

# Identifying Indicators of College Readiness & Success

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## Goals of the Presentation

- Emphasize the importance of college preparation through evidence from new research
- Explore indicators of college readiness by linking K-12 to postsecondary data
- Determining the relationship between high school predictors of readiness and actual college readiness
  - For individual students
  - For schools
- Consider multiple school measures of college readiness for accountability purposes



## THE IMPORTANCE OF COLLEGE PREPARATION—NEW RESEARCH EVIDENCE



### College Preparation

- Addressing the discrepancy between students' K-12 academic preparation and the demands of postsecondary schooling is at the heart of Common Core State Standards.
- College readiness research is broadly organized around two domains:
  - Academic rigor in high school
  - Improved information
- A note about Career Readiness: Although this has been far less researched, the same principles apply—students would be better served with more direct preparation and information about the expectations of employers in the labor market.

## College Preparation—Academic Rigor

- The accumulation of academic skills and preparation in high school is a critical predictor of students' short-term and long-term outcomes.
- High school curricular intensity is positively associated with the following: test scores, high school graduation, college entry, type of college entry, college grades, college graduation, and earnings.
- Example: a recent study found a 7 to 11 percentage point increase in the likelihood of high school graduation and four-year college entry between a student who takes no rigorous high school courses and a student taking just one rigorous course during high school.

## College Preparation—Academic Rigor

### Advantages of more rigorous courses:

- Provide richer curricula, exposing students to material they may face in college
- Often taught by more skilled teachers
- Provide a signal for college admissions and course placement
- Allow students to engage with higher-ability/motivated peers.
- Other unobserved forces (e.g. parents, school expectations, teacher encouragement)

## **College Preparation—Academic Rigor**

- Improving the academic rigor of students' high school experience will likely lead to improved postsecondary outcomes.
- But, we must also be attentive to the host of factors that contribute to students' sorting into various levels of courses in high school: availability of courses, knowledge of offerings at the school, academic ability, interest, motivation, familial involvement (or lack thereof), and the influences of teachers, counselors, and/or peers.

## **College Preparation—Information**

- A majority of high school students, regardless of their academic performance, report that they will attend college.
- Despite a college for all culture, many students lack knowledge about the academic demands of college.
- Students can experience discouragement from placement exams and additional developmental coursework needed to catch up to college-level courses.

## **College Preparation—What Works?**

Evidence from recent research:

- Increasing exposure to college-level experiences and content
- Improved information about students' academic preparation
- Improved transparency and efficiency in developmental course placement at the postsecondary level

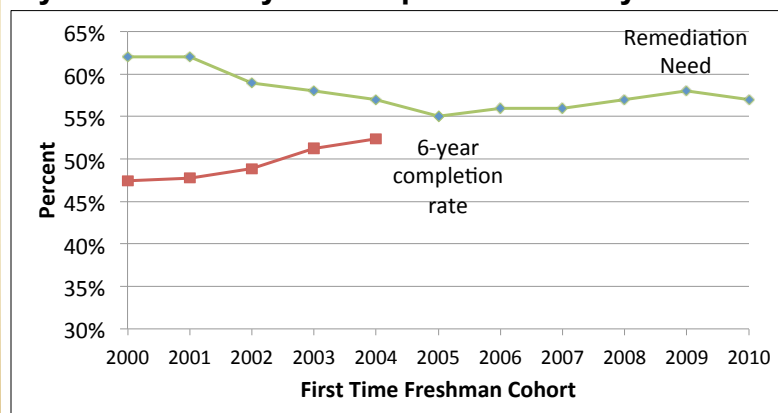
**INDICATORS OF COLLEGE  
READINESS—LINKING K-12 TO  
POSTSECONDARY DATA**

## College readiness from the point of view of higher education

- College readiness at the K-12 level is about preparation and entry.
- College readiness at the college level is about being ready to take college level courses, and increasing students' chances of persisting and completing a degree.
- Despite increased college participation, we see high rates of remedial/developmental course-taking and low rates of degree completion.
- Improving alignment between K-12 and postsecondary is a big focus of Common Core State Standards.

## College Readiness for CSU First-Time Freshmen

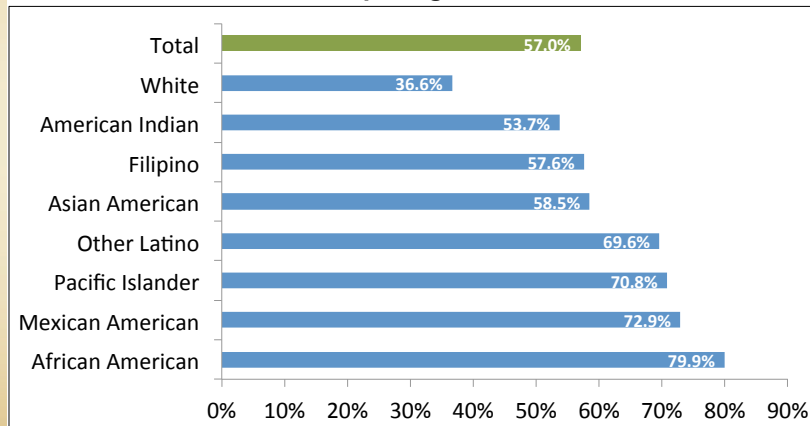
Percent of students requiring remediation at CSU system and six-year completion rates by cohort



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

## College Readiness for CSU First-Time Freshmen

Percent of students Requiring remediation at CSU in 2010



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

## The Early Assessment Program

- Goals of EAP:
  - Provide an early signal to students about their college readiness
  - Provide 12<sup>th</sup> grade interventions
- Components of EAP:
  - 1) 11<sup>th</sup> grade testing (early assessment)
  - 2) Professional development for teachers
  - 3) Supplemental preparation for students

## **The Early Assessment Program**

### **Evidence of Effectiveness**

- The introduction of the EAP reduced remediation rates among first-time freshmen at CSU systemwide, in both English and Math.
- In the early years, higher EAP test participation among high schools was associated with higher school-wide outcomes (e.g. CST, API).

## **Measuring College Readiness**

- We have a unique opportunity to link K-12 to postsecondary data at California's two largest postsecondary systems of higher education
- Data Sources
  - Matched the census of California 11<sup>th</sup> grade students in 2008 to census of California State University and Community College campuses
  - Evaluated college course-taking, specifically the need for remedial/developmental coursework



## Ways to Become College Ready at CSU and CCC

- *California State University*
  - Pre-College: SAT, Advanced Placement, EAP
  - At College Entry: English-EPT, Math-ELM
- *Community Colleges*
  - Pre-College: EAP (at about 2/3 colleges)
  - At College Entry: College-specific placement tests

## Contribution of this Analysis

- Measuring actual college readiness for those who attend college at CSU and CCC
- Why connect high school measures to actual college readiness?
  - Provide evidence of (mis)alignment
  - Provide critical information to K-12 about what is necessary for postsecondary success
    - For Students, Schools, Accountability goals

## WHAT PREDICTS COLLEGE READINESS? *FOR INDIVIDUALS*

### Measures to Consider

#### *Academic Rigor*

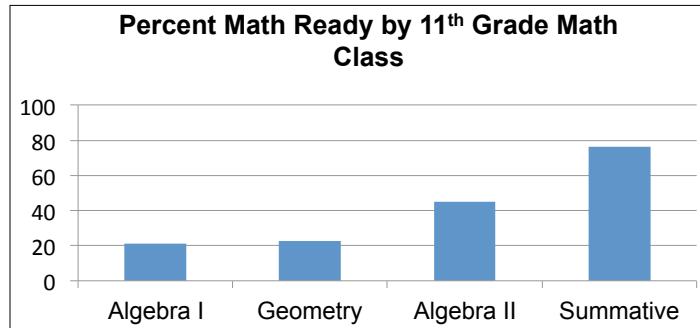
- Highest math course taken
- EAP Math Eligibility
- Academic Performance
- A to G Coursework
- High School Grade Point Average (GPA)
- EAP Exemption

#### *Information*

- EAP Participation
- Participation in college entry activities (SAT, FAFSA, etc.)
- College course taking while in high school (AP, IB, dual or concurrent enrollment)
- College application

## Predictors of College Readiness: Academic Rigor in Math

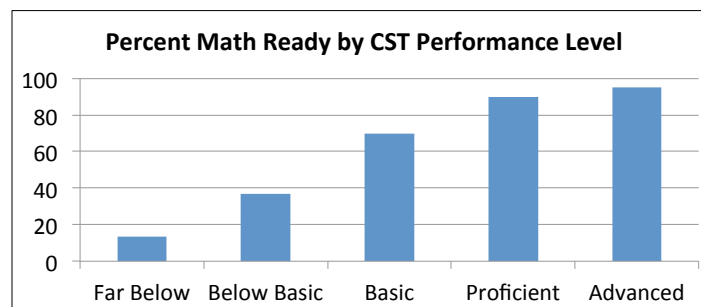
Students in higher level math courses are more likely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in math remediation (CSU) or basic skills courses (CCC)
- Math course represents the math course the student took in 11<sup>th</sup> grade

## Predictors of College Readiness: Math CSTs

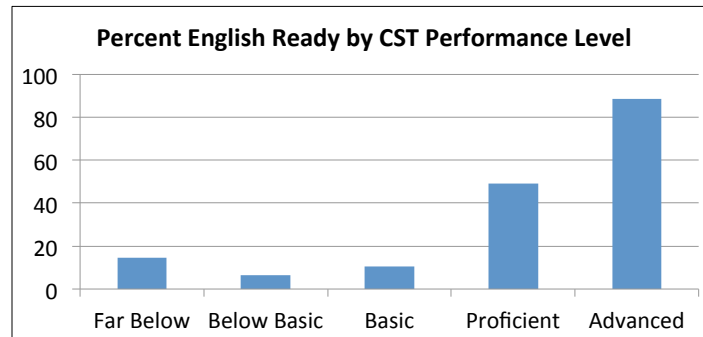
Students who were proficient or advanced on the Math CST were very likely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in math remediation (CSU) or basic skills courses (CCC)
- CST Performance levels were assigned to students based on their CST score in math

## Predictors of College Readiness: English CSTs

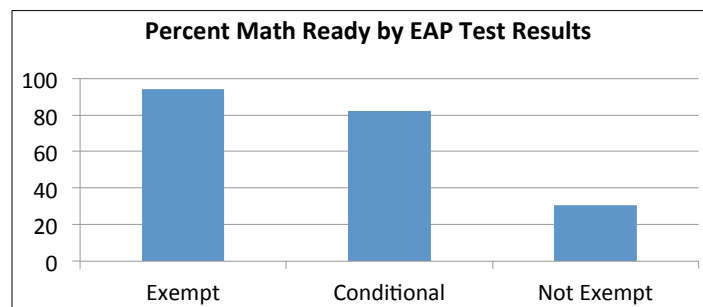
Students who were advanced on the English CST were very likely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in English remediation (CSU) or basic skills courses (CCC)
- CST Performance levels were assigned to students based on their CST score in English

## Predictors of College Readiness: EAP Math Test

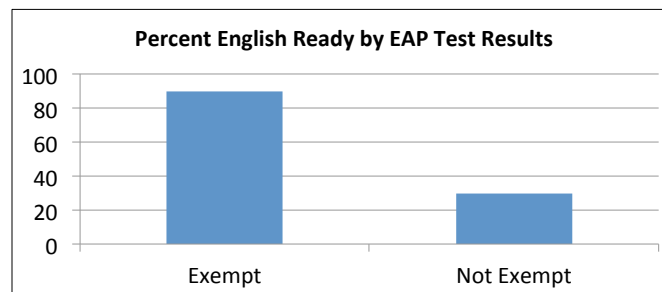
Students who scored Not Exempt on their EAP Math Test were unlikely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in math remediation (CSU) or basic skills courses (CCC)
- Students were deemed exempt from remediation if they scored high enough on their EAP Test

## Predictors of College Readiness: EAP English Test

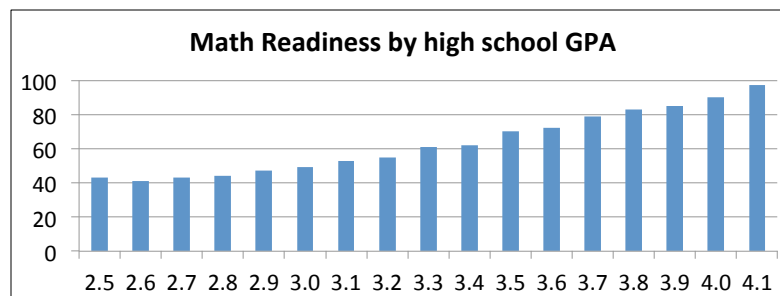
Students who scored not exempt on the English EAP were unlikely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in English remediation (CSU) or basic skills courses (CCC)
- Students were deemed exempt from remediation if they scored high enough on their EAP Test

## Predictors of College Readiness: High School Grade Point Average

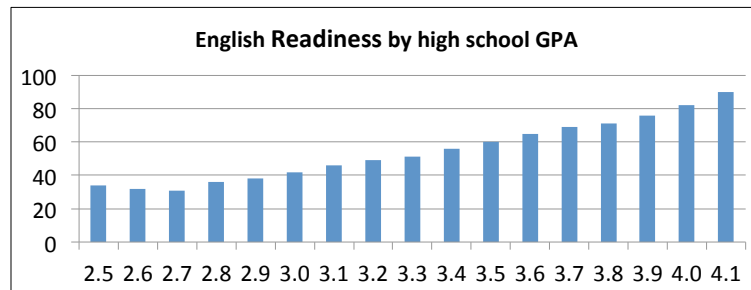
Students with higher grade point averages were more likely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in math remediation (CSU) or basic skills courses (CCC)
- High school GPA represents the cumulative grade point average upon entry to college

## Predictors of College Readiness: High School Grade Point Average

Students with higher grade point averages were more likely to be ready for college level courses



- Percent ready represents the percent of students in each category who were not enrolled in English remediation (CSU) or basic skills courses (CCC)
- High school GPA represents the cumulative grade point average upon entry to college

WHAT PREDICTS COLLEGE  
READINESS?  
*FOR SCHOOLS*

## **Predictors of College Readiness at the School Level**

- We demonstrated that several student-level measures predict college readiness in math and English
- If we want to hold schools accountable for college readiness, we may want to scale these measures up to the school level

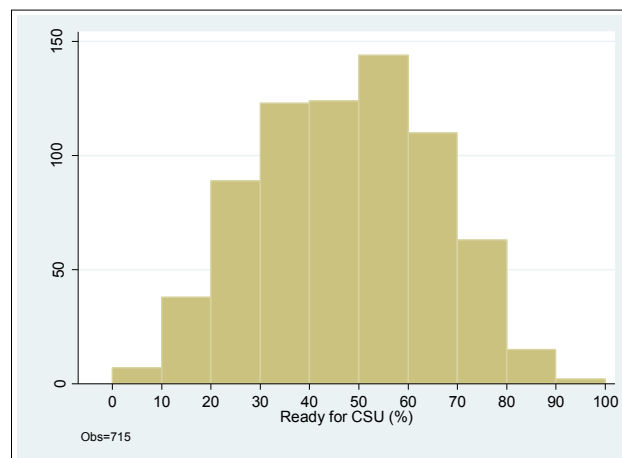
## **College Ready at California State Universities (CSU) and Community Colleges (CCC)**

- Data
  - Linking CSU & CCC with K-12 (2008 11<sup>th</sup> graders)
  - Restrict to: “Regular” high schools with minimum of 30 students in grade 11, and at least 11 students attending CSU or CCC

## College Ready at California State Universities (CSU) and Community Colleges (CCC)

- Why only CSU and CCCC?
  - Most students who go to selective colleges are ready for college level courses; need to look at moderately-selective and broad-access institutions.
  - Most students do not travel across state lines or go to private schools to attend non-selective institutions (at least when compared to more selective colleges)

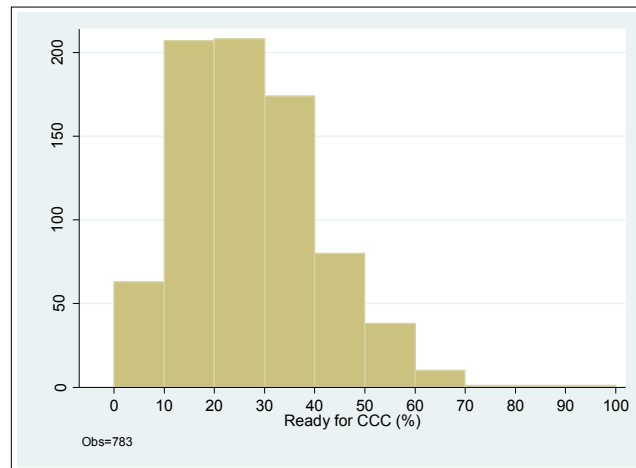
## College Ready at California State University



Note: Each observation is one school  
Only high schools with at least 11 students attending the CSU are included

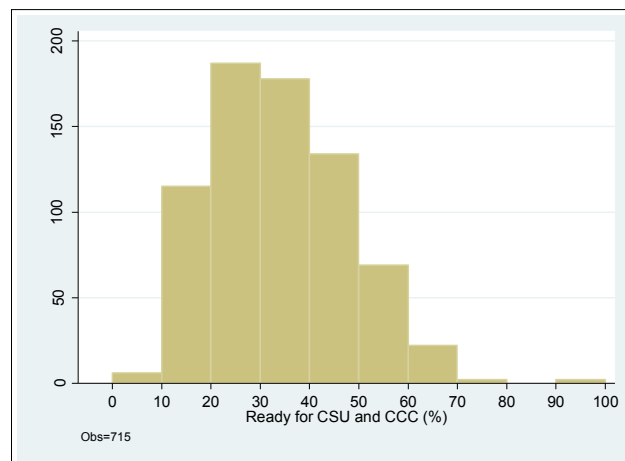


## College Ready at California Community Colleges



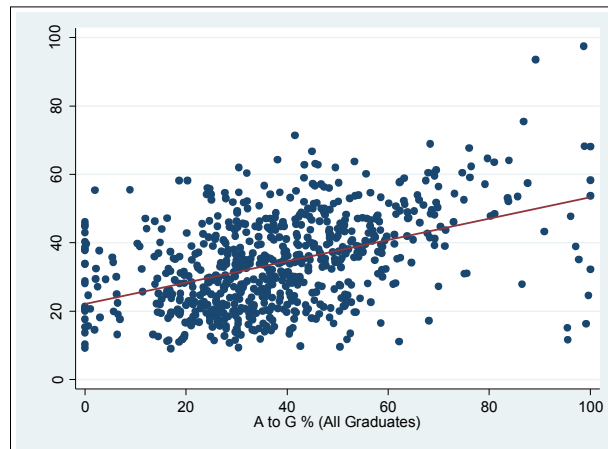
Note: Each observation is one school  
Only high schools with at least 11 students attending the CCC are included

## CSU/CCC Readiness



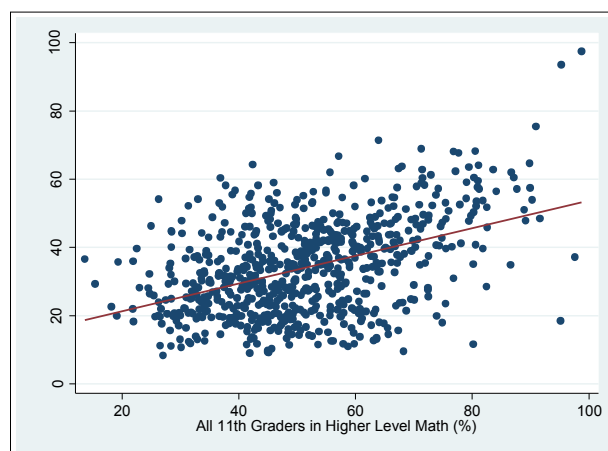
Note: Each observation is one school  
Only high schools with at least 11 students attending the CSU or CCC are included

### Schools with higher proportion of A to G eligible students had higher rates of college ready students



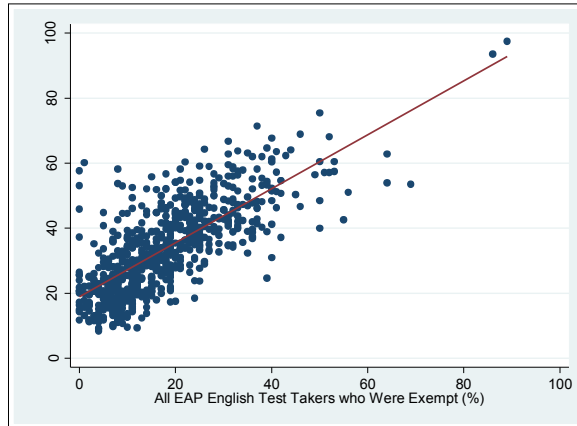
Note: Each point represents one high school  
Only high schools with at least 30 students combined in CSU or CCC are included

### Schools with higher proportion of students enrolled in more rigorous math courses had higher rates of college ready students



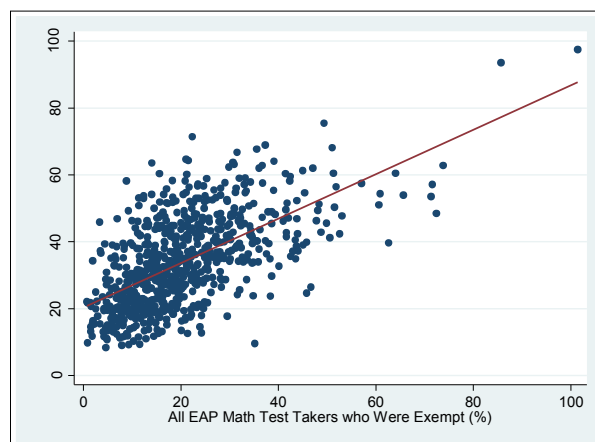
Note: Each point represents one high school  
Only high schools with at least 30 students combined in CSU or CCC are included

### Schools with higher proportion of EAP Exempt students in English had higher rates of college ready students



Note: Each point represents one high school  
Only high schools with at least 30 students combined in CSU or CCC are included

### Schools with higher proportion of EAP Exempt students in math had higher rates of college ready students



Note: Each point represents one high school  
Only high schools with at least 30 students combined in CSU or CCC are included



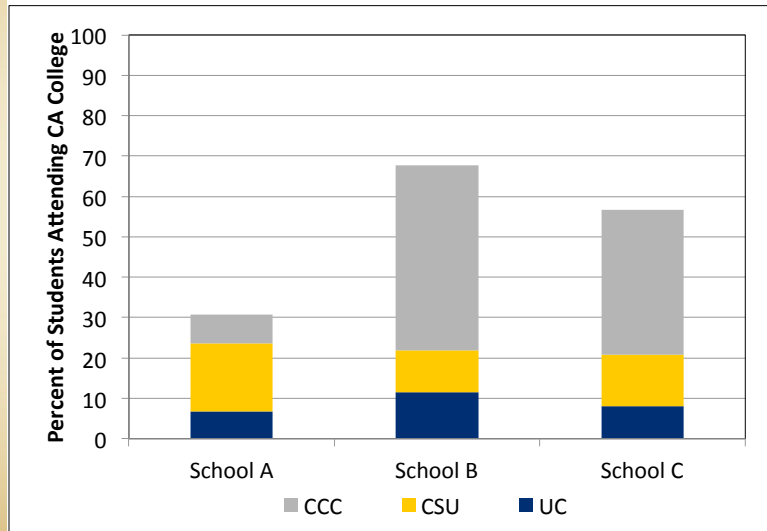
## CONSIDERING MULTIPLE SCHOOL MEASURES OF COLLEGE READINESS



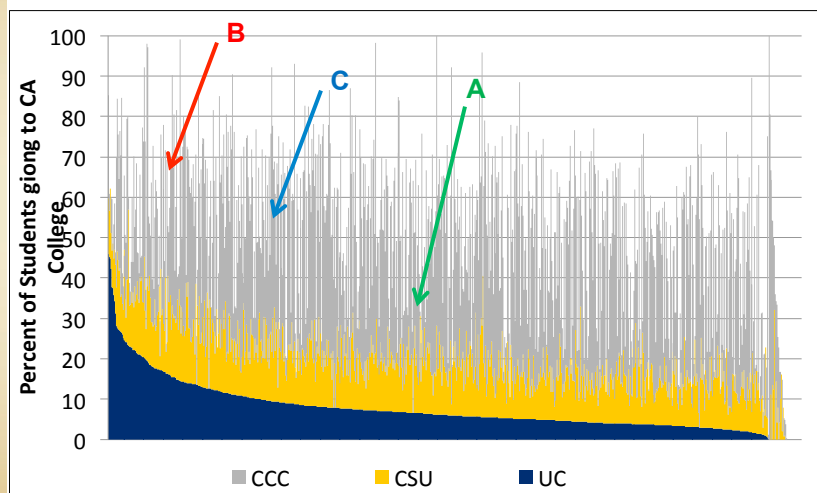
### **Investigating School Level College Readiness Indicators for Accountability**

- Objective:
  - Investigate the variation in these measures across California high schools
  - Investigate whether schools rank differently across these measures
- We demonstrate this by following 3 schools across these measures to see how they fare.
  - School A – San Diego Area
  - School B – Los Angeles Area
  - School C – Sacramento Area

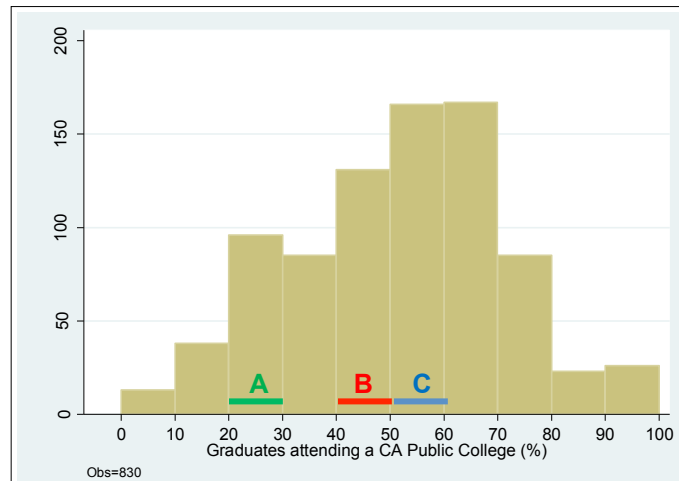
## School Indicators: College Sending



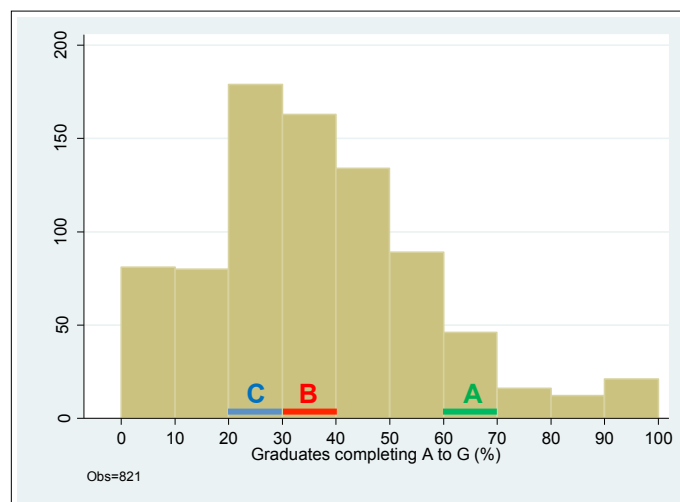
## School Indicators: College Sending



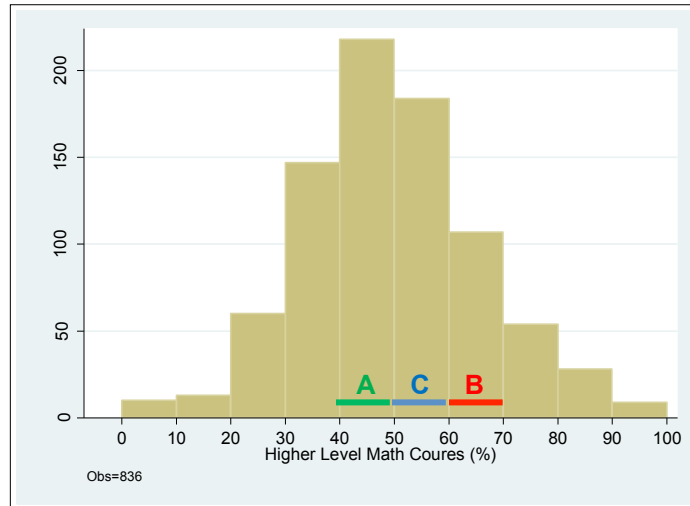
## School Indicators: Attending a California public college or university



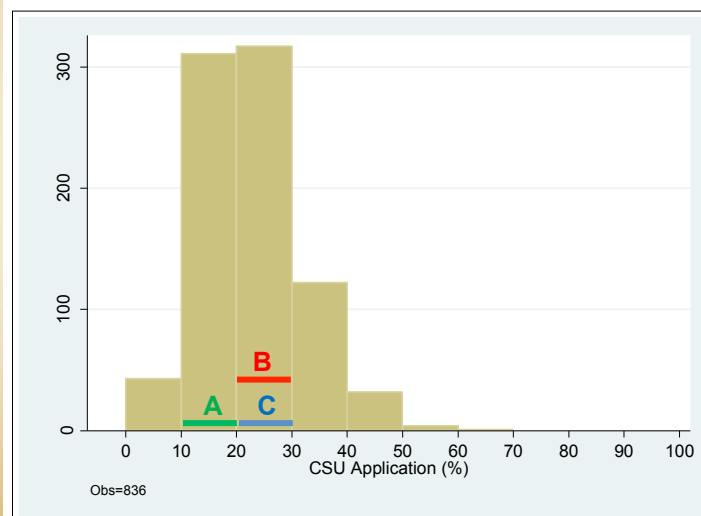
## School Indicators: Completing A-G



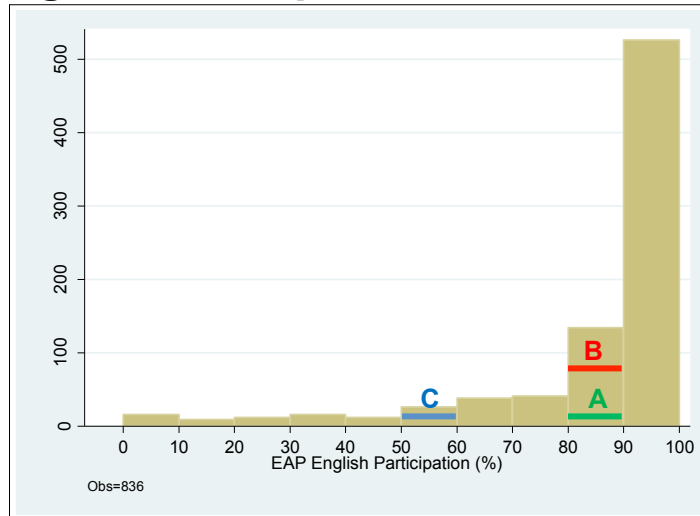
## School Indicators: Students enrolled in Algebra II or higher in 11<sup>th</sup> grade



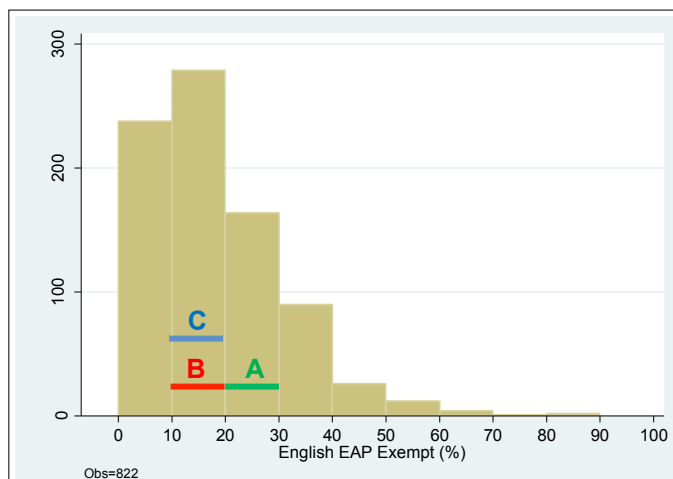
## School Indicators: Applicants to CSU



## School Indicators: College Readiness Assessment, EAP English Participation

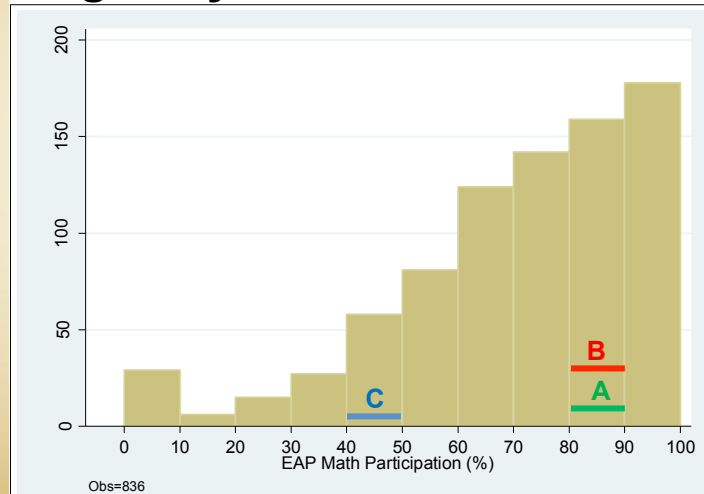


## School Indicators: College Readiness Assessment, EAP English Exemption

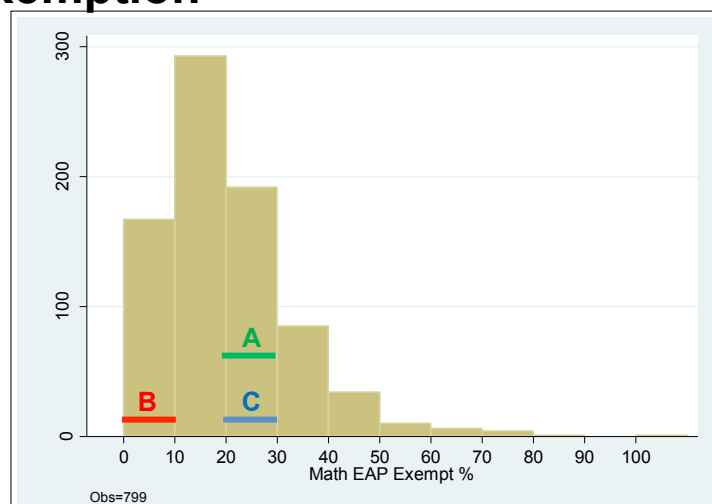




## School Indicators: College Readiness Assessment, EAP Math Eligibility



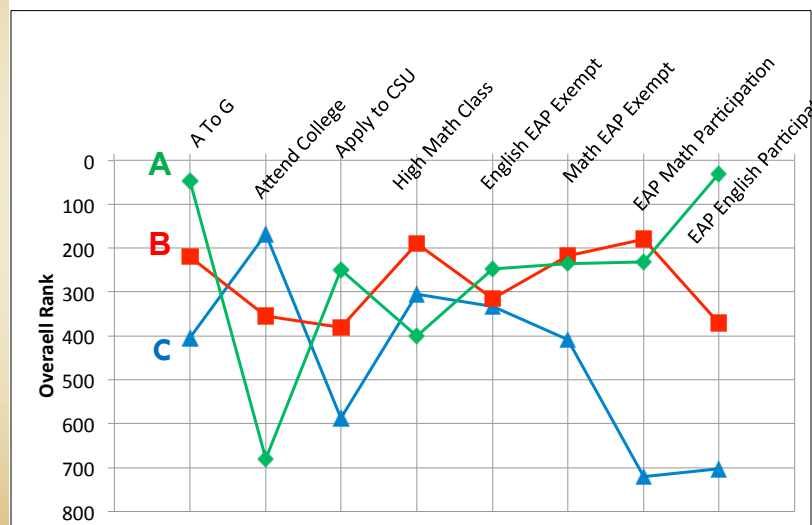
## School Indicators: College Readiness Assessment, EAP Math Exemption



## How did the three schools rank across these indicators?

Indicator	Rank		
	A	B	C
A to G	1	2	3
Attend College	3	2	1
CSU Application	1	2	3
Higher Level Math	3	1	2
English EAP Ready	1	2	3
Math EAP Ready	2	1	3
Math EAP Eligibility	2	1	3
English EAP Participation	1	2	3

## How did the three schools rank across these indicators?



## Summary

- Consistent with existing research, California juniors who have a more rigorous academic background experience higher likelihoods of being college ready when they enter CSU or CC.
- Demonstrating proficiency in high school, however, is not necessarily synonymous with college readiness.
- Several school level indicators of academic rigor are associated with college readiness at CSU and CC.
- There is widespread variation in these school level indicators of college readiness across California high schools.
- It is important to consider multiple measures of college readiness at the school level.

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