driven by courses taken at the community college
- Limitation: non-experimental study

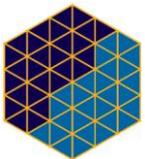
Study 2: DE effect

- Florida's eligibility requirements for DE participation:
 - 3.0 un-weighted GPA and College Placement Test (CPT)

- Regression-discontinuity (RD) intuition: compare outcomes of students around eligibility cutoffs
 - Limitation: effect for students with a level of ability close to eligibility requirements

- Two RD analyses:
 - 1) Effect of taking DE (basic), exploiting HS GPA cutoff
 - No evidence of an effect

 - 2) Effect of DE college Algebra, exploiting CPT math cutoff
 - Large positive effect of DE-Algebra: increase of 16 percentage points on college enrollment and 23 percentage points on degree attainment (AA/BA), for students on the margin of eligibility



Summary & Conclusions

- DE&AP are strong predictors of students' success, though programs are not equal predictors
- DE has strong positive effects on college enrollment and completion, but where students take DE classes and what classes they take seem critical
- Follow Florida: create databases that
 - Allow longitudinal tracking of students from high school to college
 - Record DE participation for all students (not just college-goers)
 - Contain information on: DE vocational vs. academic, course location, teacher affiliation
- Future Research: should use experimental design to establish causal relationships between participation and outcomes



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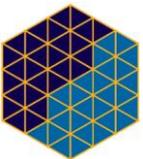
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