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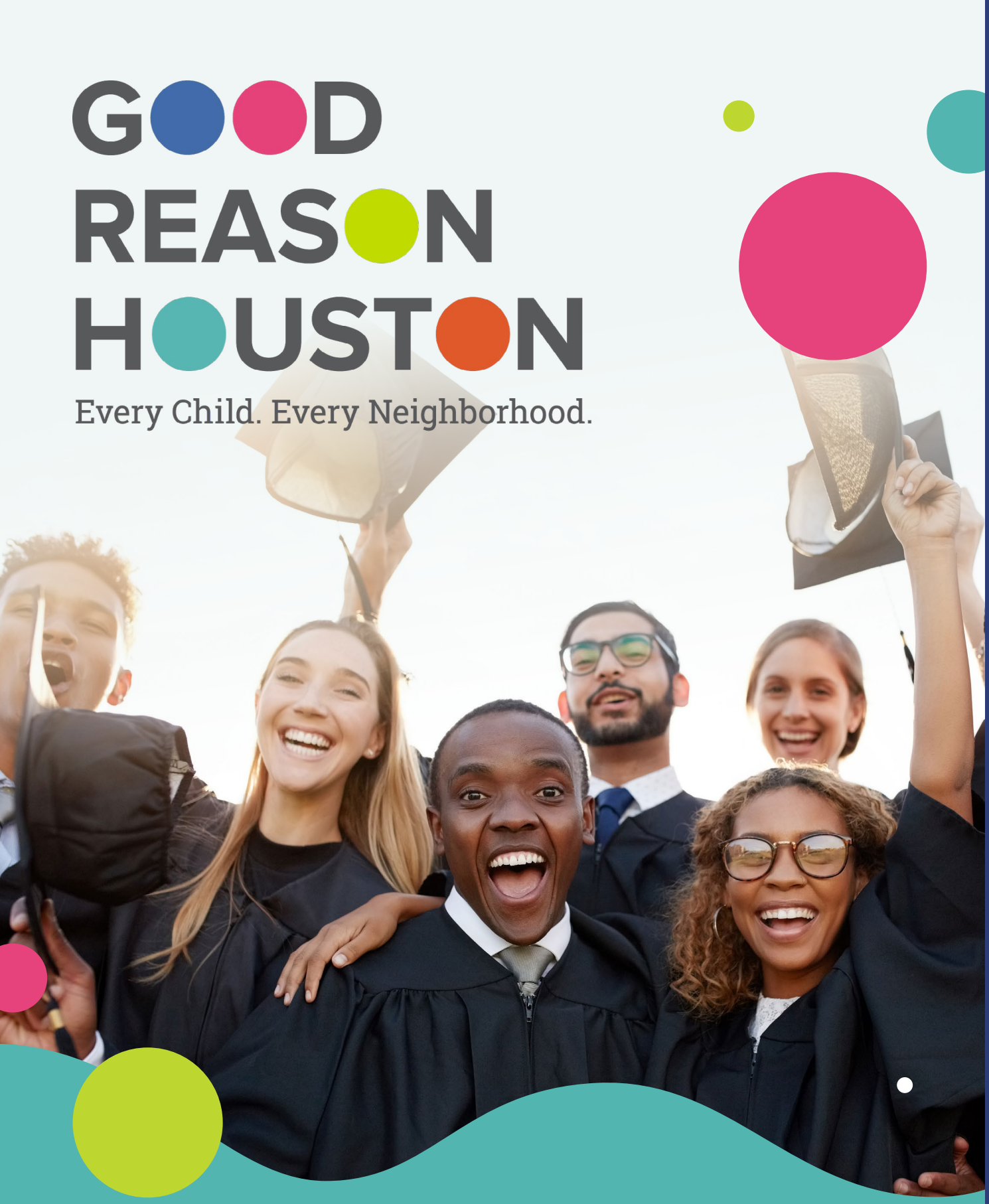
Every Child. Every Neighborhood.



BUILDING THE FUTURE WORKFORCE

CONNECTING PRE-K–12 EXPERIENCES TO WORKFORCE SUCCESS IN TEXAS

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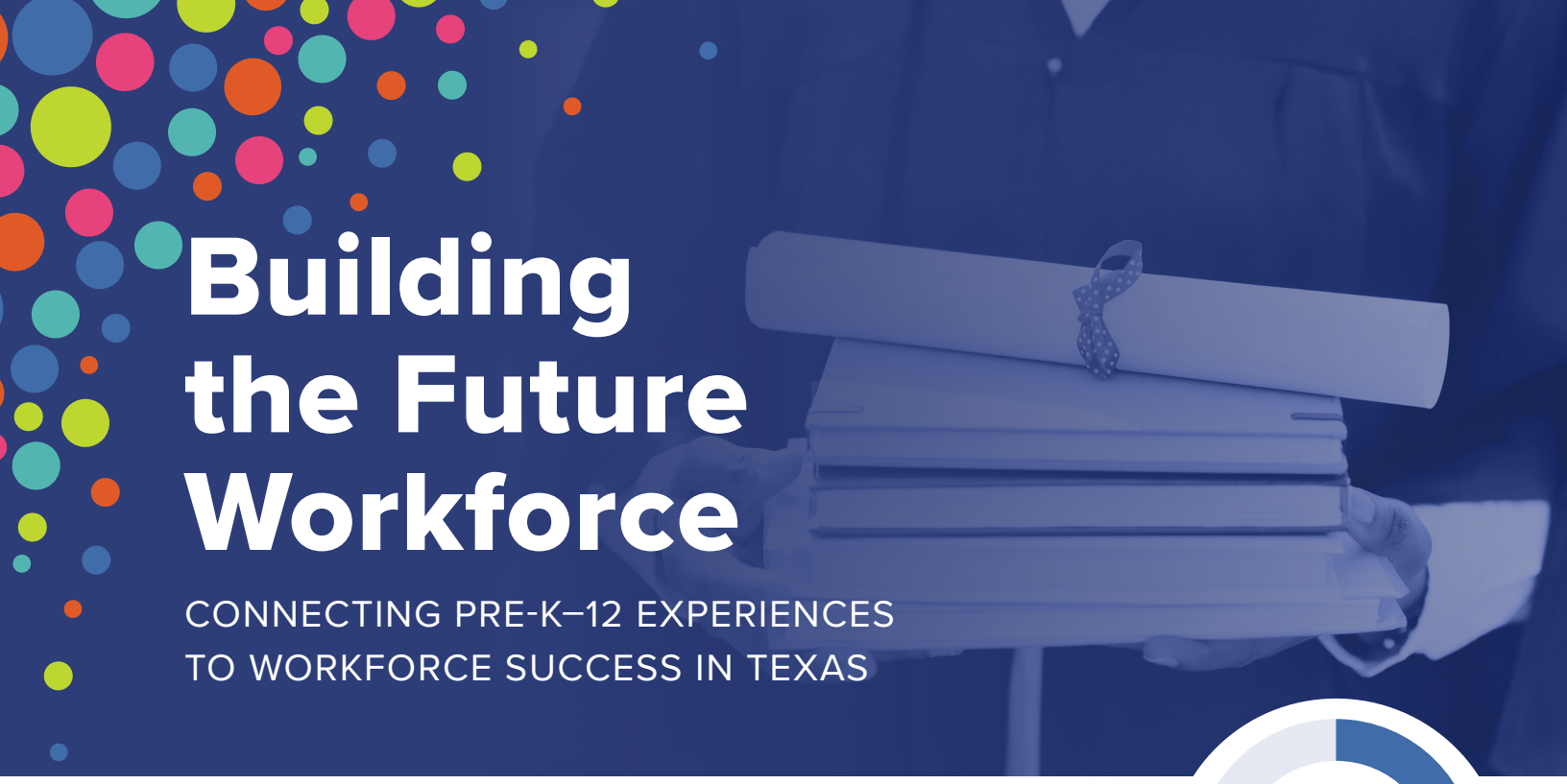


Building the Future Workforce

CONNECTING PRE-K–12 EXPERIENCES TO WORKFORCE SUCCESS IN TEXAS

INTRODUCTION AND EXECUTIVE SUMMARY

By 2036, an estimated 70% of *jobs in Texas* will require some form of postsecondary credential.

One of the main purposes of our pre-K-12 education system is to prepare students to lead choice-filled lives and access economic opportunity, yet the data to understand our progress is limited. In order to bring together leaders across pre-K-12, higher education, and the business community, these leaders need timely, accessible data that not only tracks postsecondary outcomes, but also identifies gaps along the learning journey and highlights potential solutions.

With this in mind, Good Reason Houston launched a groundbreaking research project in partnership with the University of Houston Education Research Center (ERC) in November 2023. This is the first analysis of a longitudinal study tracking Houston public school students' postsecondary outcomes such as college enrollment, credential attainment, employment, and earnings. **The goal is to identify the elements of students' pre-K-12 experiences that best predict workforce readiness and the likelihood of earning a living wage.**

The study focuses on Houston students, but the findings are applicable beyond our geography. The Houston region captures more than a tenth of public school students in Texas, including two of the largest districts in the state. Houston also is the most diverse large city in the country. Researchers believe that Houston's current demographic makeup will reflect our nation's diversity by 2040. Local insights on education quality and equity can inform education leaders nationwide as they prepare for population change in years to come.

The results are resoundingly clear: academic experiences in grades 8–12 that foster problem-solving skills, collaboration, and persistence to understand challenging concepts are *critical for thriving* in tomorrow's economy. The findings are a call to action for decision-makers in the education, business, and philanthropy sectors to invest in programs that help all students, regardless of background, gain access to a constellation of rigorous coursework.

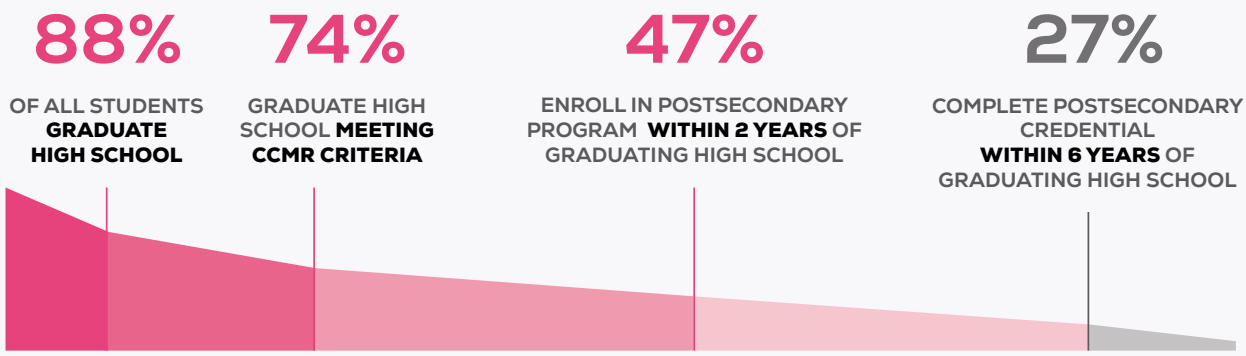
POSTSECONDARY RESEARCH AT A GLANCE

PHASE 1

Our *first report* looked at the most up-to-date student information we have to understand postsecondary credential and living wage attainment.

Only 27% of high school graduates from the classes of 2012 and 2017 attained some type of **credential within six years of high school graduation.**

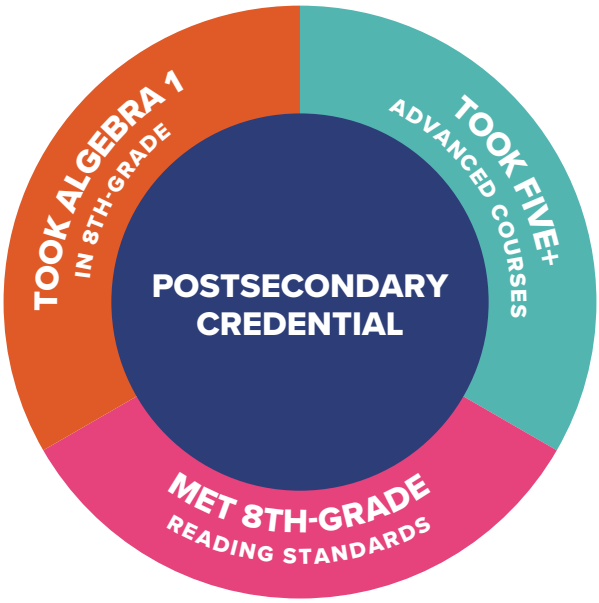
By 2023, only 20% of the the high school class of 2017 earned a living wage ($42,158 annually for a single-earner household with no dependents in Harris County). However, graduates with bachelor's degrees or professional certifications were much more likely to **earn a living wage** – 49% and 39%, respectively.



PHASE 2

Building on that work, the second phase of this original research used statistical models to explore how academic experiences in grades 8–12 influenced postsecondary outcomes and living wage-attainment six years after high school graduation.

Reading on grade level by middle school, taking Algebra 1 in 8th grade, and taking five or more advanced courses in high school are likely predictors of postsecondary success.



POSTSECONDARY RESEARCH AT A GLANCE

Various factors contribute to students' outcomes, including racial or ethnic background, family socioeconomic status, and other relevant factors. However, when we held these additional factors as constant, we found that:

Advanced coursework matters:
Graduates who took five or more advanced courses in high school were predicted to be 22 percentage points more likely to earn a credential than those with fewer advanced courses. Among all graduates, 57% took five or more advanced courses.

Prior research in the education field demonstrates the benefits of rigorous academic experiences for students' long-term outcomes, especially early access to advanced math pathways through *enrollment in Algebra 1 in 8th grade* and *access to a variety of advanced courses in high school*. This report affirms these results specifically in the Houston context.

Early academic achievement is critical:
Students who met grade-level standards on 8th grade STAAR reading or completed Algebra 1 in 8th grade were predicted to be significantly more likely to attain postsecondary credentials and earn living wages six years after high school, when accounting for other factors.

The power of combined experiences:
Students who met grade-level standards on 8th grade STAAR reading and completed five or more advanced courses in high school were the most likely to succeed in earning credentials and living wages.

Credential attainment drives economic success:
Graduates with postsecondary credentials were predicted to be 17 percentage points more likely to earn a living wage than those who did not attain a credential, accounting for other factors.

IMPLICATIONS FOR HOUSTON SCHOOLS

This research underscores the critical role of postsecondary credential attainment in achieving economic stability. Expanding access to rigorous academic experiences – such as advanced coursework and early exposure to advanced math – is essential to giving students the greatest chance to attain postsecondary credentials and achieve long-term, sustainable success.

To prepare today's students for high-wage, high-growth careers and meet the region's future workforce demands, schools and policymakers must prioritize support systems and opportunities that enable students to succeed academically and earn credentials of value. The findings point the way toward innovative, data-driven solutions to build a stronger, more equitable future for students and for Houston.

METHODS AND DATA

This study incorporates data from a few key sources:

Texas Education Agency (TEA):
Student sociodemographic information, high school graduation, student course-taking, STAAR scores, and career technical education (CTE) participation.

Texas Higher Education Coordinating Board (THECB):
College enrollment, credential completion from institutions of higher education (IHEs) in Texas, and Texas Success Initiative (TSI) readiness.

National Student Clearinghouse (NSC):
College enrollment in IHEs outside the state of Texas.

Texas Workforce Commission (TWC):
Employment and wages for graduates employed within Texas.

The portion of the study covered in this research brief connected data for high school graduates from TEA with data on college enrollment and completion from THECB. This brief summarizes postsecondary enrollment and completion outcomes for two sets of graduates:

- Outcomes six years after high school graduation for the graduating classes of 2012 to 2017, and
- Outcomes three years after high school graduation for the graduating classes of 2012 to 2020.

In addition, this brief utilized TWC data to include analyses of living wage attainment six years after high school graduation for the classes of 2012 to 2017.

Results shown in this report focus mainly on an analytic sample of 36,120 Houston-region graduates from the class of 2017.

Wage data was considered on an annual basis, and all wages reported for a given graduate in a given year were included. This structure allowed researchers to gauge the extent to which graduates had achieved particular outcomes within either three or six years of high school graduation, depending on the outcome.

Outcome variables of interest and the graduating cohorts they were examined for are as follows:

OUTCOME VARIABLE	YEARS SINCE HIGH SCHOOL GRADUATION	GRADUATING COHORTS INCLUDED
Completion of any college degree or certification	Six Years	2016 & 2017
Living wage attainment - single-earner household with no dependents	Six Years	2017

METHODS AND DATA

This research utilized logistic regression to compare students and isolate how various sociodemographic factors and pre-K-12 experiences are associated with the outcome variables of interest. Factors accounted for in these analyses include students':

- Race/ethnicity,
- Socioeconomic status,
- Emergent bilingual (EB) status,
- Sex assigned at birth, and
- Baseline academic achievement, as measured by meeting grade-level standards on 8th grade STAAR reading (for all models but those testing the effects of 8th grade STAAR).

Regression analysis compared similar students on these factors to attempt to isolate how graduates' experiences in pre-K-12 influenced their postsecondary outcomes. For example:

GRADUATE 1		GRADUATE 2
Black male economically disadvantaged background non-EB **Met grade level standards on 8th grade STAAR reading**	vs.	Black male economically disadvantaged background non-EB **Did not meet grade level standards on 8th grade STAAR reading**

In addition, interaction effects were tested between the various academic experiences and certain student characteristics, including their race/ethnicity and socioeconomic status. Select model results are included in the appendix and others are available upon request.

GLOSSARY OF TERMS

Credential(s) - Any postsecondary credential awarded by a Texas institution of higher education, including associate's degrees, level I, II, or III professional certifications, and bachelor's degrees.

Houston region - A geography defined as the 11 public independent school districts[1] with at least one campus within the city of Houston boundaries and a majority economically disadvantaged student population. Public charter school campuses within these 11 districts' boundaries are also included.

Living wage - An estimate of the earnings a household would need to cover basic expenses such as food, housing, internet, child care, and taxes. Living wages do not account for additional spending, such as eating out at restaurants, vacation, savings, or even retirement. This study utilized living wage estimates for Harris County calculated by Massachusetts Institute of Technology (MIT). More information on MIT's methodology can be found *here*[2], while details on Harris County living wage estimates and their components can be found *here*[3].

Advanced coursework - Any courses identified by TEA as advanced, including AP/IB courses, advanced Career Technical Education (CTE) courses, and high-level elective courses.

"Accounting for other factors" - Indicates that statistical modeling was used to consider and account for factors known to affect education outcomes, such as student demographics, socioeconomic status, EB status, and baseline academic achievement. See above for additional detail.

[1] Aldine ISD, Alief ISD, Channelview ISD, Cypress-Fairbanks ISD, Galena Park ISD, Houston ISD, Klein ISD, Pasadena ISD, Sheldon ISD, Spring ISD, and Spring Branch ISD
[2] https://livingwage.mit.edu/pages/methodology
[3] https://livingwage.mit.edu/counties/48201

METHODS AND DATA

Living wage thresholds for Harris County in 2023:

SINGLE-EARNER HOUSEHOLD WITH NO DEPENDENTS	SINGLE-EARNER HOUSEHOLD WITH ONE DEPENDENT	TWO-EARNER HOUSEHOLD WITH ONE DEPENDENT
$42,158	$73,017	$81,526

Notable study limitations include:

- Due to structural data concerns, NSC data on graduates who enrolled in and completed college outside of Texas could not be accurately assessed. To account for this, any graduates who enrolled in college outside of Texas at any point in the study period were excluded from all outcomes calculations.
- Linking TEA data to data from THECB, NSC, or TWC requires that students have a valid Social Security number. Graduates without valid SSNs, including undocumented students, cannot be connected to other data sources and have therefore been excluded from all analyses.
- The STAAR test was first implemented for the 2011-2012 school year, limiting the opportunity to look at academic achievement predictors prior to middle school. The high school class of 2017, for example, was in 7th grade in the first year of STAAR implementation.
- Wage and employment data are based on tax data and therefore limited to employment that generates a W-2, meaning that any earnings through the "gig economy" or other contract work cannot be accounted for.

College Enrollment and Credential Attainment

Overall, neither college enrollment nor credential attainment for Houston-region high school graduates changed much from the classes of 2012 to 2017.

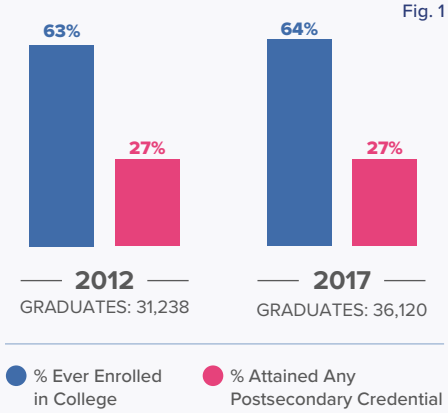
As seen in Figure 1, fewer than two-thirds of graduates from both 2012 and 2017 enrolled in college within six years of high school graduation, and just over 1 in 4 from either class attained some type of postsecondary credential.

Credential attainment among 2017 graduates varied widely across Houston-area school districts (Fig. 2). Harmony Public Schools, a Houston-based charter school network, led the region with 38% of its graduates attaining a postsecondary credential within six years. In contrast, several traditional independent school districts (ISDs) including Aldine, Alief, Houston, and Spring ISDs, had credential attainment rates below 25%, lagging the statewide average of 31%.

Postsecondary Outcomes Within 6 Years of High School Graduation

Houston Region Graduating Classes of 2012 and 2017

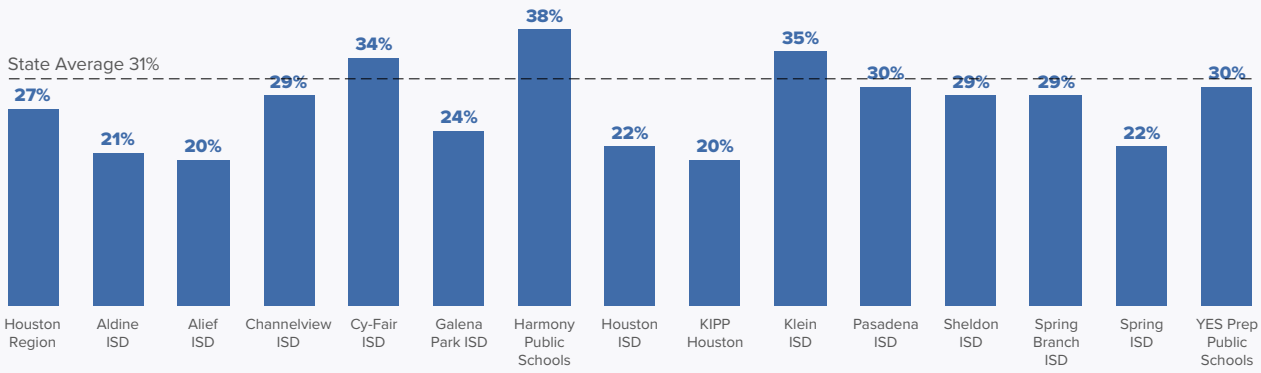
Fig. 1



Graduates Attaining Any Postsecondary Credential Within 6 Years

High School Class of 217

Fig. 2

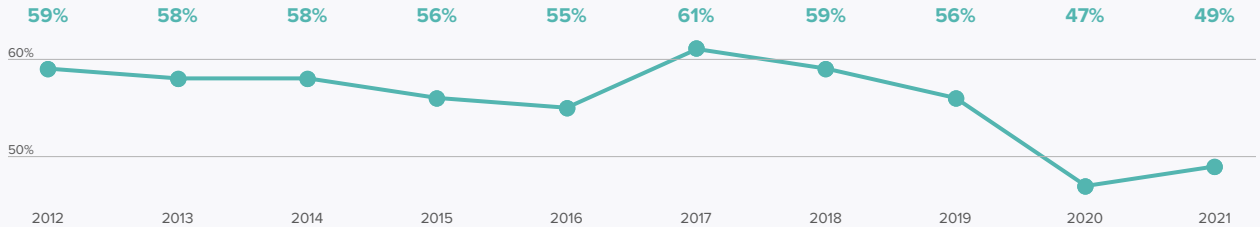


College enrollment among recent Houston-area high school graduates has declined sharply, particularly since peaking with the class of 2017 (Fig. 3). While the proportion of Houston-region graduates enrolling in college within two years of high school graduation had been falling steadily for years (including a notable spike between the classes of 2016 and 2017), the single-year decline was sharpest between the classes of 2019 and 2020, likely due largely to the COVID-19 pandemic.

Graduates Enrolling in College Within 2 Years of HS Graduation

Houston Region Graduating Classes of 2012 to 2021

Fig. 3



Earning a Living Wage

Earnings for 2017 Houston-region graduates six years after high school graduation varied significantly based on whether they attained a postsecondary credential.

Graduates with a bachelor's degree earned the highest median annual wages at $50,197 (Fig. 4), and were the only students to earn enough to surpass Massachusetts Institute of Technology's (MIT) living wage benchmark for a single-earner household with no dependents (Fig. 5) in Harris County ($42,158)[4]. Those with professional certifications earned $41,694, falling just below the living wage threshold.

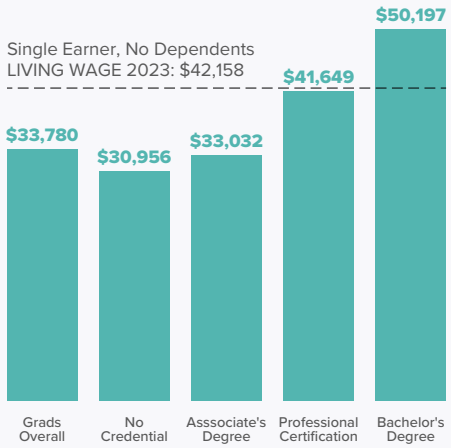
By contrast, graduates without postsecondary credentials – who make up roughly 80% of wage earners – earned an average of $30,956, more than $11,000 below the living wage (Fig. 6). These figures exclude graduates who were enrolled in college during 2023. This disparity underscores the critical role of postsecondary credentials in achieving economic stability. In 2023, only 20% of 2017 graduates earned enough to meet the living wage threshold for a single-earner household with no dependents. However, this varied significantly based on postsecondary attainment.

- Graduates with bachelor's degrees were 3.8 times more likely, and those with professional certifications were three times more likely to earn a living wage compared to graduates without credentials six years after high school.
- Despite this, only about half of bachelor's degree holders earned a living wage for a single-earner household with no dependents by six years after high school graduation.
- For single-earner households with one dependent, the numbers were even lower – just 16% of bachelor's degree holders and 10% of those with professional certifications met the living wage threshold. Graduates with professional certifications earned the second-highest wages after those with bachelor's degrees, but only 2% of the class of 2017 attained one. These credentials, typically earned at two-year institutions, often require a few courses or one semester to complete – making them far less costly and time-intensive than bachelor's or associate's degrees.

Given their strong wage outcomes and low attainment rates, professional certifications present a high-impact, cost effective opportunity for the Houston region. Expanding awareness of and access to the programs could help more students achieve financial stability with a smaller investment of time and resources.

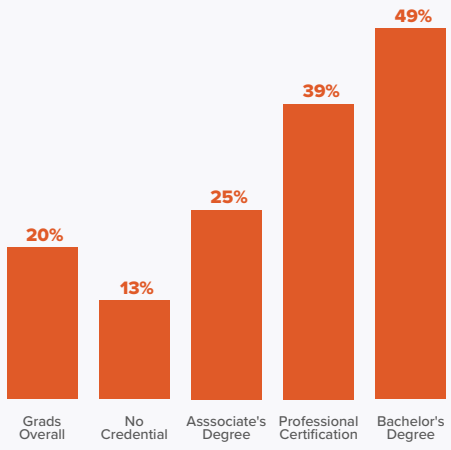
Class of 2017 Median Annual Wages Six Years After High School
by Postsecondary Credential

Fig. 4



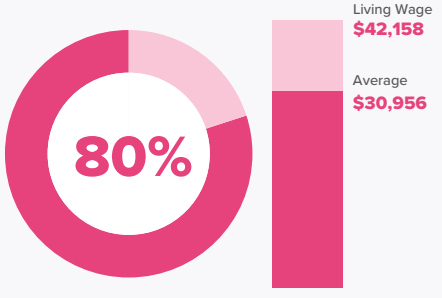
Percent of Employed 2017 Graduates Earning a Living Wage Six Years After High School
by Postsecondary Credential

Fig. 5



Average Graduate Earnings

Fig. 6



[4] For more information on these calculations, please see the page 7.

Postsecondary Credential Attainment

This study examined several experiences in grades 8-12 to identify which ones are most strongly linked to long-term postsecondary success. Since credential attainment is a key driver of higher wages, we aimed to predict how specific educational experiences impacted a graduate's likelihood of attaining a postsecondary credential.

This study examined the effects of:

- Meeting grade level standards on 8th grade STAAR reading[5],
- Access to advanced math pathways as measured by enrollment in Algebra 1 in 8th grade,
- Advanced course-taking in high school,
- Engagement with career technical education (CTE), and
- College-readiness, as measured by meeting Texas Success Initiative (TSI) criteria.

Results presented are based on statistical model results, which account for characteristics known to influence student outcomes, including race or ethnicity, socioeconomic status, emergent bilingual (EB) status, and baseline academic achievement. For more information on statistical methods, see Page 6.

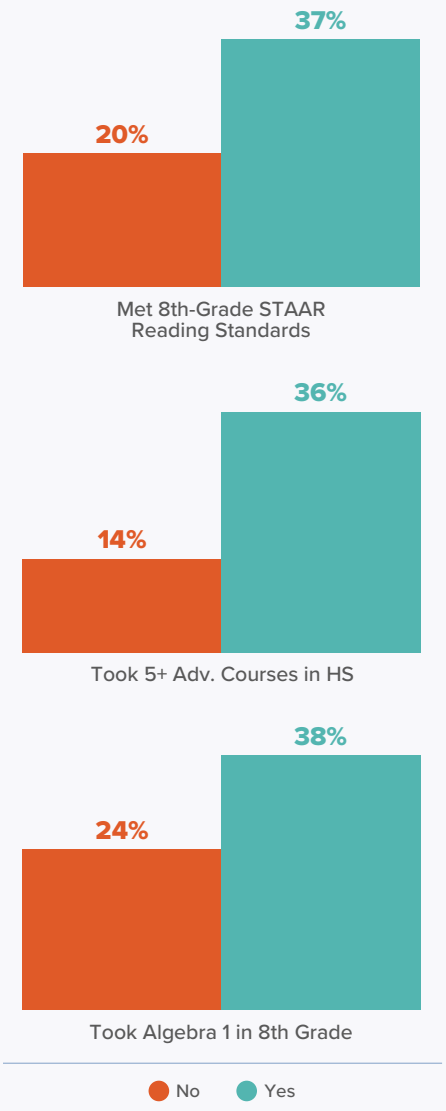
For 2017 high school graduates, three key K-12 experiences were linked to a higher likelihood of earning a postsecondary credential: meeting grade-level standards on 8th-grade STAAR reading, taking Algebra 1 in 8th grade, and completing five or more advanced courses in high school.

Among these, **taking five or more advanced courses had the strongest impact**. Graduates who took five or more advanced courses in high school were predicted to be 22 percentage points more likely to attain credentials than those who took fewer advanced courses.

Likelihood of Attaining Postsecondary Credentials by Academic Experiences

Houston Region Classes of 2016 and 2017

Fig. 7



[5] Only middle school data is available for the latest cohort Houston graduates because STAAR was adopted statewide in 2012. Future cohorts will have additional years of student achievement data and enable us to look at the link between elementary school indicators and postsecondary outcomes.

[6] Advanced coursework includes AP or IB courses, as well as advanced CTE and high-level elective courses.

HOW EXPERIENCES IN GRADES 8-12 INFLUENCE EARNING POTENTIAL

Examining the connection between advanced course-taking and meeting grade-level standards on 8th-grade STAAR reading (displayed right) reveals two key findings:

- 2017 graduates who met grade-level standards on 8th-grade STAAR reading but did not take five or more advanced courses in high school (Fig. 8, in teal) were predicted to be 8 percentage points less likely to attain a credential than graduates who did take five or more advanced courses in high school but did not meet grade level standards on 8th grade STAAR reading (Fig. 8, in orange).
- 2017 graduates who did both (Fig. 8 in teal)—took five or more advanced courses in high school and met grade level standards on 8th grade STAAR reading—were by far the most likely group to attain credentials.

Taking five or more advanced courses[5] may sound like a high bar, but a majority of Houston-region graduates (57%) are already meeting this standard.

To measure college readiness, Texas uses the Texas Success Initiative (TSI) which assesses whether graduates have the academic skills necessary to be successful in entry-level college courses in both reading and math.

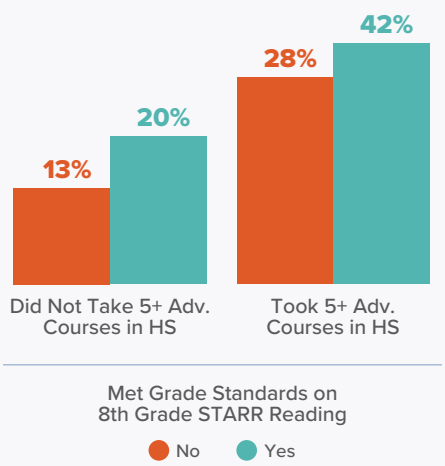
Graduates can be considered TSI-ready in math or reading in a variety of ways, including passing the TSI Assessment (TSIA), meeting college-ready standards on the ACT or SAT exams, completing college preparatory coursework, and other methods.

Unlike the rigorous academic experiences examined above that build students' readiness over time, TSI readiness can be seen as a final measure of a student's success in accumulating those rigorous academic experiences that prepare students for long-term success. High school graduates who enroll in college without being TSI-ready often need to enroll in developmental[6] coursework teaching foundational math or language arts concepts students should have mastered in high school. These courses are a known barrier to college completion given the lost time and added resources they require of students, particularly those relying on limited federal aid[7] to afford college.

Postsecondary Credential Attainment by Adv. Course-taking and 8th Grade STAAR Reading Scores

Houston Region Classes of 2016 and 2017

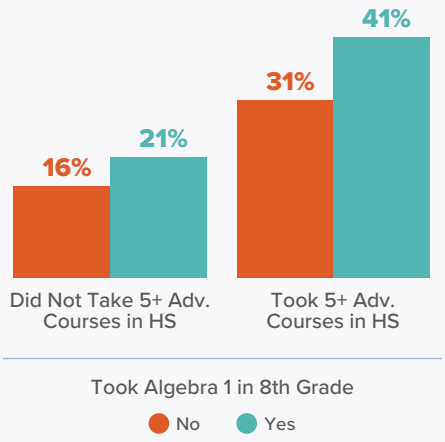
Fig. 8



Postsecondary Credential Attainment by Adv. Course-Taking and 8th Grade Algebra 1

Houston Region Classes of 2016 and 2017

Fig. 9



[5] In identifying what level of advanced course-taking seemed to really increase graduates' predicted likelihood of attaining postsecondary credentials, we tested many different thresholds. We compared the effects of taking zero vs. one advanced courses, as well as one vs. two, two vs. three, three vs. four, and four vs. five. There was little to no meaningful difference between the lower levels of advanced course-taking, but there was a statistically significant boost for taking five advanced courses compared to taking four. Using that result as a guide, we then expanded the test to be five or more advanced courses compared to less than five, and those results really stood out as making a substantial difference. As such those results are reported here.

[6] Previously known as "remedial" coursework.

[7] The Pell Grant is the primary form of federal aid for college students whose families cannot afford college on their own, but both the total amount of aid and the time over which it can be used are limited by federal law. Research has found that roughly *$7 billion in Pell dollars goes towards remedial coursework*, yet only *one in ten students* who take these courses go on to complete their post-secondary education.

HOW EXPERIENCES IN GRADES 8-12 INFLUENCE EARNING POTENTIAL

Given these barriers, TSI-ready graduates are considerably more likely to attain postsecondary credentials than their non-TSI-ready peers. This finding holds true across multiple analyses.

TSI readiness data is only available for high school graduates who enrolled in college in Texas. As such, in the figure to the right, the percentages are of 2017 graduates who enrolled in college. The figures on Page 11, on the other hand, are of all high school graduates.

Graduates who enrolled in college and were TSI-ready were much more likely to attain postsecondary credentials than those who enrolled and were not TSI-ready, with the gap being especially large for those who were TSI-ready in math or both math and reading. This difference is likely due, in part, to the barriers posed by developmental coursework, which non-TSI-ready graduates often face when they haven't had the rigorous academic experiences needed in grades 8–12.

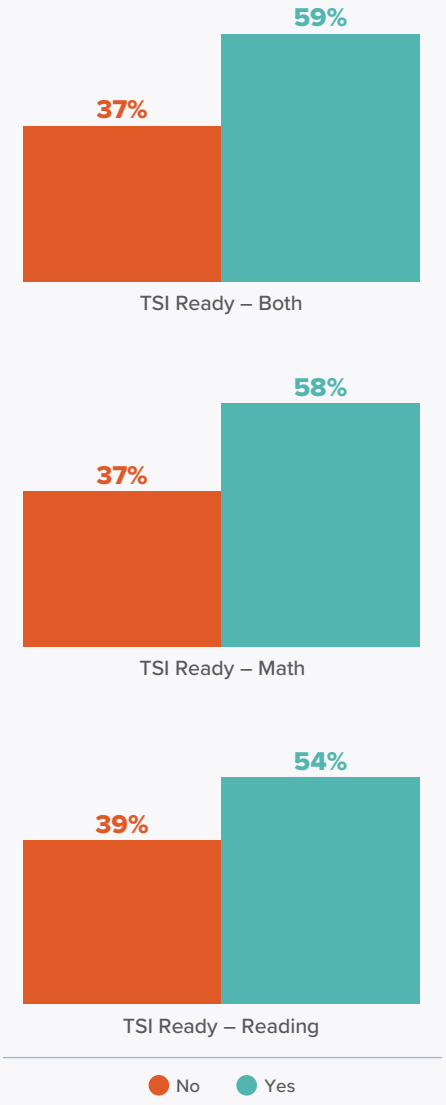
Though taking five or more advanced courses in high school was particularly beneficial, the key to postsecondary success lies in the combination of multiple rigorous academic experiences. These experiences help students meet college-readiness standards, such as TSI readiness, and provide a strong foundation for college and beyond.

To be clear, "college-readiness" does not refer exclusively to graduates' chances of attaining a bachelor's degree. Graduates with professional certifications were much more likely to earn a living wage than graduates with no postsecondary credential, but in order to attain one, graduates still need the preparation to enroll in college and complete the necessary coursework. Ensuring that all students have access to a variety of rigorous experiences tailored to their personal goals is essential for preparing them for long-term, sustainable success.

Likelihood of Attaining Postsecondary Credentials by TSI Readiness

Houston Region Classes of 2016 and 2017

Fig. 10



Earning a Living Wage

Attaining a postsecondary credential is not the ultimate goal–what matters is that it enables graduates to access career opportunities that support them and their families.

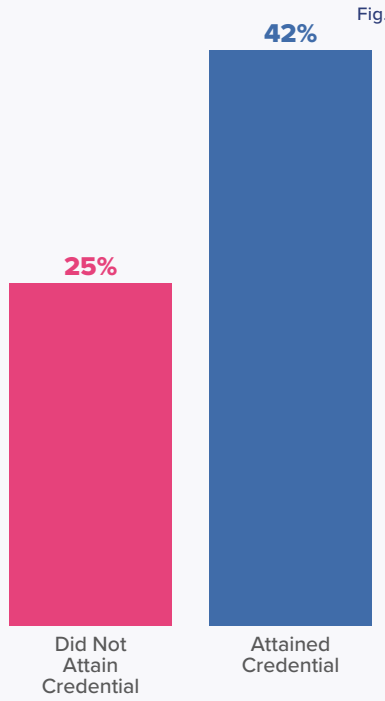
As shown earlier, 2017 graduates with postsecondary credentials were much more likely to earn a living wage six years after high school graduation. In fact, even when accounting for other factors that impact job opportunities and wages, college credential attainment was the strongest predictor of graduates' likelihood of earning a living wage. The difference seen between Fig. 11 and Fig. 5 on Page 9 demonstrates the power of statistical modeling, and how important factors such as demographics and socioeconomic status are to predicting graduates' earnings.

Accordingly, the rigorous academic experiences tied to postsecondary credential attainment were also associated with boosts in 2017 graduates' likelihood of attaining postsecondary credentials. Again, the gaps in Fig. 12 may seem smaller than expected, largely because graduates' earnings are affected by factors outside their (or the school system's) control – such as race, gender, and economic status – and the statistical model results reflect these realities

Likelihood of Earning Living Wage by Postsecondary Credential Attainment

Houston Region Classes of 2016 and 2017

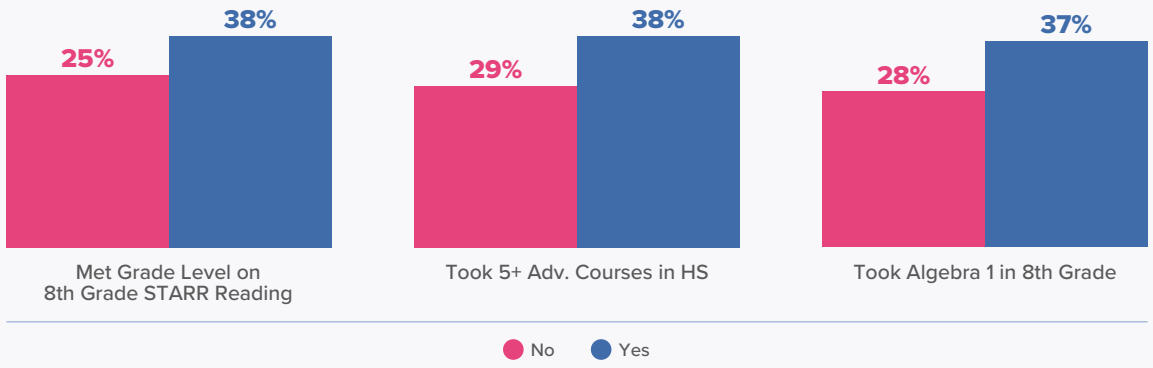
Fig. 11



Likelihood of Earning Living Wage by Academic Experiences

Houston Region Classes of 2016 and 2017

Fig. 12



Even accounting for factors like demographics and socioeconomic status, though, graduates who were able to meet grade-level standards on 8th-grade STAAR reading, take five or more advanced courses in high school, or take Algebra 1 in 8th grade remained significantly more likely to earn the $42,158 needed for a living wage than their peers who did not have these rigorous academic experiences.

If attaining a postsecondary credential–from professional certifications to bachelor's degrees–is the best way for graduates to improve their future earnings, then the best thing the pre-K-12 system can do is ensure all students have access to a range of rigorous academic experiences that increase their chances of earning that credential.

Access to Rigorous Academic Experiences

Good Reason Houston used statistical modeling to check whether rigorous academic experiences benefited students equally across different groups, a process known as "interaction effects." This helps answer the question, "Do these results apply equally to students from different backgrounds?"

The answer to that question was a resounding yes. Notably, the boost provided to graduates' likelihood of attaining postsecondary credentials was consistent across different student groups. This means, for example, Black or Hispanic students were predicted to benefit just as much from taking five or more advanced c"courses in high school as Asian or white students. Therefore, if we work to ensure that all students, regardless of background, have equitable access to these rigorous academic experiences, we would expect to see gains across the board.

Good Reason Houston found significant disparities in engagement with rigorous academic experiences among 2017 graduates from different backgrounds, as shown in the table below. Note that TSI-readiness data is only available for graduates who enrolled in college, while the percentages for the three academic experiences reflect the proportion of all graduates who participated in them.

Student Group	Met 8th-Grade Reading Standards	Took Algebra 1 in 8th Grade	Took 5+ Advanced Courses	TSI Ready - Both Subjects	TSI Ready - Math	TSI Ready - Reading
Asian	74%	59%	81%	84%	88%	89%
Black	38%	18%	48%	43%	46%	64%
Hispanic	43%	25%	55%	52%	57%	71%
White	70%	45%	65%	79%	81%	92%
Economically Disadvantaged	42%	23%	53%	50%	55%	69%
Non-Economically Disadvantaged	71%	49%	70%	78%	79%	90%

Asian graduates were over three times more likely to take Algebra 1 in 8th grade than Black graduates and more than twice as likely as Hispanic graduates. Similarly, economically disadvantaged graduates were 17 percentage points less likely to take five or more advanced courses in high school than their peers from non-economically disadvantaged backgrounds.

Good Reason Houston's statistical models showed that all student groups benefited about equally from these experiences, even when accounting for baseline academic performance. This indicates that the gaps in this table are not simply due to differences in student achievement. Instead, they likely reflect unequal access to these opportunities across students and schools, even for students who were academically prepared to participate.

Closing disparities in access to and engagement with rigorous academic experiences must become a top priority in the Houston region. Black and Hispanic graduates make up the overwhelming majority of our high school graduates, and if we do not provide them with the foundational pre-K-12 experiences they need for long-term success, our region's cultural and economic future will be at risk.

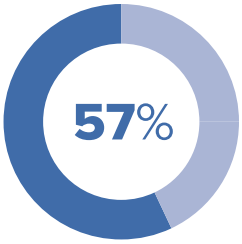
SUMMARY AND DISCUSSION

This report summarizes postsecondary outcomes for the Houston-region's high school graduating class of 2017, revealing that only 1 in 4 graduates earned a postsecondary credential – such as a professional certification, associate degree, or bachelor's degree. Postsecondary credentials were crucial for earning a living wage six years after high school, yet just 20% of graduates overall met this threshold.

These findings connect Houston-region graduates' experiences in the grades 8–12 system to their long-term outcomes, showing that an accumulation of rigorous academic experiences, especially taking five or more advanced courses in high school, strongly predicted higher chances of earning a postsecondary credential and living wage. Combining high levels of advanced course-taking with other markers of college readiness – such as meeting grade-level standards on 8th-grade STAAR reading or taking Algebra 1 in 8th grade, further improved outcomes.

While bachelor's degree holders had the highest earnings, this study highlights that a bachelor's degree is not the only path to family-sustaining wages. Graduates with professional certifications also saw notable wage gains, yet these credentials – often attainable in just one semester at a two-year institution – were earned by only 2% of the Houston-region class of 2017. Expanding access to these low-cost, high-reward options could create meaningful opportunities for many high school graduates.

Access to rigorous academic experiences, however, remains unequal. For example, economically disadvantaged graduates were 17 percentage points less likely to take five or more advanced courses than their non-economically disadvantaged peers. Though 57% of 2017 graduates overall reached this benchmark, we must ensure that all students, regardless of background, have equitable access to these experiences aligned with their goals.



Additionally, we must ensure that credential attainment translates into living-wage employment opportunities. Because 70% of jobs in Texas will require some type of credential beyond a high school diploma by 2036, the Houston region has much work to do to provide its high school graduates with the tools, resources, and knowledge they need to successfully navigate the postsecondary space.

Through intentional collective action across the K-12, higher education, and business communities, we can equip our graduates with the skills, support, and pathways needed to attain credentials of value, and sustain the economic vitality of our region.

IMPLICATIONS FOR POLICY & PRACTICE

Increase Access to Algebra I in Middle School

Texas' 88th Legislature passed Senate Bill 2124 in 2023, which addressed inequitable enrollment in advanced math pathways. The law requires districts to automatically enroll 5th graders who score in the top 40% of STAAR Math into advanced math coursework in 6th grade, putting them on a path to Algebra 1 in 8th grade and additional advanced math courses in high school. We strongly believe, based on this research, that the implementation of this bill will positively impact students' postsecondary outcomes. While districts are ramping up to full implementation, we notice region-wide declines in the number of middle schoolers taking the Algebra I STAAR, a sign that there may be barriers to increasing the number of students enrolled in advanced math courses early on despite the passage of the law. This may be due to a few factors, including pandemic learning losses and inadequate course enrollment systems and guidance counseling support. Good Reason Houston will continue to support districts in adopting strong, aligned math curriculum in elementary and middle school. We also remain committed to tracking Algebra I completion rates across schools in our region.

Enhance School Accountability

In 2024, TEA made significant changes to the A-F Accountability Rating System that were intended to improve the rigor and comprehensiveness of the system. Changes included revisions to the CCMR component to better align with postsecondary outcomes. Ratings have been withheld due to a current lawsuit against the TEA, but improvements to the system may arise in the upcoming legislative session. We now know that advanced coursework, 8th grade STAAR, and TSI (which includes SAT, ACT and TSIA performance) are strong predictors of postsecondary success. We believe that a strong accountability system should be anchored in research and our findings build the case for a system that rewards schools and systems, potentially through a tiered CCMR calculation– for expanding access to advanced coursework and college-readiness.

Break Barriers to Professional Certifications

Graduates with professional certifications earned the second-highest wages after those with bachelor's degrees, but only 2% of the class of 2017 attained one. These credentials often require a few courses to complete and are less costly than bachelor's or associate's degrees. Despite their return on investment, not enough students are completing these programs. Access to these programs requires exposure to career pathways early and advising that extends beyond high school.

APPENDIX 1 — REGRESSION RESULTS

Logistic regression model results comparing effects of various academic experiences for all high school graduates. Race/ethnicity base group for all models is first alphabetically.

	Met 8th Grade STAAR Reading Standards	5+ Advanced Courses in High School	Algebra 1 in 8th Grade
Race/ethnicity - Black	0.296***	0.319***	0.358***
Race/ethnicity - Hispanic	0.39***	0.409***	0.446***
Race/ethnicity - Other	0.412***	0.4***	0.476***
Race/ethnicity - Two or More	0.396***	0.445***	0.441***
Race/ethnicity - White	0.447***	0.521***	0.491***
Ever Economically Disadvantaged	0.489***	0.496***	0.528***
Emergent Bilingual in HS	0.483***	0.418***	0.533***
Sex - Male	0.577***	0.618***	0.566***
Met 8th Grade STAAR Reading Standards	2.48***	-	1.97***
5+ Advanced Courses in High School	-	3.76***	-
Algebra 1 in 8th Grade	-	-	2.08***
* p<.1; ** p<.05; *** p<.01			

Logistic regression model results comparing effects of TSI readiness for high school graduates who enrolled in college. Race/ethnicity base group for all models is first alphabetically.

	TSI-Ready: Both Subjects	TSI-Ready: Math	TSI-Ready: Reading
Race/ethnicity - Black	0.335***	0.338***	0.295***
Race/ethnicity - Hispanic	0.518***	0.516***	0.459***
Race/ethnicity - Other	0.596**	0.617*	0.555**
Race/ethnicity - Two or More	0.522***	0.533***	0.481***
Race/ethnicity - White	0.61***	0.621***	0.572***
Ever Economically Disadvantaged	0.565***	0.562***	0.543***
Emergent Bilingual in HS	1.03	0.987	1.05
Sex - Male	0.556***	0.559***	0.582***
Met 8th Grade STAAR Reading Standards	1.45***	1.53***	1.6***
5+ Advanced Courses in High School	1.9***	1.91***	2.19***
TSI-Ready in Subject(s)	2.7***	2.64***	2***
* p<.1; ** p<.05; *** p<.01			