Reinvestigating the Achievement Gap: An Analysis of Student Performance on the SBAC and CAHSEE

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(Roundtable Session: Test-Based Accountability and Achievement Gaps)

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Policy Context:
- Partnership between Michal Kurlaender (and colleagues) at University of California Davis and Jonathan Isler (and colleagues) at California Department of Education
  o Funded through Institute of Education Sciences grant
  o Examine college & career readiness for 11 cohorts of 11th graders in California
  o Answer timely and relevant policy questions as CDE implements new SBAC assessments and new accountability framework
- California High School Exit Exam (CAHSEE) suspended in 2016 (California Senate Bill 172)
- California Assessment of Student Performance and Progress (CAASPP) implemented in 2015
  o Based on Smarter Balanced Assessment Consortium (SBAC) exam
- Advisory Panel formed by legislature to make recommendations on future of high school exit exam and graduation requirements
  o Requested our help in examining student performance on CAHSEE and SBAC

Research Questions:
- What is the variation in student performance on the CAHSEE exam?
  o What are the differential achievement outcomes across student subgroups, including gender, race/ethnicity, and English language learner (ELL) status?
- What is the variation in student performance on the SBAC exam?
  o What are the differential achievement outcomes across student subgroups, including gender, race/ethnicity, and English language learner (ELL) status?
- How do differential achievement outcomes persist in the absence of high stakes testing?

Data & Methods:
- One cohort of high school students (n ~ 390,000)
  o CAHSEE performance as 10th graders in 2013-2014
  o SBAC performance as 11th graders in 2014-2015
- Descriptive statistics
  o Distribution of performance on CAHSEE and SBAC by subgroup
- Logistic regression – predicted probabilities
  o Outcome variables (binary) for both Math and ELA
    ▪ Failed CAHSEE
    ▪ Did Not Meet SBAC standards
  o Predictor variables
    ▪ Gender
    ▪ Race/ethnicity
    ▪ ELL status
    ▪ SES status
    ▪ Special Education status

Link to full report: http://www.cde.ca.gov/ta/tg/hs/documents/hspathwayrpt.doc

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Findings:
- Overall, students perform better on ELA compared to Math assessments
- Females perform better than males on ELA assessments

Figure 1: Student Performance on SBAC by Gender and Pass/Fail on CAHSEE

- Subgroups disproportionately represented among students that did not meet SBAC standards
- The gap in achievement narrows in the absence of a high-stakes setting for
  - Hispanic students by nearly 0.5 percentage points for ELA
  - English language learners by over 8 percentage points for ELA
  - Students with disabilities by over 4 percentage points for ELA
  - Students with disabilities by over 1.5 percentage points for math

Figure 2: Race/Ethnicity by CAHSEE and SBAC Performance

Implications:
- Great disparities on such assessments for key subgroups of students
  - Further research and analysis about disparities and differential impact
- SBAC performance as a college readiness signal
  - Level 3/MET indicates that a student is “conditionally ready” for college
  - Level 4/Exceeds indicates that a student is “ready” for college

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