

2017-18 Evaluation of Career and Technical Education

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EA18-195-4

At-a-Glance

The Carl D. Perkins Career and Technical Education Act of 2006 helped support the Department of Career and Technical Education (CTE) at Dallas Independent School District (ISD). The goals of the CTE program were to prepare students for college and career success, to provide them with the skills to be competitive in a global economy, and to recognize and meet the unique needs of a diverse student population. The CTE program received \$2,400,009 through a Texas Education Agency (TEA) grant.

Dallas ISD campuses offered courses and course sequences aligned with 16 career clusters or broad groupings of occupations and industries based on related disciplines. The district offered 246 pathways within the 16 career clusters in 2017-18. Dallas ISD also housed 47 National Academy Foundation (NAF) academies, small career themed learning communities within larger schools or as standalone public high schools at 20 campuses.

Dallas ISD expanded its collegiate academy, early college high school/technology programs to 23 in 2017-18. These 23 campuses included eight Pathways to Technology (P-TECH) Early College High Schools (ECHS), three Health Technology (H-TECH ECHS), one Engineering Technology (E-TECH ECHS), three Business Technology (B-TECH ECHS), and eight collegiate academies. Each TECH and collegiate academy was paired with a local post-secondary institution and several industry partners. The students enrolled in these programs were offered the opportunity to earn dual credit at both high school and college levels.

The purpose of this evaluation was to report: (1) student characteristics in the Dallas ISD CTE program, (2) academic effectiveness as measured by State of Texas Assessments of Academic Readiness (STAAR) and STAAR End of Course (EOCs), (3) CTE student enrollment in CTE dual credit courses, (4) selection of diploma endorsements by 2017-18 ninth graders, (5) college enrollment rates for the Dallas ISD graduating class of 2017, and (6) the number of industry-based certifications earned in 2017-18.

Dallas ISD CTE Student Characteristics

For analyses of student characteristic data, the evaluator used demographic data from district files for middle school and high school students enrolled on the Public Education Information Management System (PEIMS) file dated October 30, 2017. The data from October 30, 2017 were merged with the district PEIMS CTE status file dated July 24, 2018. Students were categorized as non-CTE if they did not take any CTE courses (non-CTE), or as one of two CTE categories (based on state and local criteria) if they were enrolled in CTE courses. The first category was CTE elective students who were enrolled in a CTE course during the year (CTE elective). The second category was coherent sequence students, who, in accordance with the TEA definition, had taken two or more CTE courses for three or more credits, either during the current school year or in previous years (coherent sequence).

Overall enrollment in grades six through 12 for the CTE elective ($n = 20,232$, 28.2%) and coherent sequence ($n = 20,755$, 28.9%) groups were similar. There was a 5.0 percent increase in the number of students enrolled in a CTE elective course in 2017-18 ($n = 20,232$) compared to 2016-17 ($n = 19,277$). Similarly, there was a 6.4 percent increase in the number of students enrolled in a CTE coherent sequence course in 2017-18 ($n = 20,755$) compared to 2016-17 ($n = 19,507$).

Middle school and high school CTE students were about half male and female and approximately 70 percent were Hispanic. About half (49.4%) of middle school CTE elective students were English learners while only 25.0 percent of high school CTE coherent sequence students and 39.3 percent of high school CTE elective students were English learners.

As shown in Table 1, CTE elective and coherent sequence students most often enrolled in business, management, and administration courses ($n = 6,117$, 14.5%); followed by finance courses ($n = 4,675$, 11.1%); and information technology courses ($n = 4,556$, 10.8%).

Table 1: 2017-18 Number of High School Enrollments by Career Cluster

Career Cluster	Total CTE Enrollment <i>n</i>	Enrollment by Cluster %
Agriculture, Food and Natural Resources	740	1.8
Architecture and Construction	1,157	2.7
Arts, A/V Technology and Communication	4,230	10.0
Business, Management, and Administration	6,117	14.5
Career Exploration	951	2.3
Education and Training	486	1.2
Finance	4,675	11.1
Government and Administration	572	1.4
Health Science	3,316	7.9
Hospitality and Tourism	2,598	6.2
Human Services	3,073	7.3
Information Technology	4,556	10.8
Law, Public Safety, Corrections, and Security	2,579	6.1
Manufacturing	93	0.2
Marketing, Sales, and Service	2,730	6.5
STEM	3,131	7.4
Transportation, Distribution, and Logistics	1202	2.8
Total	42,206	100.0

Source: District demographic PEIMS file dated October 30, 2017. District CTE status PEIMS file dated July 24, 2018. District secondary course file dated February 1, 2018.

Note: CTE = Career and technical education. A/V = Audio/Video. STEM = Science, Technology, Engineering, and Math. *n* = number of enrollments. A student could have been enrolled in multiple courses within each career cluster.

Additionally, a total of 9,179 students participated in 42 NAF academies. H. Grady Spruce High School had the highest student enrollment in the district (*n* = 560), followed by North Dallas High School (*n* = 431).

Some CTE courses are categorized as nontraditional for males or females. Overall, a higher frequency of females (*n* = 3,570) enrolled in nontraditional CTE courses than males (*n* = 3,339). Completion rates ranged from 81.1 percent to 97.6 percent for females and 65.4 percent to 86.8 percent for males.

Academic Effectiveness

STAAR EOC assessment scores were categorized into four levels to describe student performance: 1) Does Not Meet Grade Level (Does Not Meet), 2) Approaches Grade Level or Above (Approaches+), 3) Meets Grade Level or Above (Meets+), and 4) Masters Grade Level (Masters). Cut scores determine designation into these four categories. Based on the Approaches+ Standard, non-CTE students outperformed CTE students on four of the five STAAR EOC subjects (all but U.S. History).

Participation Rates in CTE Dual Credit Courses

A total of 2,527 Dallas ISD CTE elective and CTE coherent sequence students participated in a career and technology dual credit course during the 2017-18 school year, with almost half of students enrolled in more than one course. Overall, there were 4,395 enrollments in dual credit career and technology courses by CTE elective and CTE coherent students. The largest numbers of students enrolled in dual credit career and technology courses were at Townview Business Magnet (*n* = 617) followed by Seagoville High School (*n* = 469) and L.G. Pinkston High School (*n* = 438).

Grade Nine Endorsement Selections

Overall, almost half (45.0%, *n* = 5,370) of grade nine students selected one endorsement, with business being the most frequently selected endorsement (17.4%, *n* = 2,347). Science, Technology, Engineering, and Math (STEM) (8.5%, *n* = 1,147) was the least selected endorsement.

College Enrollment Rates

A total of 3,511 students (45.7 percent) enrolled in either a two-year or four-year college by the fall semester after graduating from Dallas ISD in 2017. CTE participants (*n* = 1,027, 20.0%) enrolled at two-year colleges at a higher rate compared to non-CTE participants (*n* = 406, 15.7%). Non-CTE participants (*n* = 891, 34.4%) enrolled at four-year colleges at a higher rate than CTE participants (*n* = 1,236, 24.0%).

Industry-based Certifications

In 2017-18, the Texas Education Agency (TEA) implemented directives from House Bill 22 (HB22) to evaluate the academic performance of school districts with a rating of A, B, C, D, or F. The new accountability system includes three domains: 1) student achievement, 2) school progress, and 3) closing the gaps. Additionally, in 2018-19 the TEA will hold campuses accountable for the same three domains and campus-level ratings will be issued. The student achievement domain for high schools includes a college, career, and military-readiness (CCMR) indicator, including a component for the number of program certifications earned.

Overall, 4,527 Dallas ISD students took 6,498 industry-based certifications exams in 2017-18. Almost eighty percent (78.7%, *n* = 5,117) of certification exams were passed. The largest number of industry-based certifications were earned at Skyline High School (*n* = 1,565) followed by Conrad High School (*n* = 283) and Seagoville High School (*n* = 272).

Recommendations

- **Create three new Powerschool variables to improve data analysis efficiency.** First, because the district continued to offer innovative ways for students to participate in CTE courses (e.g. National Academy Foundations (NAF), collegiate academies, and pathways with CTE electives), stakeholders should consider a new variable to identify the CTE program in which the student has participated. The second recommended variable would identify the appropriate career cluster codes for individual courses. This code would need to be updated annually. The third recommended variable would indicate whether a course is considered nontraditional for a specific gender, per the Texas Education Agency (TEA). Nontraditional courses do not change frequently. The state monitors nontraditional students and this variable would allow for more efficient analyses, when necessary. The combination of these three suggested Powerschool variables would provide a more systematic identification process, allowing more effective and efficient comparisons by CTE program, career cluster, and special course designations.
- **Create a course listing index in the CTE Handbook.** It was difficult to reconcile and locate new or uncategorized CTE courses. An index would improve the efficiency of course cross validation across career clusters.

References

Meharie, Anduamlak. (August, 2018). 2017-18 Evaluation of Early College High Schools: Final Report. Dallas, TX: Dallas Independent School District.

Turner, H., Sanguras, L., & Barton, L.M. (September, 2017). 2016-17 Evaluation of Career and Technical Education: Final Report. Dallas, TX: Dallas Independent School District.

An electronic version of this report as well as the full 2017-18 report can be found at www.dallasisd.org/Page/888. For more information, please contact Program Evaluation at evaluation@dallasisd.org.

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