



Connecting Education and the Workforce

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Handouts Provided

- Connecting Education and the Workforce Report
 - Appendix for individual School Districts/Charter Schools
- Trends in High School Graduation, Higher Education, and Workforce Outcomes among Career and Technology Students Slides

Connecting Education and the Workforce

- Report created for the Heart of Texas Region using data from the University of Houston Education Research Center (UH ERC)
- UH ERC houses a statewide individual-level data repository that combines data from the Texas Education Agency, Texas Higher Education Coordinating Board, and Texas Workforce Commission
- Follows cohorts of 9th grade students through high school, through higher education, and into the workforce
- Report provides statewide data, HOT Region data, and Appendices are provided to school districts/charter schools

Connecting Education and the Workforce

FIGURE 2.1
The Heart of Texas Region

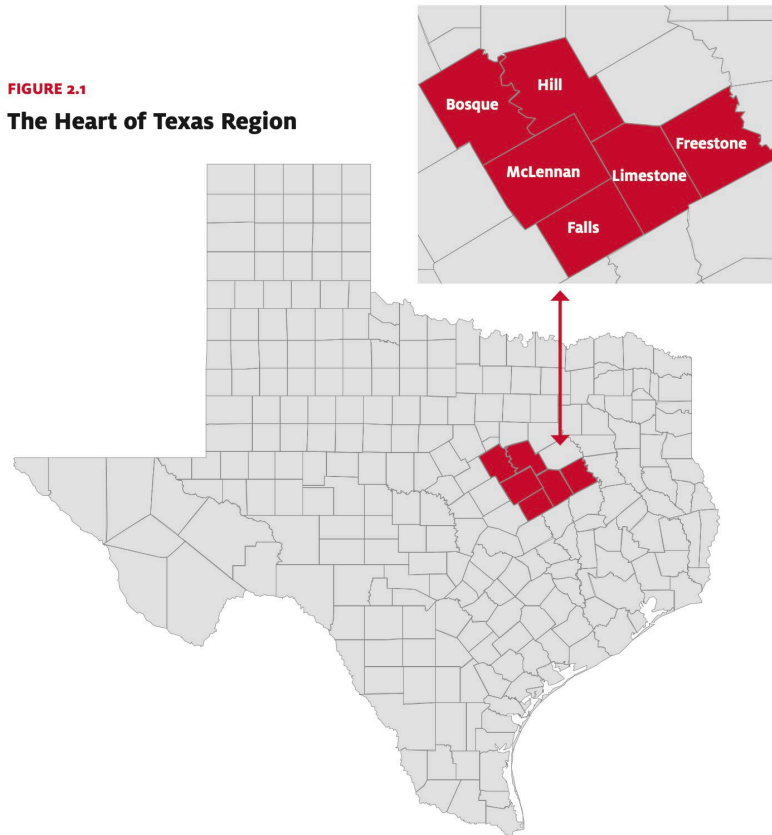
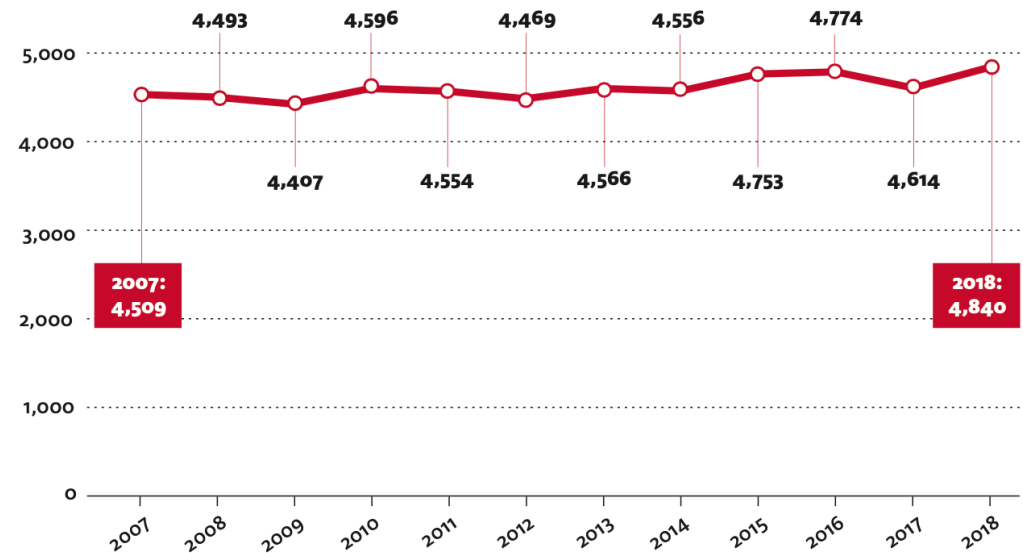


FIGURE 4.1

Heart of Texas Region Public School Ninth-Grade Cohorts, 2007–18



Source. University of Houston Education Research Center.

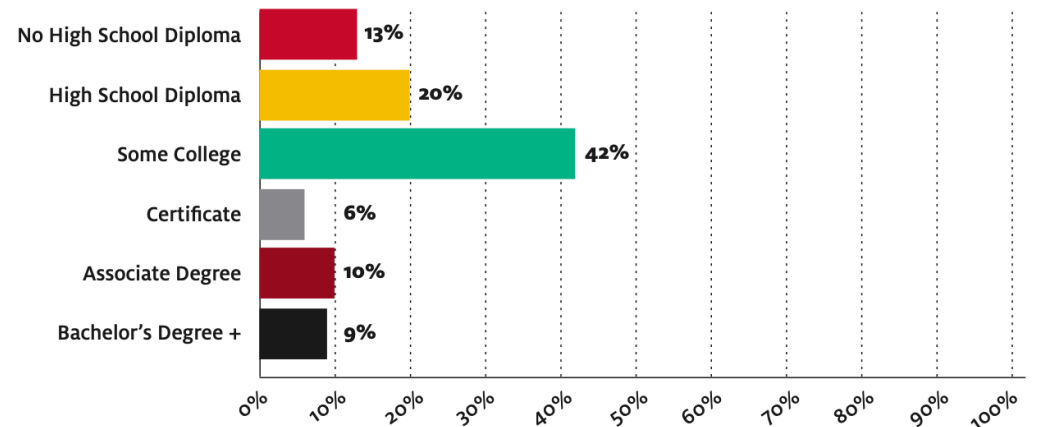
Note. The cohort is determined by Heart of Texas region students' first time enrolling in ninth grade. The total number of ninth-grade students in Heart of Texas region public school cohorts from 2007 to 2018 was 55,131.

Connecting Education and the Workforce

Among students who began the 9th grade in a school in the HOT Region, 25% earned a higher education credential as of 2023.

FIGURE 4.2

Highest Level of Education Attained as of 2023 for Heart of Texas Region Public School Ninth-Grade Cohorts, 2007–18



Source. University of Houston Education Research Center.

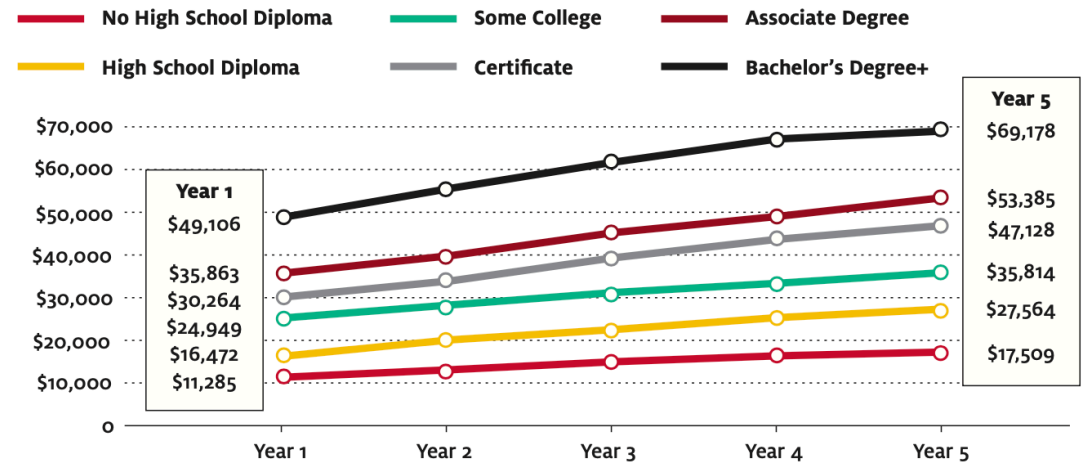
Note. The cohort is determined by Heart of Texas region public school students' first time enrolling in ninth grade. The highest level of education attained is as of 2023. "No high school diploma" refers to students who did not graduate from high school as of 2023; "high school diploma" refers to students who graduated high school but did not enroll in higher education institutions as of 2023; "some college" refers to students who enrolled in higher education but did not earn a credential as of 2023; "certificate," "associate degree," and "bachelor's degree+" refer to students who earned the respective credential as of 2023 as their highest level of education attained. "Bachelor's degree+" refers to students earning a bachelor's degree or higher as of 2023. The percentages are calculated as a fraction of the total public school students in the Heart of Texas region in the 2007 through 2018 cohorts (n=55,131).

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Among students who began the 9th grade in a school in the HOT Region, a strong connection exists between educational attainment and earnings.

FIGURE 4.3

Average Annual Wages Earned in First Five Years in Workforce by Highest Level of Education Attained, Heart of Texas Region Public School Ninth-Grade Cohorts, 2007–18



Source: University of Houston Education Research Center.

Note. The cohort is determined by Heart of Texas region public school students' first time enrolling in ninth grade. The highest level of education attained is as of 2023. "No high school diploma" refers to students who did not graduate from high school as of 2023; "high school diploma" refers to students who graduated high school but did not enroll in higher education institutions as of 2023; "some college" refers to students who enrolled in higher education but did not earn a credential as of 2023; "certificate," "associate degree," and "bachelor's degree+" refer to students who earned the respective credential as of 2023 as their highest level of education attained. "Bachelor's degree+" refers to students earning a bachelor's degree or higher as of 2023. Average wages were compiled from wages submitted to the Texas Workforce Commission as constant 2023 dollars.

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For students who began 9th grade in the HOT Region, fifth-year industry of employment and annual wages show differences among industries and among educational attainment.

TABLE 4.1

Average Fifth-Year Annual Wages and Industry of Employment by Highest Level of Education Attained, Heart of Texas Region Public School Ninth-Grade Cohorts, 2007–18

Industry	High School Diploma		Some College		Certificate		Associate Degree		Bachelor's Degree+	
	Average Wage	Number in Workforce	Average Wage	Number in Workforce	Average Wage	Number in Workforce	Average Wage	Number in Workforce	Average Wage	Number in Workforce
Accommodation and Food Service	\$15,854	553	\$19,120	855	\$29,327	56	\$26,769	61	\$29,662	12
Administrative Support, Waste Management	\$21,412	505	\$26,692	878	\$33,964	81	\$47,490	106	\$66,253	33
Agriculture, Forestry, Fishing, and Hunting	\$26,775	17	\$42,436	43	\$33,179	5	\$31,707	11	n/a	0
Arts, Entertainment, and Recreation	\$21,765	27	\$31,098	78	\$24,758	18	\$35,633	7	\$32,819	7
Construction	\$37,391	419	\$45,190	579	\$53,915	86	\$59,657	61	\$61,836	17
Education	\$18,285	61	\$42,072	347	\$43,060	166	\$43,610	169	\$51,648	164
Finance and Insurance	\$31,093	92	\$43,323	317	\$45,430	66	\$48,318	61	\$75,676	38
Health Care and Social Assistance	\$17,894	290	\$29,461	596	\$46,001	208	\$56,398	318	\$79,221	164
Information	\$32,332	25	\$51,186	97	\$47,981	14	\$44,537	14	\$81,849	13
Management	\$20,358	75	\$30,650	120	\$31,892	11	\$39,980	16	\$88,924	6
Manufacturing	\$36,043	544	\$42,994	764	\$58,557	104	\$67,955	116	\$86,996	29
Mining, Quarrying, Oil and Gas Extraction	\$50,749	73	\$72,934	104	\$75,463	20	\$81,139	19	\$141,945	*
Other Services	\$30,704	119	\$33,641	156	\$34,641	59	\$48,486	44	\$56,559	11
Professional, Scientific, and Technical Services	\$32,064	107	\$52,857	323	\$49,821	50	\$59,526	110	\$90,343	74
Public Administration	\$39,356	115	\$43,427	276	\$60,066	106	\$55,067	82	\$56,191	24
Real Estate	\$30,544	51	\$40,626	140	\$35,627	16	\$59,723	26	\$66,751	12
Retail Trade	\$23,861	792	\$28,952	1,252	\$36,846	171	\$38,608	165	\$47,456	34
Transportation and Warehousing	\$30,839	124	\$40,368	250	\$53,535	29	\$44,272	27	\$67,059	*
Utilities	\$69,728	29	\$76,773	66	\$114,333	31	\$114,869	45	\$86,795	*
Wholesale Trade	\$36,480	206	\$44,916	331	\$55,508	40	\$63,319	65	\$91,566	26

Source: University of Houston Education Research Center.
Notes: The cohort is determined by Heart of Texas region students' first time enrolling in ninth grade. Industry categories are from the North American Industry Classification System. Average annual wages are compiled from wages submitted to the Texas Workforce Commission as constant 2023 dollars. *Indicates a masked value of less than 5.

Connecting Education and the Workforce

- In the Heart of Texas region, education attainment rates were slightly higher than statewide.
 - 25% of ninth-grade students between 2007 and 2018 earned a higher education credential as of 2023.
 - 13% of ninth-graders never graduated high school,
 - 20% stopped their education after a high school diploma, and
 - 42% enrolled in college but did not earn a credential as of 2023.
- Like the statewide trends, average wage earnings in the Heart of Texas region increased with educational attainment.
- Opportunity for strong pathways from education to the workforce paying higher wages include:
 - Students with certificates employed in the utilities and public administration industries;
 - students with associate degrees in the health care and social assistance and education industries; and
 - students with bachelor's degrees in the health care and social assistance and professional, scientific, and technical services industries



Trends Among CTE Students

- Slides created to understand outcomes of students participating in CTE
- Note differences may exist between Statewide and HOT Region Outcome data due to years of data included in the CTE report and different cohorts examined.



HOTWDB 9th Grade Cohorts

Common Majors

4 Year Degrees

- Business – 17%
- Health Professions – 13%
- Agriculture – 8%
- Biological & Biomedical – 7%
- Parks, Recreation, Fitness – 6%
- Psychology -6%
- Social Sciences – 6%
- Communication – 6%

2 Year Degrees and Certificates

- Liberal Arts & Sciences – 55%
- Precision Production- 10%
- Construction Trades-5%
- Health Professions -5%
- Business - 4%
- Culinary - 4%
- Homeland Security, Law Enforcement, Firefighting- 4%



HOTWDB 9th Grade Cohorts

Common Institutions

4 Year School Enrollment

- Tarleton State University-16%
- Texas A&M University-12%
- Baylor University-11%
- Texas Tech University—7%
- Texas State University- 5%
- University of Mary Hardin-Baylor -5%
- University of North Texas – 5%

2 Year School Enrollment

- McLennan Community College-63%
- Navarro College – 11%
- Hill College -11%
- Texas State Technical College-Waco -7%



CTE Student Categories

CTE Explorer

1 CTE course per Program of Study or more than 1 CTE course from different Programs of Study

CTE concentrator

2 CTE courses per Program of Study

IBC Recipient Concentrator

CTE concentrator with Industry Based Certificate

CTE completer

3 or more courses including 1 level 3 or level 4 course per Program of Study

IBC Recipient Completer

CTE completer with Industry Based Certificate



CTE Student Participation

2016-2022 9 th Grade Cohorts	No CTE Courses	CTE Explorer	CTE Concentrator	IBC Concentrator	CTE Completer	IBC Completer	Total
Statewide	11%	8%	43%	<1%	37%	1%	2,881,010
HOTWDB	4%	5%	41%	<1%	50%	<1%	32,986

- Compared to the state, the HOTWDB region has a higher proportion of CTE Completer students.

Common Career Clusters by Participation

HOTWDB Region

<u>CTE Explorer</u>	<u>CTE concentrator</u>	<u>IBC Recipient Concentrator</u>	<u>CTE completer</u>	<u>IBC Recipient Completer</u>
<ul style="list-style-type: none">• Agriculture, Food & Natural Resources• Business, Marketing & Finance• Arts, A/V Tech, Computing• Health Science	<ul style="list-style-type: none">• Agriculture, Food & Natural Resources• Business, Marketing & Finance• Arts, A/V Tech, Computing• Health Science	<ul style="list-style-type: none">• N/A	<ul style="list-style-type: none">• Agriculture, Food & Natural Resources• Business, Marketing & Finance<ul style="list-style-type: none">• STEM• Health Science<ul style="list-style-type: none">• Human Services	<ul style="list-style-type: none">• Agriculture, Food & Natural Resources• Business, Marketing & Finance

Looking Back at CTE Data and Outcomes

- Since the Autocoding of CTE data went into place in 2021, we do not yet have high school graduation, higher education outcomes, or workforce outcomes for cohorts of students 2021 and beyond.
- For this presentation, we used the Autocoding rules that associate CTE Courses with Programs of Study in Career Clusters implemented in 2021 to look backward.
- We looked backward to the CTE participation and outcomes for the 9th grade cohorts of 2016 through 2019.
- *Note: this look-back is an estimation for discussion purposes only.*



Looking Back: Higher Education Enrollment as of 2024

2016-2019 9 th Grade Cohorts	9 th Grade Cohort	Any Higher Ed Enrollment
State	1,609,792	949,002 (59%)
HOTWDB	18,669	11,173 (60%)

2016-2019 9 th Grade Cohorts	2-year Institution Enrollment	4-year Institution Enrollment
State	531,790	417,212
HOTWDB	7,120	4,053

- Among the 2016-2019 9th grade cohorts statewide, 59% had enrolled in a higher education institution as of Fall 2024. Of those, 531,790 (56%) enrolled in 2-year institutions and 417,212 (44%) enrolled in 4-year institutions.
- In the HOTWDB region, 60% of the 2016-2019 9th grade cohorts had enrolled in higher education as of Fall 2024. Of those, 7,120 (64%) enrolled in 2-year institutions and 4,053 (36%) enrolled in 4-year institutions.

Looking Back: Higher Education Enrollment and CTE Participation as of 2024

2016-2022 9 th Grade Cohorts	No CTE Courses	CTE Explorer	CTE Concentrator	IBC Concentrator	CTE Completer	IBC Completer	Total
Statewide	30%	33%	54%	53%	69%	74%	949,002
HOTWDB	10%	19%	51%	*	68%	68%	11,173

- Statewide and in the HOTWDB region, highest higher education enrollment rates exist among CTE Completers and IBC Completers

Looking Back: Highest Level of Education Attained and CTE Participation as of 2024- HOTWDB Region

2016-2019 9 th Grade Cohorts	No CTE Courses	CTE Explorer	CTE Concentrator	IBC Concentrator	CTE Completer	IBC Completer
No High School Diploma	87%	69%	23%	*	4%	4%
High School Graduate	4%	12%	27%	*	28%	28%
Some College	28%	17%	40%	*	52%	68%
Post-Secondary Certificate	<1%	<1%	1%	*	2%	<1%
Associate	<1%	1%	6%	*	9%	<1%
Bachelor & Beyond	1%	1%	4%	*	4%	<1%

Workforce Earnings

High School Diploma by Industry- HOTWDB

- In the HOTWDB region, industries reporting the highest 2022 average wages for students whose highest level of education attained was a high school diploma were:
 - Utilities- \$42,423
 - Mining, Quarrying, and Oil and Gas Extraction- \$33,189
 - Public Administration- \$30,203
 - Wood Product Manufacturing- \$30,072
 - Construction- \$27,301
 - Primary Metal Manufacturing- \$26,711

Conclusion

- Strong relationship between educational attainment and workforce earnings are present statewide and across the HOT Region
- Opportunities exist for CTE and other pathway development from high school to ample earnings in the Texas workforce

Contact Information

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