

## The Impact of Exit Exams on Long-Term Student Outcomes in Texas

Chester Polson

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### What We Studied

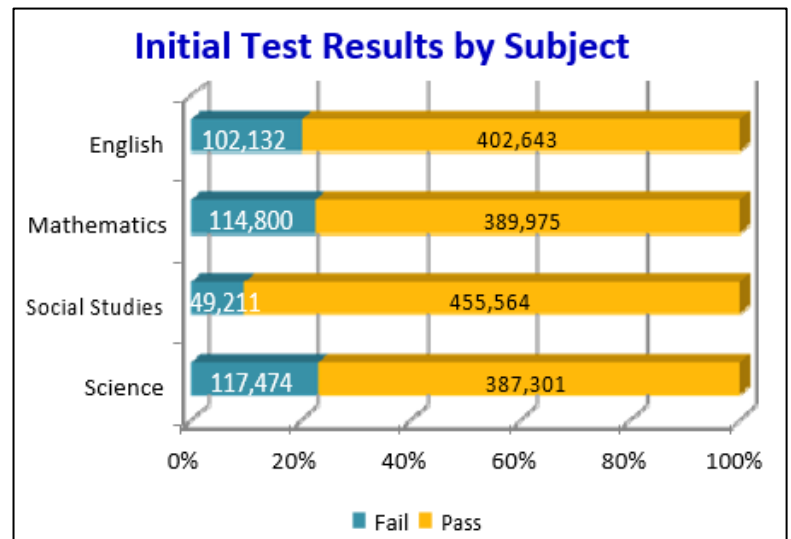
Since 1980, Texas has had some form of a standardized exam in place for public school students. More recently, this has moved to include implementation of “exit exams,” which require students statewide to meet a minimum threshold score in addition to completing traditional high school coursework in order to be awarded a diploma.

While, on paper, exit exams only impact high school graduation, they conceivably have the ability to impact students in far reaching ways much beyond high school. One possible unintended consequence of exit exams could be artificially constraining some students from graduation. If students right above and below the cutoff for passing the exam are, in fact, of the same quality, it is possible that giving some a high school diploma while withholding it for others could impact postsecondary education and employment opportunities.

### How We Analyzed the Data

Using a novel empirical technique and administrative data from the Texas Education Research Center (ERC) database, this research examines students within five points above and below the cutoff of passing an exam to see if Texas Assessment of Knowledge and Skills (TAKS) exit exam results have a causal effect on student outcomes later in life.

The researcher analyzed how passing a section of the Texas Assessment of Knowledge Skills (TAKS) exit exam during the first administration effects a student’s probability of receiving a high school diploma, enrolling in and graduating from post-secondary education, and labor force participation. The chart to the right shows the number of public high school graduates from 2008 and 2009 who passed or failed each segment of the TAKS exit exam the first time the student took the test.



While the majority of students pass a given portion of the TAKS exit exam the first time it is administered, it is the students right around the passing threshold who are the group of interest for this research. The concern is that students who pass or fail the exam are fundamentally different, and so we cannot simply compare the two groups. Comparing the whole group of students who pass to the group of students who fail would attribute any observable differences to the effect of the TAKS test when many other variables could be causing this gap. For example, if students who fail the

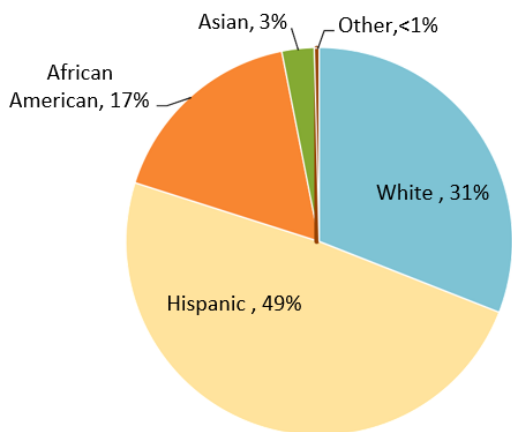
TAKS exam are also English language learners it could be improper to consider the differences between the two groups as solely a reflection of their different exam scores.

However, comparing students around the exam cutoff score who look similar, so passing or failing appears random, makes it possible to estimate the effect of exit exams in Texas. Random assignment of passing or failing the exams for a group of students who otherwise look the same allows the difference in means between the two groups to be an estimate of the impact of the exams on the outcome variables of interest.

The researcher used a regression discontinuity design to examine each of the eight outcome variables listed in the box on the right for each of the four segments of the TAKS exit exam. Regression discontinuity frameworks are popular in the economics literature because, if the requirements in order to implement one are satisfied, it produces believable estimates of the effect of the policy.

**Sample:** 2008 and 2009 graduates within five points of the passing score on either side of the threshold for each exam were selected to comprise the estimation sample group. The figure below displays the ethnic makeup for the English exam threshold sample; the threshold sample for other exams was similar.

### English Exam Threshold Sample Ethnicity

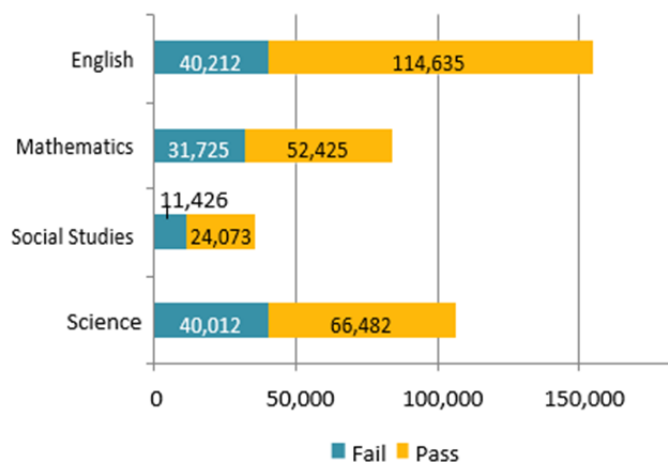


The numbers of students passing and failing a given section with scores within this ten-point window for each exam are displayed in the figure to the right.

## About the TAKS Exit Exams

- Students are administered four subject exams: Mathematics, Reading, Science, and Social Studies.
- In addition to the state-mandated curriculum tested on the TAKS exam, there are two other formats for special education students who meet additional eligibility criteria: TAKS-Modified and TAKS-Accommodated.
- The exams are administered statewide on four consecutive days, one day for each subject.
- There are 73 questions in the English section, 60 questions on the Mathematics section, and 55 questions each on both the Science and Social Studies portions of the test.
- Tests are untimed, and students are allowed as much time to respond to every question as is needed.
- Raw scores for each section of the exam are converted to a scaled score after each administration, with scaled scores comparable between years.
- The minimum scaled score to meet expectations and pass is 2100 each year; students who score 2400 or above achieve “commended performance.”
- TAKS exit exams are first administered in the 10<sup>th</sup> grade. If a student fails a portion of the exam the first time they take it, they have several opportunities to retake the exam and achieve a passing score before graduation.

### Threshold ± 5-Point Students by Exam



## What We Discovered

Overall, the researcher found suggestive evidence of a small effect on the probability of graduating from high school, which overlaps with the intended design of the program.

However, beyond high school diploma receipt, there were no estimated effects for high school exit exams impacting other longer term outcomes. Moreover, there is not even suggestive evidence of large effects with large confidence intervals; all the estimates reported are close to zero and statistically insignificant. While it is conceivable that the results of the TAKS exit exam could impact a student's educational and labor force prospects for years after the end of high school, empirically that does not seem to be the case.

From a policy perspective, this lack of a result may not be as distressing as it first seems. This policy was designed and implemented to impact high school instruction and graduation.

While the data collected here are unable to inform changes in educational quality, there are suggestive results in line with what might be expected from the segment of students actually studied. If exit exams are helping to achieve the goals they were implemented for, then these results suggest policy makers can rest easier knowing they are not overly damaging the opportunities of those who are impacted negatively by the program while in high school.

## Student Outcomes Observed in the Data

Due to the unique nature of the Texas ERC administrative dataset, the data included observations for several long-term outcomes of interest:

1. Receipt of a high school diploma
2. Employment, which is defined as having non-zero earnings for at least one quarter between the end of high school and the second quarter of 2012
3. Total wages, which is defined as the sum of earnings for all quarters in the Texas Workforce Commission data
4. Enrollment in a post-secondary educational institution in Texas
5. Persistence to a second year of post-secondary education in Texas
6. Transferring from a two-year to a four-year post-secondary educational institution in Texas
7. Receipt of a one-year certificate from a post-secondary educational institution in Texas
8. Receipt of an associate's degree from a post-secondary educational institution in Texas

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The University of Texas at Austin ERC is a research center and P-20/Workforce Repository site which provides access to longitudinal, student-level data for scientific inquiry and policymaking purposes. Since its inception in 2008, the Texas ERC's goal is to bridge the gap between theory and policy by providing a cooperative research environment for study by both scholars and policy makers. As part of its mission, the ERC works with researchers, practitioners, state and federal agencies, and other policymakers to help inform upon critical issues relating to education today.

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