High School Exit Exams
What do We Know?

Michal Kurlaender & Paco Martorell
February 23, 2016
Outline of Presentation

- Review research evidence
  - Effects of HSEE policies and practices
  - Effects of failing HSEE for students

- Review HSEE requirements in 2 SBAC states

- Discuss emerging trends in HSEE practices
High School Exit Exams

- High school exit exams (HSEE) refer to the use of formal assessment as a requirement for earning a high school diploma

- Observed in at least half of the states between early 1990s to present-day

- HSEE are present in at least 2 formats
  - Comprehensive or “standards-based”
    - Assess multiple subjects
    - Taken by all students in specific grade-level
  - End of Course (EOC)
    - Assess mastery of course content
    - Taken by students at completion of course

Center on Education Policy, 2012
High School Exit Exams

- High school exit exams refer to the use of formal assessment as a requirement for earning a high school diploma
- Observed in at least half of the states between early 1990s to present-day
- HSEE are present in at least 2 formats
  - Comprehensive or “standards-based”
    - Assess multiple subjects
    - Taken by all students in specific grade-level
  - End of Course (EOC)
    - Assess mastery of course content
    - Taken by students at completion of course

Center on Education Policy, 2012
The State of the Nation

In 2011-2012:

- 25 states administered high school exit exams
  - 17 with comprehensive assessments
  - 9 with EOCs
  - (1 required both)

- 69% of the nation’s students attend school in states with HSEE

- 70%-90% of students pass on first attempt, though rates vary from state to state and by subject area of exam

- All states with HSEE allow students repeated attempts to pass

Center on Education Policy, 2012
Trends since 2012

- Almost all states have repealed or are phasing out separate HSEE
- Adopting minimum performance requirements for graduation based on standardized assessments
  - PARCC
  - SBAC
  - ACT/SAT
- Numerous states adding End of Course exams
Framing the Issues

- Proponents argue HSEE create
  - Incentives for schools to provide better instruction
  - Incentives for struggling students to work harder and learn needed skills before graduation
  - A common standard for high school graduation, making the diploma a clearer signal to employers about the academic skills of potential employees

- Opponents argue HSEE
  - Discourage some students (academically or socially disadvantaged students) from staying in school
  - Lead to higher dropout rates

- Implications for educational inequality
RESEARCH EVIDENCE
Research on High School Exit Exams

- Reviewed more than 30 studies
Research on High School Exit Exams

- Reviewed more than 30 studies
- Causal vs. correlational research
Research on High School Exit Exams

- Reviewed more than 30 studies
- Causal vs. correlational research
- 2 research questions examined in literature
  - What are the effects of a state policy requiring a high school exit exam for graduation?
Research on High School Exit Exams

- Reviewed more than 30 studies
- Causal vs. correlational research

2 research questions examined in literature
- What are the effects of a state policy requiring a high school exit exam for graduation?
- What are the effects for students who fail a high school exit exam?
WHAT ARE THE EFFECTS OF A STATE POLICY REQUIRING A HIGH SCHOOL EXIT EXAM FOR GRADUATION?
WHAT ARE THE EFFECTS OF A STATE POLICY REQUIRING A HIGH SCHOOL EXIT EXAM FOR GRADUATION?

- What are student outcomes with and without a HSEE requirement?
WHAT ARE THE EFFECTS OF A STATE POLICY REQUIRING A HIGH SCHOOL EXIT EXAM FOR GRADUATION?

- What are student outcomes with and without a HSEE requirement?

Research Methods
- Intuition: Compare outcomes for students before & after HSEE policies
WHAT ARE THE EFFECTS OF A STATE POLICY REQUIRING A HIGH SCHOOL EXIT EXAM FOR GRADUATION?

- What are student outcomes with and without a HSEE requirement?

Research Methods
- Intuition: Compare outcomes for students before & after HSEE policies

Common outcomes in studies
- High school graduation rates
- High school dropout rates
- Academic performance
- Postsecondary outcomes
HSEE Impacts on H.S. Graduation Rates

- Decreased high school graduation rates as states adopt HSEE requirements  
  (Baker & Lang, 2013; Dee & Jacob, 2006; Marchant & Paulson, 2005; Reardon, Atteberry, Arshan, & Kurlaender, 2009; Warren, Jenkins & Kulick, 2006)

- Increased time to graduation (extra year) for students as states adopt HSEE requirements  
  (Bishop & Mane, 2001)

- Higher rates of GED awards as states adopt HSEE requirements  
  (Baker & Lang, 2013; Bishop & Mane, 2001; Warren, Jenkins & Kulick, 2006)
HSEE Impacts on H.S. Dropout Rates

- No effect on dropout rates when using national data
  
  (Bishop & Mane, 2001; Jacob, 2001)

- Increased high school dropout rates in grade 12 in Minnesota
  
  (Dee & Jacob, 2006)
Suggestive research shows...

- Students score higher in math & science on international tests of achievement in countries with HSEE
  
  (Bishop, 1999; Bishop, 1998; Jürges, Schneider, Büchel, 2005)

- Students attend college at a greater rate in states with HSEE  
  (Bishop & Mane, 2001)

- High school graduates have higher earnings in states with HSEE  
  (Bishop & Mane, 2001)

- Higher rates of incarceration in states with rigorous HSEE  
  (Baker & Lang, 2013)
Differential Effects of HSEE

- Students with disabilities are more likely to earn certificates of completion, rather than diplomas (Erickson, Kelinhammer-Tramill, & Thurlow, 2007)

- Decreased graduation rates disproportionately affect minority students (Dee & Jacob, 2006; Reardon, Atteberry, Arshan, & Kurlaender, 2009)

- Decreased graduation rates vary by gender
  - Male students less likely to graduate (Dee & Jacob, 2006)
  - Female students less likely to graduate (Reardon, Atteberry, Arshan, & Kurlaender, 2009)
WHAT ARE THE EFFECTS OF A STATE POLICY REQUIRING A HIGH SCHOOL EXIT EXAM FOR GRADUATION?

A Closer Look at the Impact of California’s Adoption of CAHSEE
Evidence from California CAHSEE Study

- Longitudinal data from 4 large CA school districts
  - San Diego, Long Beach, Fresno, San Francisco
  - Students scheduled to graduate in 2005-2007

- Comparison of outcomes across cohorts
  - Compare class of 2005 (not required to pass CAHSEE) to classes of 2006, 2007 (required to pass CAHSEE)
  - Compare students with similar 8th, 9th, 10th grade CST scores and similar demographic characteristics
  - Investigate differential impacts by prior achievement, race, gender, free/reduced-price lunch eligibility, and ELL status

- Outcomes
  - Persistence through 11th and 12th grade
  - Achievement (11th grade ELA CST)
  - Graduation (diploma receipt)
Persistence through 11th grade slightly lower in CAHSEE cohorts for students with low prior skills

11th Grade Presence Rates, by Cohort and 10th Grade ELA CST Percentile

- Class of 2005 (not subject to CAHSEE)
- Class of 2006 (subject to CAHSEE)
- Class of 2007 (subject to CAHSEE)

Reardon, Atteberry, Arshan, & Kurlaender, 2009
Persistence through 12\textsuperscript{th} grade modestly lower in CAHSEE cohorts for students with low prior skills

Reardon, Atteberry, Arshan, & Kurlaender, 2009
CAHSEE has a modest negative effect on 11th grade achievement for students with low prior skills.
CAHSEE sharply reduces graduation rates for students with low prior skills
Effects of CAHSEE on high school graduation differ by gender and ethnicity of students

Source: Reardon et al. (2009) Effects of the California High School Exit Exam on Student Persistence, Achievement, and Graduation

Reardon, Atteberry, Arshan, & Kurlaender, 2009
Considerations of Differential Effects

- Broadly, differences in observed effects may be the result of:
  - Varying rigor of HSEE across states
  - Varying content of HSEE across states
  - Varying minimum passing scores across states
  - Differences in student preparation
  - Differences in quality of schools students attend
Impact of the CAHSEE for Students with Low Academic Achievement

- No positive effect (and maybe a negative effect) on achievement
- Negative effect on persistence in high school
- Negative effect on high school graduation
  - Disproportionate negative effects for minority students and female students:
    - Rule out school quality
    - Identify possible stereotype threat
WHAT ARE THE EFFECTS FOR STUDENTS WHO FAIL A HIGH SCHOOL EXIT EXAM?
WHAT ARE THE EFFECTS FOR STUDENTS WHO FAIL A HIGH SCHOOL EXIT EXAM?

- How would student outcomes differ if those who fail, actually passed the HSEE?
WHAT ARE THE EFFECTS FOR STUDENTS WHO FAIL A HIGH SCHOOL EXIT EXAM?

- How would student outcomes differ if those who fail, actually passed the HSEE?

Research Method
- Compare students just above and just below the passing score cutoff (regression discontinuity)
WHAT ARE THE EFFECTS FOR STUDENTS WHO FAIL A HIGH SCHOOL EXIT EXAM?

- How would student outcomes differ if those who fail, actually passed the HSEE?

Research Method
- Compare students just above and just below the passing score cutoff (regression discontinuity)

- Common outcomes in studies
  - High school graduation rates
  - High school dropout rates
  - Academic performance
  - Post-secondary outcomes
Failing a HSEE has Mixed Effects on Graduation

- No impact of failing first try on likelihood of graduating high school
  (Martorell, 2005; Papay, Murnane & Willett, 2010; Reardon, Arshan, Atteberry & Kurlaender, 2010)

- Except for urban low-income students who fail a HSEE, who are less likely to graduate
  (Papay, Murnane & Willett, 2010)
Failing a HSEE has Mixed Effects on Graduation

- No impact of failing first try on likelihood of graduating high school
  (Martorell, 2005; Papay, Murnane & Willett, 2010; Reardon, Arshan, Atteberry & Kurlaender, 2010)

- Except for urban low-income students who fail a HSEE, who are less likely to graduate
  (Papay, Murnane & Willett, 2010)

- Failing “last chance” attempt in 12th grade lowers HS graduation, increases GED
  (Martorell, 2005)
Impact of Failing HSEE on Likelihood of Dropping Out Unclear

- No impact on likelihood of dropping out (Martorell, 2005)
- Increase likelihood of dropping out (Ou, 2010)
- Urban low-income students who fail a HSEE, who are more likely to drop out (Papay, Murnane & Willett, 2010)
Failing a HSEE has Little Effect on Academic or Postsecondary Outcomes

No effects of failing HSEE on …

- Achievement test scores or HS course taking
  
  (Reardon, Arshan, Atteberry & Kurlaender, 2010)
Failing a HSEE has Little Effect on Academic or Postsecondary Outcomes

No effects of failing HSEE on …

- Achievement test scores or HS course taking
  (Reardon, Arshan, Atteberry & Kurlaender, 2010)

For students denied HS diplomas due to failing a HSEE…

- Small effects on college enrollment
- No effect on degree attainment
- No effect on lifetime earnings

(Clark & Martorell, 2014)
WHAT ARE THE EFFECTS FOR STUDENTS WHO FAIL A HIGH SCHOOL EXIT EXAM?

An In-depth Look at Students in California & Texas
Graphical Depiction of Research Design

Outcome (e.g., likelihood of graduating) vs. Score on HSEE
Graphical Depiction of Research Design

Outcome (e.g., likelihood of graduating) vs. Score on HSEE

Failing  |  Passing
Graphical Depiction of Research Design

Outcome (e.g., likelihood of graduating) vs. Score on HSEE

- Failing
- Passing

Difference in Outcomes for those who pass or fail HSEE
Graphical Depiction of Research Design

No Difference in outcomes for those who pass or fail HSEE

Outcome
(e.g., likelihood of graduating)

Score on HSEE

Failing

Passing
Evidence from California CAHSEE Study

- Longitudinal data
  - San Diego, Long Beach, Fresno, San Francisco
  - Students scheduled to graduate in 2006-2010

- Methods
  - Regression discontinuity

- 4 outcomes
  - Achievement (11th grade ELA CST)
  - Subsequent course taking
  - Persistence to 12th grade
  - Graduation (diploma receipt)
Failing CAHSEE has No Effect on Academic Achievement

Reardon, Arshan, Atteberry, & Kurlaender, 2010

Mean 11th Grade ELA CST Score (standardized)

Failing 10th Grade Minimum CAHSEE Score

Passing
Failing CAHSEE has No Effect on 11th Grade Math Course

Proportion of Students who Took 11th Grade Math Higher than Geometry

10th Grade Minimum CAHSEE Score

Reardon, Arshan, Atteberry, & Kurlaender, 2010
Failing CAHSEE has No Effect on Persistence to 12th Grade

Proportion of Students Still Present in Spring of 12th Grade

Reardon, Arshan, Atteberry, & Kurlaender, 2010
Failing CAHSEE has No Effect on High School Graduation

Reardon, Arshan, Atteberry, & Kurlaender, 2010
Evidence from Texas

- Longitudinal data from Texas K-12 and University of Texas
  - 10th grade students in 1991-1995

- Methods
  - Regression discontinuity

- Outcomes
  - Persistence through 11th and 12th grade
  - Graduation (diploma receipt)
  - GED attempts
  - College enrollment
  - College degree completion
  - Quarterly earnings up to 7 years after high school

Clark & Martorell, 2014
Failing HSEE on First Attempt has No Effect on Earning a Diploma

Likelihood of Earning a Diploma

Score on First Attempt HSEE

Martorell, 2005
Failing HSEE on “Last-Chance” has Substantial Effect on Earning a Diploma

Score on “Last-Chance” HSEE

Clark & Martorell, 2014
Failing HSEE has No Effect on Earnings

Earnings

Score on HSEE

Clark & Martorell, 2014
SCAN OF STATE PRACTICES
Scan of State HSEE Practices

- Scan of HSEE policies in 50 states
- In-depth look in 5 states
  - K-12 assessment strategies
  - Diploma requirements
    - Including alternative paths for completion
  - HSEE
    - Including comprehensive and EOC
  - College & career readiness indicators and assessments

Kurlaender & Martorell
February 2016
<table>
<thead>
<tr>
<th>Exit Exam</th>
<th>Oregon</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBAC (11) Minimum scores for Graduation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOC Assessments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative Diploma/ Accommodations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Washington</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Exit Exam</td>
<td>Phased out in 2014 in exchange for SBAC</td>
<td>Phased out in 2014 in exchange for SBAC</td>
</tr>
<tr>
<td>SBAC (11) Minimum scores for Graduation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOC Assessments</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative Diploma/ Accommodations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Washington</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>Exit Exam</td>
<td>Phased out in 2014 in exchange for SBAC</td>
<td>Phased out in 2014 in exchange for SBAC</td>
</tr>
<tr>
<td>SBAC (11)</td>
<td>Reading – 2515</td>
<td>ELA – 2548</td>
</tr>
<tr>
<td>Minimum scores</td>
<td>Writing – 2583</td>
<td>Math – 2595</td>
</tr>
<tr>
<td>for Graduation</td>
<td>Math – 2543</td>
<td></td>
</tr>
<tr>
<td>EOC Assessments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Washington</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td><strong>Exit Exam</strong></td>
<td>Phased out in 2014 in exchange for SBAC</td>
<td>Phased out in 2014 in exchange for SBAC</td>
</tr>
<tr>
<td><strong>SBAC (11) Minimum scores for Graduation</strong></td>
<td>Reading – 2515</td>
<td>ELA – 2548</td>
</tr>
<tr>
<td></td>
<td>Writing – 2583</td>
<td>Math – 2595</td>
</tr>
<tr>
<td></td>
<td>Math – 2543</td>
<td></td>
</tr>
<tr>
<td><strong>EOC Assessments</strong></td>
<td>None</td>
<td>• Alg I/Integrated Math I or Geometry/Integrated Math 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Biology begin with Class of 2017</td>
</tr>
<tr>
<td><strong>Diploma Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alternative Diploma/ Accommodations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Washington</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td><strong>Exit Exam</strong></td>
<td>Phased out in 2014 in exchange for SBAC</td>
<td>Phased out in 2014 in exchange for SBAC</td>
</tr>
</tbody>
</table>
| **SBAC (11) Minimum scores for Graduation** | Reading – 2515  
Writing – 2583  
Math – 2543 | ELA – 2548  
Math – 2595 |
| **EOC Assessments**           | None                                        | • Alg I/Integrated Math I or  
Geometry/Integrated Math 2  
• Biology begin with Class of 2017 |
| **Diploma Requirements**      | • Credit requirement  
• Passing score on SBAC or  
ACT/AP/IB/PSAT/SAT or  
work samples in 9 Essential Skills  
• Meet personalized learning requirements | • Credit requirement  
• Passing score on assessments  
ELA: SBAC/HSPE*  
Math: SBAC/EOC  
• Develop HS & Beyond Plan |
<p>| <strong>Alternative Diploma/Accommodations</strong> |                                              |                                                    |</p>
<table>
<thead>
<tr>
<th></th>
<th>Oregon</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exit Exam</strong></td>
<td>Phased out in 2014 in exchange for SBAC</td>
<td>Phased out in 2014 in exchange for SBAC</td>
</tr>
</tbody>
</table>
| **SBAC (11) Minimum scores for Graduation** | Reading – 2515  
Writing – 2583  
Math – 2543 | ELA – 2548  
Math – 2595 |
| **EOC Assessments**   | None                                                                  | •Alg I/Integrated Math I or Geometry/Integrated Math 2  
•Biology begin with Class of 2017 |
| **Diploma Requirements** | •Credit requirement  
•Passing score on SBAC or ACT/AP/IB/PSAT/SAT or work samples in 9 Essential Skills  
•Meet personalized learning requirements | •Credit requirement  
•Passing score on assessments  
ELA: SBAC/HSPE*  
Math: SBAC/EOC  
•Develop HS & Beyond Plan |
| **Alternative Diploma/Accommodations** | •Alternative assessments or accommodations  
•Modified Diploma, Extended Diploma, Alternative Certificates | •Alternative assessments or accommodations  
•Certificate of Academic Achievement  
•Certificate of Individual Achievement |
## Emerging Typology

<table>
<thead>
<tr>
<th></th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
<th>Type 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credits</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Comprehensive HSEE</strong></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EOC</strong></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>SBAC/PARCC</strong></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Some states have additional graduation requirements:
- Civics course/assessment
- Community Service
- Culminating Projects
Questions?
References


References


References


