

EXPLORING POSTSECONDARY ATTAINMENT:

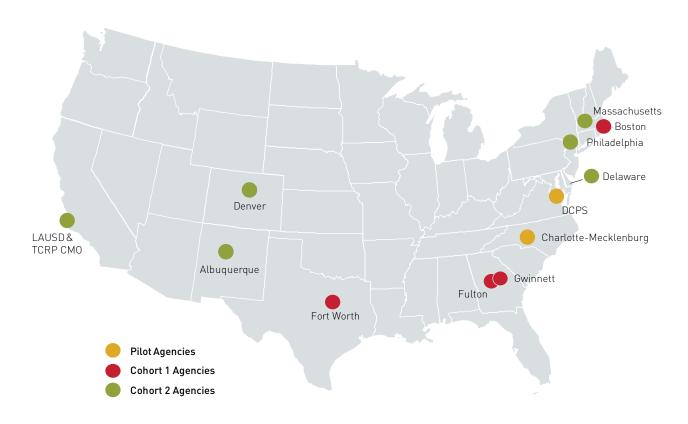
SDP COLLEGE-GOING DIAGNOSTIC

Fort Worth Independent School District, Texas
NOVEMBER 2011





THE STRATEGIC DATA PROJECT



The Strategic Data Project (SDP), housed at the Center for Education Policy Research at Harvard University, partners with school districts, school networks, and state agencies to bring high-quality research methods and data analysis to bear on management and policy decisions.

SDP's theory of action is that if we are able to bring together the right people, the right data, and the right analysis, educational leaders can significantly improve decisions, thereby increasing student achievement.

SDP fulfills this theory of action with three primary strategies:

- 1. Conducting rigorous "diagnostic" analysis on teacher effectiveness and college-going success using agency data;
- 2. Placing top-notch analysts as data fellows in partner agencies for two years;
- 3. Distributing our analytic results and learnings to support broad adoption of methods and data use practices throughout the education sector.

SDP was launched in 2008 and currently partners with two states, ten school districts, and one network of charter management organizations. The project is supported by the Bill & Melinda Gates Foundation.

INTRODUCTION AND BACKGROUND

A few generations ago, a high school diploma opened doors to skilled jobs and middle-class earnings. Today, a college diploma is just as essential. Higher education, whether in the form of a two- or four-year college or technical program, has become a critical step to achieving stable employment and financial security. In the face of these economic changes, it is increasingly important that K–12 educators prepare their students to graduate from high school with the knowledge and skills to enroll in, persist at, and complete higher education.

To this end, we at the Strategic Data Project designed the college-going diagnostic as a means to:

1	better inform district leaders about college en-
	rollment and persistence rates; and

identify potential areas for action to increase students' levels of academic achievement, preparedness for college, and postsecondary attainment.

This report, which represents a selection of findings from our full diagnostic, illuminates students' enrollment patterns over time and compares these patterns across a variety of student characteristics and academic experiences.

The college-going diagnostic represents a partnership between SDP and Forth Worth Independent School District (FWISD) to bring data to bear on policy and management decisions. As such, it is neither an exhaustive set of analyses nor does it contain specific recommendations for the district to consider.

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The diagnostic is, however, a set of standardized analyses that can help the district better understand its current performance, set future goals, and strategically plan responses.

Additionally, the diagnostic is meant to demonstrate how districts can capitalize on existing data to better inform decision making. For the diagnostic, researchers connected individual student data (including demographics and test scores) to their corresponding college enrollment data, allowing student outcomes to be tracked not only through high school but also through college.

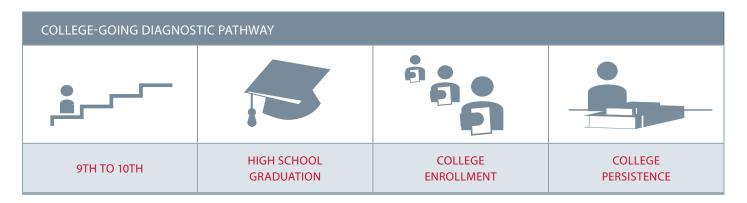
These analyses were completed by members of the research team at the Center for Education Policy Research at Harvard University with the support of FWISD staff and the FWISD SDP Fellows.



THE SDP EDUCATION PIPELINE AND METHODOLOGY

The SDP Education Pipeline is a framework used to examine the postsecondary pathways of FWISD students. The first two stages of the pipeline examine students' pathways through high school—focusing particularly on whether students successfully transition from 9th to 10th grade and whether they stay "on-track" for graduation throughout their high school careers. As students progress towards graduation, we pay particular attention to specific characteristics of FWISD students, such as achievement prior to high school, credits attained each year, and the high school attended, in order to provide district and school leaders with information about who graduates and who does not. The second half of the pipeline examines college enrollment patterns for FWISD graduates, including students' postsecondary enrollment and their persistence to the second year of college.

Examining both halves of this pipeline will provide new information about FWISD postsecondary attainment. While graduation rates are, of course, publicly known, we provide a deeper understanding of graduation patterns by exploring how student achievement prior to high school and course-taking patterns in high school relate to whether a student graduates. In addition, by linking FWISD students to college enrollment data, we are able to highlight student attainment results.



How does SDP know about the college enrollment of FWISD graduates?

In partnership with FWISD, we obtain college enrollment data by linking FWISD administrative student records to postsecondary enrollment data from the National Student Clearinghouse (NSC).

NSC is a national nonprofit organization that provides postsecondary enrollment verification for colleges and universities. The clearinghouse maintains student enrollment records at over 3,300 institutions of higher education throughout the United States, including career and technical training institutes, as well as two- and four-year colleges and universities. Presently, NSC covers institutions serving 93 percent of all postsecondary students nationwide. However, given that not all institutions are covered and that there are a number of instances in which students change name or high school, some students who attend college may not be matched with NSC records. Thus, actual enrollment rates are likely to be slightly higher than those shown in this report.

Which students are included in these analyses?

To ensure that we have sufficient numbers within each school and to reduce short-term random variation in outcomes, we combine student-level data from the three most recent cohorts of first-time ninth graders and graduates from traditional high schools to describe the trends in student achievement and attainment. While this is appropriate for understanding the historical promotion power of FWISD, major changes that occurred in any individual school in the last year examined will necessarily be muted in the outcomes reported.

Ninth grade cohorts from 2004–05 through 2006–07 are used to analyze variation in high school graduation outcomes, and high school graduates from 2007–08 through 2009–10 are used to analyze college-going in our postsecondary analysis. For delayed enrollment and college persistence analyses, we include only graduates from the 2007–08 and 2008–09 school years.

В

SDP COLLEGE-GOING DEFINITIONS

We define on-track to graduation status and calculate high school completion, college enrollment, and college persistence rates in the following ways:

On-Track to Graduation Status ²

We determine on- and off-track status in each of the first four years of students' high school careers according to the Texas Education Agency graduation requirements for the ninth grade cohorts included in our analytic sample (2004–05 through 2006–07):

Year in High School	Diploma Type							
	Minimum Diploma				Recommended Diploma			
	Total Credits	ELA Credits	Math Credits	Foreign Language Credits	Total Credits	ELA Credits	Math Credits	Foreign Language Credits
First Year	5	1	0	0	6	1	1	0
Second Year	11	2	1	0	12	2	1	0
Third Year	16	3	2	0	18	3	2	1
Fourth Year	22	4	3	0	24	4	3	2

We further classify students who meet the credit requirements for Recommended Diplomas into two groups: those with less than a 3.0 cumulative GPA and those with a 3.0 cumulative GPA or higher.

High School Completion Rate

To calculate high school completion rates we use a cohort-based formula similar to the "compact rate" used by the Texas Education Agency.³ The SDP completion formula divides the number of high school completers (students earning standard diplomas and special education diplomas) by the number of first-time ninth graders four years earlier. To identify the "number of first-time freshmen four years earlier," we add together two groups of students: 1) students enrolled in a FWISD high school in ninth grade and 2) students enrolled in a different district in ninth grade who transferred into FWISD at some point during high school. We exclude from the calculation students who transferred out of the district between 9th and 12th grade.

College Enrollment Rate

We report on two college enrollment outcomes for FWISD graduates who earn regular diplomas: 1) enrollment in college the fall following high school graduation (seamless enrollers) and 2) enrollment at any point within two years of graduating high school (delayed enrollers). To calculate seamless enrollment, we use a cut-off date of October 1st of a student's graduation year to determine college enrollment status. To calculate enrollment within two years, we use a cut-off date two calendar years from the date of graduation.

College Persistence Rate

We calculate persistence rates in college for FWISD graduates who enroll in college. To calculate these rates we determine whether a student remains enrolled in any college on October 1st one year following his or her initial enrollment date.⁴ Research suggests that students who seamlessly transition from high school to college are more likely to complete a degree than delayed college-goers. Thus, in some analyses we calculate rates separately for seamless college enrollers and delayed college enrollers.

KEY FINDINGS

1. ON-TRACK STATUS IS AN ACTIONABLE INDICATOR.

On-track status has a strong relationship to to the probability of graduating. On-track indicators could be used to target interventions by illustrating, for example, when students fall off-track, when they recover on-track status, and variation among schools in off-track recovery rates.

2. Schools have a considerable impact on secondary and postsecondary attainment.

Unsurprisingly, schools whose incoming students have higher eighth grade test scores generally have higher graduation rates than schools with lower average achievement scores. However, some schools have higher graduation and college enrollment rates than prior achievement alone would predict. Further, students with below-average prior achievement scores graduate and enroll in college at widely different rates across schools. This suggests that schools factor greatly in on-time graduation and college enrollment, especially for academically struggling students.

3. Students face different barriers to high school graduation and college enrollment.

Gaps in high school graduation rates among ethnic groups diminish when students are compared to peers with similar prior achievement. This suggests that education prior to high school is critical for later success. Similarly, there is no gap in the college enrollment rates of African American and white students when prior achievement is considered. However, even after controlling for prior student achievement, Latino students still enroll in college at substantially lower rates than their peers.

4. Not all high-performing students achieve seamless college enrollment.

Despite potential benefits of seamless four-year college enrollment, 21 percent of academically qualified FWISD graduates do not seamlessly matriculate into four-year colleges. Although some of these students attend two-year colleges, two-year college enrollees persist at substantially lower rates than four-year enrollers. Importantly, those who do not persist or never enroll in college are likely to earn lower wages throughout their lifetimes than peers who seamlessly enroll and persist to college graduation.⁶

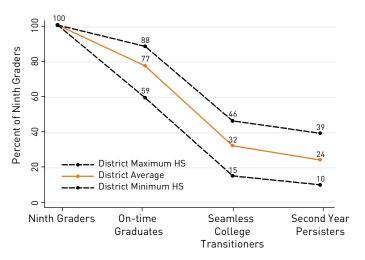
SUMMARY ANALYSES



1. How do first-time ninth graders in FWISD progress through high school and college?

Twenty-four percent of FWISD ninth graders graduate high school on-time, seamlessly transition to college, and persist to their second year.

Student Progression from Ninth Grade through College



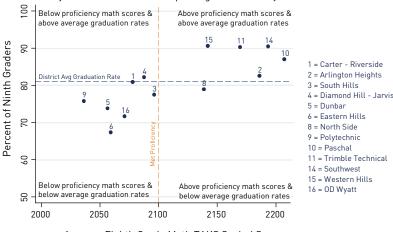
For every 100 first-time ninth graders enrolled in FWISD from 2004–05 to 2005–06, 77 graduated high school, 32 seamlessly transitioned to college, and 24 persisted to the second year of their postsecondary studies. By comparison, for every 100 ninth graders nationwide, roughly 70 graduate high school within four years, 40 immediately enroll in college, and 30 persist to their second year.⁷

While FWISD's overall postsecondary attainment rates are slightly below the national average, students at individual high schools progress along the education pipeline at vastly different rates. There is a 31 percentage point range in college enrollment and 29 percentage point range in college persistence. Many of the analyses in this report examine school-level variation in greater depth and begin to explore possible explanations for differences observed across high schools.

2. Do differences in average student achievement upon entering high school explain the variation in graduation rates across high schools?

On average, schools with higher average incoming eighth grade math test scores also have higher high school graduation rates; nevertheless, some high schools graduate a greater percentage of students than others with similar average incoming test scores.

High School Graduation by Student Achievement Upon High School Entry



Average Eighth Grade Math TAKS Scaled Score

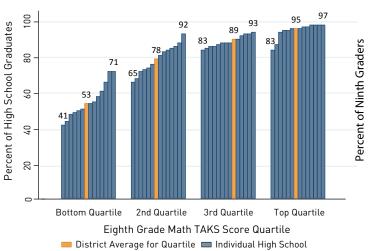
High schools with higher average incoming prior achievement as measured by eighth grade math test scores have higher graduation rates, on average. However, many high schools with similar average incoming eighth grade math scores have different graduation rates. For instance, North Side and Western Hills enroll incoming classes of ninth graders with approximately the same average eighth grade math scores. Four years later, students at Western Hills are 13 percent more likely to graduate than students at North Side. Likewise, some schools are able to graduate students at higher rates than their students' incoming test scores would "predict". For instance, Carter-Riverside's students enter high school with average TAKS scores over 100 points lower than students at Arlington Heights, but their graduation rates are almost identical. This suggests that while prior achievement is important, schools matter in the academic attainment of their students.

SUMMARY ANALYSES

3. How do graduation rates vary across schools for groups of students with similar prior achievement?

High school graduation rates are fairly consistent across FWISD high schools for students with the highest incoming achievement scores, but they vary widely among schools for students with the lowest incoming achievement scores.

Distribution of On-Time High School Graduation Rates by Prior Student Achievement



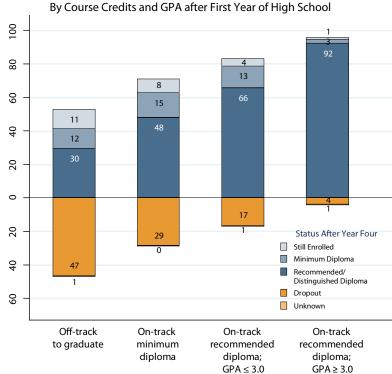
Across the district average graduation rates are higher for students with higher incoming eighth grade math scores. Students who begin high school in the top quartile of math scores graduate from high school at nearly the same rate at all but two FWISD high schools. However, students who enter high school behind their peers graduate at very different rates depending upon which high school they attend. In fact, some schools are up to 30 percent more likely to graduate the lowest-performing incoming ninth graders than others.

4. How do ninth grade credit attainment and GPA explain high school graduation outcomes?

Ninety-five percent of ninth graders who advance to tenth grade with at least 6 credits and a 3.0 cumulative GPA graduate from high school on-time.

Graduation Status After Four Years in High School

By Course Credits and GPA after First Year of High School



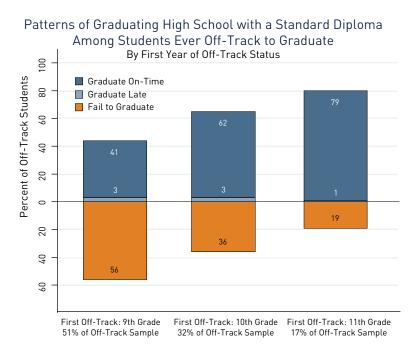
End of Ninth Grade On-Track Status

Among students on-track to receive a Recommended Diploma at the end of ninth grade, those who have at least a 3.0 cumulative GPA receive Recommended or Distinguished Diplomas at rates 26 percentage points higher than their peers who are on-track to graduate but have lower GPAs. Those who fall off-track during their first year are far less likely to graduate than their peers, yet thirty percent of these students recover enough credits to receive Recommended Diplomas and nearly half graduate on time.

SUMMARY ANALYSES

5. How does the year students fall off-track affect their high school graduation rates?

Among students who fall off-track to graduate on time, those who fall off-track later graduate at higher rates than their peers who fall off-track in the first year of high school.

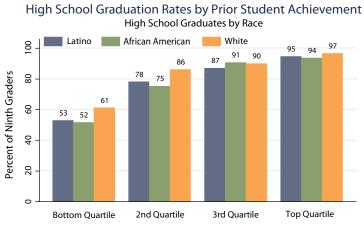


Two-thirds of students never fall off-track between their first and third year of high school in FWISD. Of the third that do fall off-track, the majority (51 percent) first fall off-track in the first year of high school. Nevertheless, many students who fall off-track do, in fact, graduate from high school on time. Among these students, different patterns emerge in graduation rates based on when they first fall off-track. Among those who fall off-track in the first year of high school, only 41 percent graduate on time, compared to 79 percent of students who first fall off-track in the third year of high school.

SUMMARY ANALYSES

6. How do high school graduation and college enrollment rates vary by race and prior achievement?

Students with similar prior achievement have similar on-time high school graduation rates regardless of race. African American and white graduates who have similar prior achievement enroll in college at roughly the same rates. However, Latino students enroll in college at lower rates than their peers even when comparing students who have similar prior achievement.



College Enrollment Rates by Prior Student Achievement Seamless Enrollers by Race African American 8 Percent of High School Graduates 80 76 68 9 54 44 43 40 27 20 **Bottom Quartile** 2nd Ouartile 3rd Ouartile Top Quartile

Eighth Grade TAKS Math Score Test Quartile

Eighth Grade TAKS Math Score Test Quartile

Average on-time high school graduation rates for Latino, African American, and white students are 80 percent, 74 percent, and 91 percent, respectively (not shown). The disparities between white and Latino or white and African American students appear to be the result of differences in academic achievement upon entering high school.⁸ This highlights the critical importance of elementary and middle school to later academic success.

Average college enrollment rates for Latino, African American, and white graduates differ more dramatically: 29 percent, 49 percent, and 64 percent, respectively (not shown). However, academic preparation prior to high school plays an important role here as well. The gap between African American and white college enrollment nearly disappears when comparing students with similar eighth grade prior achievement. However, the gap in Latino enrollment rates relative to their peers persists. This persistent disparity may reflect additional obstacles to college enrollment that Latino graduates disproportionately encounter.

SUMMARY ANALYSES

7. How do college enrollment patterns of seamless enrollers differ from delayed enrollers?

On average, seamless college enrollers are considerably more likely to attend four-year colleges than delayed enrollers.

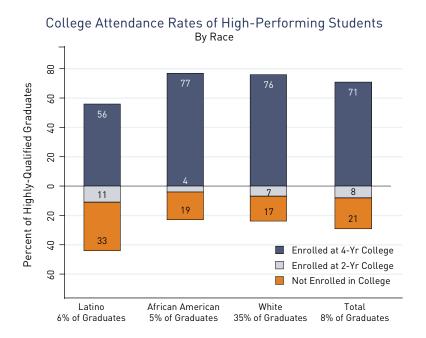
Share of High School Graduates	Seamless Enrollers		Delayed Enrollers			
2006-07 to 2009-10	Four-Year Colleges	Two-Year Colleges	Four-Year Colleges	Two-Year Colleges	Share of Graduates Enrolled in College	Share of College Goers who Enrolled Seamlessly
Arlington Heights	36%	13%	2%	4%	55%	86%
Carter-Riverside	16%	17%	0%	5%	39%	85%
Diamond-Hill Jarvis	11%	17%	2%	4%	34%	80%
Dunbar	34%	11%	3%	7%	56%	80%
Eastern Hills	25%	11%	3%	5%	44%	91%
North Side	17%	14%	2%	5%	38%	79%
OD Wyatt	24%	10%	2%	8%	44%	74%
Paschal	38%	14%	2%	5%	59%	85%
Polytechnic	10%	12%	1%	5%	28%	73%
South Hills	14%	15%	1%	7%	37%	74%
Southwest	31%	20%	2%	7%	60%	84%
Trimble Technical	17%	17%	2%	7%	43%	79%
Western Hills	24%	19%	2%	6%	51%	84%
District Average	25%	15%	2%	6%	48%	83%

Forty-eight percent of FWISD graduates enroll in a four- or two-year college within two years of graduating high school. Most graduates who go on to college enroll seamlessly (83 percent). Seamless enrollers are more likely to attend four-year colleges while delayed enrollers most often attend two-year colleges. National data suggests that, on average, seamless enrollers and students who enroll in four-year colleges persist at and obtain degrees in college at higher rates than delayed enrollers as well as students who enroll in two-year colleges.⁹

SUMMARY ANALYSES

8. At what rates do high-performing high school graduates from FWISD attend college?

Many graduates do not matriculate to college despite having the academic qualifications to attend.



Many high school graduates who are highly qualified to attend a four-year university (through having a combination of at least a 3.0 GPA and a minimum SAT score of 1000) either do not seamlessly enroll in college or attend two-year colleges instead¹⁰. In FWISD, 8 percent of all regular diploma graduates in the 2007–08 through 2009–10 school years were highly qualified to attend four-year colleges.

Yet, one in five of these high-performing high school graduates did not seamlessly enroll in a two- or four-year college. The proportion of high-performing students who do not attend four-year colleges varies by race or ethnicity. For example, one in three Latino graduates who meet the above criteria do not seamlessly enroll in two-or four-year colleges.

9. What are the top enrolling postsecondary institutions for FWISD graduates?

Forty-five percent of seamless enrollers attend one of the same five colleges.

Four-Year College/University First Attended

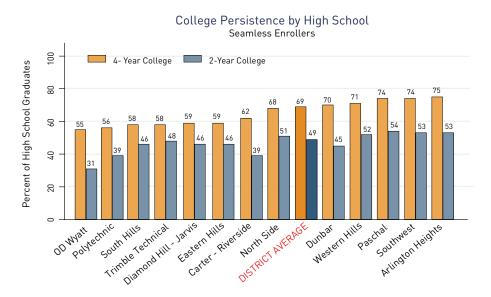
Name of Institution	Percent of FWISD Graduates Enrolled		
UT-ARLINGTON	16.1		
UNIVERSITY OF NORTH TEXAS	8.1		
TEXAS CHRISTIAN UNIVERSITY	7.9		
UT-AUSTIN	7.0		
TEXAS A&M UNIVERSITY	6.2		
STEPHEN F. AUSTIN STATE UNIVERSITY	4.9		
PRAIRIE VIEW A&M UNIVERSITY	4.6		
TEXAS TECH UNIVERSITY, LUBBOCK	3.5		
TARLETON STATE UNIVERSITY	3.4		
TEXAS WOMAN'S UNIVERSITY	2.2		
OTHER	36.1		
Total Percent	100		

Forty-five percent of FWISD graduates who seamlessly enroll in four-year colleges attend one of five institutions in Texas: UT-Arlington, University of North Texas, Texas Christian University, UT-Austin, and Texas A&M University. Students who first attend UT-Austin and Texas A&M University (competitive four-year universities according to Barron's rankings) are more likely to persist to the second year of college compared to their peers who first attend other four-year colleges and universities (not shown). The majority (78%) of graduates first enrolling in two-year colleges attend Tarrant County College (not shown).

SUMMARY ANALYSES

10. How do persistence rates to the second year of college vary across FWISD high schools?

Among seamless college enrollers, graduates who first enroll at two-year institutions persist in college at substantially lower rates than their peers who enroll in four-year institutions.



Students who enroll in two-year colleges persist at rates that are 20 percentage points lower than those who enroll in four-year colleges. Among individual schools, the gap between average twoyear and four-year persistence rates ranges from 10 percentage points to 25 percentage points. Further, persistence rates of two-year college goers vary widely across FWISD high schools (23 percentage Likewise, persistence rates of points). four-year college goers vary 20 percentage points across high schools (from 55 to 75 percentage points).

SUMMARY ANALYSES RECAP



1. Twenty-five percent of FWISD ninth graders graduate high school on-time, seamlessly transition to college, and persist to their second year.



- On average, schools with students who have higher average incoming eighth grade
 math test scores also have higher high school graduation rates; nevertheless, some
 high schools graduate a greater percentage of students than others with similar
 average incoming test scores.
- 3. High school graduation rates are fairly consistent across FWISD high schools for students with the highest incoming achievement scores, but they vary widely among schools for students with the lowest incoming achievement scores.
- 4. Ninety-five percent of ninth graders who advance to tenth grade with at least 6 credits and a 3.0 cumulative GPA graduate from high school on time.
- 5. Among students who fall off-track to graduate on-time, those who fall off-track later graduate at higher rates than their peers who fall off-track in the first year of high school.
- **6a.** Students with similar prior achievement have similar on-time high school graduation rates regardless of race.



- 6b. African American and white graduates who have similar prior achievement enroll in college at roughly the same rates. However, Latino students enroll in college at lower rates than their peers even when comparing students who have similar prior achievement.
- 7. In most FWISD high schools, seamless college enrollers are considerably more likely to attend four-year colleges than delayed enrollers.
- 8. Many graduates do not matriculate to four-year colleges despite having the academic qualifications to attend. Over a three-year period, over 20 percent of FWISD graduates with at least a 3.0 GPA and a minimum SAT score of 1000 did not seamlessly enroll in any postsecondary institutions.
- 9. Forty-five percent of seamless enrollers attend one of the same five colleges.



10. Among seamless college enrollers, graduates who first enroll at two-year institutions persist in college at substantially lower rates than their peers who enroll in four-year institutions.

NOTES

Endnotes

- 1. The institutions in Texas with enrollments exceeding 1.000 students that do not participate in National Student Clearinghouse (NSC) are Alvin Community College, Angelina College, Laredo Community College South Campus, Lee College, Lon Morris College, Lubbock Christian University, South Texas College, Texarkana College, Texas A&M University-San Antonio, Texas A&M University-Central Texas, Texas Wesleyan University, Trinity Valley Community College, University of Mary Hardin-Baylor, and University of St. Thomas. The University of Oklahoma did not participate until 2010.
- 2. The Consortium on Chicago School Research pioneered the use of on-track indicators and their relationship to eventual high school completion. See, for instance, Allensworth, E. M., & Easton, J. Q. (2005, June). On-track indicator as a predictor of high school graduation. Retrieved from http://ccsr.uchicago.edu/publications/p78.pdf.
- 3. The National Governors Association "Compact Rate" is a four-year, adjusted cohort graduation rate used to determine the percentage of on-time high school graduates from a given four-year student cohort. It has been adopted by several states to improve the consistency and accuracy of graduation rate reporting across jurisdictions. For more information on the "Compact Rate," see National Governors Association (2005), Graduation Counts: A Report of the National Governors Association Task Force on State High School Graduation Data; and National Governors Association (2009), Implementing Graduation Counts: State Progress to Date.

The National Governors Association Compact Rate: A Comprehensive Approach to Improved Accuracy and Consistency in High School Graduation Rates, Class of 2009 Update, January 2011. Retrieved from http://www.tea.state.tx.us/acctres/DropComp_compact_rate_brief_class_09_2011. pdf.

- 4. This persistence outcome is not dependent on maintaining enrollment at the same institution from one year to the next. Therefore, we consider a student to have persisted to the second year if we observe that student enrolled at any college over the course of two subsequent years. Likewise, we consider a student to have persisted to the second year of four-year college if we observe that $\frac{1}{2} \int_{\mathbb{R}^{n}} \left(\frac{1}{2} \int_{\mathbb{R}^{n}} \left($ student enrolled at any four-year college over the course of two subsequent years.
- 5. Adelman, C. (2006). The Toolbox Revisited: Paths to Degree Completion From High School Through College. Washington, D.C.: U.S. Department of Education.
- Bozick, R., & DeLuca, S. (2005). Better late than never? delayed enrollment in the high school to college transition. Social Forces, 84(1).

Horn, L., Cataldi, E.F., and Sikora, A. (2005). Waiting to Attend College: Undergraduates Who Delay Their Postsecondary Enrollment (NCES 2005–152). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

- 6. For the history and import of the wage gap see, for instance, Goldin, C., & Katz, G. (2008). The race between education and technology. Cambridge, MA: Harvard University Press. Krueger, Alan B. 2003. "Inequality, Too Much of a Good Thing." In Inequality in America, edited by James J. Heckman and Alan B. Krueger, 1-75. Cambridge, MA: MIT Press.
- 7. These estimates were calculated in 2002 by the National Center for Higher Education Management Systems (NCHEMS) and provide the best available national comparisons. However, NCHEMS's data collection, methodology, and analysis approach differ from ours substantially, thus we encourage caution when comparing FWISD-specific rates to these national estimates.
- 8. Differences in family income between racial groups further explain the differences in high school graduation and college enrollment rates once prior achievement is taken into account. Adelman, C. (2006). The Toolbox Revisited: Paths to Degree Completion From High School Through College, Washington, D.C.; U.S. Department of Education.
- 9. Digest of Educational Statistics. (2010, July). Graduation rates of first-time postsecondary students who started as full-time degree-seeking students, by sex, race/ethnicity, time between starting and graduating, and level and control of institution where student started: Selected cohort entry years, 1996 through 2005. Retrieved from http://nces.ed.gov/programs/digest/d10/tables/dt10_341.asp.
- 10. Our definition of a highly-qualified student closely aligns with criteria established by William G. $Bowen, Matthew\ M.\ Chingos\ and\ Michael\ S.\ McPherson\ in\ their\ research\ of\ college\ application\ and$ enrollment data from twenty-one flagship public universities and four statewide systems of higher education, Crossing the Finish Line: Completing College at America's Public Universities. Bowen, W.G., & Chingos, M.M. (2009), Crossing the finish line: completing college at America's public universities. Princeton, NJ: Princeton University Press.

Figure Notes

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- 1. Sample: 2004–05 through 2005–06 first-time ninth graders. Postsecondary enrollment outcomes are from NSC matched records. All other data are from FWISD administrative records.
- 2. Sample: 2004-05 through 2006-07 first-time ninth graders with eighth grade math TAKS scores. All data are from FWISD administrative records.

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- 3. Sample: 2004-05 through 2006-07 first-time ninth graders with eighth grade math TAKS scores by eighth grade math TAKS quartiles. All data are from FWISD administrative records.
- 4. Sample: 2004-05 through 2006-07 FWISD first-time ninth graders attending their first semester of ninth grade in FWISD. Students receiving SPED diplomas and students who transferred into or out of the district are excluded from the sample. All data are from FWISD administrative records.

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5. Sample: 2004–05 through 2006–07 first-time ninth graders attending their first semester of ninth grade in FWISD. Students receiving SPED diplomas and students who transferred into or out of the district are excluded from the sample. All data are from FWISD administrative records.

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6. High School Graduation Sample: 2004–05 through 2005–06 FWISD ninth graders from traditional high schools with eighth grade math TAKS scores. All data are from FWISD administrative records. College Enrollment Sample: 2007-08 through 2009-10 FWISD graduates from traditional high schools with eighth grade math TAKS scores. Postsecondary enrollment outcomes are from NSC matched records. All other data are from FWISD administrative records.

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7. Sample: 2007–08 through 2009–10 FWISD graduates from traditional high schools. Postsecondary enrollment outcomes are from NSC matched records. All other data are from FWISD administrative records.

8. Sample: 2007-08 through 2009-10 FWISD regular diploma recipients. Eligibility to attend a public four-year university is based on a cumulative GPA of at least 3.0 and an SAT score of at least 1000. Postsecondary enrollment data are from NSC matched records. All other data are from FWISD

9. Sample: 2007-08 and 2008-09 FWISD graduates with a regular diploma that seamlessly enrolled in college. Postsecondary enrollment outcomes are from NSC matched records. All other data are from FWISD administrative records.

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10. Sample: 2007-08 through 2009-10 graduates from traditional high schools that seamlessly enrolled in college. Postsecondary enrollment outcomes are from NSC matched records. All other data are from FWISD administrative records.

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