### **Evaluating Remediation Reforms at the California State University**

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#### **Presentation Outline**

- College remediation and the CSU context
- Early Start Policy
  - ① Differences in participation across campuses
  - ② Effects of Early Start on student outcomes
  - ③ Effects of remedial placement under Early Start
- Future directions

#### Persistence and Completion Rates at the California State University System



### Completion Rates by Student Race/Ethnicity at the California State University System

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**Graduation Rates by Race/Ethnicity** 

#### High Remediation and Low Graduation Rates at the California State University System

Percent of students requiring some remediation at CSU system and six-year graduation rates by cohort



#### Differences in College Readiness by Student Race/Ethnicity

#### Percent of students entering CSU "College Ready" in 2016



Data from CSU Analytic Studies: http://www.asd.calstate.edu/performance/proficiency.shtml

#### Racial/Ethnic Composition of Students at the California State University System



#### First-Time Freshmen by Race/Ethnicity

#### Controversy over Collegiate Remediation

- Where should remediation occur?
  - Bridge between K-12 schooling and college readiness
  - Role of secondary schools (or community colleges), but not BA-granting institutions
- Costs associated with remediation
  - "Paying Double"
  - Estimated cost of remediation is about \$1.3 billion nationally (Center for American Progress, 2016)
- Poor outcomes of remediated students

#### Why Remediation?

- Students enter college unprepared for college-level work
- Why?
  - Variation in academic rigor in K-12
  - Lack of information about college readiness
  - K-12-Postsecondary misalignment (placement policies)
- Why should we care?
  - Expensive
  - Inefficient
  - Discouraging
  - Poor outcomes for students identified for remediation
  - Inequality in readiness and in identification

#### **Research on Collegiate Remediation**

- College readiness matters
- Better articulation and alignment between K-12 and college expectations is effective at reducing remediation
- Results are mixed (at best) about the effectiveness of remediation
- Placement processes can be inaccurate
- Remediation signal may be discouraging
- Content/format of remediation matters

#### Most High School Students are Not Ready for College Level Work



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### California Smarter Balance 11th Grade Results 2016





#### College Readiness at Similar Institutions

Institution	Math		English	
	SAT	ACT	SAT	ACT
CSU	550	23	500	22
CUNY	500	21	480	20
Colorado Mesa	460	19	430	18
Georgia Southern	400	17	430	17
Univ. of New Mexico	510	22	450	19
Winston-Salem State	510	21	460	17

#### Determining Remediation at the California State University System

#### Multiple Ways to Demonstrate College Readiness

![](_page_14_Figure_2.jpeg)

MATH

- Ready by Exam During High School (ACT, AP, CAASPP, SAT)
- Ready by Course Taken in High School
- Ready by CSU Exam

![](_page_14_Figure_6.jpeg)

![](_page_14_Figure_7.jpeg)

- Ready by CSU's Early Start / Summer Program
- Require Developmental Course

#### Early Start at CSU

- Early Start began in 2012 with the stated goal of better preparing students in math and English before their first semester, thereby improving their chances of completing a college degree.
- It is required for incoming students who have not fulfilled the Entry Level Math (ELM) and/or English Placement Test (EPT) proficiency requirements.
- Stated Program Details:
  - The program takes place the summer before the freshman year
  - Upon admission, CSU campuses inform students how and where to sign up for Early Start
  - Early Start math and English courses are available at every CSU campus, and online
  - Financial aid is available for those who demonstrate need

#### **Research Questions**

- What does Early Start participation look like across the system?
- Did the Early Start policy impact student success at CSU (performance and persistence)?
- Do students identified for remediation under Early Start have better achievement and persistence outcomes than otherwise similar students not identified for remediation?

#### Data & Measures

- Six cohorts of first-time freshman applicants
  - 3 prior to Early Start (2009-2010 to 2011-2012)
  - 3 after Early Start (2012-2013 to 2014-2015)
- Outcomes
  - GPA in the first term
  - Persistence to year 2
  - Persistence to year 3 (units accumulation)
- Early Start
  - Remediation status
  - Participation
  - Type and Mode
    - 1 vs. 3 credits
    - online vs. face-to-face

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#### Early Start Participation across CSU campuses (2014)

![](_page_19_Figure_1.jpeg)

#### Mode of Instruction—English (2014)

![](_page_20_Figure_1.jpeg)

#### Mode of Instruction—Math (2014)

![](_page_21_Figure_1.jpeg)

#### Units—English (2014)

![](_page_22_Figure_1.jpeg)

#### Units—Math (2014)

![](_page_23_Figure_1.jpeg)

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#### Evaluating the Impact of the Early Start Policy

- Method: Difference-in-Differences
- Intuition: what would students who are deemed in need of remediation's outcomes look like if Early Start didn't exist?
  - Control for observable characteristics that may determine achievement and persistence (e.g. prior academic background, demographic characteristics, campus differences)

#### Student Characteristics Over Time by Remediation Status (English)

![](_page_26_Figure_1.jpeg)

#### Student Characteristics Over Time by Remediation Status (English)

![](_page_27_Figure_1.jpeg)

SAT

## What if Early Start had no impact on achievement or persistence?

![](_page_28_Figure_1.jpeg)

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# What if Early Start <u>did</u> improve achievement and persistence?

![](_page_29_Figure_1.jpeg)

— Pass EPT/ELM: Do Not Need Remediation (CONTROL)

Persistence to Year 2

#### Student Outcomes Over Time by Remediation Status (English)

![](_page_30_Figure_1.jpeg)

#### Student Outcomes Over Time by Remediation Status (English)

![](_page_31_Figure_1.jpeg)

First Term GPA

### Results: Fitted Values for 1<sup>st</sup> Term GPA (English)—small and not statistically significant

![](_page_32_Figure_1.jpeg)

## Results: Fitted Values for 2<sup>nd</sup> year Persistence (English) —small and not statistically significant

![](_page_33_Figure_1.jpeg)

## Results: Fitted Values for 3<sup>rd</sup> year Persistence (English) —small and statistically significant

![](_page_34_Figure_1.jpeg)

#### Results: Fitted Values for 1<sup>st</sup> Term GPA (Math) —negative and statistically significant

![](_page_35_Figure_1.jpeg)

#### Interpreting Results

- No consistently positive effect of the Early Start policy on persistence or on achievement
- Why the potential negative effect on GPA for math?
  - More college-level units in the first term
  - Courses taken post-ES may be more difficult
- Key campus differences

#### Campus Differences—Percent taking CSU Placement Tests by Campus (2015)

![](_page_37_Figure_1.jpeg)

#### Campus Differences—Percent Passing CSU Placement Tests by Campus (2015)

![](_page_38_Figure_1.jpeg)

### **Research Questions**

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### How might the remediation signal and the Early Start experience influence students?

Discouragement	Boosting skills/ Encouragement
Students may be discouraged by being told they need to do Early Start in order to matriculate	Students may be obtaining necessary academic skills to better prepare for college coursework
Students may be discouraged about the demands of college and the college experience from participating in the course	Students may be obtaining social skills about college experience (experiencing the campus early, making friends, etc.)

#### Evaluating the Impact of Needing Remediation under the Early Start Policy

- Method: Regression Discontinuity
- Comparing students just below and just above the remediation cutoff (i.e. otherwise similar students but for just missing the EPT/ELM cutoff and its consequences)

#### Example Regression Discontinuity Effect

#### Hypothetical Grade Point Difference

![](_page_42_Figure_2.jpeg)

#### Results—No Effect on GPA (English)

![](_page_43_Figure_1.jpeg)

#### Results—No Effect on Persistence Rates (English)

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#### Summary

- Early Start as a CSU-wide policy effort has not resulted in significant improvements in performance or persistence of students identified in need of remediation.
- Some evidence of modest improvements in third year persistence rates in English (about 2 percentage points overall), but not in math.
- Important differences in campus implementation of the policy need to be addressed: participation, format, (and ultimately differences in effectiveness).
- Signal for Early Start remediation in English does not result in higher (or lower) academic performance or persistence.

#### Next Steps & Policy Implications

- Improving K-12 alignment with postsecondary—a critical equity issue!
  - Strengthening and evaluating efforts at better preparation in high school
- Strengthening the transition and developmental supports in college—a critical equity issue!
  - Reconsidering the assessments (multiple measures)
  - Closer investigation of campus differences and different Early Start models
  - Move to credit-bearing developmental education

#### Moving Forward

From CSU Board of Trustees meeting 3/21/17

Improving System Policies and Programs:

- Promote Four Years of High School Math/Quantitative Reasoning
- Improve Placement and Assessment
- Strengthen Early Start
- Restructure Development Education

#### Moving Forward

"Remedial courses represent strike one before they ever set foot on any of our campuses, it represents a deficit model that must be reformed if we really hope to achieve our equity and completion goals."

-Loren J. Blanchard, CSU Executive Vice Chancellor for Academic and Student Affairs We thank the CSU Chancellor's Office for their collaboration in this work and for data access. The research reported here was undertaken through the Center for the Analysis of Postsecondary Readiness at Teachers College, Columbia University, and supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305C140007. The opinions expressed are those of the authors and do not represent views of the Institute, the U.S. Department of Education, or the California State University Chancellor's Office.

#### mkurlaender@ucdavis.edu Thank You!