



IDEA FACTSHEET: #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

The Individuals with Disabilities Education Act (IDEA) requires that schools assist students with disabilities to develop independent living skills and abilities essential to succeed in most of their life's endeavors. According to the law, each student with a disability must have an individualized education program (IEP), and the IEP must address transition services. Transition planning is required in the IEP for students by age 16; many students begin this planning at age 14 or earlier so that they have the time to build skills they will need as adults.



Evidence shows that IDEA students benefit from career and technical education (CTE) in terms of school completion and successful postsecondary life. Through CTE programs, students with disabilities can develop independent living skills, including personal skills, workplace skills, and people skills. In this Factsheet, we use five key indicators to illustrate how students with disabilities (i.e. IDEA students or students with special needs who have IEPs under the IDEA law) can benefit from CTE programs.

1. How many students with disabilities participate in CTE at the secondary level?

The Strengthening Career and Technical Education for the 21st Century Act (Perkins V) emphasizes the development of employability skills of all students through CTE programs, including special populations, such as individuals with disabilities. Perkins V was signed into law on July 31, 2018, to amend the Carl D. Perkins Career and Technical Education Act

of 2006 (Perkins IV). As the data we analyzed were collected prior to Perkins V, the definitions of the indicators in this Factsheet are from Perkins IV.

The number of high school students who participated in CTE did not experience significant change from 2008 to 2018 (approximately 7.6 million). However, during the same 10 years:

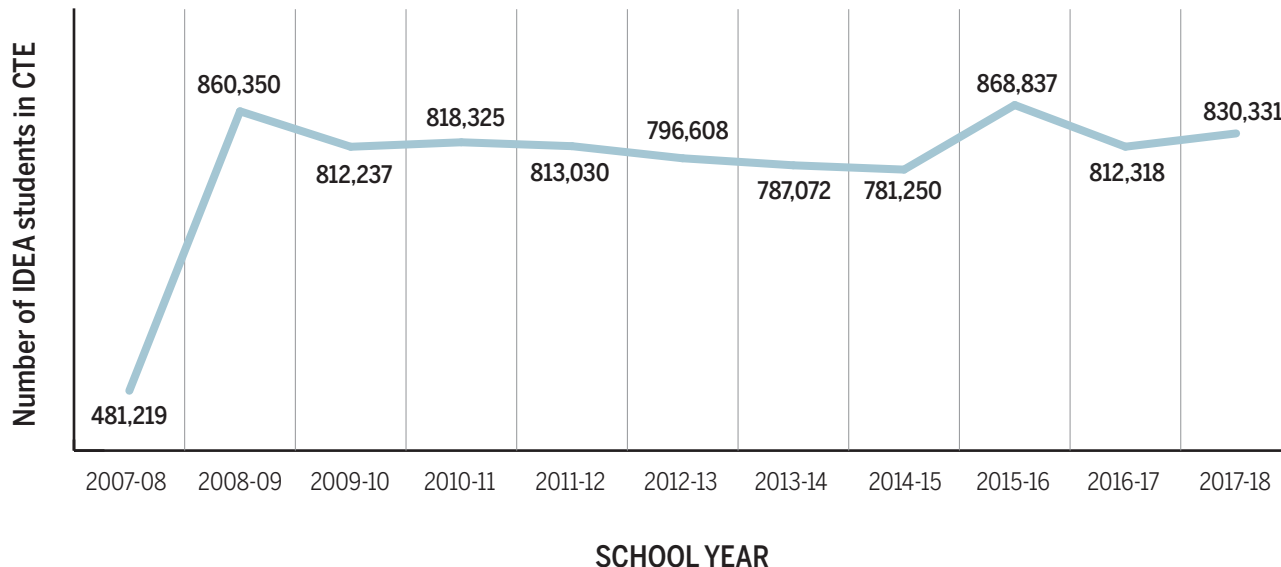
- the number of IDEA students who enrolled in CTE at the secondary level increased by 73 percent from less than 500,000 in 2008 to more than 800,000 in 2018 (Figure 1);
- among the CTE secondary students, the percentage of IDEA students increased from 1 to 8 percentage points in 20 states, the District of Columbia and Puerto Rico (Table 1); and
- in 2017-18, more IDEA students participated in CTE in Texas, North Carolina and Georgia than other states (Figure 2).



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Figure 1. Total number of IDEA students in CTE at the secondary level: 2007-08 through 2017-18



Note: California data for 2007-08 and 2017-18 were not available.

Data source: <https://perkins.ed.gov/pims/DataExplorer/CTEParticipant>

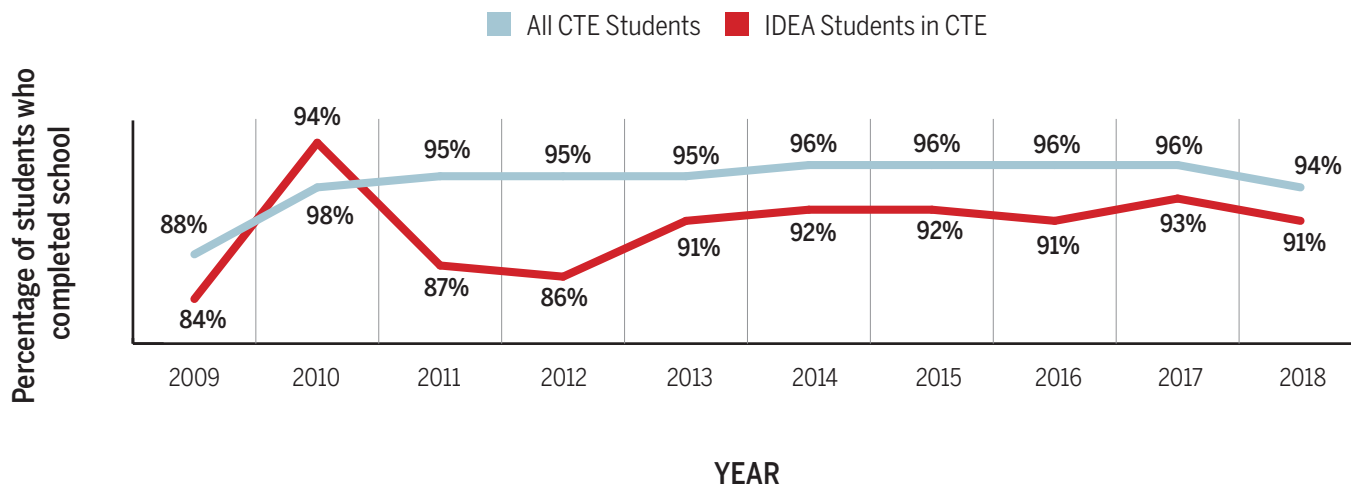
2. What is the school completion rate among IDEA students who participated in CTE?

School completion refers to CTE students who earned a regular secondary school diploma, or earned a general education development (GED) credential as a state-recognized equivalent to a regular high school diploma (if offered by the state), or other state-recognized equivalent (including recognized alternative standards for individuals with disabili-

ties), or earned a proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if offered by the state). Nationwide, among students with disabilities who participated in CTE:

- from 2013 to 2018, over 90 percent completed high school and earned a credential or certificate, and the gap between IDEA students and all CTE students was smaller than 5 percentage points (Figure 3);

Figure 3. National average school completion rate of students with disabilities in CTE: 2009-2018



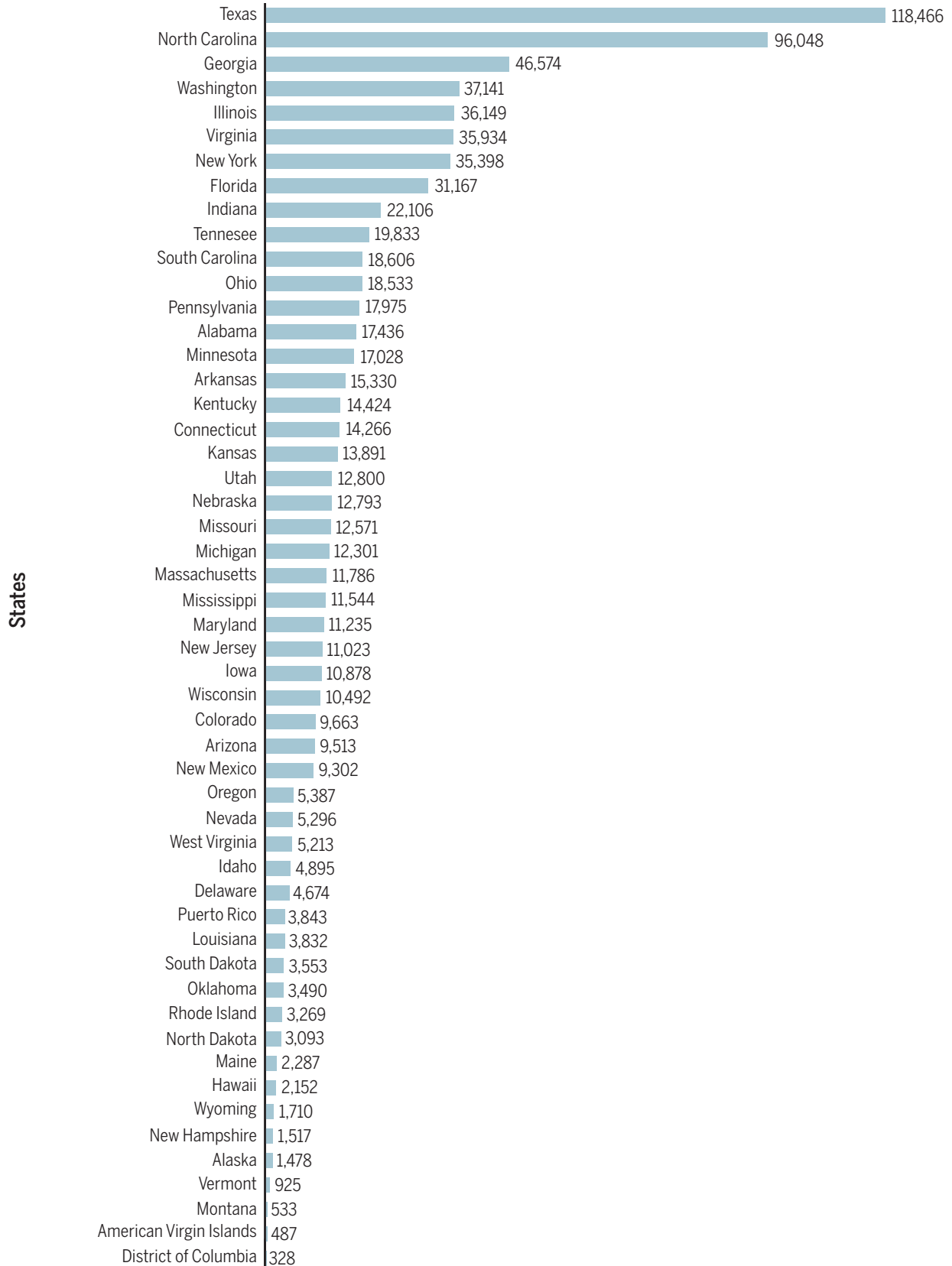
Data source: <https://perkins.ed.gov/pims/DataExplorer/Performance>



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Figure 2. Number of students with disabilities in CTE at the secondary level, by state: 2017-18

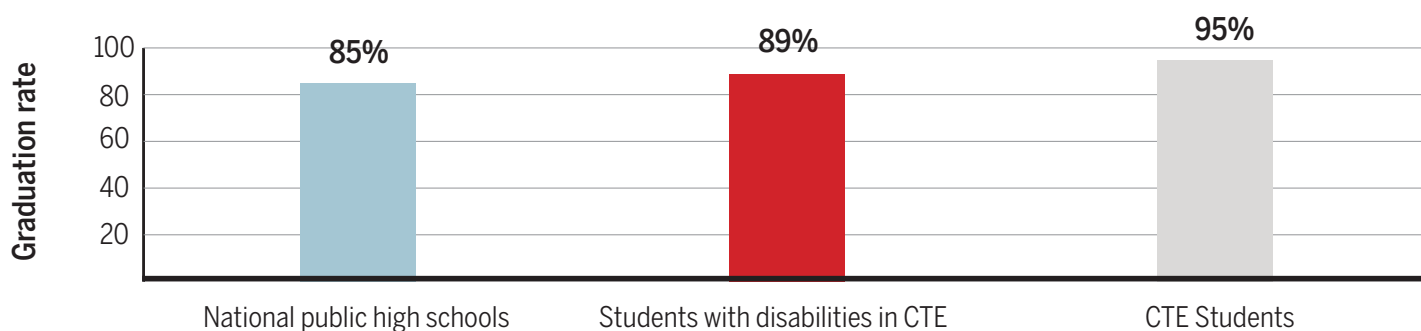




FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Figure 4. Graduation rate of IDEA students in CTE: 2017



Note: Data of California and North Carolina were imputed by using the mean of the non-zero values from 2008 to 2018. Data source: https://nces.ed.gov/programs/coe/indicator_coi.asp; <https://perkins.ed.gov/pims/DataExplorer/Performance>

- New Jersey and West Virginia achieved 100 percent school completion rate five years in a row (Table 2);
- in the District of Columbia, the school completion rate increased from 89 percent to 100 percent from 2014 to 2018 (Table 2).

3. What is the graduation rate among IDEA students who participated in CTE?

Recent federal data show that the public high school graduation rate nationwide is 85 percent, the highest it has been since the rate was first measured in 2011. However, in both 2017 and 2018, the national average graduation rate of students with disabilities who participated in CTE reached 89 percent, only 6 percentage points below the national average graduation rate of all CTE students (Figure 4).

Although there is a gap in graduation rate between IDEA students and the general CTE students, research shows that students with disabilities who participated in CTE are more likely to have higher graduation rates than those who did not. Table 3 shows that in 2018, the graduation rate of IDEA students who participated in CTE

- was the same as that of all CTE students (i.e. 95 percent or above) in 15 states;
- reached the national public high school graduation rate (i.e. 85 percent or above) in over two thirds of states; and
- had zero gap in Pennsylvania, Nebraska, Kansas, Montana and Arizona, compared with all CTE students.

Additionally, from 2014 to 2018, the gap between IDEA students and other CTE students has been closing in 26 states (e.g., South Carolina, Virginia) (Table 3).

4. How do IDEA students in CTE perform academically?

Compared with a decade ago, students with disabilities who participated in CTE programs made significant progress in academic proficiency in 2018. As shown in Table 4:

- 12 states experienced an increase in the percentage of IDEA students in CTE who met proficiency levels in reading;
- 8 states saw a percentage growth of IDEA students who enrolled in CTE and became proficient in math;
- in Massachusetts, almost three out of four IDEA students in CTE met the state reading proficiency level in 2018, with an increase of 65 percentage points from 2008; and
- in Florida, the percentage of IDEA students in CTE who met the state math proficiency level increased almost seven times in 2018 from 2008.

5. How ready are IDEA students for career/college through CTE programs?

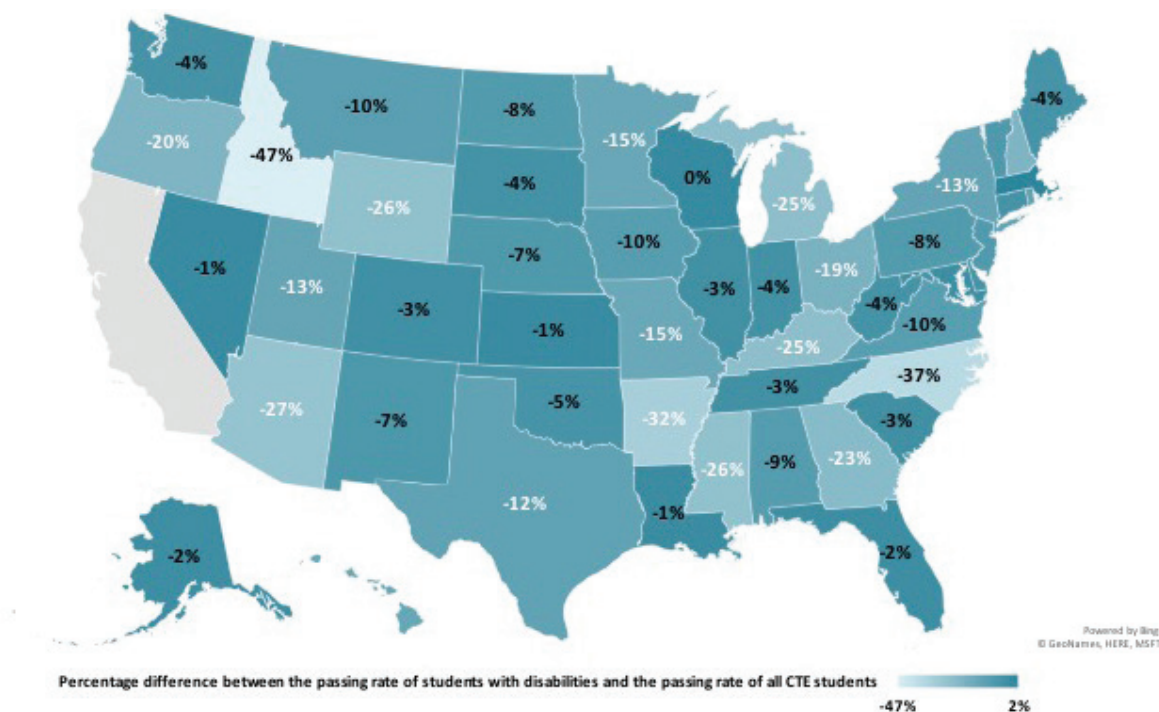
Students who have earned three or more sequential credits in any state-approved CTE program grades 9-12 are expected to pass technical skill assessments that aligned with industry-recognized standards, if available and appropriate. Among



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Figure 5. Gap in technical skill attainment between CTE participants with disabilities and the general CTE participants in secondary schools: 2018



Data source: <https://perkins.ed.gov/pims/DataExplorer/Performance>

Note: Data for California is not available.

students who participated in CTE, the gap between IDEA students and other students in technical skill attainment is smaller than the gap in reading/math. The state-level data show that in 2018:

- in eight states (Kansas, Louisiana, Tennessee, South Dakota, Massachusetts, Wisconsin, Indiana, and South Carolina), over 90 percent of students with disabilities who participated in CTE passed technical skill assessments;
- in 13 states, 80-89 percent of students with disabilities who participated in CTE passed technical skill assessments; and
- in 31 states, Puerto Rico and the Virgin Islands, the gap in the passing rate between IDEA students and all CTE students is no greater than 10 percentage points (Figure 5).

Career/college readiness is also measured by the secondary placement rate, the percentage of CTE students who continue postsecondary education/advanced training or get employed shortly after they leave high school. This indicator not only shows how effective a CTE program is, but also tells

us how ready students are for college/career. Table 5 shows that among students with disabilities who participated in CTE:

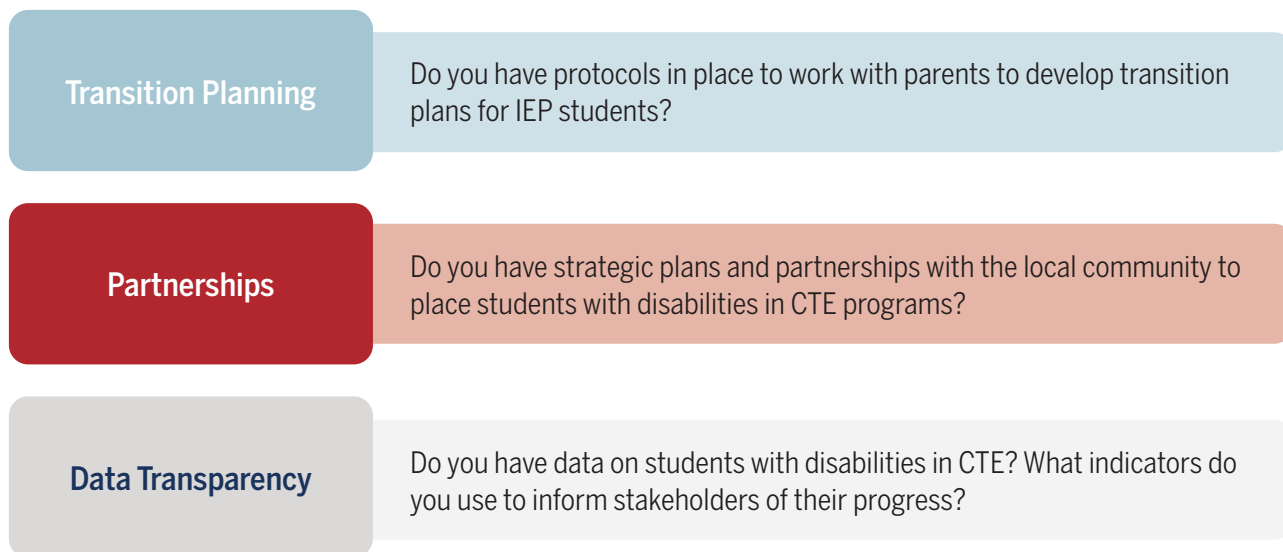
- three out four (75 percent) had a placement after high school in 2018, with an increase of 3 percentage points from 2014;
- in 15 states, above 90 percent had a placement after high school in 2018;
- nationwide, in two-thirds of the states, 75 percent or above had a placement after high school in 2018;
- compared with the overall placement rate of CTE students, the gap was smaller than 5 percentage points in 15 states (i.e. Hawaii, Maine, New Jersey, Georgia, Idaho, Nevada, South Carolina, Colorado, Vermont, New York, Massachusetts, Wisconsin, South Dakota and the Virgin Islands) in 2018; and
- compared with the overall placement rate of CTE students, the gap was smaller than 10 percentage points in 36 states (including the District of Columbia and the Virgin Islands) in 2018.



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Figure 6. Three considerations when implementing CTE for students with special needs:



Considerations and resources for school leaders:

As the data show, CTE provides many benefits for students with special needs. School leaders may consider three good practices—transition planning, partnerships, and data sharing—when implementing CTE for students with special needs (Figure 6).

- To develop feasible and promising transition plans for IEP students, school districts may consider developing protocols that promote collaboration between special educators and CTE teachers, involving parents and other stakeholders.
- To create work-based learning opportunities for IDEA students, school leaders may consider reaching out to the community and partnering with local businesses and employers.
- To better serve students with special needs, school leaders may consider sharing with the community (i.e. parents, teachers and other stakeholders) key achievement data, such as CTE participation rate, graduation rate, English and math proficiency rate, and secondary placement rate.

The National School Boards Association (NSBA) shares best practices of special education in some school districts.

- In Indiana, the MSD Wayne school district operates a dedicated transition center for 18- to 22-year-old special education students, including an offsite classroom for students to use as a “home base” while exploring their community for employment and service opportunities.
- In Missouri, the Special School District (SSD) emphasizes each student’s transition from adolescence to adulthood and focuses on identifying the training and supports that the student will need as an active adult in the community.
- In South Carolina, Greenville County Schools created building-based enterprises within high school settings to make sure that students transition into job placements with the appropriate employability skills necessary to be successful.

Limitations

The data we used in this factsheet are consolidated data from each state and published by the U.S. Department of Education. As is known, states implement different standards for academic attainment and graduation and sometimes make changes over the years. Therefore, caution should be exercised when interpreting the statistics in this factsheet.



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 1. Percentage of students with disabilities in the CTE student population at the secondary level

States Profiles

State	2007-08 percentage	2017-18 percentage	Change 2008 vs 2018
Arkansas	3%	11%	8%
North Dakota	7%	14%	7%
Delaware	10%	15%	5%
Maine	25%	28%	3%
District of Columbia	8%	12%	3%
Wyoming	7%	10%	3%
Puerto Rico	11%	13%	2%
Pennsylvania	26%	28%	2%
Indiana	11%	13%	2%
South Carolina	8%	10%	2%
New York	16%	18%	2%
Idaho	6%	8%	2%
New Hampshire	15%	16%	2%
Arizona	7%	9%	2%
Alaska	10%	11%	1%
Washington	10%	12%	1%
Vermont	18%	19%	1%
Maryland	9%	10%	1%
Georgia	11%	12%	1%
Nebraska	12%	13%	1%
Illinois	12%	13%	1%
Colorado	9%	9%	0%
Florida	9%	9%	0%
Wisconsin	12%	12%	0%
New Jersey	15%	15%	0%
Michigan	12%	11%	0%
Kansas	10%	9%	0%
Massachusetts	20%	19%	-1%
Louisiana	4%	3%	-1%
Iowa	12%	11%	-1%
Ohio	18%	15%	-2%
Oregon	14%	11%	-3%
West Virginia	15%	12%	-3%
Texas	12%	9%	-3%
Kentucky	13%	10%	-3%
Montana	10%	2%	-8%

Note: States with missing data or zero number are excluded from the table. SOURCE: <https://perkins.ed.gov/pims/DataExplorer/CTEParticipant>



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 2. School completion rate of students with disabilities in CTE at the secondary level, by state: Year 2014–18

State	2014	2015	2016	2017	2018
National Average	92%	92%	91%	93%	91%
Alabama	90%	90%	91%	93%	91%
Alaska	63%	87%	82%	80%	81%
Arizona	97%	97%	99%	98%	98%
Arkansas	96%	87%	96%	93%	96%
California	87%	88%	85%	86%	-
Colorado	77%	70%	73%	69%	82%
Connecticut	88%	91%	97%	81%	15%
Delaware	96%	96%	92%	87%	94%
District of Columbia	89%	79%	89%	100%	100%
Florida	85%	87%	90%	91%	95%
Georgia	64%	88%	92%	93%	95%
Hawaii	96%	98%	97%	97%	97%
Idaho	96%	95%	99%	95%	87%
Illinois	86%	86%	97%	97%	93%
Indiana	99%	99%	100%	99%	99%
Iowa	90%	91%	94%	99%	83%
Kansas	97%	95%	96%	97%	95%
Kentucky	99%	99%	98%	98%	98%
Louisiana	97%	96%	96%	96%	97%
Maine	88%	88%	85%	86%	88%
Maryland	96%	96%	98%	98%	98%
Massachusetts	94%	94%	95%	94%	95%
Michigan	91%	91%	94%	93%	95%
Minnesota	98%	98%	97%	98%	98%
Mississippi	74%	79%	0%	78%	72%
Missouri	98%	98%	99%	99%	99%
Montana	98%	97%	98%	98%	98%
Nebraska	97%	97%	96%	96%	95%
Nevada	85%	89%	92%	88%	91%
New Hampshire	99%	100%	98%	98%	99%
New Jersey	100%	100%	100%	100%	100%
New Mexico	85%	85%	85%	86%	84%
New York	83%	83%	86%	89%	90%
North Carolina	100%	100%	100%	99%	99%
North Dakota	97%	96%	97%	98%	97%
Ohio	99%	98%	92%	97%	99%
Oklahoma	99%	99%	99%	99%	96%



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 2. Continued

State	2014	2015	2016	2017	2018
Oregon	65%	64%	79%	74%	76%
Pennsylvania	99%	99%	99%	99%	99%
Puerto Rico	99%	99%	100%	100%	100%
Rhode Island	96%	95%	91%	84%	91%
South Carolina	89%	90%	88%	87%	86%
South Dakota	95%	95%	94%	95%	96%
Tennessee	96%	96%	87%	96%	97%
Texas	95%	95%	96%	95%	94%
Utah	97%	84%	84%	86%	88%
Vermont	99%	96%	98%	99%	99%
Virgin Islands	88%	95%	78%	80%	43%
Virginia	99%	99%	98%	98%	98%
Washington	89%	81%	81%	83%	83%
West Virginia	100%	100%	100%	100%	100%
Wisconsin	89%	91%	93%	91%	91%
Wyoming	97%	98%	99%	97%	97%

Note: California 2018 data were unavailable. Data source: <https://perkins.ed.gov/pims/DataExplorer/Performance>



“Research shows that students with disabilities who participated in CTE are more likely to have higher graduation rates than those who did not.”

Table 3. Graduation rates of students with disabilities who participated in CTE, by state, 2014 vs 2018

State	IDEA student graduation rate		Gap in graduation rate (IDEA students - all CTE students)	
	2014	2018	2014	2018
Pennsylvania	99%	99%	0%	0%
Nebraska	99%	99%	0%	0%
Kansas	98%	99%	-1%	0%
Maryland	97%	99%	-2%	-1%
Montana	98%	98%	0%	0%
Kentucky	98%	98%	0%	-1%
Arizona	97%	97%	-1%	0%



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 3. Continued

State	IDEA student graduation rate		Gap in graduation rate (IDEA students - all CTE students)	
	2014	2018	2014	2018
Hawaii	97%	97%	-2%	-1%
New Jersey	100%	97%	0%	-1%
West Virginia	95%	97%	0%	-1%
Connecticut	68%	97%	-24%	-2%
Delaware	98%	97%	-1%	-2%
District of Columbia	73%	96%	-18%	1%
Arkansas	96%	96%	-1%	-1%
Oklahoma	78%	96%	-6%	-1%
Florida	88%	95%	-6%	-2%
Missouri	95%	95%	-1%	-1%
Idaho	98%	95%	-1%	-1%
Tennessee	93%	95%	-4%	-3%
New Hampshire	93%	95%	-4%	-3%
Puerto Rico	93%	94%	-2%	-1%
Texas	95%	94%	-1%	-2%
Oregon	67%	93%	-18%	-3%
Utah	79%	93%	-14%	-2%
Ohio	99%	92%	-1%	-3%
Wisconsin	89%	91%	-7%	-7%
Virgin Islands	94%	90%	-2%	11%
Wyoming	85%	90%	-9%	-7%
Vermont	95%	90%	-2%	-4%
Maine	89%	90%	-4%	-3%
New Mexico	90%	89%	0%	-4%
Michigan	88%	89%	-8%	-8%
Massachusetts	85%	88%	-7%	-6%
Indiana	86%	88%	-9%	-7%
South Carolina	80%	88%	-17%	-11%
South Dakota	94%	87%	-4%	-9%
Alaska	72%	86%	-18%	-9%
Virginia	72%	84%	-25%	-14%
Georgia	55%	84%	-35%	-12%
Rhode Island	90%	84%	-7%	-10%
Nevada	44%	83%	-40%	-10%
Illinois	86%	83%	-10%	-12%
New York	75%	83%	-12%	-9%
Iowa	89%	82%	-3%	-6%
Alabama	85%	80%	-4%	-10%



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 3. Continued

State	IDEA student graduation rate		Gap in graduation rate (IDEA students - all CTE students)	
	2014	2018	2014	2018
Washington	75%	79%	-11%	-10%
North Dakota	82%	78%	-13%	-17%
Louisiana	79%	76%	-14%	-14%
Minnesota	72%	75%	-18%	-17%
Mississippi	74%	72%	-18%	-21%
Colorado	65%	71%	-20%	-19%
National average	86%	89%	-8%	-5%

Note: North Carolina and California have missing data in 2014 or 2018.

Data source: <https://perkins.ed.gov/pims/DataExplorer/Performance>

Table 4. Percentage of students with disabilities who participated in CTE and met academic proficiency levels, by selected state: 2008 vs. 2018

State	Reading/English Language Art		State	Mathematics	
	2008	2018		2008	2018
Massachusetts	9%	74%	Florida	6%	45%
Georgia	19%	41%	South Carolina	25%	62%
Oregon	12%	34%	Massachusetts	8%	38%
Florida	22%	42%	Iowa	10%	33%
South Carolina	28%	45%	Tennessee	9%	23%
Ohio	63%	74%	Pennsylvania	10%	19%
Iowa	14%	25%	Virginia	84%	92%
Maine	4%	12%	Ohio	61%	65%
Minnesota	21%	26%			
Michigan	18%	21%			
Arkansas	3%	4%			
Mississippi	10%	11%			

SOURCE: U.S. Department of Education, Office of Career, Technical, and Adult Education, Consolidated Annual Report (CAR) States report data based on their definitions of CTE participant and CTE concentrator.

Note: Data for some states were not available for either 2008 or 2018, hence no calculation was conducted in those states. States without increase in the percentages from 2008 to 2018 are not reported in this table.



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 5. Secondary placement rate of students with disabilities who participated in CTE, by state, 2014 vs 2018

State	IDEA students		Gap in secondary placement rate (IDEA students – All CTE students)	
	2014	2018	2014	2018
Hawaii	100%	100%	0%	0%
New Jersey	98%	98%	-1%	-1%
Georgia	71%	98%	-14%	-2%
Nebraska	94%	95%	-4%	-3%
Nevada	89%	95%	-7%	-3%
Colorado	92%	95%	-5%	-3%
South Carolina	95%	95%	-2%	-3%
New York	91%	94%	-6%	-4%
Vermont	89%	94%	-7%	-3%
Massachusetts	94%	92%	-3%	-4%
Idaho	78%	92%	-13%	-3%
Wyoming	91%	92%	-6%	-5%
Michigan	88%	91%	-8%	-5%
Virginia	95%	91%	0%	-5%
Wisconsin	88%	91%	-8%	-5%
Missouri	86%	89%	-9%	-6%
Tennessee	85%	89%	-8%	-6%
Kansas	86%	88%	-5%	-5%
Ohio	82%	88%	-9%	-6%
Virgin Islands	45%	88%	-1%	-4%
Pennsylvania	79%	86%	-10%	-6%
Arkansas	82%	86%	-13%	-9%
Oklahoma	86%	85%	-6%	-9%
North Carolina	86%	85%	-8%	-9%
Kentucky	80%	85%	-10%	-8%
Alabama	91%	82%	-3%	-9%
South Dakota	83%	82%	-3%	-5%
Mississippi	-	81%	-	-8%
Montana	78%	81%	-8%	-10%
West Virginia	86%	80%	-5%	-9%
Iowa	81%	75%	-7%	-12%
Florida	73%	73%	-9%	-8%
District of Columbia	72%	73%	-11%	-8%
Indiana	79%	73%	-7%	-7%
Arizona	59%	70%	-13%	-11%
Puerto Rico	45%	67%	-2%	-5%
North Dakota	48%	67%	-20%	-13%



FACTSHEET #2

STUDENTS WITH DISABILITIES IN CAREER AND TECHNICAL EDUCATION (CTE)

Table 5. Continued

State	IDEA students		Gap in secondary placement rate (IDEA students – All CTE students)	
	2014	2018	2014	2018
Maryland	58%	66%	-18%	-17%
Utah	60%	65%	-9%	-9%
Alaska	61%	59%	-20%	-10%
Texas	58%	57%	-13%	-13%
Washington	49%	49%	-22%	-22%
Rhode Island	41%	47%	-24%	-23%
New Mexico	49%	45%	-10%	-12%
Delaware	38%	45%	-19%	-21%
Maine	91%	45%	0%	0%
Illinois	34%	40%	-15%	-24%
Connecticut	84%	40%	-4%	-25%
Minnesota	36%	37%	-31%	-31%
New Hampshire	38%	34%	-23%	-21%
Oregon	28%	33%	-26%	-25%
Louisiana	33%	27%	-31%	-30%
California	88%	-	-4%	-
National average	72%	75%	-10%	-10%

Note: Mississippi and California data for 2014 or 2018 not available.

Data source: <https://perkins.ed.gov/pims/DataExplorer/Performance>