

Career and Technical Education, 2015-16

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EA16-195-4

At-a-Glance

The Carl D. Perkins Career and Technical Education Act of 2006 (*Perkins IV*) helped support the Career Education and Workforce Partnerships (CEWP) Department of the Dallas Independent School District, commonly known as Career and Technical Education (CTE). Perkins funds, \$2,642,769, were received through a Texas Education Agency (TEA) grant.

Perkins IV stated that the purpose of CTE was to prepare students for college and/or workforce careers. The district's goals for CTE 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.

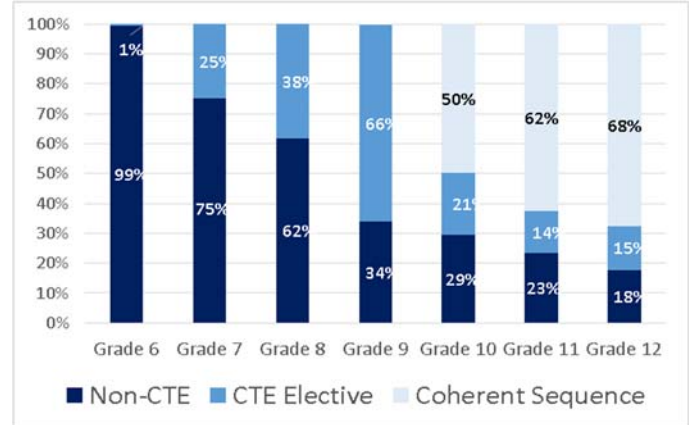
A nationwide effort under the States' Career Clusters Initiative defined 16 Career Clusters, or broad groupings of occupations and industries based on related disciplines, including recommended sequences of academic coursework. Texas has adopted the national 16 Career Clusters Model and is implementing all Career Clusters. The Dallas Independent School District follows the Texas plan, and uses the term Career Pathways to distinguish these groupings from the career clusters offered at district high schools.

CTE students were classified into two levels. *Coherent Sequence* students were high school students who had taken two or more CTE courses for three or more credits within a specified pathway. *Elective* students were all those who were enrolled in at least one CTE course during the current school year.

District Characteristics

All middle school (grades 7-8) CTE students were elective students. Out of 21,735 students in grades 7-8, 6,861, or 31.6 percent, were enrolled in elective CTE courses at the fall PEIMS snapshot date. In grades 9-12, out of 40,697 students, 29,669 participated in CTE (72.9%), with 32.1 percent enrolled in CTE electives and 40.9 percent in coherent sequences, shown in Figure 1. CTE elective students were more often Hispanic males. Coherent sequence students were more often Hispanic, while gender was equally split between males and females.

Figure 1: Percent of students by CTE category and grade



Post-Secondary Outcomes

A study of college outcomes for the Dallas ISD class of 2009 compared college enrollment and completion of CTE elective or coherent sequence students and non-CTE graduates. College enrollment and completion data were obtained from the National Student Clearinghouse (NSC). Table 1 shows all college enrollments of 2009 graduates following high school completion. Two-year college enrollment was more common for CTE elective or coherent sequence students (53.7%) than for non-CTE students (49.8%).

Table 1: College Enrollment of Class of 2009 by School Type

School Type	Total	CTE Elective or Coherent Sequence		Non-CTE	
	N	N	Percent	N	Percent
2-year	5,420	3,240	53.7%	2,180	49.8%
4-year	2,959	1,552	25.7%	1,407	32.1%
Less than 2 years	14	6	0.1%	8	0.2%
No enrollment	2,021	1,235	20.5%	786	17.9%
Total	10,414	6,033	100.0%	4,381	100.0%

Note: Results from state and national research show that CTE students tend to enroll and graduate from college at higher rates, which is not reflected in the results reported in this section. In 2009, a manual process was still in place in the district for identifying CTE students, which could have influenced the resulting CTE versus non-CTE comparison.

CTE elective and coherent sequence students completed two-year colleges at a higher rate than non-CTE students, while non-CTE students completed four-year colleges at a higher rate.

Career Pathways Offered in Dallas ISD

In 2015-16, 196 Career Pathways were offered in Dallas ISD schools as pathway or academy, a significant expansion from 123 pathways in 2014-15. Pathways and academies are similar in that each offers a specialized sequence of career-themed courses. Academies, however, assign students to the same group of core content teachers as well as to the same CTE teachers. All Dallas ISD academies are National Academy Foundation (NAF) programs. The NAF is a national network of high school career academies, predominately based in urban districts

Table 2 shows enrollment in all high school CTE courses districtwide, including electives as well as courses that were part of a pathway or academy program. CTE elective students account for 39 percent of enrollments and coherent sequence students account for 61 percent. The most popular elective courses were in Business, Management, & Administration, followed by Information Technology.

Table 2: Course Enrollments by Career Cluster, 2015-16

Career Cluster	Total Enrollments	% of CTE Enrollment
Business, Management, and Administration	5,807	16.3%
Information Technology	4,190	11.8%
Arts, AV Technology and Communication	2,822	7.9%
Health Science	2,783	7.8%
Science, Technology, Engineering, and Mathematics	2,750	7.7%
Hospitality and Tourism	2,666	7.5%
Career Exploration	2,472	7.0%
Human Services	2,392	6.7%
Finance	2,114	5.9%
Law, Public Safety, Corrections, and Security	1,909	5.4%
Architecture and Construction	1,321	3.7%
Marketing, Sales, and Service	1,199	3.4%
Transportation, Distribution, and Logistics	1,086	3.1%
Education and Training	859	2.4%
Agriculture, Food and Natural Resources	764	2.1%
Government and Administration	388	1.1%
Manufacturing	46	0.1%
Totals	35,568	100%

Academic Effectiveness

Analyses comparing performance on the *State of Texas Assessments of Academic Readiness End-of-Course (STAAR EOC)* exams showed passing rates were often similar between CTE and non-CTE students with the exception of CTE students having lower passing rates on the English I and English II EOC's. However, CTE students with limited English proficiency outperformed the non-CTE students across all five STAAR EOC exams. Analyses of general STAAR passing rates for grades 6 to 8 for CTE and non-CTE students varied by grade and test subject. CTE students passed at a higher proportion across all subject exams in grades 6

to 8. Statistical differences for passing rates across the test subjects were noted on all STAAR exams for grades 6 to 8 except on STAAR reading for grade 7.

Advanced Placement (AP), International Baccalaureate (IB), and Dual Credit Enrollment

Participation in AP and IB courses varied by school. Skyline had the largest number of AP and IB enrollments followed by Townview School of Science and Engineering. Students enrolled in AP courses are expected to take the corresponding AP exams at Dallas ISD. For example, a student enrolled in AP U.S. History course is strongly encouraged to take the corresponding *AP United States History* exam developed by the College Board. AP exams are graded on a scale of 1(low) to 5 (high), where a score of 3, 4, or 5 is considered a "qualified" score and may be eligible for college credit, depending upon the policy at the post-secondary institution. Overall, the district performance tended to be higher than the CTE Elective and Coherent Sequence student groups, except on *Calculus BC*, *Spanish Language*, and *Spanish Literature* exams.

Dallas ISD had 1,527 students participate in dual credit courses during the first semester of the 2015-16 school year that were matched to the fall PEIMS snapshot date. The 1,527 students had 1,871 enrollments since a student could take more than one dual credit course. More than one-third of dual credit course enrollments were in the Career and Technology area (N = 699).

Freshman Endorsement Selection

Revision of Texas high school graduation requirements mandated by House Bill 5, passed in 2013, placed new emphasis on coherent sequences of CTE courses, which contribute to diploma "endorsements" in five areas: science, technology, engineering, and math; business and industry; public services; arts and humanities; and a multidisciplinary option. Freshman students may select up to five endorsements. Most freshman selected one endorsement (73%). Of the freshman that selected an endorsement, business was the most frequently selected endorsement and multi-studies, was the least frequently selected.

Recommendations

In summary, the evaluation for 2015-16 emphasized data measures to compare CTE elective and coherent sequence students to non-CTE students. Analyses revealed that CTE elective students are performing similarly or better across all major aspects of this evaluation compared to non-CTE students. No recommendations are made regarding program changes; however, a number of changes regarding the process and efficiency for tracking CTE indicators were suggested in the full report.

For more information, see EA16-195-2, available at http://www.dallasisd.org/inside_disd/depts/evalacct/.