

EDUCATIONAL INNOVATION



THE UTAH STATE BOARD OF EDUCATION
Report to Legislative Committee

Meeting the Needs of Utah's Secondary Students in Career and Technical Education

FY18 – October 2018

Thalea Longhurst, CTE Director
Thalea.Longhurst@schools.utah.gov

Darin Nielsen, Assistant Superintendent
Darin.Nielsen@schools.utah.gov



Career and Technical Education 2018 Annual Report

STATUTORY REQUIREMENT

U.C.A. Section 53E-3-507 provides that the Utah State Board of Education shall, after consulting with school districts, charter schools, the Utah System of Technical Colleges, Salt Lake Community College’s School of Applied Technology, Snow College, and USU Eastern, prepare and submit an annual report detailing how career and technical education needs of secondary students are being met, and what access secondary students have to programs offered at the Technical Colleges and within the regions served by USHE.

161,596

Students enrolled in LEA Career & Technical Education courses SY 2017-2018

Executive Summary

The Utah State Board of Education provides leadership for Career and Technical Education (CTE) in the state’s public secondary schools, with local education agencies (LEAs) providing 92 percent of the instruction. Students in LEAs enroll in many excellent programs. LEAs exercise forward-looking leadership in maintaining and expanding career and technical education opportunities for their students. Additionally, through coordinated, collaborative, and creative partnerships with post-secondary education, including the Utah System of Technical Colleges (UTech) and the Utah System of Higher Education (USHE), LEAs assure efficient and effective career and technical education delivery.

Secondary Career & Technical Education Efforts in SY 2017-2018

Utah LEAs have well-developed, high-quality career and technical education programs that meet many career awareness, career exploration, and career preparation needs for public school students. CTE prepares students for the world of work by introducing them to workplace competencies and makes academic content accessible to students by providing it in a hands-on context. Rigorous program standards are foundational to CTE.

Below are key data for career and technical education efforts during the 2017-2018 school year:

- Enrollment in LEA Career and Technical Education courses increased by 0.96 percent (1,542 students) in 2017-2018 to 161,596 – up from 160,054 students in 2016-2017.
- LEA Career and Technical Education average daily membership (ADM) decreased 7.77 percent (2,018 ADM) in 2017-2018 to 24,709 – down from 26,727 ADM in 2016-2017.
- LEAs delivered 92 percent of all career and technical education membership hours in grades 9-12.
- Over 5,900 teachers, administrators, and counselors participated in staff development activities, including industry tours.
- Development of College and Career Ready materials, including occupational data on high-demand occupations.

- 105 secondary students received CTE scholarships and tuition awards.
- Secondary students earned over 79,000 concurrent enrollment credits in CTE courses.

CTE Credentials and Certifications

Utah Secondary LEAs offers a variety of CTE credentials:

111,238

**CTE Skill
Certificates
awarded to
secondary
students**

- CTE Skill Certificates – this program provides competency-based student assessments, measured by core standards and competencies needed to be successful in the workforce. Assessments include both an online knowledge assessment as well as a performance-based assessment of technical skills. Those students earning certificates have mastered the content and skills at 80% proficiency.
- Industry certifications – these are credentials of

value to employers in Utah. Some are also “right-to-work” credentials and/or state licenses required to gain employment in certain fields. These certifications validate that the student has demonstrated mastery of the most up-to-date skills in a career field.

- As a subset of Industry certifications, Utah continues to implement the Microsoft Imagine Academy with program support from Microsoft and Certiport. Funding provides professional development for teachers and administrators, resources for all teachers and students, and certification exams in various industry credentials as requested by employers.
- Sample certifications include Microsoft Office Suite (Word, Excel, PowerPoint, Access, OneNote, SharePoint®, Outlook), Microsoft Technology Associate (Database Administration Fundamentals, HTML5 Application Development Fundamentals, Security Fundamentals, Operating System Fundamentals), Quickbooks, Java Programming, JavaScript Programming, and Python Programming).
- 17,878 student and teacher certifications were earned through the Microsoft Imagine Academy program.

19,411

**Industry
certifications
earned by
secondary
students**

31,412,780

**Membership
hours in
secondary CTE
courses in
2017-2018**

Career Pathways

Career Pathways are a coordinated, non-duplicative sequence of secondary and postsecondary courses that incorporate challenging, state-identified academic standards and address academic and technical knowledge, as well as employability skills, which are aligned to the needs of industries in the state, region, or local area. A pathway progresses in content specificity, has multiple “entry and exit points” that allow for stackable credentialing, and ultimately culminates in the attainment of a recognized postsecondary credential.

Research on the positive impact of Career Pathways is significant. In Utah, secondary students who concentrate (1.5 credits in a career pathway sequence of courses) graduate from high school at 95% compared to Utah’s statewide graduation rate of 86%.

- CTE Concentrators (1.5 credits in a career pathway sequence of courses) SY17-18 = 57%
- CTE Completers (3.0 credits in a career pathway sequence of courses) SY17-18 = 20%

57%

**of Secondary
students are CTE
concentrators**

20%

**of Secondary
students are CTE
completers**

In SY17-18, the CTE Career Pathways with the highest completer rates were:

- CAD Architectural Design
- Protective Services
- Food Production/Processing
- Pre-K: Early Childhood Education
- Nursing
- Animal Systems
- Cabinetmaking/Millwork

Work-Based Learning

Work-Based Learning means a continuum of awareness, exploration, preparation, and training activities that combine structured learning and authentic work experiences implemented through industry and education partnerships. Through Work-Based Learning, students have the opportunity to see how classroom instruction connects to the world of work and future career opportunities.

- 2,659 secondary students participated in internships.

College and Technical Student Organizations (CTSOs)

CTSOs prepare students for individual and group leadership responsibilities and enhance Career and Technical Education in Utah through the co-curricular network of programs, business and community partnerships, and leadership experiences at the school, state, and national level.

- 23,691 secondary students were served through DECA, FBLA, FCCLA, FFA, HOSA, SkillsUSA, and TSA in SY17-18.

College and Career Awareness – 7th grade

College and Career Awareness is a year-long course taught by a team of Career and Technical Education teachers and school counselors. Through application-based lessons, students utilize technology, develop foundational skills, and explore careers. Students learn to understand their goals and aspirations, interests, and work values. Students learn about careers and how to access current information about market demand, average earnings, and training and education requirements.

- In SY17-18, 47,564 middle/junior high school students participated in the College and Career Awareness program.

Partnering with Industry

Each of Utah's eight regional CTE planning councils meet regularly to identify high demand occupations that are important to the region as well as the availability of coordinated CTE offerings in the regions. Additionally, CTE works closely with GOED and DWS to partner with various industry groups to develop industry-led programs, giving students the opportunity to develop skills necessary to enter high demand, high skill, high wage careers upon graduation.

The ROI for Secondary CTE

Career and Technical Education is an integral component of secondary education in Utah. Not only does CTE play an important economic role in Utah, it provides educational and occupational pathways for all secondary students.

CTE Cost of Services

- The FY18 Secondary CTE Add-On Allocation was \$94,297,300. The value of the CTE WPU was \$3,311.
- LEAs are required to expend an amount equivalent to the regular WPU for students in approved CTE programs. For FY18, the budgeted minimum qualifying expenditure for this maintenance of effort is calculated to be \$84,157,520. The actual audited MOE expenditures will not be available until spring 2019.
- The SY17-18 secondary CTE enrollment (in courses and programs provided by LEAs) was 161,596 students.
- The total membership hours for the LEA CTE courses was 31,412,780.

\$5.68
Average total cost per
membership hour in LEA
Career & Technical
Education

Secondary CTE programs provided by the LEAs are competitive and provide a valuable and cost-effective educational element for the students of Utah.

CTE Works for High School Students

- High school students involved in CTE are more engaged, perform better, and graduate from high school at higher rates.¹
- CTE addresses the needs of high-growth industries and helps close the skills gap.²
- The more students participate in Career and Technical Student Organizations, the higher their academic motivation, academic engagement, grades, career self-efficacy, college aspirations, and employability skills.³
- Research has found that Work-Based Learning helps students apply and extend classroom learning, gain motivation and understanding, explore careers, and develop critical understanding of the work environment.⁴
- In Utah, secondary students who concentrate (1.5 credits in a career pathway sequence of courses) graduate from high school at 95% compared to Utah's statewide graduation rate of 86%.

95%
Graduation rate for
secondary students who
are CTE concentrators

Hospitality and Tourism Management Career and Technical Education Pilot Program

U.C.A Section 53E-3-515 requires the State Board of Education to report on the Hospitality and Tourism Management CTE Pilot Program. CTE staff is working on the request for proposals (RFP) for the program so no LEAs are being served yet. This program is funded through a tax established in Senate Bill 264, Outdoor Recreation Grant Program (2017 General Session). The bill took effect on January 1, 2018 so the actual amount of funding for the program has been uncertain since we have had to wait and see what the tax collected for the program has been. Initially, there were discussions with other state agencies around the program and the possibility of working with industry partners to create an industry-led pathway program around Hospitality and Tourism. However, interest from industry has been minimal and this we are moving forward with the RFP for a vendor(s) to provide resources for this program to LEAs. At this time there are no recommended changes to the pilot program.

Table 1: LEA change in Student Headcount and Average Daily Membership (ADM)

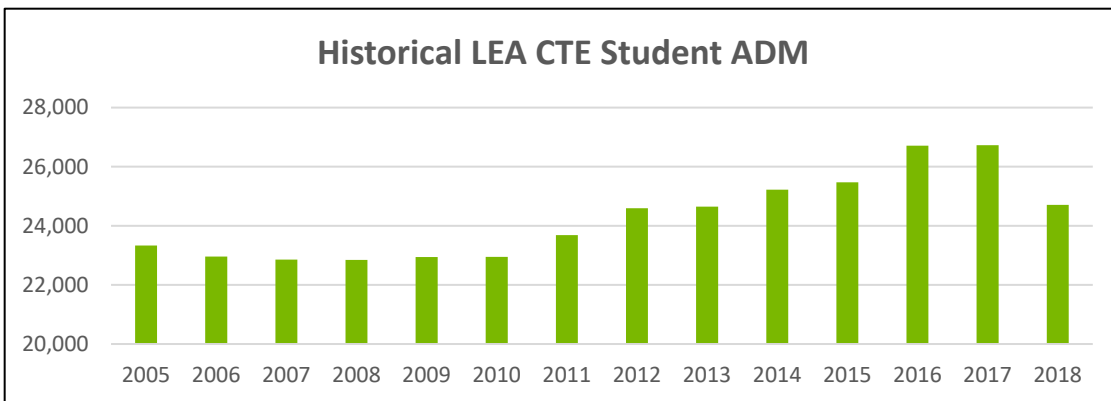
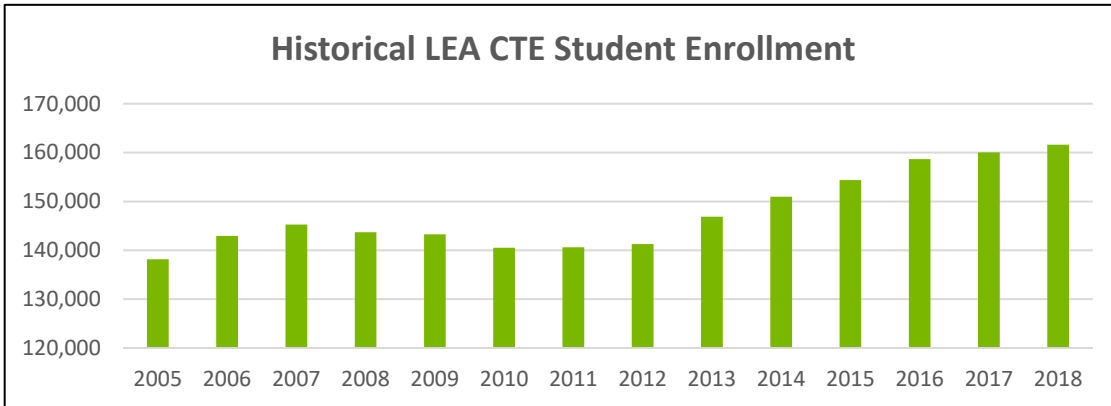
Local Education Agency Career and Technical Education	2017	2018	Difference 2017 to 2018	Percent Difference 2017 to 2018
Student Enrollment	160,054	161,596	1,542	0.96% increase
Average Daily Membership (ADM)	26,727	24,709	2,018	7.77% decrease

Note: Secondary student enrollment is by school. Prepared by USBE, CTE Section, 09/18.

Table 2: Historical LEA change in Student Headcount and Average Daily Membership (ADM)

Year	Headcount	ADM
2005	138,169	23,331
2006	142,954	22,960
2007	145,278	22,856
2008	143,684	22,844
2009	143,273	22,945
2010	140,532	22,951
2011	140,631	23,686
2012	141,285	24,592
2013	146,881	24,646
2014	150,973	25,224
2015	154,364	25,473
2016	158,677	26,711
2017	160,054	26,727
2018	161,596	24,709

Prepared by USBE, CTE Section, 09/18.



Utah System of Technical Colleges Secondary Programs

UTech is delivering value-added services in many areas of the state. Local education agencies (LEA) indicate that secondary students are receiving either the same or increasing levels of service from UTech training programs as they have in the past.

- UTech secondary student headcount increased by 3.89% (351 students) in 2017-2018 to 9,385 students, up from 9,034 students in 2016-2017.
- Membership hours for secondary students at UTech increased by 10.97% (209,642 hours) in 2017-2018 to 2,120,844 hours, up from 1,911,202 hours in 2016-2017.
- In 2017-2018, UTech and USHE provided 8% of the total high school career and technical education program opportunities statewide (as measured in membership) in grades 9-12.

9,385
UTech/USHE
Secondary Student
Headcount

3.89%
Increase in
student
UTech/USHE
Membership Hours

Utah System of Higher Education Secondary Programs

Utah's colleges and universities are important partners in providing a full range of career and technical education offerings to secondary students through concurrent enrollment and other articulation arrangements that result in credit.

Concurrent enrollment in career and technical education coursework is provided to high school students with credit granted by high schools as well as cooperating credit-granting (non-UTech) colleges or universities. In the 2017-2018 school year, secondary students earned over 79,000 concurrent enrollment credits in CTE courses. Concurrent enrollment opportunities are a critical component in High School to College and Career Pathways. Pathways are developed to open more career and technical education opportunities for secondary students in higher education.

Utah State University Eastern

In the 2007 legislative session, the Southeast Applied Technology College (SEATC) was merged with the College of Eastern Utah (CEU). In 2011, CEU became Utah State University Eastern (USU Eastern). The 2007 legislation required USU Eastern to continue to serve secondary students at no charge, and to work to provide services to the outlying school districts in the region. USU Eastern can provide credit or non-credit to high school students. Since this legislative change, the LEA personnel and CEU/USU Eastern staff have been working hard to ensure that the same levels of service and funding for secondary students are provided.

Snow College

In the 2003 legislative session, HB161 merged the Central Applied Technology College with Snow College. The legislation requires Snow College to continue to serve secondary students at no charge, and to work to provide services to the outlying school districts in the region. Snow College can provide credit or non-credit to high school students. Snow College Richfield continues to provide programs to secondary students in the Central Region.

Salt Lake Community College

Salt Lake Community College, through its School of Applied Technology, is to serve the needs of secondary students in the Wasatch South Region, with the exception of Tooele County. Salt Lake Community College School of Applied Technology membership for secondary students is holding steady. There has been an aggressive effort to provide high school CTE programming.

Table 3: UTech/USHE change in Secondary Student Headcount and Membership Hours

UTech Secondary Student Data	2017	2018	Difference 2017 to 2018	Percent Difference 2017 to 2018
Student Headcount	9,034	9,385	351	3.89% increase
Membership Hours	1,911,202	2,120,844	209,642	10.97% increase

Source: USTC Data 2017 & 2018

Table 4: UTech/USHE Historical Secondary Student Headcount and Membership Hours

Year	UTech Headcount	UTech Membership Hours
2005	11,169	1,812,298
2006	11,361	1,898,077
2007	11,663	1,948,583
2008	11,413	1,904,175
2009	11,127	1,890,601
2010	9,717	1,677,843
2011	9,411	1,528,136
2012	8,856	1,463,561
2013	8,401	1,437,801
2014	7,900	1,511,558
2015	8,652	1,624,477
2016	11,195	1,895,904
2017	9,034	1,911,202
2018	9,385	2,120,844

Source: USTC Data 2005-2018

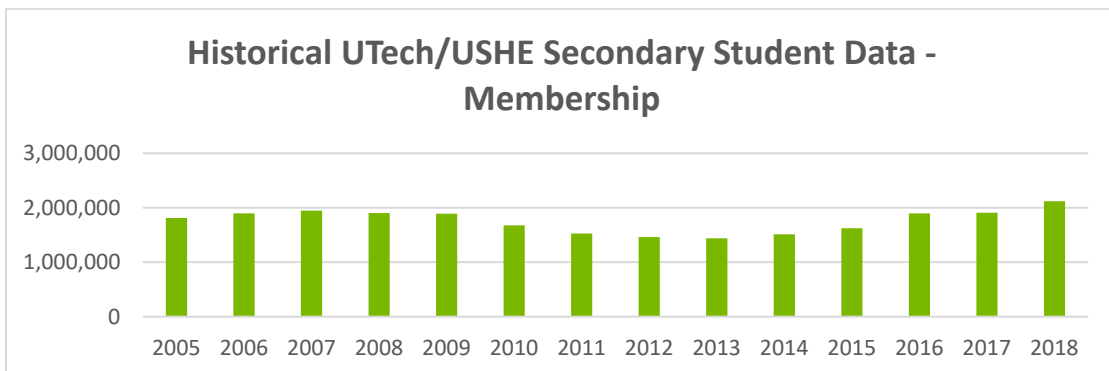
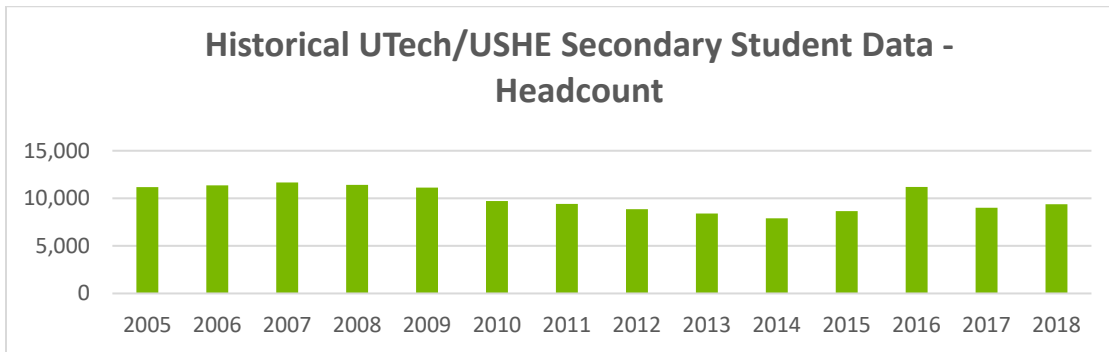


Table 5: Percentage of Total Secondary CTE Effort

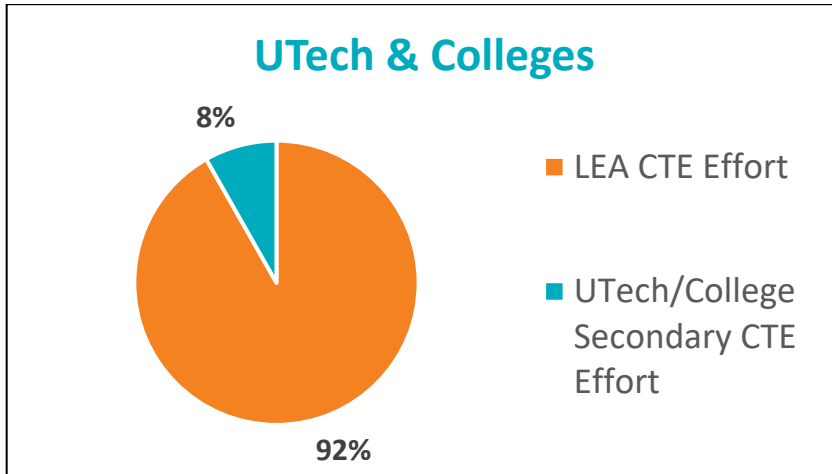


Table 6: Percentage of Total CTE Average Daily Membership (ADM) Grades 9-12, Provided by School Districts and UTech, Snow Richfield, USU Eastern, and SLCC

USTC membership includes both the courses provided at college campuses and USTC courses provided at the high schools. Central, Southeast, and Wasatch Front South Region membership is for students attending Snow College, USU Eastern, and SLCC, and is reported by these institutions. Average daily membership (ADM) is full-time equivalent based on 990 hours. Prepared by USBE, CTE Division, 09/17.

Region	School District Percent of Total Secondary CTE Membership 2017-18	USTC and USHE Percent of Total Secondary CTE Membership 2017-18
Bear River Region (BTech)	77%	23%
Central Region (Snow Richfield)	95%	5%
Davis Morgan Region (DTech)	87%	13%
Dixie Region (DXTech)	95%	5%
Mountainland Region (MTech)	92%	8%
Ogden-Weber Region (OWTech)	88%	12%
Southeast Region (USU Eastern)	100%	0%
Southwest Region (SWTech)	83%	17%
Tooele County (TTech)	98%	2%
Wasatch Front South (SLCC)	100%	0%
Uintah Basin Region (UBTech)	65%	35%
State Total	92%	8%

Table 7: UTech Change in Secondary Student Headcount and Membership Hours

UTech Region Campus		2017	2018	Difference	Percent
Bridgerland	Headcount	1,875	2,142	267	14.24%
	Membership	363,821	422,026	28,205	16.0%
Davis	Headcount	1,435	1,313	-122	-8.5%
	Membership	368,834	395,287	26,453	7.2%
Dixie	Headcount	301	294	-7	-2.3%
	Membership	65,353	78,110	12,757	19.52%
Mountainland	Headcount	1,453	1,502	49	3.37%
	Membership	475,174	524,193	49,019	10.32%
Ogden-Weber	Headcount	1,327	1,384	57	4.30%
	Membership	261,891	321,126	59,235	22.62%
Southwest	Headcount	856	900	44	5.14%
	Membership	93,208	99,701	6,493	6.97%
Tooele	Headcount	144	147	3	2.08%
	Membership	22,438	21,289	-1,149	-5.12%
Uintah Basin	Headcount	1,643	1,703	60	3.65%
	Membership	260,484	259,114	-1,370	-0.53%
UTech TOTAL	Headcount	9,034	9,385	351	3.89%
	Membership	1,911,202	2,120,844	209,642	10.97%

Source: USTC Data 2018

Table 8: UTech Historical Secondary Student Headcount and Membership Hours

		FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Bridgerland	Headcount	1,988	1,957	1,686	1,737	1,722	1,779	1,968	1,875	2,142
	Membership	295,861	269,475	241,527	275,885	359,936	361,369	374,948	363,821	422,026
Davis	Headcount	1,990	1,661	1,375	1,095	946	1,086	1,264	1,435	1,313
	Membership	322,329	263,040	219,825	206,592	229,301	251,798	355,730	368,834	395,287
Dixie	Headcount	473	522	843	985	730	951	2,528	301	294
	Membership	66,844	49,489	42,283	34,638	46,539	53,081	69,595	65,353	78,110
Mountainland	Headcount	1,326	1,284	1,349	1,422	1,284	1,259	1,373	1,453	1,502
	Membership	347,806	345,932	377,467	409,941	392,877	399,247	448,787	475,174	524,193
Ogden-Weber	Headcount	1,514	1,360	1,293	1,219	1,028	1,203	1,443	1,327	1,384
	Membership	253,378	237,415	223,573	220,051	176,504	211,602	264,859	261,891	321,126
Southwest	Headcount	763	1,048	880	644	798	839	894	856	900
	Membership	89,293	94,121	80,286	74,595	87,177	91,687	98,410	93,208	99,701
Tooele	Headcount	59	26	31	30	44	86	128	144	147
	Membership	10,759	3,627	4,995	3,824	7,941	12,598	21,485	22,438	21,289
Uintah Basin	Headcount	1,604	1,553	1,399	1,269	1,348	1,449	1,597	1,643	1,703
	Membership	291,573	265,037	273,605	212,275	211,283	243,095	262,090	260,484	259,114
TOTALS	Headcount	9,717	9,411	8,856	8,401	7,900	8,652	11,195	9,034	9,385
	Membership	1,677,843	1,528,136	1,463,561	1,437,801	1,511,558	1,624,477	1,895,904	1,911,202	2,120,844

Source: USTC Data 2010-2018

¹ Association for Career and Technical Education, CTE Today! 2016.

² Ibid.

³ Alfeld et al., Looking Inside the Black Box: The Value Added by Career and Technical Student Organizations to Student's High School Experiences, National Research Center for CTE, 2007.

⁴ Alfeld et al., Work-Based Learning Opportunities for High School Students, National Research Center for CTE, 2013.