

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

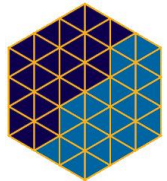
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Evidence from Florida

- **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

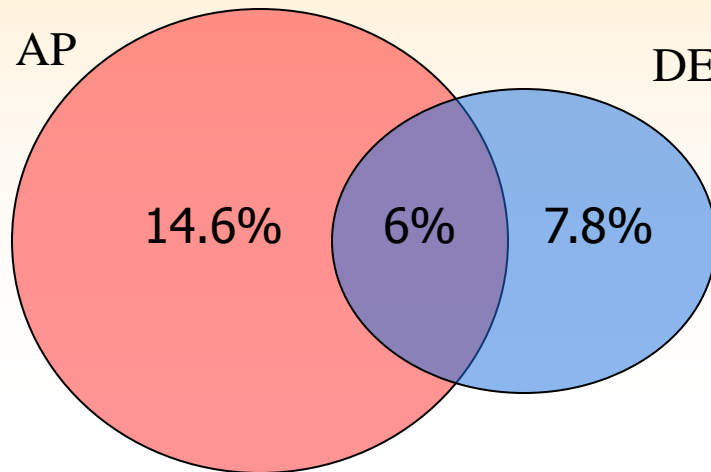
| | Dual Enrollment | Advanced Placement |
|---------------------------------------|---|---|
| Course experience | <ul style="list-style-type: none">-Actual College Course-College credit: passing grade in course | <ul style="list-style-type: none">-HS “college-level” course-College credit: satisfactory 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%

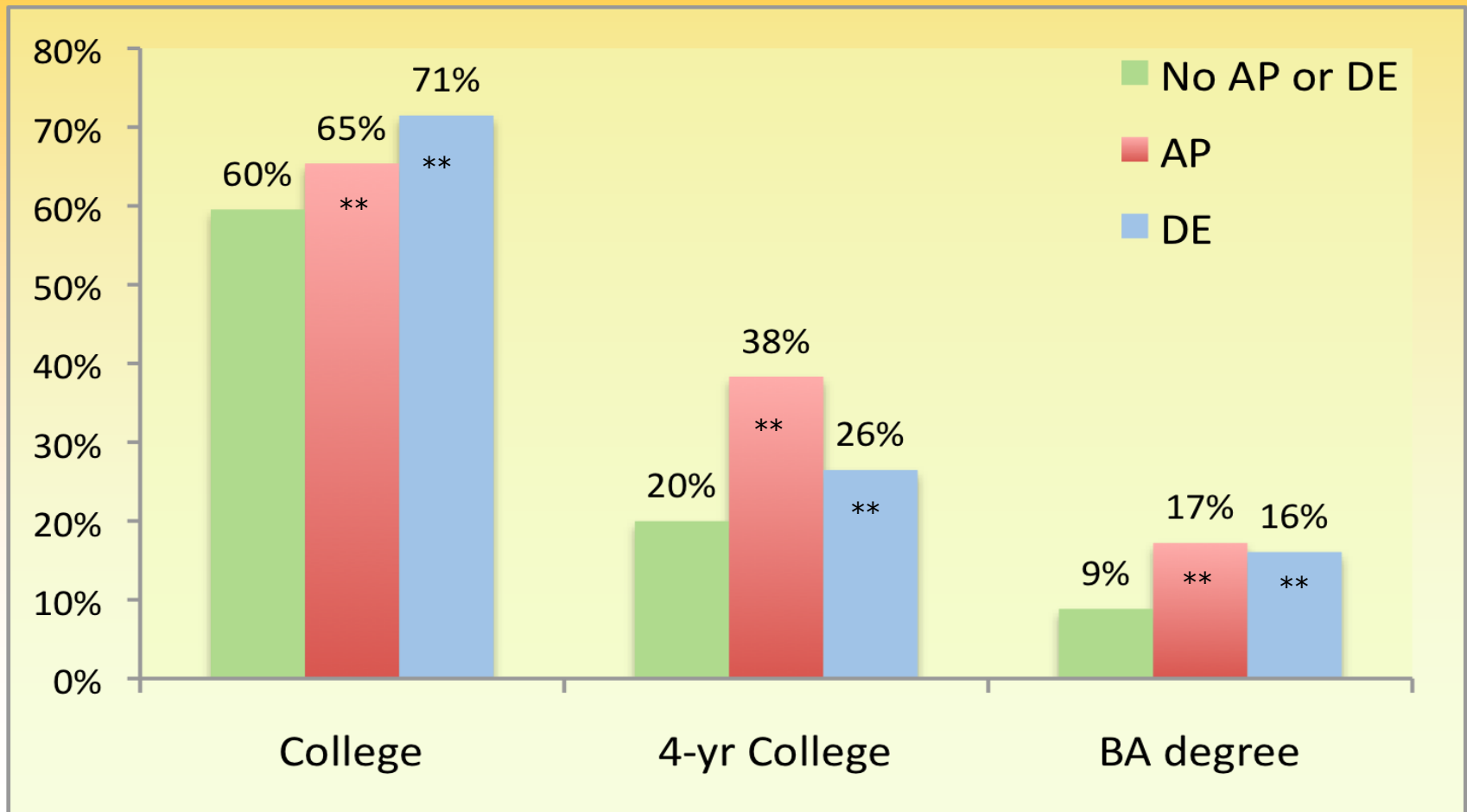


Descriptive Portrait of AP & DE students

| | 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

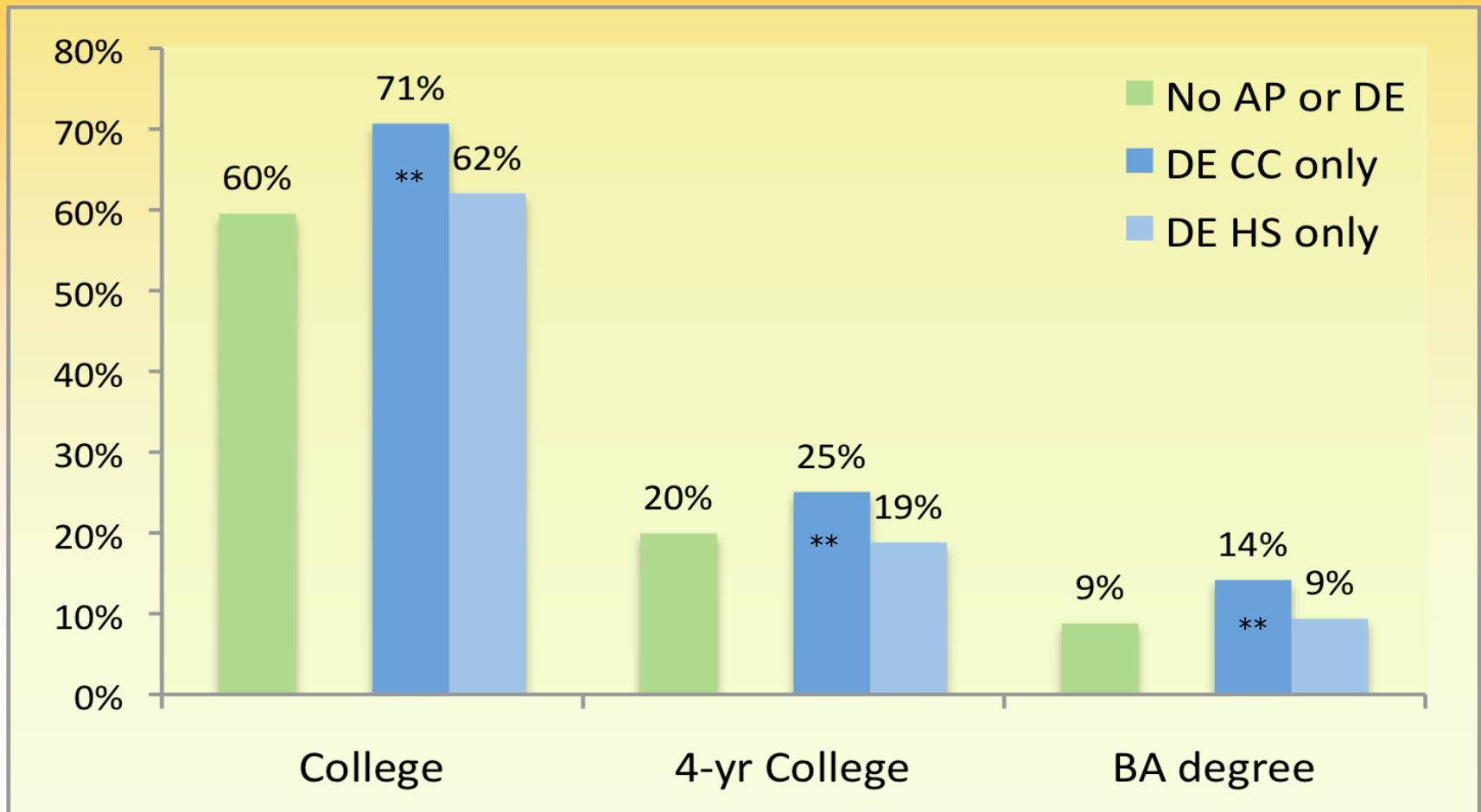


** Significant at 1%

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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