

EXECUTIVE SUMMARY

The primary purpose of the Career and Technical Education (CTE) program is to prepare students for college and career success by providing them with the skills necessary to be competitive in a global economy. To meet this goal, the Dallas Independent School District (ISD) offers courses across 51 comprehensive CTE pathways to students in grades six through 12. Courses can be taken as one-off courses or in a program of study at participating middle and high schools. Students can also participate in CTE by taking courses through National Academy Foundation (NAF), Career Institutes (CI), or Early College High School (ECHS) programs. Through participation in CTE, students can earn diploma endorsements, industry certifications, educational certificates, and college credit hours. In addition, students can participate in paid internships. The CTE program is coordinated by the CTE Department under Teaching and Learning. Program activities are partially funded through both state CTE funds and a grant established by the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV). In 2021-22, the total Dallas ISD CTE budget was \$42,503,415, which included \$28,399,071 for payroll expenses, and \$3,970,008 for the Career Institutes.

EVALUATION QUESTIONS/OUTCOMES

What were the components of the CTE program?

- CTE course offerings are centered around three endorsements: Business and Industry; Public Service; and Science, Technology, Engineering and Mathematics (STEM). Within each of the endorsements, a student can select a career cluster, followed by a pathway.
- In 2020-21, Perkins V redefined pathways, resulting in the merging of several previously offered pathways. To better align with the new programs of study created by the Texas Education Agency (TEA), the number of pathways offered dropped from 271 in 2018-19 to 51 comprehensive pathways in 2020-21.
- Starting with the 2020-21 school year, CTE students were identified by TEA as either CTE Participants, CTE Explorer, CTE Concentrator, or CTE Completer based on CTE course enrollment. Generally, CTE Participants and Explorers are similar to students in prior years identified as CTE elective, whereas CTE Concentrators and Completers are similar to CTE Coherent Sequence students prior to 2020-21.

NAF Academies

NAF academies provided students career-focused educational experiences within and outside the classroom. The NAF curricula incorporates industry standards and practices, literacy strategies, and STEM integration, while emphasizing project-based learning.

- In 2021-22, the Dallas ISD, in cooperation with NAF, operated 44 NAF academies at 18 high schools. All NAF academies have an open enrollment policy.
- NAF academies were designed to be small learning communities that operate based on a "school within a school" model within the existing high school systems.
- Academies are based around one of five high-growth career industries: Engineering; Finance; Health Sciences; Hospitality and Tourism; and Information Technologies.
- Students who successfully complete their academic courses, workplace projects, and internship can earn the NAFTrack Certification, indicating to post-secondary institutions and employers that the student is college- and career-ready. The NAFTrack Certified Hiring program is a commitment made by top American companies to consider these qualified students as eventual job applicants. Career Institutes

Career Institutes

Career Institutes provide high school students the opportunity to obtain relevant workforce readiness skills and post-secondary education in high-demand vocations to earn a living wage after graduating high school.

- Career Institutes function as a hub serving their surrounding high schools.
- By 2026-27, Dallas ISD plans to establish a total of four Career Institutes, one for each quadrant of the city (north, south, east, and west).
- CTE program documents indicated that "these state-of-the-art facilities will feature real-world learning spaces and industry standard equipment, providing students access to post-secondary education, training, and career pathways that may be inaccessible on their home campus".¹
- Pathways offered at the Career Institutes are tuition-free for all Dallas ISD students and have open enrollment. Students will take Career Institute pathway courses for half a day, twice a week at dedicated Career

¹ Career Institutes brochure Developing Leaders Building Futures and March 7, 2019 Dallas ISD Board Briefing on Career Institutes.

Institute campuses. Transportation of students from and to their home campus is free of charge.

Early College High Schools

- In 2021-22, the Dallas ISD operated 26 ECHSs, including eight traditional ECHSs and 18 Pathways in Technology Early College High Schools (P-TECH).
- Each P-TECH was paired with an institution of higher learning (IHE) and one or more industry partners.
- Students enrolled in a P-TECH can earn up to 60 tuition-free, dual-credit hours and graduate with an Associate Degree of Applied Science in one of 32 fields.
- Out of the 60 dual-credit hours, students can take up to 18 credit hours of CTE related coursework.
- P-TECH students also have an opportunity to earn industry-based certifications and educational certificates in their selected career pathways that are attractive to employers and gain valuable workplace skills through one of the industry partners.

Credentials

- **Certificates** are types of credentials that are predominately awarded by two-year institutions of higher learning for the satisfactory completion of a workforce education program.
- **Certifications** are types of credentials that are usually granted by an organization, such as a trade association, validating that an individual possesses certain skills. An occupation may have multiple certifications with different levels of expertise.
- Unlike certificates, certifications are often time-limited credentials and need to be renewed periodically. Since 2017-18, school districts are required to report student-level data to TEA about industry-based certifications that meet TEA accountability requirements. The 2021-22 list of approved industry-based certifications for the A-F Accountability System included 244 certifications within 14 primary career clusters.

CTE Implementation in Middle Schools

Fifty out of 54 middle schools² (93%) offered one or more CTE courses in 2021-22.

- Of the 20 CTE courses offered, four were considered foundational courses and qualified for middle school credit, while 16 courses could be taken for high school credit.
- Five of the 21 courses utilized PLTW Gateway curricula. CTE department leadership highly recommended all middle school students take the College and Career Readiness class, and one of the four Investigating Careers classes in grade eight to have a better understanding of CTE options in high school.
- Thirty-seven middle schools (69%) offered the College and Career Readiness class and 27 middle schools

(50%) offered one or more of the Investigating Careers classes.

What were the enrollment and demographic characteristics of CTE students?

- During the 2021-22 school year, 41,379 students participated in CTE, including 11,382 middle school students (27.5%) and 29,997 high school students (72.5%, Table 1), an overall decrease of two percent ($n=650$) compared to 2020-21.

Table 1: 2021-22 CTE Enrollment by Grade

Grade	N	%
Middle School		
Grade 6	1,108	11.5
Grade 7	5,139	51.2
Grade 8	5,135	50.6
High School		
Grade 9	9,253	73.9
Grade 10	7,448	77.8
Grade 11	6,618	79.2
Grade 12	6,668	76.8
Overall		
Overall Middle School	11,382	38.2
Overall High School	29,997	76.6
Overall	41,379	60.0

Source: End-of-year demographic file, 06/06/22. CTE course file, 09/06/22. Dallas ISD course file, 09/08/22.

- In 2021-22, 44 percent of the 41,379 CTE students were CTE Participants ($n=18,239$), 25 percent were CTE Explorers ($n=10,447$), 23 percent were Concentrators ($n=9,324$), and eight percent were CTE Completers ($n=3,369$).
- Districtwide, CTE students took the highest percentage of courses within the Business Management & Administration cluster (23%), followed by the Science, Technology, Engineering & Mathematics cluster (15%), and Arts A V Technology Communications (9%).

High school students were able to participate in traditional CTE course offerings and enroll in specialized CTE programs such as Career Institutes, NAF Academies, and ECHSs.

- Of the 29,997 high school students who enrolled in CTE courses in 2021-22, 15,087 students enrolled in one or more of these specialized high school CTE programs.
- Although 87 percent of the 15,087 students enrolled in only one of these programs, 13 percent enrolled in two or three programs. Overall, 4,152 students enrolled in Career Institutes, 7,481 students enrolled in NAF Academies, and 5,535 students enrolled in ECHSs.

Demographic Characteristics

- The ethnic composition of district CTE students was similar to middle and high school students not enrolled in the CTE program.

² Includes Elementary/Middle, Middle, and Middle/High level schools.

- A smaller percentage of CTE students received special education services compared to non-CTE students (9% vs 13%).
- Fewer CTE students were English learners compared to non-CTE students (45% vs 48%).
- While CTE and non-CTE students were similarly at risk of dropping out (71% vs 72%), both groups, however, increased by five (CTE) and six percentage points (non-CTE) over 2020-21 (both 66%).

What were the completion rates for CTE courses?

- In 2020-21, 41,379 CTE students enrolled in 69,661 CTE courses with an 89 percent passing rate (61,832 courses).
- Likewise, 5,501 Dallas ISD students participated in 12,514 CTE dual credit courses of which they passed 10,849 courses (87%).
- CTE Completers had the highest overall passing rate for all CTE courses (96%) and CTE dual credit course (91%) followed by CTE Concentrators (94% and 90%), and CTE Participants (87% and 87%). CTE Explorers had the lowest overall passing rate for all CTE courses (82%) and CTE dual credit courses (80%).

What were the academic outcomes of CTE students on STAAR EOC exams?

- Overall, 23,705 out of the 29,997 CTE high school students took one or more STAAR EOC exams in 2022-22 (79%).
- The subject test with the highest participation count was English I ($n=11,534$), followed by English II ($n=9,761$).
- Majority of CTE students met the Approaches+ benchmark for U.S. History (85%), followed by Biology (76%) and English II (60%).
- CTE Explorers participated in the greatest number of STAAR EOC exams, while CTE Completers met the Approaches+ benchmark most often (77%) across all subject tests, followed by CTE Concentrators (68%).

How many credentials were earned by CTE high school students?

- Overall, 7,348 Dallas ISD CTE students earned 9,833 credentials in 2021-22, including 9,395 industry-based certifications and 438 educational certificates, which was an increase of 4,912 credentials from 2020-21 (4,921 credentials).
- Certifications identified by TEA for the A to F accountability system accounted for 58 percent ($n=5,401$) of all industry certifications earned.
- Compared to 2020-21, the number of industry-based certifications increased by 4,941, while the number of educational certificates decreased by 29.

How many Dallas ISD CTE seniors received an associate degree?

- Overall, 723 CTE graduates earned an associate degree in 2021-22.
- Of these graduates, all were ECHS students, which included 528 PTECH students and 195 traditional ECHS students.
- Students who participated in a program of study (CTE Concentrators and CTE Completers) accounted for 469 associate degrees (65%).
- In 2021-22, more Associate of Science degrees were awarded to CTE students ($n=379$, 52%) than Associate of Applied Science ($n=167$, 23%), Associate of Arts ($n=125$, 17%), or Associates of Arts in Teaching ($n=52$, 7%) degrees.

What were the college enrollment rates for 2020-21 CTE graduates?

- According to the 2021-22 NSC data file, 42 percent of CTE graduates and 44 percent of non-CTE graduates enrolled in college within one year of graduation.
- Of these students, more CTE students enrolled in a two-year college than non-CTE students (15% vs 9%). Similarly, a lower percentage of CTE students enrolled in a four-year university than non-CTE students (85% vs 91%).

What were teacher perceptions of the CTE program?

The CTE department conducts an annual survey to collect programmatic feedback from teachers to assess program strengths and identify areas of improvement. Insights gained from the survey are meant to help with future program development and program evaluation.

- The 2021-22 survey was administered by Evaluation and Assessment (E&A) staff from April 6 through May 6, 2022, using Qualtrics, an online survey-development tool.
- A total of 314 CTE teachers (62%) responded to the information request. Among the key-findings were:
- Ninety-seven percent of respondents agreed that the CTE program allows students to discover career opportunities they otherwise may not have considered.
- Eighty-seven percent of respondents agreed that the CTE program provides students with basic training to obtain a job,
- Seventy-seven percent of respondents agreed that the CTE program motivates students to complete high school who otherwise are at risk of dropping out.
- Overall, 99 percent of CTE teachers indicated that CTE learning activities were aligned with current practices in business, industry, and/or technology.

What were the perceptions of the CTE Internship program?

CTE staff worked with the E&A staff to design and collect feedback from student interns, employers, and direct supervisors regarding their internship experiences.

- The 2021-22 surveys were administered by E&A staff from July 27 (student survey) and August 3, 2022 (employer and supervisor surveys) through September 12, 2022, using Qualtrics.
- Overall, 12 students (86%), ten employers (71%), and 11 supervisors (79%) responded to CTE surveys.
- Overall, all students and most employers (80%) were satisfied or very satisfied with the CTE internship program.
- Ninety-two percent of students further noted that their internship experience met their expectations.
- Ninety percent of employers noted that they would participate again in the internship program.
- However, students and employers were less satisfied with the Oppti platform (67% and 90%, respectively).
- Overall, 91 percent of responding supervisors agreed or strongly agreed that the intern met their expectations.
- Eight out of 11 responding supervisors (73%) noted that they would hire the intern following the internship if a position was open.

How did the Dallas ISD perform on CTE related accountability measures?

- Over the past three years, the percentage of Dallas ISD graduates who were College, Career or Military Ready decreased by two percentage points from 61 percent in 2018-19 (2020 report) to 59 percent in 2020-21 (2022 report).
- For the same timeframe, the percentage of graduates who earned at least three dual credit hours in ELA or Mathematics or nine hours in any subject increased by 17 percentage points (14% vs 31%).
- The percentage of graduates who completed Level I or Level II certificates increased by three percentage point from 2018-19 to 2020-21 (1% vs 4%).
- The percentage of graduates who earned an industry-based certification increased by eight percentage points (2% vs 10%).
- The percentage of graduates who completed Individual Education Program and Workforce Readiness remained stable from 2018-19 to 2020-21 (2% vs 2%).

- Compared to other similar large urban districts in Texas, a lower percentage of Dallas ISD graduates were College, Career, or Military ready (59%) than graduates of Austin ISD (80%), El Paso ISD (78%), San Antonio ISD (75%), Houston ISD (60%), and Fort Worth ISD (59%).

RECOMMENDATIONS

Based on the key findings, the following recommendations are offered for stakeholders.

Continue to work with the IT Department to accurately track CTE participation. Review of PowerSchool enrollment data indicated that CTE students were not accurately identified as such. This is especially true for cases in which students participate in more than one program, such as being an ECHS student taking CTE courses, resulting in the underreporting of CTE students. Tracking student enrollment via a dedicated PowerSchool variable may provide a streamlined solution that benefits the program and increases the accuracy of future data analysis.

Continue to support specialized CTE initiatives including Career Institutes and NAF Academies. Specialized CTE programs provide work-based learning experiences that may otherwise be inaccessible for a large part of Dallas ISD students. While enrollment in the Career Institutes more than doubled from 2020-21 ($n=2,043$) to 2021-22 ($n=4,152$) enrollment in NAF academies declined by four percent to 7,481 students (2021-22). Given that participation in these programs increases the likelihood that students can earn a living wage after graduating high school, consider allocating additional resources to these areas of the program.

Continue to promote CTE students' completion of educational certificates and industry-based certifications. CTE students earned 9,833 credentials in 2021-22, including 438 educational certificates and 9,395 industry-based certifications. Fifty-eight percent ($n=5,401$) of all industry certifications earned were A-F certifications providing points towards TEA's A to F accountability system. Although the numbers of industry-based certifications more than doubled from 2019-20 to 2020-21 (A-F certifications increased by 221%), the number of educational certificates earned decreased over the same timeframe by six percent. Given the importance of credentials in finding employment, the CTE department should continue to find ways to promote the participation and completion of industry-based certifications or educational certificates.

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