Beyond the Numbers

A Toolkit for Communicating CTE Data

ADVANCE >> CTE
State Leaders Connecting Learning to Work

Contents

Introduction

States collect a multitude of data about Career Technical Education (CTE). They then report this data to comply with federal and state requirements; provide technical support to local institutions; and in some cases, drive decisionmaking to ensure that *each* learner has access to high-quality CTE programs and programs of study.

Meeting these goals means that a wide variety of stakeholders need access to timely, accurate CTE data:

● **K-12 and postsecondary leaders and practitioners** need the data to guide their program improvement efforts and close equity and access gaps.

● **Learners and their families/caregivers** need the data to understand their education options and make informed academic and career plans.

● **Employers** need the data to better assess whether the local talent pipeline will be able to meet the demand for skilled workers.

● **Local and state policymakers** need the data to allocate resources and update policy — and to ensure that their regions attract businesses that can provide jobs and bolster the local economy.

The Beyond the Numbers toolkit contains guidance, best practices and customizable tools that CTE leaders can use to create communications that help stakeholders better understand and act on CTE data. The primary audience for the toolkit is state leaders, but district and K-12 or postsecondary institution leaders may also be able to use these resources for their CTE data communications.

Too often, states simply report data without providing context to help audiences understand whether the data shows that CTE is helping learners succeed, businesses prosper and communities thrive. Providing this context — and tailoring it to target audiences — is essential. This approach helps stakeholders make decisions and take actions so that more learners benefit from high-quality CTE programs and programs of study that lead to credentials of value and well-paying jobs.

To help state CTE leaders create effective communications materials that both report CTE data and help audiences understand the larger story the data is telling, Advance CTE and the Association for Career and Technical Education (ACTE) convened a Shared Solutions Workgroup of national and state leaders. The workgroup identified promising practices and developed recommendations for improving the sharing and use of CTE data among internal and external stakeholders under the Strengthening Career and Technical Education for the 21st Century Act (Perkins V). Those recommendations led to the development of this toolkit and a companion report focused on principles for reporting data.

> **TIP**
> All of the planning tools and templates in this toolkit are available to download and customize to meet your needs. Go to https://bit.ly/3khsS40.
>
> **DOWNLOAD** ⬇

Telling the CTE Data Story: More Than Just Numbers

Effectively communicating CTE data is about more than checking a box for compliance or providing every piece of available data to every possible audience. It is about providing the information with context so audiences understand the story the data is telling — and can use the information to meet goals such as closing equity and access gaps, improving program quality, increasing learner success and building support for CTE.

States need to help their audiences connect the dots to understand what the data shows about whether CTE is helping learners achieve academic and career success — and preparing the workforce that businesses and communities need to thrive. This approach often requires using data from more than one source and going beyond statewide totals or data required by Perkins V. For example, you may need to use labor market information to show what the high-skill, high-wage, in-demand jobs are in the local area and how CTE is preparing learners for careers in those fields. Or you may need to report disaggregated data to help advocacy organizations identify under-served populations and push for more resources in those communities.

You may want to read the toolkit from cover to cover to learn more about creating effective data communications. Or you may want to jump to certain sections. The toolkit includes six main steps:

- Step 1: Identify Your Strategic Goal and Audience(s):
  - ◗ 1A: Identify the Strategic Goal Your Communications Will Support;
  - ◗ 1B: Brainstorm Potential Audiences; and
  - ◗ 1C: Prioritize Your Audiences.
- Step 2: Determine What You Want Your Audience(s) to Know and Do.
- Step 3: Select Data to Tell the Story.
- Step 4: Create Your Materials:
  - ◗ 4A: Determine the Type of Resource(s) You Will Create; and
  - ◗ 4B: Craft Your Story and Design Your Materials.
- Step 5: Identify Evaluation Measures.
- Step 6: Build an Action Plan.

Each step includes examples and planning tools to help you develop materials to meet different goals and communicate CTE data to different audiences. The planning tools build on one another, so information you enter in the tool for Step 1A, for example, will also be used in the tools for Steps 2-6. Step 4 also includes templates that you can download and customize to implement your plans.

You can complete the planning tools in the space provided in this toolkit. Or you can got to https://bit.ly/3khsS4O to download digital versions of the planning tools and the templates. The planning tools are available in one Excel document to make repeating information from tool to tool easier. The templates are available in Adobe InDesign, Adobe Illustrator and PowerPoint (see pp. 20-23 for more details).

Designing User-Friendly Data Reports

This toolkit focuses on how to create materials to communicate CTE data and help audiences understand the story the data is telling. Visualizing the data in engaging, user-friendly ways through charts, maps and other graphics is essential to making the information accessible to different audiences. Beyond the Numbers: Design Principles for CTE Data Reporting, a companion to this toolkit, provides a set of overarching guidelines for creating data tools and visualizations that are purposeful, accessible, visually compelling and understandable. Find out more at https://bit.ly/31lRsKr.

Identify Your Strategic Goal and Audience(s)

STEP 1A
Identify the Strategic Goal Your Communications Will Support

The first step for creating effective communications is to identify what you want to accomplish. To start, review your state's strategic plan for CTE (or the equivalent) and identify the overarching goal your data communications will support. For example, is this work aimed at increasing participation in CTE among under-represented groups? Attracting qualified CTE teachers to the field? Increasing state funding for CTE? Increasing employer participation in work-based learning or on advisory councils? Closing access gaps?

To target your efforts, limit yourself to one goal for each communications effort. It may be tempting to try to support multiple goals at once, but that approach will make it difficult to provide the context your audience needs to understand the story the data is telling. If you identify multiple strategic goals that you want to meet, you can repeat the process in this toolkit for each goal.

Aligning your work with existing efforts to communicate about CTE within and across state agencies and organizations is also essential. Therefore, you should coordinate your work with other state agencies, particularly their communications departments. This engagement will help prevent duplication and ensure consistent messaging and branding across state CTE communications.

Following is the strategic goal used as an example throughout this toolkit. Page 5 includes a tool you can use to describe your own strategic goal and begin planning your communications.

> **TIP**
> Effective communications are about more than just pushing out information — they can be a key part of efforts to move the needle on your big-picture goals. If your state does not have a separate strategic plan for CTE, look at your Perkins V plan and think about your overarching goals for advancing CTE in your state. After you have identified the big-picture goals, come back to this toolkit to plan how to communicate your CTE data to help you meet each goal.

SAMPLE PLANNING TOOL

Identify the Strategic Goal Your Communications Will Support
In the space below, describe your strategic goal for your communications.

Strategic Goal	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.

PLANNING TOOL

DOWNLOAD

Identify the Strategic Goal Your Communications Will Support

In the space below, describe your strategic goal for your communications.

Strategic Goal	

STEP 1B
Brainstorm Potential Audiences

Once you have identified your strategic goal, identify your audiences — the people you need to reach to meet that goal. Different audiences will need different types of information to inspire them to act. After you develop a list of audiences, you can then tailor your communications to meet the various audiences' needs.

For this step, brainstorm a list of all possible audiences. Step 1C will help you set priorities.

One person can create an initial list, but involving others, such as members of the communications team, will help you identify audiences you may not have considered. Major categories of audiences to consider include:

- Learners and families/caregivers:
  - K-12; and
  - Postsecondary.
- Practitioners, including administrators, teachers and school counselors:
  - K-12; and
  - Postsecondary.
- Industry representatives.
- State and local policymakers.
- The media and general public.

Use these categories as a starting point but also consider additional audiences, such as job seekers, CTE advocates and workforce development organizations, depending on your strategic goal. You may also want to subdivide these categories to further target communications. For example, you may differentiate middle school and high school learners and families/caregivers rather than group them into one K-12 audience. Or you may differentiate communications for state and local policymakers rather than lumping them into one group.

Following is an example of audiences for data communications related to the sample strategic goal — increasing participation in CTE among under-represented groups at the secondary and postsecondary levels. Note: This example is not meant to be comprehensive; it is intended to help you start thinking through your own list. Based on your context, your list may include other groups.

SAMPLE PLANNING TOOL

Brainstorm Potential Audiences

Create a list of potential audiences based on the strategic goal you identified in Step 1A. Start with general categories and then drill down to get more specific.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.

Audience
K-12
• Learners
• Families/caregivers
• High school counselors
• K-12 CTE teachers
• Other K-12 teachers, staff and administrators
Postsecondary
• Two- and four-year postsecondary learners
• Adult education learners
• Academic and career advisors
• Postsecondary CTE faculty
• Other postsecondary faculty, staff and administrators
Industry representatives
State and local policymakers
Media and general public

PLANNING TOOL
DOWNLOAD ⬇

Brainstorm Potential Audiences

Create a list of potential audiences based on the strategic goal you identified in Step 1A. Start with general categories and then drill down to get more specific.

Strategic Goal From Step 1A	

Audience

STEP 1C
Prioritize Your Audiences

You may find that your list of audiences is broad or overwhelming. If your list is too long or too varied, think about whom you most need to reach with each communication — these will be your primary audiences. While other audiences on your list may find the information relevant, they may not be your target for this communication. These audiences could be considered peripheral for this purpose, or you may decide to create separate communications for them.

For example, if your goal is to increase participation in CTE among under-represented groups, you may list learners and practitioners as audiences. But practitioners may need additional details that learners do not need, such as disaggregated data on participation by particular learner groups, so you may need to create different communications for them.

Following is an example of primary and peripheral audiences for communications related to the sample strategic goal — increasing participation in CTE among under-represented groups at the secondary and postsecondary levels. In this example, the state is focusing on K-12 learners, K-12 families/caregivers and postsecondary learners as the primary audiences. Based on your goal, your list may be different.

SAMPLE PLANNING TOOL

Prioritize Your Audiences

List the audiences from Step 1B in the table, organized into primary and peripheral categories.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.

Audience
PRIMARY AUDIENCES
K-12 learners
K-12 families/caregivers
Postsecondary learners
PERIPHERAL AUDIENCES
High school counselors
Postsecondary academic and career advisors
K-12 CTE teachers
Other K-12 teachers, staff and administrators
Postsecondary CTE faculty
Other postsecondary faculty, staff and administrators
State and local policymakers
Media and general public

PLANNING TOOL

DOWNLOAD ⬇

Prioritize Your Audiences

List the audiences from Step 1B in the table, organized into primary and peripheral categories.

Strategic Goal From Step 1A	

Audience
PRIMARY AUDIENCES
PERIPHERAL AUDIENCES

Determine What You Want Your Audience(s) to Know and Do

Now that you have developed a list of primary audiences, you need to determine exactly what you want each audience to know and do as a result of your communications. For example, if your goal is to increase participation in CTE among under-represented groups and your primary audiences are K-12 and postsecondary learners, you could want them to know about the benefits of CTE and enroll in a CTE program. Or if your audience is policymakers, you could want them to know what groups are under-represented and what barriers are preventing their participation so the policymakers can change policy or increase funding to remove those barriers.

Determining these factors will help you identify the appropriate data and context to include in your communications to help your audience understand the story the data is telling.

Following is an example of what you may want the primary audiences identified in Step 1C to know and do.

TIP

As you work through the steps, keep engaging with other state agencies and organizations, particularly the communications departments, to coordinate the work. Aligning efforts within and across agencies will help prevent duplication and ensure consistent CTE messaging and branding.

SAMPLE PLANNING TOOL

Determine What You Want Your Audience(s) to Know and Do

List your primary audiences from Step 1C in the table below. For each audience, list what you want them know and do as a result of your communications.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.	
Audience	**What You Want Them to Know**	**What You Want Them to Do**
K-12 learners	Benefits of CTE	Enroll in a CTE program
K-12 families/caregivers	Benefits of CTE	Encourage their child to enroll in a CTE program
Postsecondary learners	Benefits of CTE	Enroll in a CTE program

PLANNING TOOL

DOWNLOAD ⬇

Determine What You Want Your Audience(s) to Know and Do

List your primary audiences from Step 1C in the table below. For each audience, list what you want them know and do as a result of your communications.

Strategic Goal From Step 1A	

Audience	What You Want Them to Know	What You Want Them to Do

Select Data to Tell the Story

Now that you have identified the primary audiences you want to target and what you want them to know and do, start to think about the data points you need to include in your materials. Not every communication will include every data point you identify in this step, but put yourself in your audience's shoes and think about what data will inspire them to act.

As you think about potential data points, be specific. Think about how to define the population — for example, if you are reporting on high school graduation rates for CTE, do you want to include all learners who participate in CTE? CTE concentrators? CTE completers? If you are comparing the CTE high school graduation rate to the statewide graduation rate, are you using the four-year adjusted cohort graduation rate, or are you including learners who took additional time? As you define the population, be as specific as possible about those details in your materials while minimizing jargon and unfamiliar terms.

Also, consider data points beyond those required for Perkins V reporting. Is there labor market information or a set of state college and career readiness metrics that would be valuable to include to help you meet your strategic goal? These choices will be based on the data you have available and your state context.

Identifying these data points now will help you decide whether you can reach all of your primary audiences with one resource or whether you will need to develop separate materials for each primary audience. In the example on the next page, for instance, the K-12 audience includes data points that are not relevant for the postsecondary audience, so the state will likely need to create separate materials for K-12 and postsecondary audiences. Note: The list on the next page is not intended to be comprehensive, and the data points you select will depend on your state context and your strategic goal.

TIP

The data points in the sample on p. 14 are just a few examples of data that might be valuable to each type of audience. It is important to engage with the audiences in your state to understand what each audience in your particular state or region wants and needs to know. Check to see if your state has already conducted any relevant focus groups or surveys. Local leaders may also want to consult their Comprehensive Local Needs Assessment.

TIP

Based on your audience and your goal, think about the granularity of your data. Will statewide data provide enough detail? Does the data need to be provided at the regional or community level? Is it useful to disaggregate the data by learner group or Career Cluster®?

Select Data to Tell the Story

SAMPLE PLANNING TOOL

Based on your primary audiences (Step 1C) and what you want them to know and do (Step 2), identify possible data points to include in your communications. Be specific. When you develop your materials in Step 4, you will finalize exactly which of these data points you will include.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.

Audience	What You Want Them to Know	What You Want Them to Do	Data Points
K-12 learners	Benefits of CTE	Enroll in a CTE program	• Percentage of high school learners who are CTE concentrators
K-12 families/caregivers	Benefits of CTE	Encourage their child to enroll in a CTE program	• Percentage of CTE concentrators who participated in early postsecondary opportunities (e.g., dual enrollment) • K-12 graduation rates for CTE concentrators compared to the statewide average for all learners • Number of credentials of value earned by high school CTE concentrators • Post-high school placement for CTE concentrators (postsecondary enrollment, employment, military enlistment) compared to the statewide average • Number and type of CTE programs and pathways that are available in their community • Ways CTE fosters the development of real-world skills (number and type of work-based learning opportunities, number of Career Technical Student Organizations, etc.) • Top five Career Clusters by enrollment and number of CTE programs in each field
Postsecondary learners	Benefits of CTE	Enroll in a CTE program	• Percentage of postsecondary learners who are CTE concentrators • Percentage of postsecondary CTE program completers who earned credentials of value • Outcomes for CTE concentrators after program completion (remain in postsecondary, are in advanced training, are in the military, are in a national community service program) • Percentage of CTE concentrators who were employed within six months of graduation/program completion • Top five Career Clusters by enrollment and number of CTE programs in each field

PLANNING TOOL
DOWNLOAD

Select Data to Tell the Story

Based on your primary audiences (Step 1C) and what you want them to know and do (Step 2), identify possible data points to include in your communications. Be specific. When you develop your materials in Step 4, you will finalize exactly which of these data points you will include.

Strategic Goal From Step 1A	

Audience	What You Want Them to Know	What You Want Them to Do	Data Points

Create Your Materials

STEP 4A
Determine the Type of Resource(s) You Will Create

With Steps 1-3 complete, you are ready to create your materials. You may already have an idea about the type of resource or resources you want to develop, and now is the time to finalize that decision.

Deciding what type of resource to create can be tricky. Budget and timing are often driving factors — a one-page PDF or print document that can be created in house is going to be cheaper and faster to create than an interactive microsite or video. But other factors play into the decision as well, including:

● How you plan to use the resource. Is the primary purpose for a meeting? For high school counselors to provide to their learners to encourage enrollment in CTE? For advocacy organizations to use in their efforts to change policy?

● How often you need to update the resource.

● Your audiences' preferred type of communication (for example, a short leave-behind versus a microsite) and preferred methods for receiving communications.

Following are some pros and cons for some communications resources to consider.

Type of Resource	Pros	Cons
One-pager/ infographic (print or online PDF)	● Is a good way to provide top-level or limited amounts of information. ● Can provide information in short, visual chunks so it is easy for the audience to scan and digest. ● Is portable. ● Is quick to produce. ● Often can be created in house with minimal resources.	● Has constraints on length. ● Requires the audience to go to another resource if they want more detailed information. ● Is static so making updates takes more time, and out-of-date versions may continue to circulate.

Type of Resource	Pros	Cons
Presentation slides (e.g., PowerPoint)	● Is a good way to provide top-level or limited amounts of information in real-time meetings. ● In real time, allows the presenter to verbally provide additional detail or context for the slides. ● Is easy to update and tailor for different audiences. ● Is quick to produce. ● Often can be created in house with minimal resources.	● Allows limited amounts of detail on slides. ● Can be misinterpreted when the presentation is not provided in real time (i.e., when a user downloads it from a website).
Interactive microsite/online dashboard	● Provides access to data for a wide range of audiences at any time. ● Has no space constraints — can be structured with successively deeper levels of detail for users who want to know more. ● Can be updated regularly and provide real-time information. ● Can allow the audience to select different views of data (e.g., the same data for different learner groups).	● Is more expensive to create. ● Requires regular maintenance. ● Does not offer an easy way to tailor the messaging to a particular audience. ● Often requires external support to create and maintain.
Video	● Is an effective way to personalize information and bring it to life. ● Is the preferred form of communication for younger audiences and mobile users. ● Can combine visuals and audio to walk users though complex concepts. ● Is easy to share through multiple channels (e.g., website, social media).	● Is usually not timely, so data can become out of date quickly. ● Is more expensive to create. ● Often requires external support to create. ● Is hard to update.
Social media and e-newsletter	● Is good for frequent, low-cost communication. ● Can be used to provide timely data. ● Can be repackaged from and drive audiences to other resources (e.g., one-pagers). ● Can be viewed by multiple audiences and shared to extend reach.	● Can get lost in the volume of posts. ● Is more difficult to tailor to a particular audience. ● To be seen and shared, requires regular posting and engagement in the discussion.

STEP 4B
Craft Your Story and Design Your Materials

Crafting the story is about more than writing text that reiterates the data in words — it involves providing context for the data and conveying your key messages. For example, if you have a set of data points about the percentage of learners participating in work-based learning, you can write a headline that reinforces the message that CTE helps learners explore careers and gain real-world experience. If you plan to include a set of data points on learner placement after high school, you can write text to highlight how successful CTE learners are after high school. (See examples on pp. 21-26.)

If your state already has messaging and branding for CTE, start there. Both your messages and the look and feel of your materials should support and align with your state's overall CTE communications.

A few guidelines to keep in mind as you craft your story and design your materials:

- **Be transparent and honest about what the data shows.** Crafting the story is not about spin. It is important that your audiences trust and value the data. The story may be positive: The data shows that you are making progress or have met your goal. But the data also may reveal challenges and that your state still has more work to do. If the data is not where you want it to be — or is not moving in the right direction — be careful not to assign blame to any one group. (Note: You will also need to be prepared to explain what the state will be doing to address those challenges.)

- **Use descriptive headlines and concise narrative to convey the point of the data and connect it back to your audiences and the goal.** Keep your audiences in mind, and show what is in it for them. Ultimately this work is about more than just numbers — it is about improving people's lives, so including quotes or short success stories can help personalize the data and make it real. The more you can ground the data in real-life examples, the greater the likelihood that your audiences will buy into your message and take the desired action.

- **Avoid jargon and explain what unfamiliar terms mean.** For example, do not just use the term "CTE concentrator." Spell out that a secondary CTE concentrator is a learner who has completed at least two courses in a single CTE program and a postsecondary CTE concentrator is a learner who has completed at least 12 credits in a CTE program or completed a program that encompasses fewer than 12 credits.

TIP

If your state does not have its own CTE messages and branding, check out Advance CTE's tools for promoting CTE. The resources include messages that were tested with families and learners as well as specific guidance for working with policymakers.

This toolkit also includes templates you can download and customize to help you get started.

TIP

While communicating data is the focus of this toolkit, consider including other visuals such as photos that can reinforce the key messages in your story. For example, if your goal is to increase participation in CTE among under-represented learner groups, adding a photo that includes learners from those groups will help your audience see themselves and connect your story to their own lives. If your state has photos of real learners — and the necessary permissions and rights for you to use those photos — even better. Online stock houses have thousands of photos that are inexpensive and easy to use, but the photo you select may turn up in other materials.

- **Avoid getting bogged down in detail that does not relate to the goal, but provide readers a link or a way to get additional information if they want to find out more.** For example, depending on the story you are crafting, you may need to show disaggregated data or you may not. But if you are creating a print piece, you can provide a link to a website with the disaggregated data, or if you are creating an interactive online resource, you can provide a way to drill down to another page or use a filter for more detail. Including links to source materials is always a best practice to allow readers to access additional information and better understand the data presented through the communications materials.

- **Provide a clear call to action explaining what you want users to do next.** The call to action can be simple — for example, "Visit this website to find out more." Or it can be more involved — for example, "Join the local industry advisory council to guide CTE offerings in your community." The action depends on your strategic goal and what you want your audience to know and do, but always be specific about next steps.

- **Be inclusive.** Creating inclusive materials requires using inclusive language, terminology and visuals. For example, use people-first phrases such as "people experiencing homelessness" rather than "homeless people." It also involves providing materials, particularly for families/caregivers and the general public, in multiple languages so that individuals for whom English is not their first language can understand the information. When choosing design elements, include visuals that are representative of your audience, such as a range of genders, ages and races/ethnicities, as appropriate.

- **Ensure that your materials are accessible.** The materials you create need to be usable by assistive devices, particularly screen readers. This is not only a best practice but also sometimes legally required — many states have passed specific laws requiring state and local agency publications and websites to be accessible. See Section508.gov for more information about requirements in your state and check out Beyond the Numbers: Design Principles for CTE Data Reporting for specific tips on making your materials accessible.

Visualizing the Data

This section focuses on how to craft your story and create your materials. For more on how to visualize the data in engaging, user-friendly ways, see Beyond the Numbers: Design Principles for CTE Data Reporting, a companion to this toolkit, at https://bit.ly/31IRsKr.
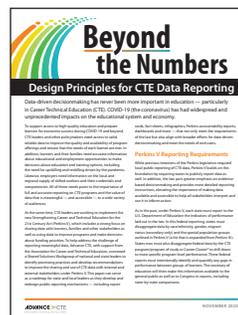
The following pages show examples of different resources for communicating CTE data and provide advice about how to write and design materials that go beyond the numbers. The examples in this guide include:

- One-pagers for K-12 and postsecondary learners;
- Presentation slides for K-12 practitioners;
- An interactive microsite; and
- Social media and e-newsletter graphics.

The online version of this toolkit includes templates you can download and customize:*

- One-pagers for:
  - K-12 learners;
  - Postsecondary learners;
  - K-12 practitioners;
  - Postsecondary practitioners;
  - State policymakers;
  - Industry representatives; and
  - The media/general public.
- PowerPoint presentation.

Note: The one-pager templates have been created in Adobe InDesign and Adobe Illustrator. If you do not have InDesign and Illustrator, you can use the templates as models and inspiration for your own tools.

One-Pager for K-12 Learners

DOWNLOAD ⬇

This section shows an example of a one-pager, which is available for you to download and customize. The annotations provide guidance for your own materials.

- **Strategic Goal:** Increase participation in CTE among under-represented groups at the secondary and postsecondary levels
- **What you want the audience to know:** Benefits of CTE
- **What you want the audience to do:** Enroll in CTE

CTE Works for You
Gain the Skills You Need for the Future You Want — WEST DAKOTA

Career Technical Education (CTE) gives you the opportunity to explore careers and acquire real-world skills while learning the academic content you need for your future.

A wide range of learners participate in CTE.

49% of high school seniors are CTE concentrators*

*Completed at least two courses in a single CTE program

CTE helps you explore careers and gain real-world experience in middle and high school.

700+ CTE programs are offered in 16 Career Clusters® across the state

51% of graduating CTE concentrators participated in work-based learning
including job shadowing, internships, apprenticeships and workplace readiness activities

36% of graduating CTE concentrators were members of a Career Technical Student Organization
participating in extracurricular activities related to their CTE program and learning leadership skills

See website.org for more details about available CTE programs, work-based learning and Career Technical Student Organizations.

CTE also helps you get an early start on college and careers in high school.

3,000+ high school CTE learners completed dual credit CTE courses
earning them college credit and saving time and money toward their degrees

1,515 credentials of value were earned by high school CTE learners in 2017–18
demonstrating their job readiness and helping them stand out in the job market

All data are from the 2018–19 school year unless otherwise noted.

CTE learners graduate high school at higher rates.

97% of CTE concentrators graduate in 4 years
State average, all learners: 89%

By learner group
▲ State average

Learner group	CTE	State average
Black	96%	85%
Latinx	97%	87%
White	98%	92%
Learners with disabilities	65%	44%
Learners from low-income families	89%	76%
Male	95%	88%
Female	98%	91%

CTE learners go on to succeed after high school.

After high school graduation:

76% of CTE concentrators were enrolled in some form of postsecondary education — 48% four-year college, 28% two-year college
State average, all learners: 54%

9% were employed

3% were in the military

You can get started now on the career you want.

Top 5 industries in West Dakota with openings for jobs that pay well but do not require a bachelor's degree (BA)

	Manufacturing	Health services	Transportation and utilities	Construction	Retail trade
Number of non-BA good jobs	95,000	43,000	42,000	32,000	29,000
Median wage	$58,000	$51,000	$61,000	$57,000	$51,000
Number of related CTE programs in the state	150	136	63	98	74

"I wasn't very interested in high school, and no one in my family had ever gone to college. But then I saw a video about the Health Sciences CTE program and students practicing getting trapped people out of a damaged building. I saw how what I would learn could help people in the real world. Now I am studying to be a nurse." —*Jose Ramos*

To find out more about CTE programs in your school and how to enroll, talk to your counselor or a CTE teacher.

Annotations

- Personalize the information for your audience — show what is in it for them. If your audience is employers, for example, you could change the headline to "CTE Works for Business: Preparing the Workforce You Need."
- Specify what population you are including (CTE concentrators, CTE completers, etc.), and define unfamiliar terms.
- Including other visuals, such as photos, can help reinforce your key messages.
- Descriptive heads provide context and tell the story.
- Specifying the time frame for the data allows audiences to know that it is current.
- Comparisons to state averages help provide context.
- The specific data you include may vary based on your context. For example, you may need to show data on different learner groups.
- Labor market information is often important to include. Based on your context and available data, you may want to provide regional or local data.
- Quotes from your target audience help bring the data to life.
- Clear calls to action help audiences know what to do with the information.

One-Pager for Postsecondary Learners

This section shows an example of another one-pager with the same goal but a different audience. It also is available for you to download and customize.

- **Strategic Goal:** Increase participation in CTE among under-represented groups at the secondary and postsecondary levels
- **What you want the audience to know:** Benefits of CTE
- **What you want the audience to do:** Enroll in CTE

CTE Works for You
Gain the Skills You Need for the Future You Want　　WEST DAKOTA

Career Technical Education (CTE) gives you the opportunity to explore careers and acquire real-world skills while learning the academic content you need for your future.

Many postsecondary learners participate in CTE.

32% of postsecondary learners are CTE concentrators*

*Completed at least 12 credits in a CTE program or completed a program that encompasses fewer than 12 credits

CTE helps you explore careers and gain real-world experience.

49% of graduating postsecondary CTE concentrators participated in work-based learning including job shadowing, internships, apprenticeships and workplace readiness activities

Programs offer flexible scheduling for postsecondary learners who have jobs, family care responsibilities or other commitments

CTE puts you on a path to success.

After postsecondary CTE program completion:

82% of CTE concentrators had earned a credential of value

37% remained enrolled in postsecondary education

76% were employed, in advanced training or in the military within 6 months
32% were employed
42% went on to advanced training

Numbers may total more than 100 percent because some learners may be counted in more than one category.

All data are from the 2018–19 school year unless otherwise noted.

Learning that works for America CTE

CTE programs are available statewide.

West Dakota Technical Center

Community College of Northern West Dakota

College of West Dakota

Community College of Eastern West Dakota

West Dakota Community College

Community College of Southern West Dakota

100+ CTE programs *are offered in* **16** Career Clusters®

at colleges across the state

Get started now on the career you want.

Top 5 industries in West Dakota with openings for jobs that pay well but do not require a bachelor's degree (BA)

	Manufacturing	Health services	Transportation and utilities	Construction	Retail trade
Number of non-BA good jobs	95,000	43,000	42,000	32,000	29,000
Median wage	$58,000	$51,000	$61,000	$57,000	$51,000
Number of related CTE programs in the state	33	23	21	34	15

"I had a part-time job to help pay the bills and was taking care of my ailing mother. I knew I wanted to work in health care but wasn't sure how to get into the field and what options were available. My advisor recommended CTE. I learned about different health care careers, and the flexible schedule meant I could take the classes I needed when I needed them. Now I work as a nursing assistant at a long-term care facility." *–Jose Ramos*

To find out more about CTE programs and how to enroll, visit website.org.

Materials aimed at postsecondary learners will have many of the same types of data as materials for a K-12 audience but with updated language and definitions.

At the postsecondary level in particular, learners often have responsibilities outside of school, so providing information about how CTE can work with their schedules and other benefits of CTE can help encourage learners to participate.

Providing information about how many CTE programs are available and where can help learners make choices about their postsecondary education.

Labor market information is even more important at the postsecondary level as learners finalize decisions about careers they want to pursue — and whether to enroll in a related CTE program.

Presentation Slides for K-12 Practitioners

DOWNLOAD ⊙

This section shows a few slides from a presentation with the same goal but adapted for a different audience and different type of resource. The full presentation is available for you to download and customize.

- **Strategic Goal:** Increase participation in CTE among under-represented groups at the secondary and postsecondary levels

- **What you want the audience to know:** Which learner groups are under-represented

- **What you want the audience to do:** Encourage learners from those groups to enroll in CTE

Many Learners in Our District Concentrate in CTE

CTE concentrator: Learner who has completed at least two courses in a single CTE program
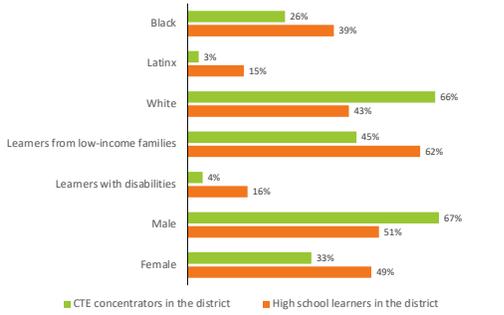
49% of high school seniors in our district **were CTE concentrators** in 2018-19

#CTEWorks • website.org — 6

> Live presentations give you an opportunity to walk viewers through top-level information, starting with data such as overall CTE participation or concentration rates.

But Some Learner Groups Are Under-Represented

CTE Concentration Rates by Learner Group

Learner Group	CTE concentrators in the district	High school learners in the district
Black	26%	39%
Latinx	3%	15%
White	66%	43%
Learners from low-income families	45%	62%
Learners with disabilities	4%	16%
Male	67%	51%
Female	33%	49%

#CTEWorks • website.org — Data is from the 2018-19 school year. 7

> Then you can provide disaggregated data to help uncover issues such as equity and access gaps.
>
> You can also look not just at which learner groups have higher rates of CTE concentrators but also at which ones have higher rates of program completion.

Concentration Is Also Not Proportional Across Career Clusters®

	All CTE	Human Services	Busines Management & Administration	Agriculture, Food & Natural Resources	Hospitality & Tourism	Arts, A/V Technology & Communications
Total CTE concentrators	24,336	9,661	8,198	4,099	3,513	2,635
Black	26%	32%	14%	22%	30%	17%
Latinx	3%	5%	3%	2%	5%	2%
White	66%	62%	69%	68%	52%	75%
Learners from low-income families	45%	50%	32%	57%	62%	32%
Learners with disabilities	4%	8%	2%	6%	8%	2%
Male	67%	55%	65%	78%	60%	55%
Female	33%	45%	35%	22%	40%	45%
Number of related CTE programs in the district	N/A	634	432	119	124	233

Data is from the 2018-19 school year. It reflects duplicate numbers as some learners can achieve concentrator status in more than one career field.

Under- or over-representation of 10 percentage points or more
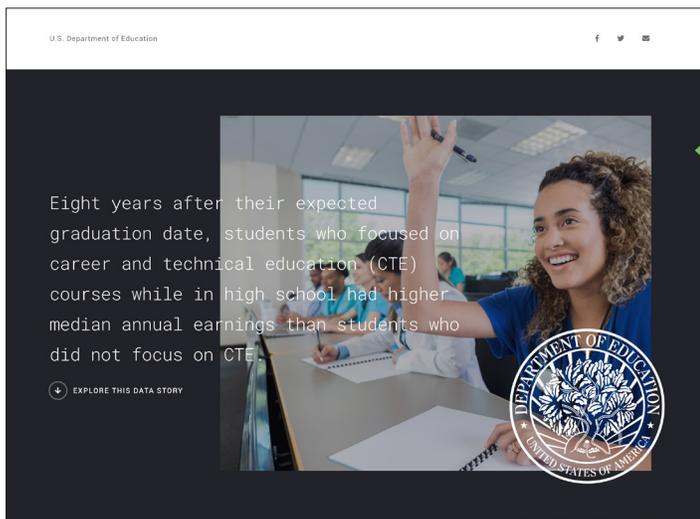
#CTEWorks • website.org — 9

> Further disaggregating the data by Career Cluster can also illuminate gaps.
>
> Linking Career Clusters to number of CTE programs can help uncover potential reasons for under- and over-representation.
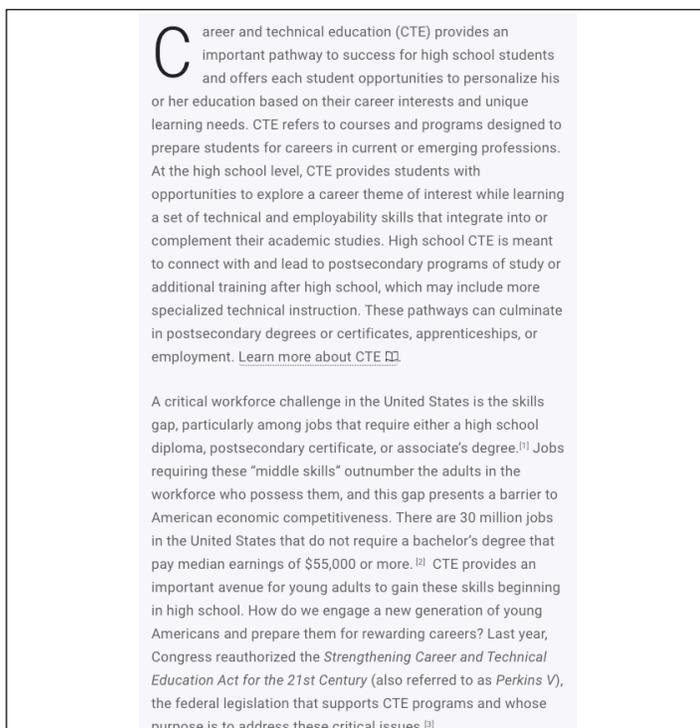
Interactive Microsites/Dashboards

Some states provide CTE data in the form of dashboards that present data (often large amounts of data) for users to interpret on their own. This section shows screenshots from a U.S. Department of Education website that aims to tell the CTE data story at the national level. The website is a useful starting point for states that want to create interactive online tools that provide context for users. The screenshots are annotated to highlight strengths and discuss ways that states considering a similar resource could tweak the format to tell the story even more effectively.

U.S. Department of Education Bridging the Skills Gap: Career and Technical Education in High School

https://www2.ed.gov/datastory/cte/index.html

U.S. Department of Education

Eight years after their expected graduation date, students who focused on career and technical education (CTE) courses while in high school had higher median annual earnings than students who did not focus on CTE.

⬇ EXPLORE THIS DATA STORY

The opening screen provides a hook for viewers by linking CTE to earnings. The main content is provided on one scrolling page. As you think about developing a similar tool, consider the pros and cons of different formats. For example, providing the content on one page conveys the full CTE story and decreases the risk of losing viewers as they click from page to page. But providing a set of bullets that allows users to see the content on the page at a glance and jump directly to different sections could be a useful navigation tool. Or you may consider breaking the content into multiple pages for viewers who want additional detail.

Career and technical education (CTE) provides an important pathway to success for high school students and offers each student opportunities to personalize his or her education based on their career interests and unique learning needs. CTE refers to courses and programs designed to prepare students for careers in current or emerging professions. At the high school level, CTE provides students with opportunities to explore a career theme of interest while learning a set of technical and employability skills that integrate into or complement their academic studies. High school CTE is meant to connect with and lead to postsecondary programs of study or additional training after high school, which may include more specialized technical instruction. These pathways can culminate in postsecondary degrees or certificates, apprenticeships, or employment. Learn more about CTE.

A critical workforce challenge in the United States is the skills gap, particularly among jobs that require either a high school diploma, postsecondary certificate, or associate's degree.[1] Jobs requiring these "middle skills" outnumber the adults in the workforce who possess them, and this gap presents a barrier to American economic competitiveness. There are 30 million jobs in the United States that do not require a bachelor's degree that pay median earnings of $55,000 or more. [2] CTE provides an important avenue for young adults to gain these skills beginning in high school. How do we engage a new generation of young Americans and prepare them for rewarding careers? Last year, Congress reauthorized the *Strengthening Career and Technical Education Act for the 21st Century* (also referred to as *Perkins V*), the federal legislation that supports CTE programs and whose purpose is to address these critical issues.[3]

The title and opening paragraph make clear that the site focuses on high school CTE and does not provide information on postsecondary CTE.
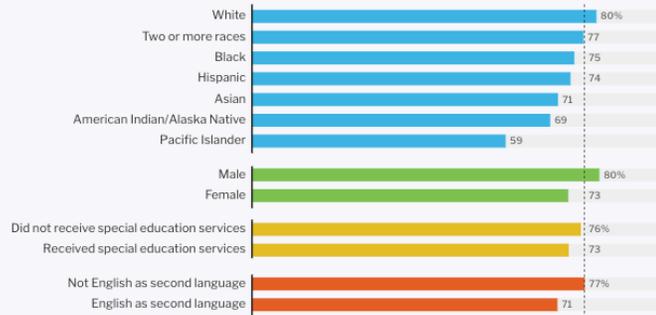
The next several paragraphs provide good context for the story, defining CTE terms and offering links to find out more.

Headlines provide relevant detail to make it easier for viewers to scan and understand the main points.

This site focuses on the national level and provides some data disaggregated at the state level. As you think about creating a state-level tool, consider whether and how you can provide local or regional detail as well.

Student participation in high school CTE was relatively high (77 percent).

Percentage of high school students who were CTE participants

77 percent of high school students were CTE participants (earned at least one credit in CTE)

|	
White	80%
Two or more races	77
Black	75
Hispanic	74
Asian	71
American Indian/Alaska Native	69
Pacific Islander	59
Male	80%
Female	73
Did not receive special education services	76%
Received special education services	73
Not English as second language	77%
English as second language	71

The charts are clear and provide information disaggregated by learner groups. They also provide notes on the data sources and an option to download the underlying data spreadsheet via icons in the lower right corner of each chart.

The site is transparent when the data does not show a clear benefit from CTE.

CTE concentrations in STEM and STEM-related career clusters represented one-third of all CTE concentrations in high school. However, the percentage of concentrations in these career clusters varied widely by state.

Percentage of high school CTE concentrations in STEM and STEM-related career clusters, by state: 2016–17

U.S. Average: 35%
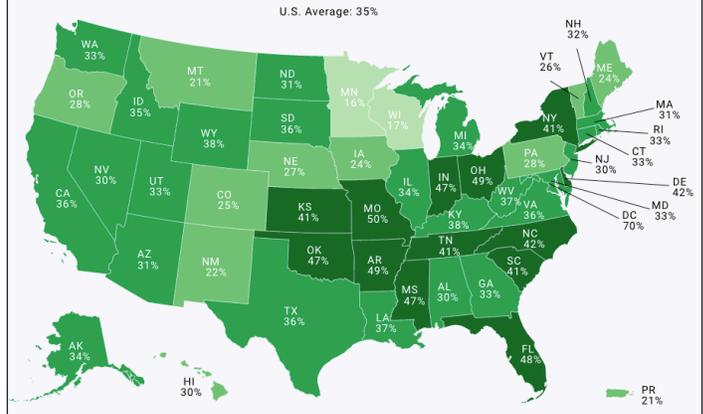
About half of both CTE concentrators and non-concentrators earned a postsecondary credential within eight years of their expected high school graduation. There was no measurable difference between CTE concentrators and non-concentrators earning a bachelor's degree; about one-quarter of CTE concentrators and non-concentrators earned a bachelor's degree. However, high school students who were CTE concentrators were more likely than non-concentrators to earn an associate's degree as their highest level of educational attainment within eight years of their expected high school graduation.

Nearly all public school districts offered CTE programs to high school students. About three-fourths of these districts offered CTE courses that earn both high school and postsecondary credit, commonly called dual credit.
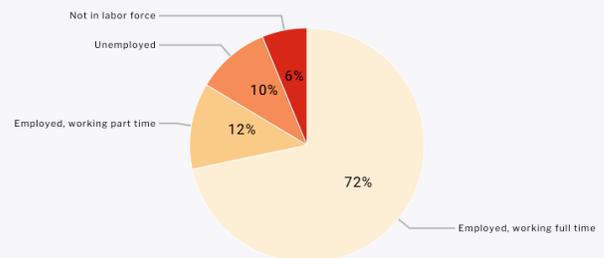
Among public school districts that offered CTE programs, percentage by activity offered

Offered on-the-job training, internships, practicums, clinical experiences, or cooperative education (co-op)	77%
Offered CTE courses that earned both high school and postsecondary credits	73
Offered mentoring by local employers	65
Offered student-run enterprises or services	55
Offered apprenticeships or pre-apprenticeship programs	31
Offered other work-based learning	16

The site combines postsecondary credit options with workplace learning and discusses the percentage of districts providing those options. If you have the data available, consider providing the percentage of learners or CTE learners participating in each option.

The site provides some information on employment outcomes. Depending on the data you have available, think about what would be most useful to your viewers. For example, do you have information about what the high-skill, high-wage, in-demand jobs are in your state and whether CTE concentrators have found employment in those areas?

Percentage distribution of high school **CTE concentrators** by employment status eight years after expected high school graduation

Not in labor force 6%
Unemployed 10%
Employed, working part time 12%
Employed, working full time 72%

Social Media and E-Newsletter Graphics

This section shows how to repackage information from the one-pagers for use in social media posts and e-newsletters.

CTE Helps You Explore Careers

700+

CTE programs are offered in 16 Career Clusters® across West Dakota

Learn more at website.org

#CTEWorks

CTE — Learning that works for America

> You do not have to start from scratch — you can repackage graphics from other materials to use in social media and e-newsletters.

> Reusing graphics from other materials allows you to create a series of posts to release over time. Creating multiple posts helps reinforce your message and increase the chances that users will see it.

CTE learners go on to succeed after high school.

76% of CTE concentrators were enrolled in some form of postsecondary education within six months of graduation

48% four-year college • 28% two-year college

West Dakota state average, all learners: 54%

Learn more at website.org

#CTEWorks

CTE — Learning that works for America

> Use descriptive heads so viewers can see your message at a glance when they are skimming their social media feed or email.

> Include a link where users can go to find out more.

You can get started now on the career you want.

Top 5 industries in West Dakota with openings for jobs that pay well but do not require a bachelor's degree

Manufacturing	Health services	Transportation and utilities	Construction	Retail trade
150	136	63	98	74

Number of related CTE programs in state

Learn more at website.org

#CTEWorks

CTE — Learning that works for America

> Include one or more hashtags.

Identify Evaluation Measures

The effectiveness of individual communications materials — and communications work overall — can be difficult to evaluate. But it is important to determine as much as possible whether your materials are reaching your primary audience and the impact your materials are having (i.e., whether that audience is taking the desired action). Assessing reach and impact will help ensure that you are investing your resources wisely and making progress toward your strategic goal.

Short-term measures that can be tracked to assess the reach of particular communications materials include website downloads, email opens, and social media likes and shares. Longer-term measures to assess impact include legislative activity, progress toward quarterly or annual milestones for your strategic goals, shifts in enrollment numbers, etc. These longer-term impact measures generally cannot be traced back to individual communications materials, but if you are making progress with your overall approach, that is an indication that your communications are having the desired effect.

Following is an example of evaluation measures for a one-pager aimed at K-12 learners to encourage learners from under-represented groups to enroll in CTE programs and programs of study.

TIP Audience feedback, even anecdotal feedback, is an important part of evaluation. Throughout your work, ask your audience if they have any feedback on specific materials — and ask your colleagues to do the same. Consider providing an email address or phone number for feedback. You also can conduct a brief online survey to get input on whether your communications are resonating so you can determine whether they are having the desired impact and how you can improve them. This feedback, along with other evaluation measures, can help guide any changes you make when you update your materials.

SAMPLE PLANNING TOOL

Identify Evaluation Measures

In the table below, fill in methods for how you plan to evaluate effectiveness.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.	
Audience	K-12 learners	
What You Want Them to Do	Enroll in CTE	
Type of Resource	One-pager	
Measures to Evaluate Effectiveness	**Short-Term Measures to Assess Reach**	**Longer-Term Measures to Assess Impact**
	• Number of copies distributed • Number of downloads from website	• Change in percentage of learners from under-represented groups that enroll in CTE programs • Change in percentage of those learners that go on to become CTE concentrators over time

PLANNING TOOL

DOWNLOAD ⬇

Identify Evaluation Measures

In the table below, fill in methods for how you plan to evaluate effectiveness.

Strategic Goal From Step 1A	

Audience	
What You Want Them to Do	
Type of Resource	

Measures to Evaluate Effectiveness	Short-Term Measures to Assess Reach	Longer-Term Measures to Assess Impact

Build an Action Plan

> After reviewing this toolkit, you know the steps you need to take to plan, create and evaluate your CTE data communications materials. Now it is time to put the pieces together and develop an action plan to implement these steps.

As part of your action plan, embed processes to make changes to the materials based on evaluation results or when updated data is released. A few tips:

● **Assign "ownership" for the materials.** Designate a specific person or position who will be responsible for leading the creation of each piece — overseeing other staff members working on the materials, gathering and responding to feedback, and updating the materials as results come in and new data is released.

● **Create an overall calendar,** showing when data and materials will be released throughout the year as well as key dates when data tools may be heavily used (e.g., CTE Month, state educator conferences, legislative sessions, educator recruitment periods, industry advisory council meetings).

● **Work with the communications team** to plan the release of your materials and how they will be distributed, including ensuring that all communications channels are updated and that all staff members know about and have access to the completed materials.

Following is one example of an action plan for creating and updating your materials. **Your plan will differ, depending on your team and the materials you are creating.** The goal is to be specific so team members know what they need to do and when. The more specific you can be, the more efficiently the work will progress.

SAMPLE PLANNING TOOL

Build an Action Plan

Fill in the table below to develop an action plan for creating and updating your materials.

Strategic Goal From Step 1A	Increase participation in CTE among under-represented groups at the secondary and postsecondary levels.

Audience	K-12 learners
What You Want Them to Do	Enroll in CTE
Type of Resource	One-pager

Measures to Evaluate Effectiveness	**Short-Term Measures to Assess Reach**	**Longer-Term Measures to Assess Impact**
	• Number of copies distributed • Number of downloads from website	• Change in percentage of learners from under-represented groups that enroll in CTE programs • Change in percentage of those learners that go on to become CTE concentrators over time

Activities Timeline	10/1-10/15: Identify strategic goal and audience, determine what we want them to know and do, select data
	10/16-11/16: Create materials, including reviews by State CTE Director; plan distribution with communications team
	11/16: Launch
	11-16-12/16: Review short-term evaluation measures
	2/16: Review materials to update data, evaluate whether revisions are needed
	6/16: Review materials to update data, evaluate whether revisions are needed
	9/1: Begin planning for annual update
Owner	Joe Smith

PLANNING TOOL

DOWNLOAD ⬇

Build an Action Plan

Fill in the table below to develop an action plan for creating and updating your materials.

Strategic Goal From Step 1A		

Audience		
What You Want Them to Do		
Type of Resource		
Measures to Evaluate Effectiveness	**Short-Term Measures to Assess Reach**	**Longer-Term Measures to Assess Impact**
Activities Timeline		
Owner		

Acknowledgments

ADVANCE >> CTE

State Leaders Connecting Learning to Work

careertech.org