Career and Technical Education

Scorecard Analysis Annual Report: 2020–2021

**Department of
Research and Evaluation**
AUSTIN INDEPENDENT SCHOOL DISTRICT

Table of Contents

List of Figures

List of Tables

Introduction

Career and Technical Education (CTE) at Austin Independent School District (AISD) aims to provide scholars with the academic knowledge and technical skills needed to gain entry to high-demand, high-skill, and high-wage industries. CTE offers work-based learning experiences that combine hands-on learning with real-world scenarios so scholars are prepared to enter the workforce or college after they graduate high school.

This report summarizes the results of the CTE Program Analysis Scorecard for the 2020–2021 school year. The CTE Program Analysis Scorecard results focus on three components of program outcomes: (a) program alignment, (b) quality of instruction, and (c) access and equity. Program outcomes provide information about program effectiveness and help to facilitate decisions about program implementation and improvement.

Evaluation Questions

To measure and address program outcomes, AISD Department of Research and Evaluation (DRE) staff collected and analyzed quantitative and qualitative data from AISD information systems, CTE instructors, and scholars (Appendix A). The program evaluation addresses questions in three focus areas as part of the CTE 5-Year Plan (5YP, Appendix B):

Program alignment: Was the CTE Program implementation aligned with industry and postsecondary standards that prepared scholars for college and careers?

Quality of instruction: Did the CTE Program provide teachers with the resources and professional learning opportunities needed to provide high-quality work-based instruction?

Access and equity: Did the CTE Program provide scholars with access to a coherent sequence of courses that met scholars' pathway aspirations?

Program Alignment

Was the CTE Program implementation aligned with industry and postsecondary standards that prepared scholars for college and career?

Results indicated that implementation aligned industry and postsecondary standards through courses and programs of study POS) that prepared scholars to earn postsecondary credentials. At least one industry certification (industry-based or industry-driven) was earned by 1,530 CTE scholars. At least one dual college credit was earned by 2,837 CTE scholars. At least one articulated college credit (i.e., credit earned through a high-school-level course that fulfills specific requirements of an identified college-level course and provides a pathway for high school students to earn credit toward a technical certificate or technical degree at a partnering institution of higher education) was earned by 4,172 CTE scholars. Recognized by industry and postsecondary education institutions, postsecondary credentials, including industry certifications and postsecondary dual credits, provide evidence of program alignment to industry and postsecondary standards.

Postsecondary Credentials

CTE offered scholars multiple opportunities to earn postsecondary credentials, including industry-based certifications (IBC), industry-driven certifications (IDC), level I certifications, dual credits, and articulated credits. Gaining postsecondary credentials prepares scholars for success in college and career. Scholars study, practice, and prepare for certification examinations. By earning an industry certification (e.g., level I, IDC, and/or IBC), scholars demonstrate industry knowledge and skill expertise in specific career fields. Similarly, scholars engage with postsecondary education institutions to earn college credits toward their high school and college degrees. Early opportunities to explore career fields and strengthen academic and technical skills give scholars an advantage through real-world college and career experiences prior to high school graduation.

Industry Certifications

**Level I Certifications**

AISD CTE scholars earned 20 level I certifications through Austin Community College (ACC), including eight biotechnology and 12 commercial electrical construction certifications. More AISD graduates earned Biotechnology level I certifications in 2021 than in 2020. In total, fewer level I certifications were earned in 2021 (n = 20) than in 2020 (n = 30) (Figure 1).

Figure 1
Level I Certifications Earned Through ACC in 2020 and 2021

More AISD graduates earned biotechnology level I certificates in 2021 than in 2020.
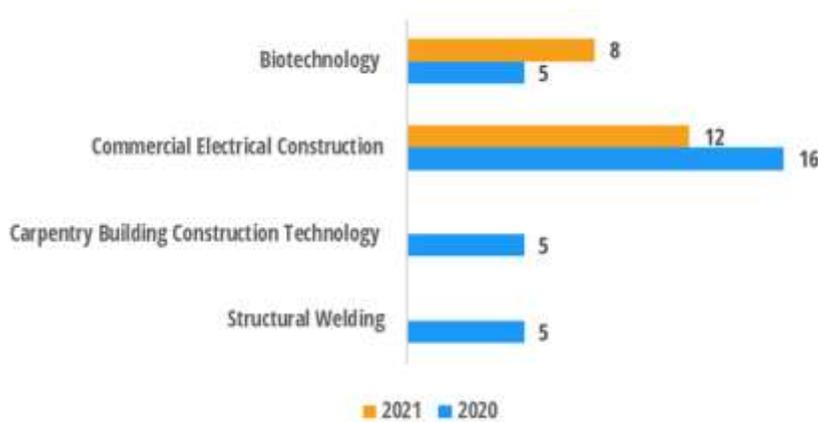
The Commercial Electrical Construction certification was the most frequently earned certificate by scholars in 2020 and 2021 (Table 1). Completing additional coursework through ACC, four scholars at Navarro High School earned both Structural Welding level I certifications and Inert Gas occupational skills awards in 2019–2020. Table 2 describes level I certifications earned for each campus for the past 2 years. Juan Navarro High School and Liberal Arts Science Academy scholars earned level I certifications in 2021 (Table 2).

Table 1
Level I Certifications Earned Through ACC, by Certification

ACC Level I Certification	2020	2021
Structural Welding	4	-
Carpentry Building Construction Technology	5	-
Commercial Electrical Construction	16	12
Biotechnology	5	8
Total	30	20

Table 2
Level I Certificates Earned Through ACC, by Campus

Campus	2020	2021
David Crockett High School	5	-
Juan Navarro Early College High School	24	12
Liberal Arts and Science Academy	1	8
Total	30	20

Industry-based Certifications

CTE scholars earned 305 IBCs in 2020-2021. IBCs earned included 66 Clinical Medical Assistant (22%), 48 Texas State Floral Association Floral Skills Knowledge Based (16%), and 36 Patient Care Technician (12%). Table 3 lists numbers of IBCs earned by scholars in 2020–2021. As described by Coco (2020) in the *2019–2020 CTE Annual Report*, earned IBCs count toward college, career, and military readiness for state accountability (Texas Education Agency [TEA], 2021). The TEA's list of approved IBCs is provided in Appendix D.

Table 3
IBCs Earned in 2020–2021

IBC	Number earned
Adobe Certified Associate Illustrator	11
Adobe Certified Associate Photoshop	6
Adobe Certified Associate Premiere Pro	15
Autodesk Certified Professional or User AutoCAD	19
Autodesk Certified Professional or User Inventor	1
Basic Structure Fire Protection	11
Certified Nurse Aide/Assistant	3
Clinical Medical Assistant	66
Cosmetology Operator License	23
Emergency Medical Technician	12
Microsoft Office Specialist Excel	5
Microsoft Office Specialist Word	24
Non-Commissioned Security Officer Level II	12
Patient Care Technician	36
QuickBooks Certified User	1
ServSafe Manager	8
Texas State Floral Association Floral Skills Knowledge Based	48
Texas State Floral Association Level I	4
Total	**305**

Source. AISD records, 2020-2021

Industry-driven Certifications

IDCs represent certifications earned by scholars that prepare scholars for industry work. IDCs may include certifications, such as Cardiac Pulmonary Resuscitation (CPR) and Texas Alcohol and Beverage Commission (TABC), that are necessary for employment in health-care and culinary occupations but are not on the TEA-approved list of IBCs for public school accountability. IDCs may be required for work across many industries and serve an essential role in preparing scholars for the workforce. Both IBC and IDC exams were included for purposes of reporting district certification outcomes. **The number of certification exams passed was higher in 2021 (n = 2,579) than in 2020 (n = 2,458).**

However, the percentage of certification exams reported was slightly lower in 2021 (82%) than in the previous year in 2020 (85%; Coco, 2021). Certification exams were taken (n = 3,129) and passed (n = 2,579) by 1,530 unique scholars (Figure 2). The percentage of exams passed continuously increased from 2018 to 2021 (Table 4). Certifications were earned through certification examinations.

Figure 2

Certification Passing Rates

Of the 3,129 certification exams taken, **2,579 exams (82%) were passed.**

(pie chart: 18% no pass, 82% pass)
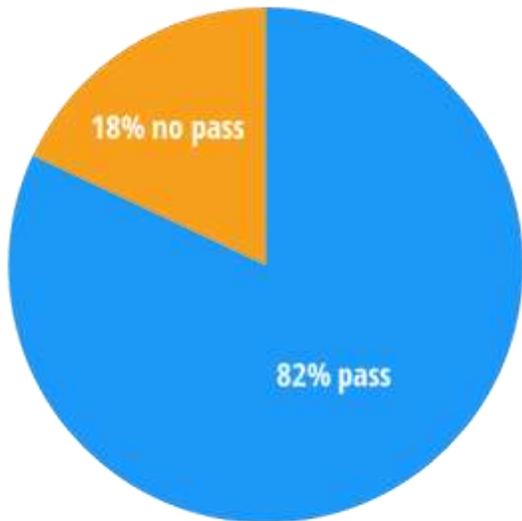
Source. AISD certification records, 2020-2021
Note. Total number of certifications earned was 2,579.

Table 4

Certification Pass Rates from 2018–2021

For 4 consecutive years, the passing rate for certification exams has been greater than 75%.

Year	Passed	Pass rate
2018	2,792	76%
2019	3,574	77%
2020	2,458	85%
2021	2,579	82%

Source. AISD records, 2018–2021

More than 100 certifications were earned by CTE scholars at most high school campuses. The number of certifications earned at Northeast High School (n = 702) surpassed other campuses by hundreds of certifications (Figure 3). **Most campuses had a greater than 75% passing rate for certification examinations.** Comparing percentages of certification exam passing rates for the various campuses, LBJ (99%), Eastside (99%), and Austin (97%) had the highest passing rates for certifications (Figure 4).

As an industry, careers in the transportation, distribution, and logistics cluster offer a multitude and variety of certifications. Northeast High School offered more certifications in alignment with industry standards and academic curriculum as part of the POS in the transportation cluster. Specifically, 72 unique certifications required competencies in areas that as far-ranging as ethics, pollution, safety, iCar, Ford, and Valvoline. When the format for certification exam preparation and administration transitioned to the online environment, CTE instructors focused on content knowledge in the online environment to support scholars in exam preparation. Certification exams were built into the district-acquired software for transportation POS. Selecting and using software with built-in certification exams further increased accessibility and availability to certifications required for employment in the industry.

Certifications offered varied for each campus and program of study. Autodesk AutoCAD (an IBC applicable to careers in the science, technology, engineering, and math [STEM] cluster) was the only certification exam offered at McCallum High School. The majority of scholars who attempted the exam passed.

Learning modality played a role in certification passing rates, as scholars in some programs returned to campus to prepare for certification examinations. In particular, hands-on training was needed to adequately prepare for certifications in POS within the health science career cluster. Akins, LBJ, and Navarro, and Northeast offered several certifications in health science.

At Akins, scholars in the Clinical Medical Assistant practicum were among the first programs with scholars to return to campus. The passing rate for the Health Science Clinical Medical Assistant IBC exam was 100% (n = 33). Patient Care Technician scholars returned to campus later in the spring semester, which may have been associated with a lower passing rate (38%) on the IBC exam due to not having enough time for hands-on skills training. Similarly, scholars taking the Pharmacy Technician exam did not return to campus for training and had a low passing rate. **At LBJ, scholars returned to campus for in-person learning in Health Therapeutics and showed 100% passing in Patient Care Technician and the Clinical Medical Assistant IBC exams. At Northeast, scholars returned to campus to prepare for the Clinical Nurse Assistant (CAN) IBC exam, which resulted in a 100% pass rate.**

At campuses such as Navarro and Clifton, where fewer scholars returned for on-campus learning, scholars may have had limited access for hands-on skills training, which may have resulted in lower certification passing rates.

Figure 3

Number of Industry Certifications Earned, by Campus
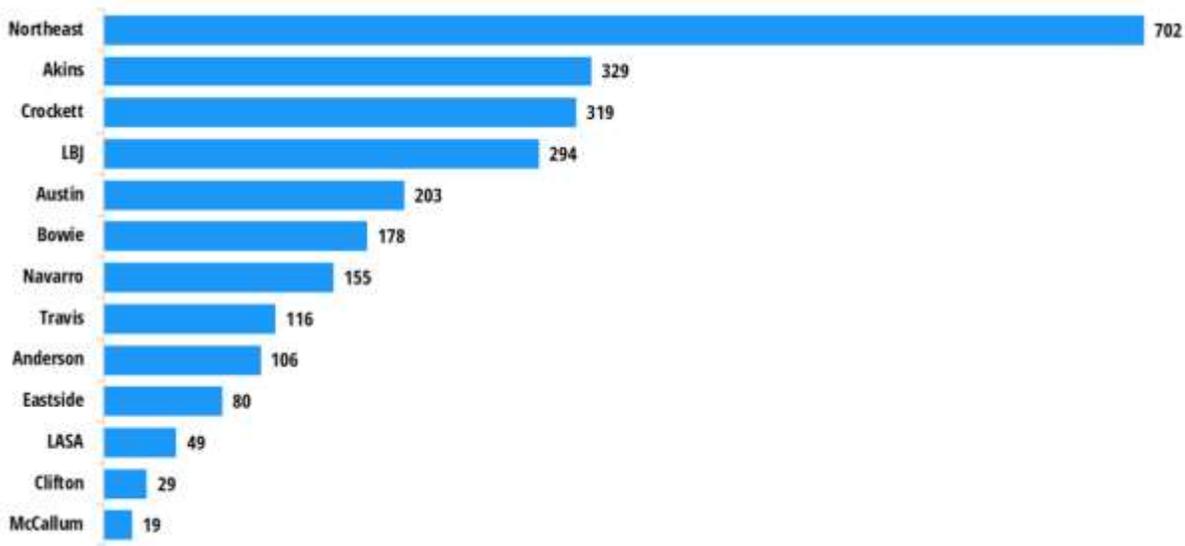
Source. AISD and CTE records, 2020–2021

Figure 4

Passing Rates of Industry Certifications Earned, by Campus
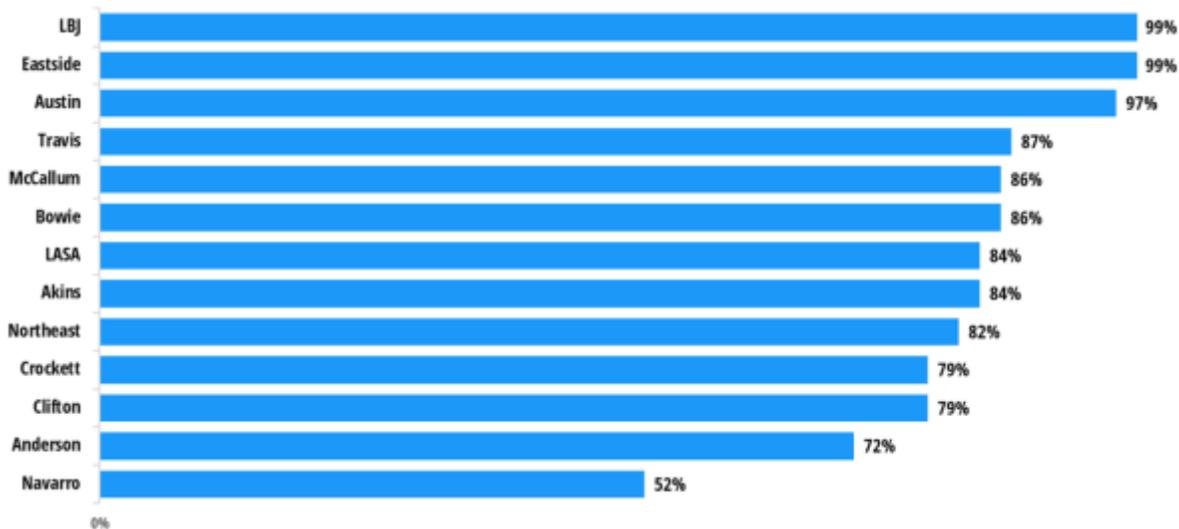
Source. AISD and CTE records, 2020–2021

Dual Credit

High school scholars enrolled in dual-credit courses to earn academic credits recognized by postsecondary institutions. CTE offers dual credit and articulated credit courses for scholars to earn college credit during high school. According to the TEA (2022),

> The Texas Higher Education Coordinating Board (THECB) defines dual credit as a system in which an eligible high school student enrolls in college course(s) and receives credit for the

course(s) from both the college and high school. Dual credit courses may be taught on the high school campus by an approved instructor or on the college campus. Dual credit courses include both academic and technical courses. (https://tea.texas.gov/academics/college-career-and-military-prep/dual-credit).

At least one dual credit was earned during high school by 3,771 unique CTE scholars; at least one dual credit was earned in 2021 by 2,837 unique CTE scholars. Among the 3,198 scholars who earned dual credits in the district in 2021, 2,837 scholars (89%) were CTE scholars pursuing a program of study. Compared with the previous year, the number of unique scholars who earned dual credits was about the same (2,974 scholars out of 3,396 scholars), but a higher percentage of scholars were in career clusters in 2021 (89%) than in 2020 (66%).

During 2021

Dual credits were earned by CTE scholars in 6,871 courses in 2021. The sum of dual credit earned by CTE scholars in 2021 was 4,405.5 dual credits. At least one dual credit was earned by 3,198 scholars. Of the scholars who earned dual credits, 89% (n = 2,837) were CTE scholars.

During High School (2018 to 2021)

Dual credits were earned by CTE scholars in 13,030 courses from 2018 to 2021. That is, 95% of courses attempted (n = 13,671) resulted in credit earned. The sum of dual credit earned by CTE scholars during high school was 8,267.5 dual credits. At least one dual credit was earned during high school by 3,771 unique CTE scholars (96%) out of the total of 3,888 scholars who had attempted dual credit courses in high school.

Articulated Credit

High school scholars enrolled in articulated-credit courses to earn academic credits recognized by postsecondary institutions, based on articulation agreements between AISD and ACC.

Articulated credits were earned by 8,585 CTE scholars in CTE articulated credit courses in 2020–2021. Most scholars earned articulated credit for courses they attempted. **There were 4,172 (88%) unique CTE scholars who earned at least one articulated credit** out of the 4,707 scholars who took articulated credit courses in 2020–2021. Articulated credits were earned in more than 30 different course topics. Scholars earned articulated credit in more than one course.

Figure 5
Top Articulated Courses, by Number of Scholars
Articulated credit was earned by scholars in multiple career fields.

Top Articulated Courses by Number of Scholars

Course	Number of Scholars
Graphic Design I	1186
Business Information Management	1101
Intro Culinary Arts	1077
Intro Engineering Design	804
Digital Media	760
A/V Production I	587
POE- PLTW	504
Biotechnology I	370
Principles Biomedical Science	340
Human Body Systems	295
Animation I	292
Medical Intervention	230
Child Development	219

Source. AISD and CTE records, 2020-2021

Quality of Instruction

Did the CTE Program provide teachers with the resources and professional learning opportunities needed to provide high-quality work-based instruction?

The Association for Career and Technical Education's (ACTE) high-quality CTE programs framework elements of prepared and effective program staff and engaging instruction were used to inform this annual program evaluation report. To address the question of high-quality work-based instruction provided by the CTE Program, 2020–2021 Nepris usage results were summarized for quality of instruction program outcomes.

Instructors incorporated digital resources to support scholars' learning and engagement across both face-to-face and remote learning classroom environments. CTE instructors adapted to the virtual learning environment by building and incorporating online resources (e.g., Blend; Nepris; textbooks; and cluster-specific materials and resources) specialized to the industry, curriculum, and POS.

Nepris

Nepris is an online platform that connects educators and scholars with industry professionals in a virtual environment to engage scholars in career exploration and real-world knowledge. Through Nepris, CTE instructors scheduled live virtual sessions and industry chats to connect with industry professionals as well as incorporated videos to enhance curriculum, provide real-world exposure, and bring industry expertise into classrooms.

Live Virtual Sessions and Industry Chats

Live virtual sessions and industry chats provided CTE scholars with the opportunity to interact with industry professionals. Live virtual sessions were requested by the CTE instructor for the scholars. Industry chats were prescheduled live virtual sessions that CTE instructors and scholars joined.

For virtual sessions, a total of 20 CTE instructors conducted 39 virtual live sessions in their classrooms (Table 5). A total of 1,173 CTE scholars attending 11 campuses participated. Most virtual live sessions covered topics focused on health sciences, STEM, arts, audio visual (A/V) technology, and career development. Titles included Genetic Counseling and Graduate School, Health Science Careers, and Animation.

Industry chat topics were much more varied than the virtual session topics. Industry chat subjects ranged from a series on virtual learning, Classrooms Without Walls, to a session on Hispanic Heritage Month. As would be expected, several virtual sessions that scholars viewed were related to careers and professional development (e.g., What Should I do When I Grow Up; Life as a Corporate Lawyer).

Videos

Videos provided additional content for scholars to learn about various careers and gain skills. A wide variety of videos were available for teachers/scholars to choose from. Topics included videos that provided a view into a day in the life of different careers (e.g., *Day in the Life of a Web Designer*), virtual tours of science or manufacturing facilities (e.g., *Tour LabLaunch, a Biotech Incubator in Los Angeles*), and videos that taught life or wellness skills (e.g., *Stress Management for Teens*).

For video usage, 120 CTE instructors incorporated 500 videos into their classrooms (Table 5). Nepris videos enhanced classrooms at 30 AISD campuses, including 16 high schools and 14 middle schools.

The most frequently viewed videos were on the topics of computer science/digital technology, engineering/robotics, and health/medicine. For example, scholars viewed videos such as *Developing Video Games and Apps* for video design and *Healthcare Series: Emergency Medical Technician* for medical careers. Man scholars also learned about career searches and interpersonal skills by viewing *Resume and Interview Dos and Don'ts* and *The Subtle Art of the Elevator Pitch*. Business topics were covered in the videos *What Is It Like to Be an Entrepreneur?* and *Business Communication*.

Table 5

Nepris Video and Virtual Session Usage, by School Level

|		Number at high schools	Number at middle school	Total
Video	Videos	370	130	500
	Instructors	90	20	120
	Campuses	16	14	30
Virtual	Live sessions	35	4	39
	Instructors	17	3	20
	Scholars	1,128	45	1,173
	Campuses	8	3	11

Source. Nepris records, August 2020 through June 2021

More instructors used Nepris videos than used virtual sessions. Usage of videos and virtual live sessions was higher in high schools than in middle schools (Table 5). CTE courses and programs were offered primarily at the high school level to teach and train scholars in the academic and technical knowledge and skills needed to pursue postsecondary credentials, certifications, and employment in specialized career fields, so it was expected that more CTE instructors would teach at high school campuses.

Akins High School (n = 101) CTE instructors incorporated more Nepris videos than did other high school campuses (Figure 6). Gorzycki Middle School (n = 71) CTE instructors incorporated more Nepris videos than did other middle school campuses (Figure 7). Nepris video usage results among high school instructors and middle school instructors provided comparisons at the campus level.

Figure 6

**Nepris Video Usage, by High School Campus**
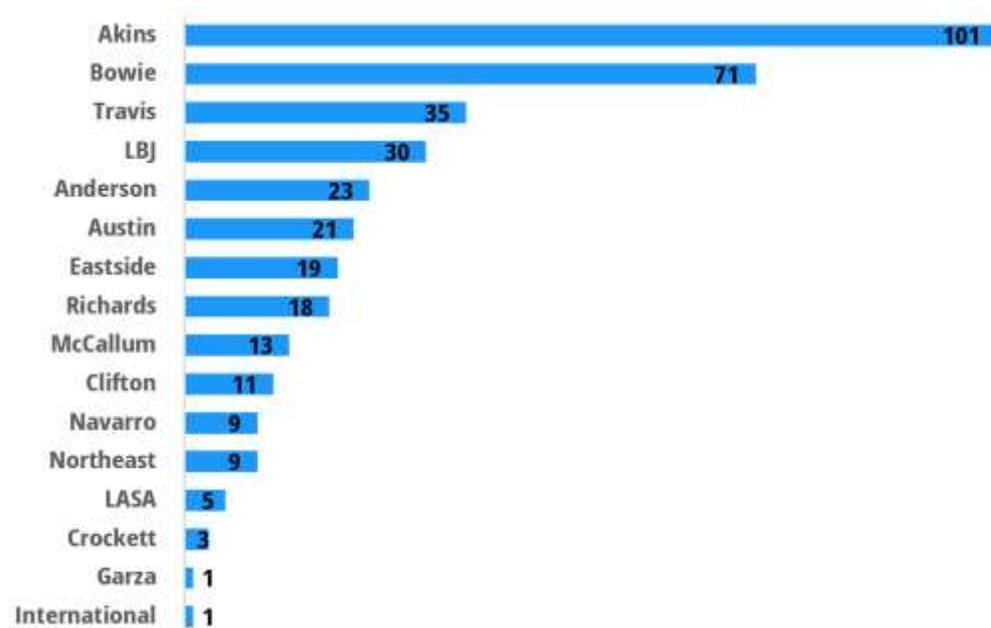
Source. Nepris records, August 2020 through June 2021

Figure 7

Nepris Video Usage, by Middle School Campus

Middle School CTE Instructors used Nepris videos to connect CTE scholars to industry expertise and professional networks.

Campus	Count
Gorzycki MS	37
Lamar MS	27
Bailey MS	12
Martin MS	11
Murchison MS	9
Lively MS	8
Sadler Means MS	7
Small MS	5
Paredes MS	4
O.Henry MS	3
Webb MS	3
Burnet MS	2
Doble MS	1
Kealing MS	1
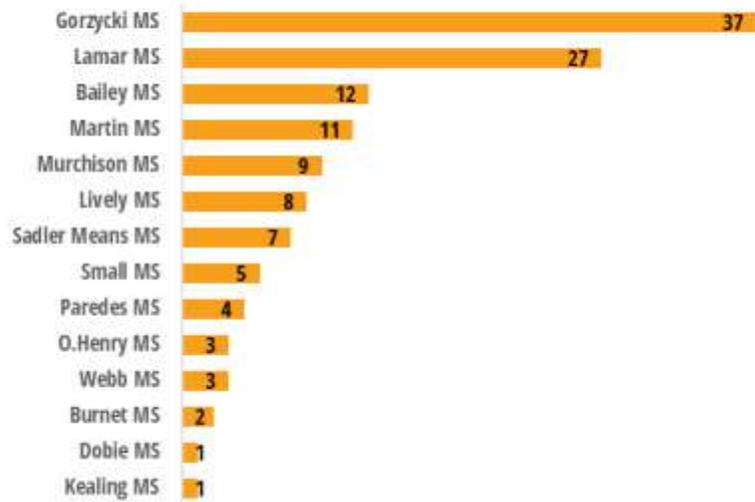
Source. Nepris records, August 2020 through June 2021

The majority of CTE instructors (52%) reported that they did not use Nepris videos or virtual sessions to support their CTE classes (Figure 8). Among the instructors, usage was reported at one to four times per semester (42%), five to nine times per semester (2%), and more than 10 times per semester (4%). CTE instructors provided feedback about CTE program, including Nepris usage, in the annual CTE instructor survey.

Figure 8

Frequency of Nepris Usage Reported by CTE Instructors

How often do you use Nepris videos and/or virtual sessions to support your CTE classes?

Frequency	Percent
0 times per semester	52%
1-4 times per semester	42%
5-9 times per semester	2%
More than 10 times per semester	4%
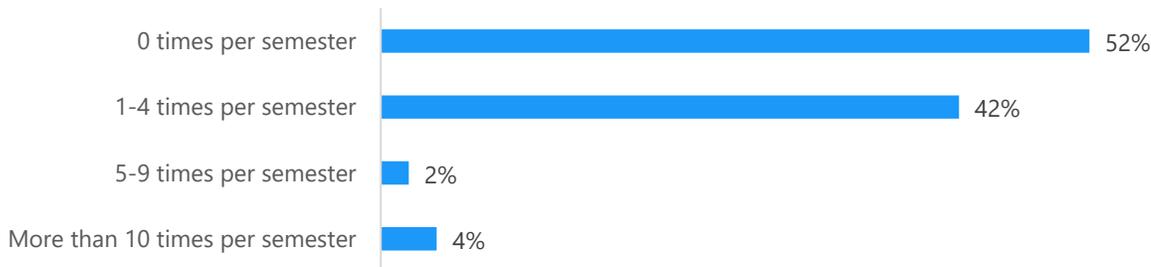
Source. CTE Instructor Survey, 2020–2021

Blend

Resources used for virtual instruction included course blueprints and resources in the district's learning management system, Blend. A total of 75 CTE courses were written in Blend and made available with other course blueprints (Table 6).

Course Name	Cluster
Accounting I	Business, Marketing, and Finance
Accounting II	Business, Marketing, and Finance
Advanced Animal Science	Agriculture, Food and Natural Resources
Advanced Plant and Soil Science	Agriculture, Food and Natural Resources
Anatomy and Physiology	Science, Technology, Engineering, and Mathematics
Animation I	Arts, A/V Technology, and Communication
Animation II	Arts, A/V Technology, and Communication
A/V Production I	Arts, A/V Technology, and Communication
A/V Production II	Arts, A/V Technology, and Communication
Business Information Management I	Business, Marketing, and Finance
Business Information Management II	Business, Marketing, and Finance
Business Management	Business, Marketing, and Finance
Career Preparation	Multiple Clusters
Child Development	Education and Training
Commercial Photography I	Arts, A/V Technology, and Communication
Commercial Photography II	Arts, A/V Technology, and Communication
Computer Science I	Science, Technology, Engineering, and Mathematics
Court Systems & Practices.	Law and Public Service
Criminal Investigation	Law and Public Service
Digital Audio Technology I	Arts, A/V Technology, and Communication
Digital Audio Technology II	Arts, A/V Technology, and Communication
Digital Electronics	Arts, A/V Technology, and Communication
Digital Media	Arts, A/V Technology, and Communication
Engineering Design and Presentation I	Science, Technology, Engineering, and Mathematics
Engineering Design and Problem Solving	Science, Technology, Engineering, and Mathematics
Engineering Science	Science, Technology, Engineering, and Mathematics
Entrepreneurship	Business, Marketing, and Finance
Equine Science	Agriculture, Food and Natural Resources
Floral Design	Agriculture, Food and Natural Resources
Forensic Science	Law and Public Service
Fundamentals of Computer Science	Science, Technology, Engineering, and Mathematics
General Employability Skills	Multiple Clusters

Course Name	Cluster
Graphic Design and Illustration I	Arts, A/V Technology, and Communication
Graphic Design and Illustration II	Arts, A/V Technology, and Communication
Greenhouse Operation & Production	Agriculture, Food and Natural Resources
Health Science Theory	Health Science
Horticultural Science	Agriculture, Food and Natural Resources
Hospitality Services	Hospitality and Tourism
Human Growth and Development	Education and Training
Instructional Practices	Education and Training
Interpersonal Studies	Human Services
Introduction to Culinary Arts	Hospitality and Tourism
Landscape Design and Management	Agriculture, Food and Natural Resources
Law Enforcement I	Law and Public Service
Law Enforcement II	Law and Public Service
Lifetime Nutrition and Wellness	Health Science
Medical Terminology	Health Science
Pathophysiology	Health Science
Practicum in Agriculture, Food, and Natural Resources (First time taken)	Agriculture, Food and Natural Resources
Practicum in Business Management	Business, Marketing, and Finance
Practicum in Commercial Photography	Arts, A/V Technology, and Communication
Practicum in Culinary Arts	Hospitality and Tourism
Practicum in Graphic Design and Illustration	Arts, A/V Technology, and Communication
Practicum in Health Science	Health Science
Practicum in Information Technology	Information Technology
Principles of Agriculture, Food, and Natural Resources	Agriculture, Food and Natural Resources
Principles of Applied Engineering	Science, Technology, Engineering, and Mathematics
Principles of Arts, A/V Technology, and Communications	Arts, A/V Technology, and Communication
Principles of Biosciences	Science, Technology, Engineering, and Mathematics
Principles of Business, Marketing, and Finance	Business, Marketing, and Finance
Principles of Construction	Architecture and Construction
Principles of Education and Training	Education and Training
Principles of Health Science	Health Science
Principles of Human Services	Human Services
Principles of Information Technology	Information Technology
Principles of Law, Public Safety, Corrections, and Security	Law and Public Service
Principles of Manufacturing	Manufacturing
Professional Communications	Multiple Clusters

Course Name	Cluster
Project Based Research	Multiple Clusters
Small Animal Management	Agriculture, Food and Natural Resources
Veterinary Medical Applications	Agriculture, Food and Natural Resources
Video Game Design	Arts, A/V Technology, and Communication
Virtual Principles of Business, Marketing, and Finance	Business, Marketing, and Finance

Source. AISD and CTE records, 2020-2021

Course blueprints were created to assist instructors in the creation of lessons. Blueprints provided instructors with a guide to use in developing and transitioning their courses to a completely online space for teaching and learning. **Blend was used for courses prior to the COVID-19 disruption but not to the same extent that was needed in the educational landscape during 2020–2021.** Blueprints also helped set standards and provide additional support for teachers and programs experiencing more challenges in transitioning online.

AISD provided a required training on the use of Blend and course blueprints to all instructors, including CTE instructors, prior to the start of the school year. The CTE program staff supplemented training and materials to CTE instructors on using Nepris, Blend, course blueprints, and online resources and materials. Staff also provided instructions on accessing the materials and exporting material into course shells.

District survey data about Blend were collected by the AISD Technology Design Team from 7,345 scholars in grades 6 through 12 in October 2020. Results indicated that students preferred clear due dates, step-by-step instructions, accessible assignments, and reminders. Recommendations included reviewing course materials and instruction for manageable workloads during class, clear due dates posted for assignments, consistency in assignment locations, and instructor feedback.

At the end of the school year, CTE instructors provided feedback about the CTE Program in the annual CTE instructor survey. Of the 119 CTE instructors who responded to the survey item, **the majority of CTE instructors (91 instructors, 76%) reported that they did not use the blueprint modules sent out by the district for their classes** (Figure 9). Of the 23% of instructors who did report using the blueprint modules (28 instructors), 67% used some of the blueprint modules, 23% used one blueprint, and 10% used all blueprints (Figure 10).

Many instructors indicated the blueprint modules were not useful in their courses. This could be due to differences in the applicability and structure of course blueprints, which were based on traditional academic curriculum. Additionally, the nature, size, and scope of CTE curriculum differed from traditional academic curriculum in many ways that may not have been considered in the course blueprints provided by the district.

Figure 9

Blueprint Module Usage Reported by CTE Instructors

## Did you use the blueprinted modules that were sent out by the district?

26% Yes

74% No
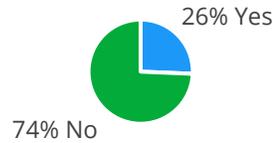
Source. CTE Instructor Survey, 2020-2021

Figure 10

Extent of Blueprint Module Usage Reported by CTE Instructors

To what extent did you use the blueprinted modules?

Used some of the blueprinted modules	67%
Used one of the blueprinted modulse	23%
Used all of the blueprinted modules	10%
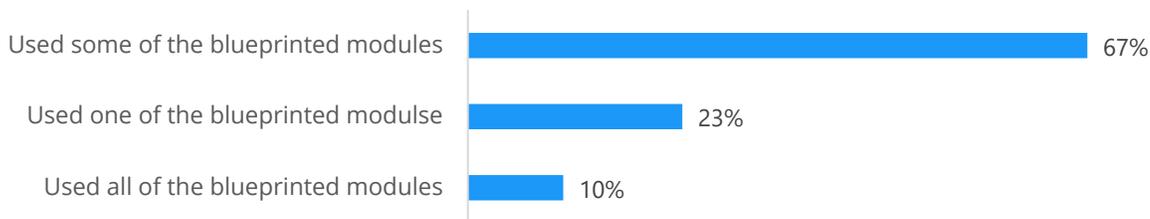
Source. CTE Instructor Survey, 2020-2021

Prepared and Effective Program Staff

This element addresses the qualifications and professional development opportunities of program staff, including secondary CTE teachers, postsecondary CTE faculty, administrators, and other personnel. Specifically, "CTE and academic staff collaborate regularly and frequently to coordinate curriculum, instruction, assessment and extended learning activities and to analyze data for program improvement" (ACTE, 2018).

CTE began attending district academic meetings to learn about district initiatives for core classes and applications to CTE curriculum. CTE program staff attended weekly meetings throughout the school year. CTE program staff reported benefits from participation in the meetings, including the opportunity to make connections and collaborate with other departments and to further understand reasoning for some initiatives. Meetings included sharing updates, which provided opportunities to inform other academic departments about CTE as well as learn about activities and needs in other departments. Additionally, academic meetings offered insight and resources for the development of guidelines for professional learning for teachers from both district initiative and departmental perspectives. These findings are consistent with previous recommendations, based on research findings and best practices (Coco, 2021).

Access and Equity

Did the CTE program provide scholars with access to a coherent sequence of courses that met scholars' pathway aspirations?

Scholars' participation levels and demographic characteristics helped to describe accessibility to coherent sequences of courses for scholars to pursue their career interests. CTE indicator codes (Table 7 and Figure 12) and demographic characteristics (Figure 11) described overall participation in the CTE Program. CTE indicator codes defined by the TEA are included (Figure 13). CTE concentrator and completer participation in POS (Figure 14 and Table 8) and career clusters (Figure 15) are also provided.

Demographic Characteristics

The demographic characteristics of CTE scholars were comparable to the demographics in the overall district with respect to major ethnic/racial and special groups (Figure 11). Percentages were identical or similar, which indicated that the characteristics of CTE Program participants reflected those of their peers in the overall district. CTE contributed to equity and access for scholar participation district wide.

Figure 11

CTE Program participants' characteristics reflected those of the overall district population.
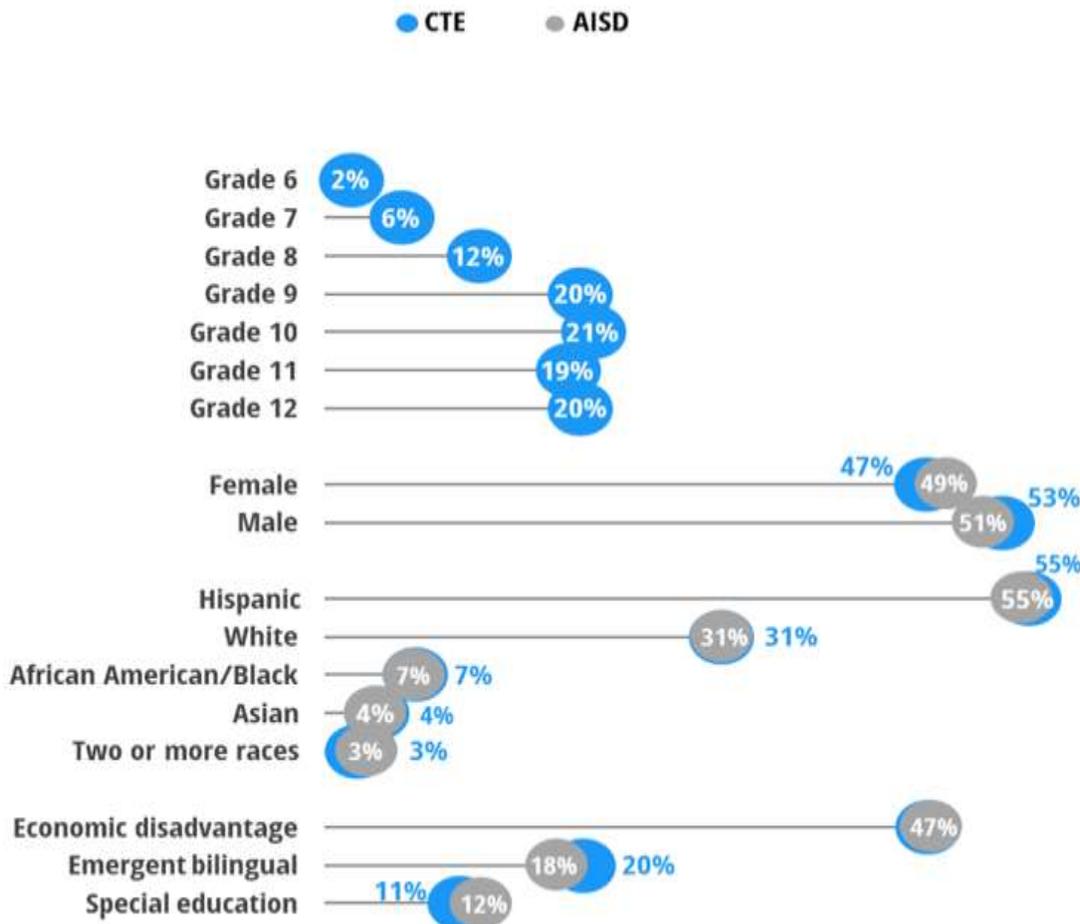
Source. AISD records, 2020-2021

Note. For CTE scholars in grades 6–12, n = 24,562. District comparison percentages included scholars in grades 6–12, n = 42,223.

CTE Indicator Codes

There were 25,797 unique scholars taking courses in CTE POS in grades 6 through 12. Scholars who met criteria based on new guidance from the TEA were assigned CTE indicator codes based on academic records of course completion (TEA, 2021). Definitions for each indicator code are provided in Figure 13 and Appendix F.

Almost half (44%, n = 11,373) of scholars in the program were **CTE participants** who had completed one CTE course. **CTE explorers** (24%, n = 6,275) represented scholars taking a broader approach to their education and included scholars who had completed two or more CTE courses and were not participants, concentrators, or completers. Explorers could also represent students who had completed enough courses in a program of study to be coded as a concentrator or a completer but completed the school year in a district where the region was not approved. **CTE concentrators** (25%, n = 6,511) represented scholars focusing their education in a specific career path aligned to a program of study. Concentrators were students who had completed and passed two or more courses in the same program of study and were not a completer. The number of scholars who had completed their second course in the same program of study was nearly the same as the number of those who had completed two courses in different POS (Table 7) (TEA, 2021).

Completing a CTE program of study prepares scholars to continue achieving their college and career goals. There were 1,638 CTE completers, scholars who completed the sequence of courses in their CTE program of study (Table 7 and Figure 12).

Table 7

CTE Student Indicator Codes

CTE Code	N	%
CTE Program Participant	11,373	44%
CTE Program Explorer	6,275	24%
CTE Program Concentrator	6,511	25%
CTE Program Completer	1,638	6%
Total	25,797	100%

Source. TEA AISD CTE student records, 2020–2021

Figure 12

CTE Scholar Engagement, by CTE Indicator Code
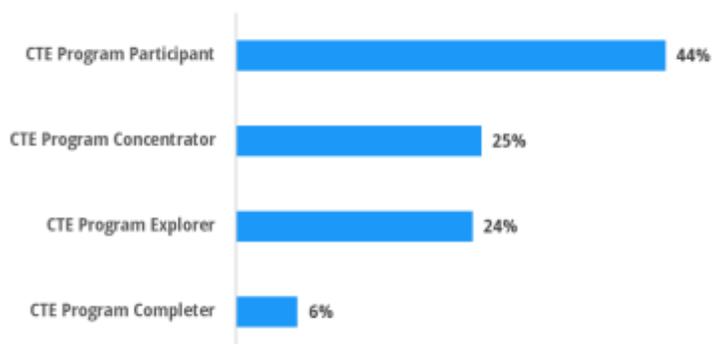
Source. TEA AISD CTE student records, 2020–2021

Figure 13
Texas CTE Student Indicator Code Definitions

POS and Career Clusters

Consistent with the federal requirements for the Strengthening CTE for the 21st Century Act (Perkins V), changes to state career clusters were implemented in 2020–2021. State career cluster changes included combining marketing and finance clusters with business management and administration; the government and public administration cluster joined law, public safety, corrections, and security. The TEA's auto-

calculation of CTE indicator codes was implemented to provide support to districts in state and federal reporting of CTE concentrators and CTE completers. CTE concentrators and CTE completers were assigned to POS based on course completion records. Two new CTE indicator codes were added: CTE participant and CTE explorer (Figure 13). Approved state and regional POS were in full effect for 2020–2021 (TEA, 2021).

More unique POS were offered in 2020–2021 (n = 48) than in the previous year (n = 31). Within each career cluster, specialized POS align sequences of courses to specialized career fields. The CTE Program provided scholars with access to coherent sequences of courses via POS in career clusters across the district. CTE POS, staff, instructors, and scholars were provided at 34 campuses across the district, which included 14 high schools, 16 middle schools, and four other schools. See Figure 14 for the top 10 POS, based on the number of scholars and Table 8 for a complete list of POS participation at AISD.

Graphic design and multimedia arts had the highest number of scholars (n = 1,626; Figure 14). The top POS aligned with the following career clusters: Arts, A/V Technology and Communication; Business, Marketing, and Finance; Health Science; and STEM.

Health Science (25%) and STEM (23%) had higher percentages of CTE concentrator and completer participation than did the other clusters (Figure 15). Based on the POS participation, it was not surprising to find the same four clusters with the highest percentages of concentrators and completers.

Results were consistent with Comprehensive Local Needs Assessment outcomes in 2020, which recommended the CTE Program align programs and resources with regional labor market demands in these career clusters. In addition, evidence supporting the expansion of opportunities to engage in STEM-related occupations as a benefit of POS implementation was evident in district results that showed high numbers of CTE scholars completing coursework in the STEM cluster and POS.

In summary, significant changes had an impact on CTE career clusters, indicator codes, and POS in 2020–2021. In recent years, this annual report has not included CTE scholar completion or participation by pathway or POS (Coco, 2020, 2021; Coco & Bonazzo, 2020). Benefits of the implemented changes were improved data collection and reporting on CTE concentrators and completers as well as participation and completion of specified POS.

> **"Perkins V describes a program of study as a coordinated, nonduplicative sequence of academic and technical content at the secondary and postsecondary level that: incorporates challenging state academic standards; addresses academic, technical, and employability skills; aligns with the needs of industries in the state, regional, and/or local economy; progresses in specificity, beginning with all aspects of industry and leading to more occupation specific instruction; has multiple entry and exit points that incorporate credentialing; and culminates in the attainment of a recognized postsecondary credential." (TEA Programs of Study Overview, 2019)**
>
> **https://tea.texas.gov/sites/default/files/Programs_of_Study_Overview_9_06_2019_Final.pd**

Figure 14

Top 10 POS Participation, by CTE Concentrators and Completers
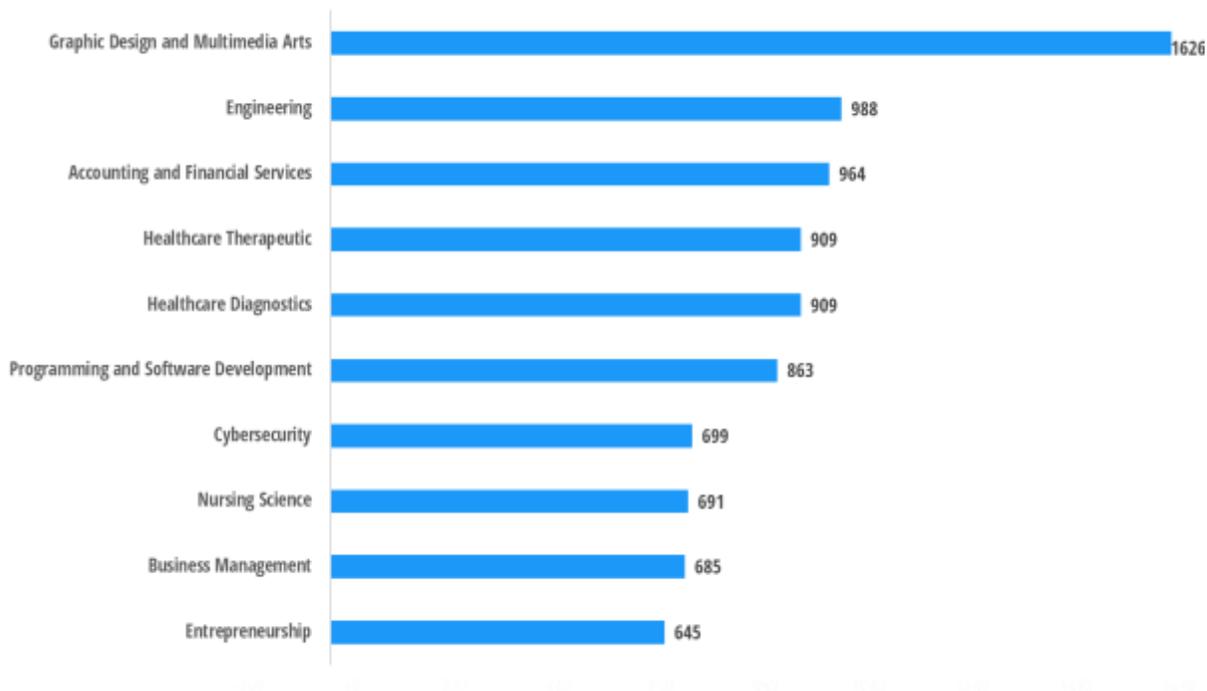
Table 8

2021 POS Participation

POS	Number of scholars
Accounting and Financial Services	964
Advanced Manufacturing and Machinery Mechanics	248
Agribusiness	58
Animal Science	301
Applied Agricultural Engineering	87
Automotive	118
Aviation (Flight)	15
Biomedical Science	576
Business Management	685
Carpentry	42
Cosmetology and Personal Care Services	136
Culinary Arts	196
Cybersecurity	699
Diesel and Heavy Equipment	*
Digital Communications	575
Early Learning	19

POS	Number of scholars
Electrical	61
Emergency Services	120
Engineering	988
Entrepreneurship	645
Environmental and Natural Resources	114
Exercise Science and Wellness	22
Family and Community Services	252
Food Science and Technology	56
Graphic Design and Multimedia Arts	1626
Health and Wellness	116
Health Informatics	529
Healthcare Diagnostics	909
Healthcare Therapeutic	909
HVAC and Sheet Metal	10
Information Technology Support and Services	56
Law Enforcement	367
Legal Studies	90
Lodging and Resort Management	77
Manufacturing Technology	71
Marketing and Sales	*
Masonry	10
Medical Therapy	631
Networking Systems	158
Nursing Science	691
Plant Science	213
Plumbing and Pipefitting	13
Programming and Software Development	863
Renewable Energy	262
Teaching and Training	206
Travel, Tourism, and Attractions	31
Web Development	154
Welding	*

Source. TEA and AISD records, 2020–2021

Note. There were 14,974 concentrators and completers. * indicates fewer than 5 students.

State Career Cluster Participation, by CTE Concentrators and Completers

Health Science	25%
Science, Technology, Engineering and Mathematics	23%
Business, Marketing and Finance	15%
Arts, Audio Visual Technology and Communication	15%
Agriculture, Food and Natural Resources	6%
Law and Public Service	4%
Human Services	3%
Information Technology	2%
Manufacturing	2%
Hospitality and Tourism	2%
Education and Training	2%
Architecture and Construction	1%
Transportation, Distribution and Logistics	1%
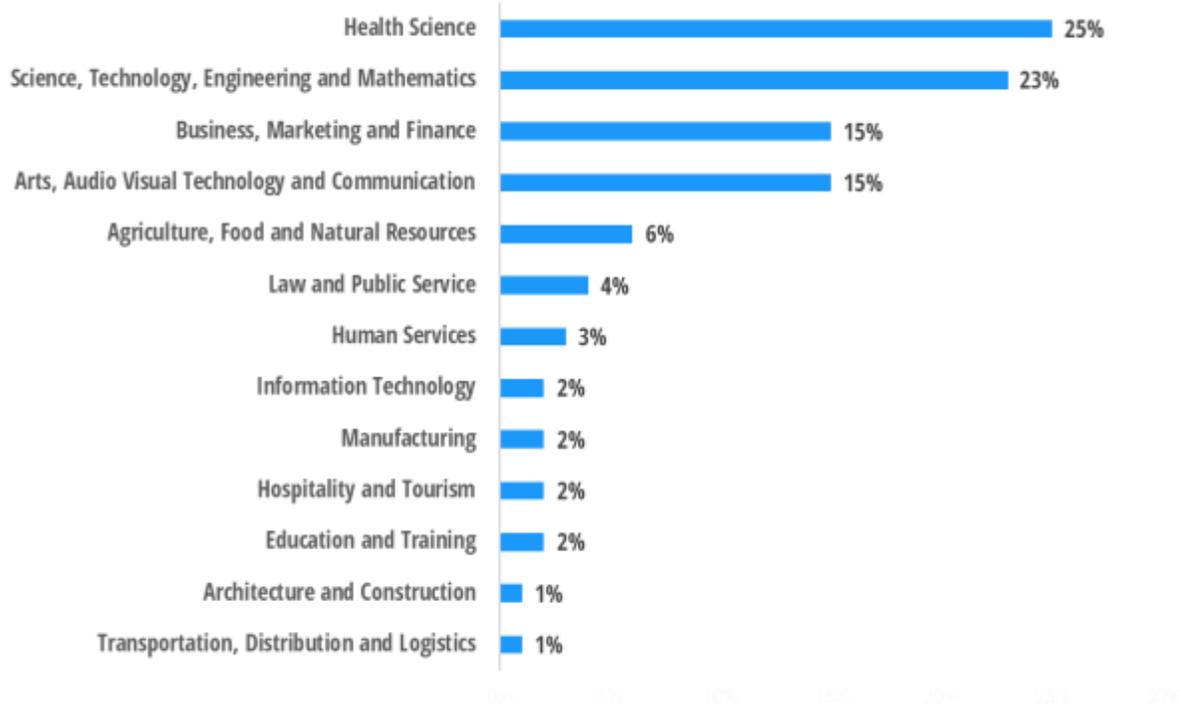
Source. TEA AISD CTE student records, 2020–2021
Note. Total number of concentrators and completers in POS was 14,974.

Economic Disadvantage

Among CTE concentrators and completers, 4,255 (41%) were economically disadvantaged. The percentage of CTE scholars who were economically disadvantaged in each cluster provides information about program accessibility and enrollment (Figure 16).

Business, Marketing, and Finance (21%) had the highest percentage of scholars who were economically disadvantaged, compared with the other clusters. Manufacturing (1%) had the lowest percentage.

STEM (18%) and Health Science (15%) had the next highest percentages of CTE concentrators and completers who were economically disadvantaged, compared with other clusters, which suggests the CTE Program continued to promote and support participation of underrepresented student groups on in-demand, high-skill, and high-wage career tracks.

Figure 16

Percentage of CTE Concentrators and Completers Who Were Economically Disadvantaged, by Cluster

Cluster	Percentage
Business, Marketing and Finance	21%
Science, Technology, Engineering and Mathematics	18%
Health Science	15%
Arts, Audio Visual Technology and Communication	14%
Law and Public Service	7%
Agriculture, Food and Natural Resources	5%
Transportation, Distribution and Logistics	4%
Human Services	4%
Hospitality and Tourism	4%
Information Technology	3%
Education and Training	2%
Architecture and Construction	2%
Manufacturing	1%

Source. TEA AISD CTE student records, 2020–2021
Note. Total number of distinct concentrators and completers was 10,460.

Emergent Bilingual

Among CTE concentrators and completers, 1,381 (13%) were emergent bilingual. The percentage of CTE scholars who were emergent bilingual in each cluster provides information about program accessibility and enrollment (Figure 17).

Business, Marketing, and Finance (28%) had the highest percentage of scholars who were emergent bilingual, compared with the other clusters. Manufacturing (1%) had the lowest percentage.

Percentage of CTE Concentrators and Completers Who Were Emergent Bilingual, by Cluster
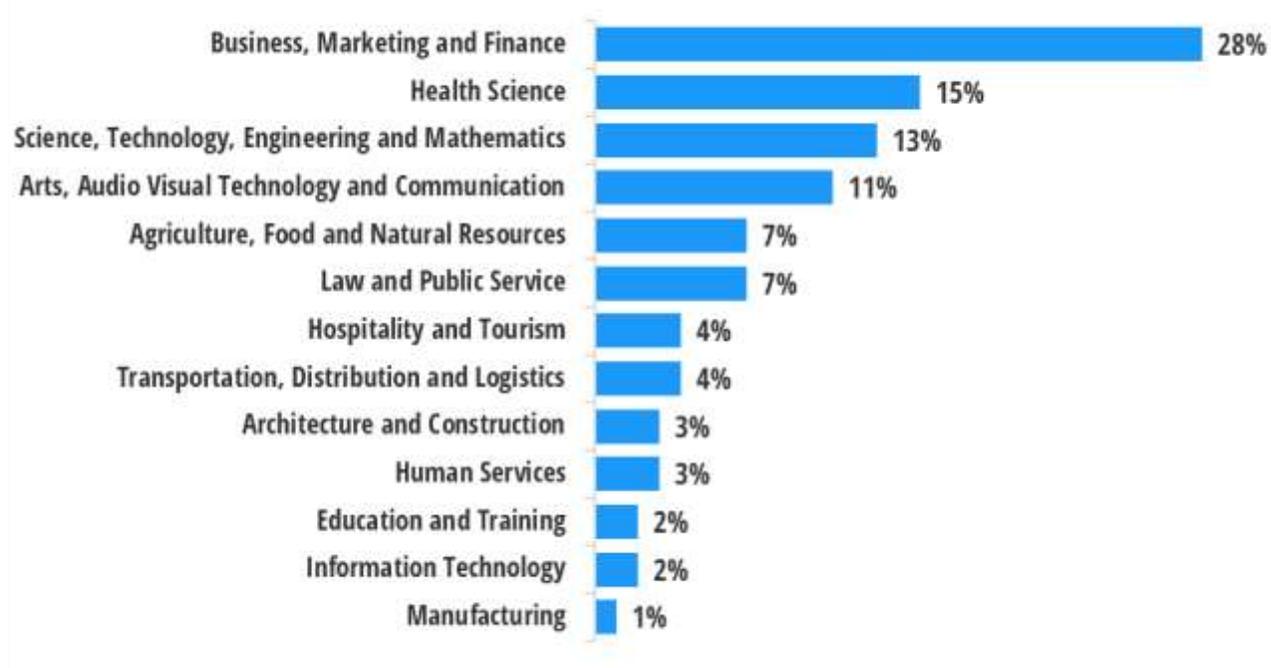
Special Education

Among CTE concentrators and completers, 583 (6%) received special education services. The percentage of CTE scholars who received special education services in each cluster provides information about program accessibility and enrollment (Figure 18).

Business, Marketing, and Finance (19%) had the highest percentage of scholars who received special education services, compared with the other clusters. Architecture and construction (1%) had the lowest percentage.

Figure 18

Percentage of CTE Concentrators and Completers Who Received Special Education Services, by Cluster
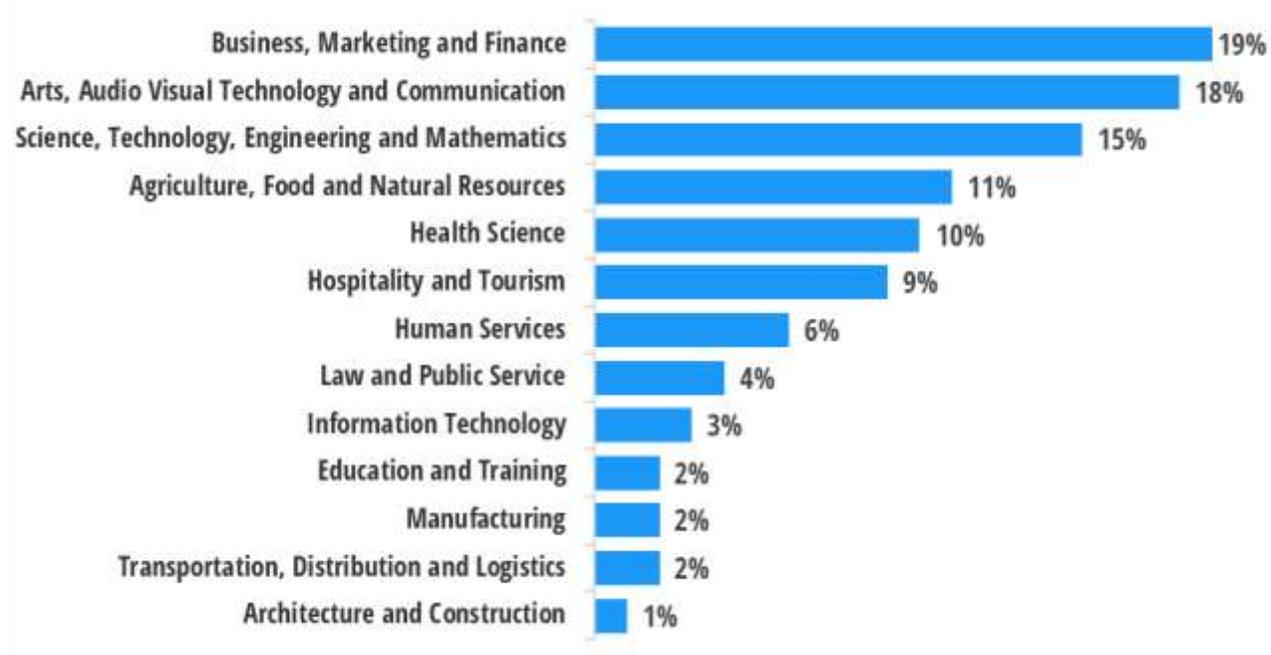
Source. TEA AISD CTE student records, 2020–2021
Note. Total number of distinct concentrators and completers was 10,460.

Gender

Among CTE concentrators and completers, there were more males (53%, n = 5,825) than females (44%, n = 4,635). The percentages of males and females in clusters provides information about program accessibility and enrollment to inform participation in nontraditional career fields by gender (Figure 19).

More males pursued studies in Business, Marketing, and Finance (15%), STEM (15%), and Arts, A/V Technology, and Communication (10%), compared with females (7%, 8%, and 9%, respectively).

Figure 19

Percentage of Female and Male CTE Concentrators and Completers, by Career Cluster
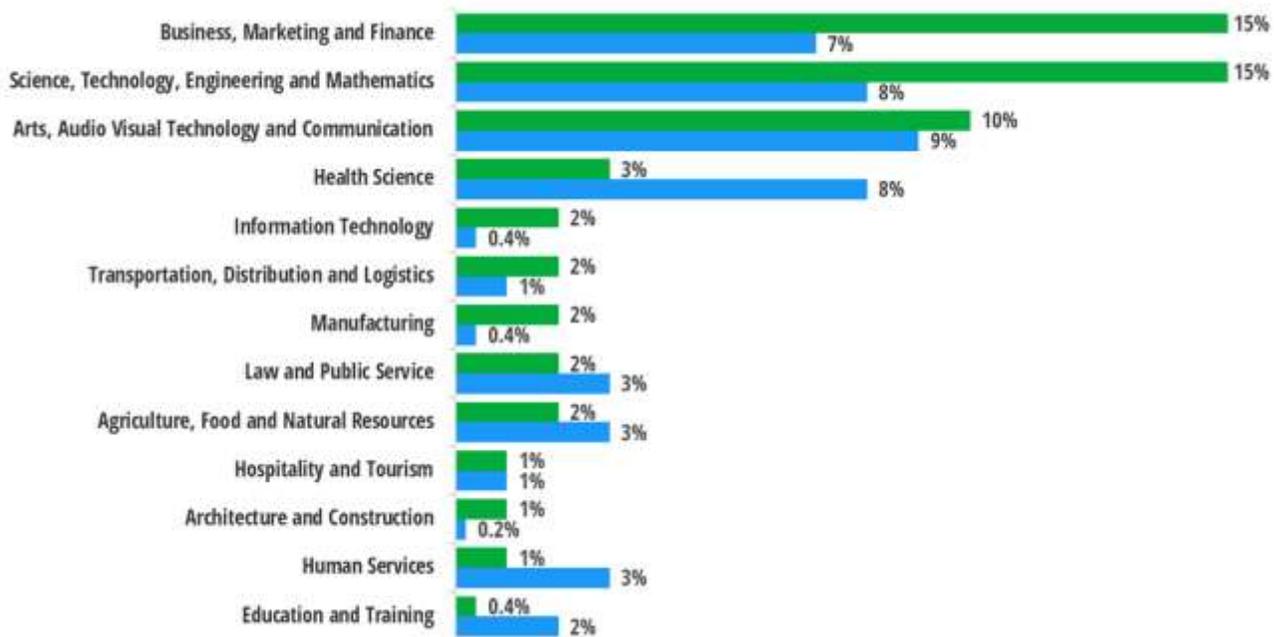
Source. TEA AISD CTE student records, 2020–2021
*Note.* Total number of distinct concentrators and completers was 10,460.

Funding Trends

Funding received by Perkins was based on Comprehensive Local Needs Assessment and Perkins criteria to help meet the growing demand for developing high-quality CTE programs including comprehensive POS and opportunities for scholars (Table 9). Spending for CTE, which includes staffing and expenses for program expenditures, is outlined to describe expenditures across 3 years (Table 10).

Table 9

Perkins Funding Amounts, by Year

School Year	Perkins Funds
2015–2016	$979,508
2016–2017	$690,599
2017–2018	$772,576
2018–2019	$804,129
2019–2020	$786,875
2020–2021	$883,459

Source. AISD TEAL records, 2015-2021

Table 10

Expenditure Amounts, by Year

Year	Local Expenditures
2015–2016	$10,905,634
2016–2017	$12,066,731
2017–2018	$15,850,417
2018–2019	$13,106,060
2019–2020	$15,408,309
2020–2021	$16,828,315

Source. AISD TEAL records, 2015-2021

Conclusions

This report summarizes program data for the 2020–2021 CTE Program Analysis Scorecard Annual Report. Consistent with goals in the CTE 5YP, the CTE program development and implementation focused on program alignment, quality of instruction, and equity and access; indicators in the focus areas were evaluated and described for year 3 of the 5YP. The ACTE high-quality CTE programs framework was used to inform this annual program evaluation report. Overall, as evidenced by descriptive results in the annual program evaluation, program outcomes reflected high quality.

Scholar certification and college credit earnings helped to measure program alignment. Postsecondary credentials serve as measures of student performance at the local, state, and federal levels. Two measures were added to the report this year to provide a more complete picture of postsecondary credentials: level I certifications and articulated college credits. The number of certifications earned was higher in 2020–2021 (n =2,579) than in 2019–2020 (n = 2,458). Challenges associated with COVID-19 and remote instruction still limited the number and type of exams that could be taken. Although some certifications may also have age and/or specific industry requirements, scholars faced other challenges preparing for certification exams that involved hands-on training, due to the majority of high school scholars participating in remote instruction. Scholars who returned to campus for many health science programs showed higher passing rates of IBC exams.

Nepris videos and virtual sessions, along with Blend course blueprints usage, helped to determine the quality of instruction in CTE. Results indicated that Nepris and blueprints were not widely used by CTE instructors. It is recommended the CTE Program work with instructors to determine the utility of these resources in the future. The CTE Program may consider reviewing district and CTE blueprints to modify courses written to align guidelines with objectives and Texas Essential Knowledge and Skills (TEKS). Because there are more than 260 CTE courses, the task of having Blend courses with standard lessons and accessible instruction materials will continue to be a work in progress.

CTE Program participation demographic characteristics were representative of the overall district. Disaggregating scholar enrollment demographics in the career clusters helped to gauge equitable access to the CTE programs offered throughout the district. Business, Marketing, and Finance had the highest rates of

course completion by CTE concentrators and completers for scholars who experienced economic disadvantage, were emergent bilingual, or received special education services. STEM and Health Science were the next highest clusters, which indicated the CTE Program continued to promote and support participation of underrepresented student groups in high-demand, high-skill, and high-wage career tracks.

Major changes had an impact on CTE career clusters, indicator codes, and POS in 2020–2021. Consistent with the Strengthening CTE for the 21st Century Act (Perkins V), changes were implemented to provide support for districts and the state for meeting federal requirements. State career cluster changes included combining marketing and finance clusters with business management and administration; the government and public administration cluster joined law, public safety, corrections, and security (TEA, 2021). Implementation of the new TEA indicator codes (Figure 13) included creating new indicator codes of CTE participant and explorer as well as assigning CTE concentrators and completers to POS based on course completion records (TEA, 2021). Approved state and regional POS were in full effect for 2020-2021.

Results indicated the CTE Program is on track with aligning CTE POS to labor market needs, based on Perkins requirements. More unique POS were offered in 2020-2021 (n = 48) than in 2019–2020 (n = 31). The top POS aligned to career clusters: Arts, A/V Technology and Communication; Business, Marketing and Finance; Health Science; and STEM (Figure 14). Findings were consistent with Comprehensive Local Needs Assessment outcomes in 2020, which recommended the CTE Program align programs and resources with regional labor market demands in these career clusters. Evidence supporting the expansion of opportunities to engage in STEM-related occupations as a benefit of POS implementation was indicated by district results showing high numbers of CTE concentrators and completers completing coursework in the STEM cluster and POS. Additionally, a benefit of the implemented changes was improved data collection and reporting on CTE concentrators and completers as well as participation and completion of specified POS. In recent years, this annual report has not included CTE scholar participation or completion by pathway or POS (Coco, 2020, 2021; Coco & Bonazzo, 2019).

Recommendations

Earning postsecondary credentials, such as IBCs, demonstrated scholars were experienced in real-world industry skills, making them more competitive in the job market. Recommendations include looking at postsecondary credential earnings by graduates with college and career readiness, employment, and postsecondary enrollment upon high school graduation.

To support quality of instruction, steps should be planned, designed, and implemented to work more closely with instructors and partners to strengthen the consistent use of online instructional materials and the district's learning management system, Blend. Additional professional learning and support in online resources for online modules and interactive learning may also be considered.

Ongoing work to incorporate and educate others about changes implemented in 2020–2021 as well as continued efforts in strengthening coherent course sequences in POS is advised. Future data digs may investigate participation patterns of CTE explorers and CTE concentrators to increase CTE scholar retention and persistence.

Finally, continued dialogue about areas of growth and priorities related to industry credentials, college credit, industry alignment and partnerships, work-based learning, college and career readiness, student sharing, and marketing may yield greater understanding of how best to develop, improve, and implement sustainable and innovative CTE programs.

Overall, CTE provided consistency and growth in focus areas amidst challenges with remote instruction due to COVID-19 and implementation of new TEA POS. This report highlights CTE program agility and steadiness amidst change and progress toward fulfilling the CTE vision for all AISD CTE scholars to graduate high school ready for college, career, and life, and to do so from high-quality, standards-based, industry-aligned POS that provide work experience, academic knowledge, technical and professional skills, leadership development, and postsecondary credentials.

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Appendix A

Evaluation Methodology

AISD DRE staff collected and analyzed quantitative and qualitative data from AISD information systems, CTE instructors, and scholars.

Data Collection

To provide data with which CTE program staff could measure progress toward its goals and 5YP, quantitative and qualitative data were collected. To address evaluation questions, a variety of measurements were used, including industry-based certifications, dual credits, and course completion records. In each of the three focus areas (i.e., program alignment, quality of instruction, and access and equity), relevant data were analyzed to inform the evaluation question for the focus area. Analyses were conducted using various forms of data.

Staff used district information systems to obtain demographic information, course enrollment, dual credit, certification, and tests. To describe program enrollment, TEA records from the autocalculation of CTE indicator code and AISD information systems provided information for the 2020–2021 school year for each POS, career cluster, and background characteristic. To measure access and equity, AISD information systems supplied scholars' background characteristics and enrollment information from the 2020–2021 school year.

To describe certifications earned by scholars, certification examination scores and pass rates provided records for student performance and certification outcomes. Both IBC and IDC exams were included for purposes of reporting district certification outcomes. To describe dual credits earned by scholars, records from ACC, UT OnRamps, and district systems provided information on dual credits and articulated credits earned.

To describe quality of instruction, DRE staff analyzed data collected from Nepris and CTE survey data. CTE instructors submitted responses to self-assessment items about their experiences with the CTE Program, which included items about the use of Nepris, course blueprints, and Blend.

CTE scholars completed surveys sharing their experiences and perceptions of their CTE courses. DRE staff worked with the CTE program staff to develop and add items to CTE surveys to measure whether CTE programs were meeting scholars' career and college aspirations. Specifically, CTE surveys, such as the AISD CTE Teacher Survey and AISD CTE Scholar Survey, provided administrators', teachers', and scholars' perceptions of the quality of support they received from the CTE administration. District surveys, such as the AISD High School Exit Survey, provided information to assess scholars' college and career preparation and expectations for postsecondary education.

Data Analysis

As articulated in the CTE 5YP, DRE staff summarized CTE program data from the 2020–2021 school year. The analysis included program enrollment by CTE indicator code and postsecondary credentials, such as certifications and dual credits. DRE staff used a mixed-methods approach to provide the evaluation information pertaining to CTE programs. Quantitative data (e.g., course enrollment) were analyzed using

descriptive statistics (e.g., numbers and percentages). Data were further explored by disaggregating by endorsement, cluster, program of study, campus, CTE indicator code, grade level, race/ethnicity, gender, economic disadvantage status, emergent bilingual status, and special education status. Qualitative data (e.g., open-ended survey responses) were analyzed using content analysis techniques to identify important details, themes, and patterns.

Appendix B

CTE 5 YP Goals

CTE was in the second year of the 5YP implementation during the 2019–2020 school year. The 5YP aims to prepare all scholars for high-demand, high-skill, and high-wage careers through industry-aligned pathways built on academic, professional, and technical skills; leadership development; work experiences; and postsecondary credentials. In fulfilling the 5YP, the evaluation team developed the CTE theory of change (Figure 20).

The theory of change depicts a roadmap for change and builds connection between implementation activities and the achievement of short-term and long-term goals. As illustrated by the CTE theory of change, CTE focused on goals in areas: (a) program alignment, (b) instruction quality, and (c) access and equity to improve short- and long-term outcomes.

Program alignment: CTE staff will align its curriculum to match industry and postsecondary standards and to provide scholars with opportunities to explore different career options.

Quality of instruction: CTE staff will provide innovative, industry-standard resources, curriculum, training, and instruction to provide relevant experiences that prepare all scholars for postsecondary success.

Access and equity: CTE staff will provide all AISD scholars with opportunities to participate in their choice of CTE program.

Figure 20

The CTE theory of change illustrates how CTE works through implementation focused on goals in program alignment, access and equity, and quality of instruction to accomplish short-term and long-term outcomes.
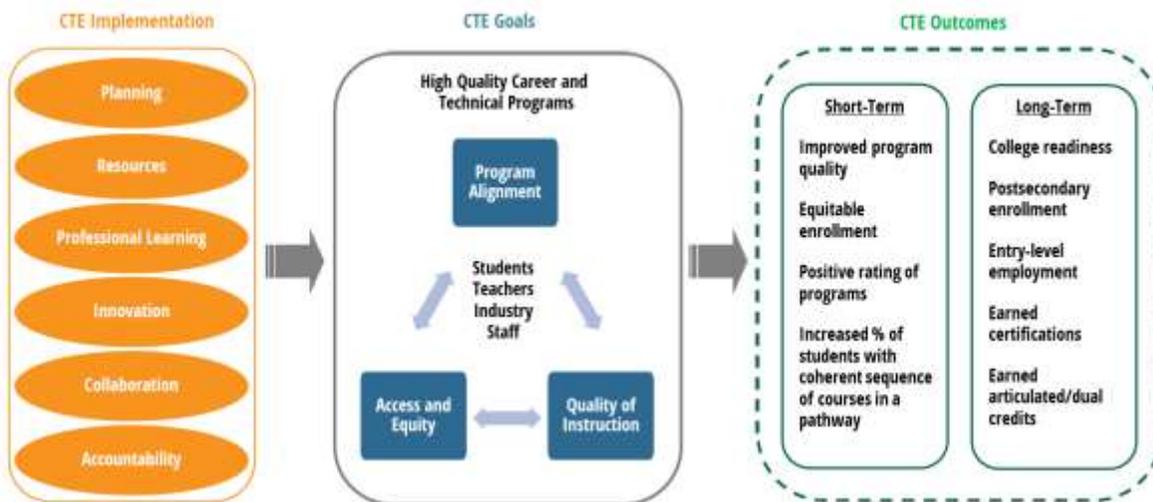
Source. Coco & Bonazzo (2019), AISD CTE Annual Report, 2017–2018

Appendix C

2021 Texas Education Agency Accountability Manual: CCMR Excerpt

College, Career, and Military Readiness (CCMR) is a measure used by the TEA to help determine campus and district ratings under the state accountability system. Students can demonstrate CCMR by demonstrating any one of the indicators listed here. The information provided below is an excerpt from the 2021 TEA Accountability Manual (https://tea.texas.gov/sites/default/files/2021-accountability-manual-chapter-2.pdf).

College, Career, and Military Readiness Component

The CCMR component of the student achievement domain measures graduates' preparedness for college, the workforce, or the military. The student achievement CCMR denominator consists of 2020 annual graduates. Annual graduates are students who graduate from a district or campus in a school year, regardless of cohort. This is separate from and may include different students than the longitudinal graduation cohorts. Annual graduates demonstrate college, career, or military readiness in any one of the following ways:

Chapter 2—Student Achievement Domain

- Meet Texas Success Initiative (TSI) criteria in English language arts (ELA)/reading and mathematics. A graduate must meet the TSI college readiness standards in both ELA/reading and mathematics; specifically, by meeting the college-ready criteria on the TSI assessment, SAT, or ACT, or by successfully completing and earning credit for a college prep course, as defined in TEC §28.014, in both ELA and mathematics. The assessment results considered include TSI assessments through October 2020, SAT and ACT results through the July 2020 administration, and course completion data via TSDS PEIMS. A graduate must meet the TSI requirement for both reading and mathematics but does not necessarily need to meet them on the same assessment. For example, a graduate may meet the TSI criteria for college readiness in ELA/reading on the SAT and complete and earn credit for a college prep course in mathematics.
- Earn dual course credits. A graduate must complete and earn credit for at least three credit hours in ELA or mathematics or at least nine credit hours in any subject.
- Meet criteria on the Advanced Placement (AP)/International Baccalaureate (IB) Examination. A graduate must meet the criterion score on an AP or IB examination in any subject area. The criterion score is 3 or higher for AP and 4 or higher for IB.
- Earn an associate degree. A graduate must earn an associate degree by August 31, immediately following high school graduation.
- Complete an OnRamps Dual Enrollment Course. A graduate must complete an OnRamps dual enrollment course and qualify for at least 3 hours of university or college credit in any subject area.

- Earn an industry-based certification. A graduate must earn an industry-based certification under 19 TAC §74.1003.
- Graduate with a completed individualized education program (IEP) and workforce readiness. A graduate must receive a graduation type code of 04, 05, 54, or 55, which indicates the student has completed their IEP and has either demonstrated self-employment with self-help skills to maintain employment or has demonstrated mastery of specific employability and self-help skills that do not require public school services.
- Enlist in the Armed Forces. A graduate must enlist in the U.S. Army, Navy, Air Force, Coast Guard, or Marines.
- Graduate under an advanced diploma plan and be identified as a current special education student. A graduate must be identified as receiving special education services during the year of graduation and have a graduation plan type identified as a Recommended High School Plan (RHSP), Distinguished Achievement Plan (DAP), Foundation High School Plan with an Endorsement (FHSP-E), or Foundation High School Plan with a Distinguished Level of Achievement (FHSP-DLA).
- Earn a level I or level II certificate. A graduate must earn a level I or level II certificate in any workforce education area.

Note. Due to discrepancies between annual enlistment counts for Texas military enlistees aged 17–19 released by the United States Department of Defense and TSDS PEIMS military enlistment data for 2017 and 2018 annual graduates, military enlistment data are excluded from accountability calculations until such data can be obtained directly from the United States Armed Forces.

Appendix D

Industry-based Certification (IBC)

Texas Education Agency (TEA) approved list for 2019–2022

More information on IBC can be found on the TEA website at https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/industry-based-certifications

Appendix E

ACTE High-Quality CTE Programs Framework

Figure 21

Twelve Elements of High-Quality CTE Programs

Source. ACTE

High Quality CTE Programs

To bring clarity to the burgeoning conversation about high-quality CTE programs and to support CTE administrators and educators in developing and improving CTE POS, the ACTE created an evidence-based framework defining high-quality CTE across 12 elements. CTE at AISD adopted the ACTE framework and worked to elevate all CTE programs to meet all high-quality standards. Areas of focus in the CTE 5YP and annual program evaluation report (program alignment, quality of instruction, and access and equity) were consistent with the ACTE's high-quality elements. Specifically, program alignment corresponded to the ACTE's standards-aligned and integrated curriculum and sequencing and articulation, quality of instruction related to ACTE-prepared and effective program staff and engaging instruction, and access and equity applied to ACTE access and equity. The ACTE framework was used to organize, categorize, and inform program improvement and development of CTE programs. [Click to learn more about ACTE High-Quality CTE programs](#).

38

Appendix F

Definitions, Acronyms and Abbreviations

Note: The five CTE indicators are defined in the "Table Values" section.

- Career clusters – a grouping of occupations and broad industries based on commonalities.

- Credit value – a value used to calculate the number of credits associated with a given course, based on highest of the values for each course in the C022 table.

- CTE – career and technical education - career preparation programs that prepare workers to meet employers' needs in a variety of occupations.

- CY – current year

- LEA – Local education agency. A public school district or open enrollment charter school. Texas has over 1,200 LEAs.

- Perkins – the Carl D. Perkins Career and Technical Education Act of 1984 (reauthorized in 1990, 1998, 2006, and 2018) – instituted to provide an increased focus on the academic achievement of career and technical education students, strengthen the connections between secondary and postsecondary education, and improve state and local accountability.

- Program of Study (POS) – sequences of academic and CTE coursework to help students attain a postsecondary degree or industry-recognized certificate or credential, as defined in the Perkins grant legislation.

- Service ID – an identifier for the services supplied by staff.

- UID – a unique number assigned to a student or staff member by the Texas Education Agency.

On July 31, 2018, the federal government passed the Public Law 115-224, known as Perkins V. This act requires career and technical education (CTE) reporting to be "valid, and reliable, and comparable across the State."

Moreover, the act necessitates new participation values that provide more detail about the type and depth of a student's CTE coursework.

The TEA is required to report student CTE participation by "career clusters," to meet the Perkins V legislative requirements.

To meet this legislative need for consistency, reliability, and granularity, the TEA implemented a CTE Indicator auto-calculation process that uses a student's course completion data collected in the PEIMS Summer (SUMR) Submission starting in the 2020-2021 school year to derive each CTE participant's classification.

The automated process replaced the manual process that used to be the responsibility of the individual LEAs.

The purpose of this document is to provide LEAs and vendors with a summary of the logic that the TEA uses to determine the CTE Indicator Codes for students participating in Career and Technology programs.

TEA (2021) defined program of study as "sequences of academic and CTE coursework to help students attain a postsecondary degree or industry-recognized certificate or credential, as defined in the Perkins grant legislation" (CTE Indicator Code Autocalculation Instructions, p. 1).

Code Title Definition

4 Not CTE A student who never enrolled or who did not complete any high school CTE course as defined by 19 TAC Chapter 126 (C), 127 (B) or 130.

5 CTE Participant5F 6 A student completing EITHER: • Only one CTE course for any number of credits OR More than one course for less than two credits where a CTE course is defined by 19 TAC 126 (C), Chapter 127 (B) or 130 (the student does not have to pass or receive credit).

E CTE Explorer A student completing two or more high school CTE courses for a total of two or more credits defined by 19 Chapter (C), 127 (B) or 130 and not a participant, concentrator, or completer (the student does not have to pass or receive credit).

6 CTE Concentrator A student completing and passing two or more chapter 126 (C), 127 (B) or 130 CTE courses for a total of at least two credits within the same program of study and not a completer in the same program of study.

7 CTE Completer A student completing and passing three or more chapter 126 (C), 127 (B) or 130 CTE courses for 4 or more credits within a program of study, including one level 3 or level 4 course from within the same program of study.

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