# Illinois State Board of Education

# Illinois Career and Technical Education Program Evaluation

July
2022

**MI** ® **MEASUREMENT**
INCORPORATED

# Table of Contents

# Executive Summary

Formalized Career and Technical Education (CTE) in the United States dates back to the *Smith-Hughes Act of 1917* when it was more commonly known as vocational education (Perkins Collaborative Resource Network, 2022). Since that time, CTE has gone through various changes in meaning and scope as careers have evolved to meet societal needs.  In its most recent form, CTE programs are best understood as a collection of educational experiences that provide students with skills-based technical training in specific career fields. Included in these experiences are work-based learning opportunities to help students make connections to the workforce, and a focus on employment preparation so that students learn the appropriate steps towards achieving their career goals (e.g., resume writing, networking, interviewing, post-secondary planning).

More recently, there has been a renewed interest in CTE that has resulted from various factors including the loss of this country's leadership rank as a global competitor, increased costs of college tuition, and greater demands from industry sectors not requiring a 4-year college degree (The Burning Glass Institute, 2022).  What's more, research has documented many positive outcomes for CTE students, including those in the state of Illinois. For instance, in its 2021 CTE report to the Governor and state legislature, the Illinois State Board of Education (ISBE) showed that CTE concentrators (those who have taken two or more CTE courses within an approved program of study) posted *higher* four-year and six-year graduation rates than the state average (Ayala, 2022). Other studies found similar results that include higher graduation rates, greater credit accumulation, successful completion of college preparatory mathematics, and higher earnings for CTE students compared to non-CTE students (Neild, Boccanfuso, and Byrnes 2015; Hughes, 2022).

With all of this as impetus for CTE, Congress has passed several authorizations of the *Carl D. Perkins Act*, the most recent being *Perkins V* (*Strengthening Career and Technical Education for the 21st Century Act*) that was signed into law by President Trump in 2018. The state of Illinois was allocated over $45 million from this legislation and additionally contributed $43 million as matching funds to Education for Employment (EFE) systems. The State became one of the first in the nation to have their Perkins V Plan approved by the United States Department of Education in May 2020. The plan, developed through a partnership between ISBE and Illinois Community College Board (ICCB), along with collaboration from educators, businesses, and students, called for increased rigor in programming, a larger emphasis on work-based learning opportunities, and greater access to CTE for special populations.

Several years into its new plan, the CTE & Innovation Department at ISBE, which oversees the CTE delivery system, wanted to assess the implementation and effectiveness of career and technical education in the state. In July 2021, the Illinois State Board of Education contracted with **Measurement Incorporated** (MI) and the Consortium for Educational Research and Advancement (CERA), a minority/women owned business located in Illinois, to conduct an independent evaluation of its statewide CTE program, the first of its kind. The study sought to address the following objectives:

❖ To assess the overall structure and functions of the CTE system in Illinois State
❖ To gauge the quality of communication and support provided by/to all entities at all levels of the system to promote high quality CTE programs

❖ To determine whether there is equity of access and experience for all student subgroups

❖ To evaluate the extent to which CTE programs are implemented in accordance with nationally recognized best practices

❖ To identify barriers to effective CTE implementation by high schools and ACCs

❖ To assess stakeholder satisfaction with CTE policies and programs

❖ To identify relationships between varying contexts, levels of CTE implementation, and perceived outcomes

❖ To advance recommendations to improve Illinois' CTE system

The evaluation featured a robust design that reflects MI's approach to research; it included a comprehensive conceptual framework to guide the evaluation and data collection, multiple data sources to check the validity and reliability of findings, and mixed methods (i.e., quantitative and qualitative data collection procedures) to achieve a balance between breadth and depth of information.

The current report summarizes key findings from the comprehensive one-year evaluation that are organized into six sections. Following is a summary of findings that were presented in each section.

*IL CTE Context*

The CTE system was administered by ISBE and its partner organizations at the state level. At the regional level sat Boards of Control that provided oversight. The bulk of CTE implementation occurred at the local level that involved regional Education for Employment (EFE) systems of which there are 56 located across the state that include three systems organized by the Illinois Department of Juvenile Justice, the Illinois Department of Human Service of Mental Health Services, and the Office of Rehabilitation Services. Each EFE is a consortium of local districts/schools and Area Career Centers (ACCs). The EFEs plan, support, and help to deliver high-quality CTE to students in their systems. They also collaborate with local postsecondary institutions to enhance programming and support students in their academic growth.

Leaders in the system held a vision of CTE that collectively embraced career exploration, employability skills, college and career readiness, preparation for future jobs, and sustaining local economies. This vision was aligned with ISBE's Strategic Plan as well as its Perkins V Plan.

Most of the study's participating districts were configured as K-12 districts of medium size. Region 2 and Lake/Cook Counties comprised the largest number of districts. Students in the evaluation were predominantly white and identified as male. Females made up between 41-44% of the participants. Other race/ethnicity groups represented included Hispanic (11-18%), black/African American (7-10%), Asian and other (7-11%). Students who participated in special education and English Language Learner programs accounted for less than 25% of the sample.

*IL CTE System Supports*

Key findings suggest that the overall governance structure was satisfactory and that most entities provide good support and communication. Most notable, EFE directors played a vital role in the CTE multi-tiered system and provided support in various areas, many of which aligned with Illinois' Perkins V Plan. The triangulation of positive feedback for EFE directors from other key constituent groups, including school and district CTE staff, was highly consistent relative to other support entities. However, there were sharp distinctions between how

single- and dual-role directors were perceived: those in single-roles were more supportive, especially in building the capacity of CTE educators.

Areas in need of improvement were identified for community colleges, the EFE Boards of Control, and ISBE's CTE and Innovation Department. Starting with community colleges, the overall communication with colleges was good, but the actual support from colleges for CTE programs was, in some instances, less than what key stakeholder groups expected. There were tensions with respect to dual credit courses and the credentialing of high school staff to teach them. These perceptions varied widely among survey respondents.

Perceptions of the EFE Boards of Control membership, and their roles and responsibilities - including areas of oversight - were not consistent across key stakeholder groups. More specifically, there appeared to be few members on the EFE BOC and only 61% of district superintendents included themselves as members. To add, there were large discrepancies between the report of district superintendents and EFE directors in terms of areas of oversight provided by the BOC. Moreover, while most school and district staff were pleased with the communication and support, few understood the roles and responsibilities of the EFE's BOC.

The State's CTE and Innovation Department received lower ratings on communication and support than did other CTE entities in this evaluation. Communication delays due to staff turnover at the Department were cited as the primary reason for the difficulties that regional and local CTE stakeholders have experienced.

### IL CTE Implementation

The evaluation found that many schools and ACCs reported high implementation of key best practices that provided students with hands-on, relevant career-related experiences. There was a higher level of CTE best practice implementation at ACCs than at high schools. Even so, in both settings work-based learning (WBL) and business partnerships were at lower levels of implementation. This showed in the low levels of student participation in work-based learning opportunities.

Students in large numbers were very satisfied with their CTE courses. In general, students discussed career choices in classes and with counselors. More CTE concentrators at ACCs appear to take advantage of dual credit courses and WBL than do their non-concentrator peers. Many students expressed interest in taking more CTE courses but could not because of scheduling conflicts at their high schools.

Less than a fifth of all students surveyed participated in a Career and Technical Student Organization (CTSO), but many more were uncertain if they had such an experience. Those who did participate in CTSOs unanimously agreed that their leadership, public speaking, networking, and advocacy skills had been enhanced by their involvement with CTSO chapters. Lastly, formal career planning in middle and high school was not widespread despite its evidence-based benefits.

With respect to equity in CTE participation, more male students than females enrolled in WBL and had access to industry credentials; more female students took part in career fairs, dual credit courses, and CTSOs. A higher proportion of Students with Disabilities (SWD) than non-SWD participated in all CTE experiences. The same was true of EL compared to non-EL, except for CTSO membership.

The most prominent obstacle to CTE programming was recruitment of qualified staff. High school leaders had greater difficulty staying abreast of industry trends. ACC directors' challenges were course scheduling and graduation requirements.

Illinois' vision for CTE as articulated in their Perkins V Plan is to "empower and support all students to achieve their life and career goals through an aligned, equitable, and high-quality career pathway system" (pg. 4, Illinois State Board of Education 2020). To this end, the State outlined the following six goals of their plan.

1. Increase the percentage of students who obtain a postsecondary certificate, degree, or industry-recognized credentials.
2. Strengthen CTE offerings by improving access, program quality, and transition points between education and workforce systems and programs.
3. Increase participation in CTE dual credit coursework.
4. Increase responsiveness to local, regional, and state workforce needs based on labor market information and employer input.
5. Recruit and retain a robust and sustainable pipeline of CTE educators.
6. Expand access to quality work-based learning for all students

The evaluation found that most schools and ACCs were addressing these goals and more with success. The top program improvements included 1) increased awareness and enhanced image of career and technical education, 2) adding new CTE courses to meet industry needs/student interests, 3) offering college and career pathway endorsements and 4) increased WBL opportunities.

This section also highlighted positive student outcomes that were reported by school/district CTE staff, ACC directors, and students. For example, most school/district staff and ACC directors cited the same two outcomes, increased dual credit completion and increased knowledge of career options—both were key components of the State's Perkins V plan. Students reported increased knowledge of different career options, identification of possible careers, and better skills that can be applied to any job as well as tasks related to their career choice. Equally important, high school and ACC concentrators reported more benefits than non-concentrators.

It should be noted that the evaluation did not include CTE student achievement outcomes as required by the federal Perkins V legislation. Our rationale for excluding these data is that the available data are for the previous academic year and are not relevant to the study timeframe. Moreover, these outcomes are reported in the 2021 IL CTE report to the Governor.

## *Supports Associated with Implementation and Outcomes*

The relationship between supports, implementation, and outcomes are explored in this section of the report. What we found was that EFE directors play a vital role in supporting CTE implementation, which, ultimately, resulted in better outcomes in high schools. Furthermore, the analyses identified specific supports that should be universal across all programs. Recognizing that the availability of resources varies across the state, e.g., funding for full-time EFE directors, access to qualified individuals, the State will need to identify priority areas of supports and the ways in which these supports can be provided.

For their part, community colleges also provide valuable resources to high schools that impact implementation and outcomes. The level of access to these supports, however, varies across the state. Again, the State will need to identify priority areas and perhaps set a different level of expectation for community college involvement.

*Conclusions and Recommendations*

In the final section of the report, we translate our findings into suggestions for improving CTE policy and practices to elevate and sustain the status of CTE programs in Illinois. The chief recommendations are listed and described below.

1. **Re-examine the roles and supports provided by the various entities involved in the CTE delivery system.** Illinois' CTE system operates at several levels, with some of the players performing more than one role, resulting in limited capacity to support local programs. Furthermore, the leadership staffing is far from even across regions. This creates an opportunity for ISBE to take a hard look at the policies expected of downstream leaders—BOCs, EFEs, ACCs, and high school directors—so that (a) efficiencies and (b) supports can be rendered in a more equitable manner. Such a re-balancing of staffing and roles can enhance the implementation and growth of CTE programs. Closely related, this is an opportunity to re-align regions, so that there is greater access to resources—workforce boards and community colleges—for high schools and ACCs.  Lastly, we encourage more explicit articulation of the roles, responsibilities, and expected supports from each entity.  As the system evolves and improvements are made, regular and repetitive communication about the CTE system, expectations, and supports to the field, i.e., high schools, is imperative to the success of the program.

2. **Ensure that CTE is afforded equal play in the State's high school graduation requirements.** In recent years, the state and national CTE data have confirmed that CTE students post better outcomes than do their peers who do not pursue a CTE high school program. Yet most high school students do not have room in their schedules to enroll in CTE. In fact, many academically advanced students are discouraged from enrolling in CTE in favor of an AP program.  Given the state of the global economy, worker shortages, and enormous college student debt, now is the time to seriously advocate for giving CTE parity with AP in high school graduation policy.

3. **Streamline policies for CTE dual credit.**  ISBE could encourage greater involvement from ICCB to level the playing field by creating more policy equity across the State, as recommended by the Dual Credit Quality Act (Illinois General Assembly, 2018). Currently, decisions on dual credit are left up to the individual community colleges. To add, as per the State's Perkins V Plan, ICCB and ISBE should continue their focus on other supports identified for expanding dual credit, such as continued expansion of stackable credentials, improved access to higher education for underrepresented groups, and implementation of the State's Model Partnership Agreement.

   We would also recommend that HS CTE leadership has a seat at the table. Included in these discussions should be considerations for providing equipment and materials to support dual course classwork at the high school, as this was an important predictor of CTE implementation and outcomes.

4. **Continue to focus on certain areas of CTE implementation, including work-based learning opportunities and meeting industry needs.** Improving supports to high schools is one way to improve implementation. For their part, high schools should consider staffing the director role so that CTE program oversight gets its fair share of attention at the schools. Several areas of implementation that need improvement are business partners and work-based learning experiences, which go hand in hand. Ensuring that the CTE classroom meets current industry needs is another area of improvement and likely related to staffing and funding.

5.  **Improve data tracking and create more efficient protocols and processes for oversight.** High schools and Area Career Centers do not have the bandwidth to track post-secondary plans for students after they leave high school; however, ISBE could partner with ICCB and the Department of Labor to track post-secondary education participation, earnings, etc. Demonstrating participation in the labor force, particularly related to CTE courses will lend credibility to the program.

    To add, our review of protocols and processes developed by the CTE & Innovation department indicated that the department is taking positive steps towards improving tools, such as the Program Quality Review form, which is based on best practices outlined in ACTE's program of study framework. Even so, there are other tools that could be improved to increase their effectiveness and efficiency. For instance, the CLNA form is vague, the data are not quantifiable, and the information is highly subjective. Consider a survey format for the CLNA which can yield more useful information. Similarly, the desk audit and on-site monitoring form requires a lot of qualitative data entry, most of which can be converted to quantifiable fields which are better suited for aggregate analyses.

6.  **Intensify focus on the recruitment and preparation of a sustainable pipeline of CTE educators.** In its Perkins V Plan, the State has outlined several strategies that include licensure rule revisions, the development of a bridge program to recruit and prepare educators holding a teaching license in another area to teach CTE, and educator preparation programs such as the CTE Education Career Pathway grant that could include a more intensified focus on CTE. To this list we add the Educators Rising programs, which can be tailored to CTE educator preparations[1] and consideration of universal criteria for teacher qualification of dual credit courses, the latter of which will alleviate EFE directors' task of navigating variations across community colleges and create more equitable access to CTE instructors across the state.

7.  **Consider the use of an external evaluation more regularly.** This evaluation was the first of its kind and limited to one year. More frequent and longer evaluation studies will help the State to better track implementation progress and identify areas for continuous improvement. It can also be used to monitor the contributions of, and provide unbiased feedback to, the various support entities. Finally, external evaluation provides state-level data on the strengths of the CTE program, which can be used to advocate for more funding, participation, etc.

---

[1] See article*: https://www.newamerica.org/education-policy/reports/grow-your-own-teachers/a-look-at-the-data/*

# I. Introduction

Career and Technical Education (CTE) has had a long history in the United States dating back to the *Smith-Hughes Act of 1917* when it was more commonly known as vocational education (Perkins Collaborative Resource Network, 2022). Traditionally, CTE has taken a back seat to academic education, a track intended for the less academically able and the economically disadvantaged. However, today we are seeing a renewed spotlight on CTE, which in no small part is due to a confluence of several factors: America no longer leads the global economy, according to a recent World Economic Forum report (Schwab, 2019); it ranks 36th of 79 industrialized nations in mathematics literacy (The OECD Programme for International Student Assessment, 2018); and the COVID-19 pandemic has thrown the labor market into stark disarray. Clearly, in this dynamic global economy the connection between education and the workforce could not be more apparent.

There has also been emerging evidence about positive outcomes for CTE students, both in Illinois and in the nation at-large. In its 2021 CTE report to the Governor and state legislature, the Illinois State Board of Education (ISBE) showed that CTE concentrators (those who have taken two or more upper-level CTE courses within an approved program of study) posted higher four-year and six-year graduation rates than the state average (Ayala, 2022). To add, Neild, Boccanfuso, and Byrnes (2015) studied three cohorts of students in Philadelphia and found similar results: CTE students had significantly better outcomes in terms of graduation rates, credit accumulation, and the successful completion of college preparatory mathematics. Such findings have been replicated in ongoing studies conducted by the National CTE Research Network. They reveal that compared to non-CTE students, CTE students had higher attendance, test scores, and graduation rates. CTE students also accumulated more college credits while in high school, were more likely to enroll in college, and had higher post-graduation quarterly earnings at age 23 or older (Hughes, 2022).

With all of this as impetus for CTE, Congress has passed several authorizations of the *Carl D. Perkins Act*, the most recent being *Perkins V* (*Strengthening Career and Technical Education for the 21st Century Act*) that was signed into law by President Trump in 2018. The state of Illinois was allocated over $45 million from this legislation and additionally contributed $43 million as matching funds to EFE systems.

In July 2021, the Illinois State Board of Education contracted with **Measurement Incorporated** (MI) to conduct an independent evaluation of its statewide CTE program, the first of its kind. The study sought to address the following objectives:

❖ To assess the overall structure and functions of the CTE system in Illinois State

❖ To gauge the quality of communication and support provided by/to all entities at all levels of the system to promote high quality CTE programs

❖ To determine whether there is equity of access and experience for all student subgroups

❖ To evaluate the extent to which CTE programs are implemented in accordance with nationally recognized best practices

❖ To identify barriers to effective CTE implementation by high schools and ACCs

❖ To assess stakeholder satisfaction with CTE policies and programs

❖ To identify relationships between varying contexts, levels of CTE implementation, and perceived outcomes

❖ To advance recommendations to improve Illinois' CTE system

## Report Organization

The remainder of this report is organized into six sections. The first four of them end with a summary of key findings.

II. *IL CTE Context*- where we provide the backdrop to our study, describing the vision of CTE from leadership, demographics of participating districts, and the various component organizations that make up the CTE governance structure.

III. *IL CTE System Supports*- where we explain the roles and types of assistance provided by the entities at each level within the CTE system.

IV. *IL CTE Implementation*- that describes implementation of best practices at the high schools and Area Career Centers, student participation, equity in student participation, and barriers to quality programming.

V. *IL CTE Outcomes*- that describes program and student outcomes.

VI. *Supports Associated with Implementation and Outcomes*- that describes the relationship between supports, implementation, and outcomes.

VII. *Conclusions and Recommendations* - where we translate our findings into suggestions for improving CTE policy and practices.

The reader should also note that this evaluation does not include CTE student achievement outcomes as required by the federal Perkins V legislation. Our rationale for excluding these data is that the available data are for the previous academic year and are not relevant to the study timeframe. Moreover, these outcomes are reported in the 2021 IL CTE report to the Governor.

# II. IL CTE Context

This section of the report presents the landscape of CTE for the external evaluation. It includes a summary of findings related to leadership's vision for CTE, the characteristics of participating schools and districts, and the governance structure of the program in Illinois.

## A. Vision

In focus group interviews, CTE leaders[2] cited the following as their goals and aspirations for students. The themes uncovered below are in keeping with the ISBE's Strategic Plan and its Perkins V Plan (see box with excerpts from the plans).

### Career exploration and refinement

The most widespread CTE vision was to provide *all* students with opportunities to explore multiple career pathways, to identify their interests, and to refine their skills in the CTE area of their choice. According to an ACC director, *"The primary one that I communicate amongst all of those stakeholder groups is that career and technical education provides a very viable and very enjoyable potential career path for students that not only augments the core curricular areas of the school, and the learning students are doing, but also provides an extra incentive for coming to school."* This underscored the importance of introducing CTE in middle school, through tours of ACCs and high school CTE classes. Such exposure was necessary to broaden students' aspirations of what their work life might look like. By having the chance to try out certain hands-on tasks, students would also begin to develop a sense of their own skill and enjoyment in a potential future trade. In the words of an ISBE consultant, *"We advertise CTE as development of the whole child."*

> **Excerpts from ISBE's Strategic Plan**
>
> *"Illinois' success in expanding college and career readiness provides an example of how strategies designed to address equity can work."*
>
> *"Illinois also continues to expand access to career and technical education and dual credit courses."*
>
> **Excerpts from Illinois' Perkins V Plan**
>
> *"Illinois will empower and support all students to achieve their life and career goals through an aligned, equitable, and high-quality career pathway system."*

### Employability skill acquisition

Many stakeholders emphasized that schools were responsible for teaching students what it took to be employable—communication, punctuality, problem solving, reliability, and working productively in a team. As an EFE director commented, *"[It's about] sustainable skills that will carry them throughout life."* Life skill development in the middle and high school years was a critical component for preparing students to be good citizens and CTE had a role to play.

---

[2] Included ISBE consultants, EFE and ACC directors, and high school CTE directors

College and career readiness

CTE was viewed as a pathway to preparing students for the next step. A high school CTE director stated, *"…a lot of it involves postsecondary education, whether it's one or two years at a community college to get certification, or whether the coursework that you take here at CTE puts you on a pathway that expands to a four-year degree or beyond. So, it's really trying to get that message out and challenge the misconception [of work or college]."* They saw dual credit opportunities as a window to this pathway. In this mission, there was a vital role for business and industry. In the words of an EFE director, *"My CTE vision is to ensure students connect to postsecondary opportunities with our industry partners in order to establish career pathways and keep that talent pipeline moving "*

Preparing for the future

Respondents spoke of equipping students for their futures, with a focus on a 21st century world with high-demand, high-skills, and high-wage careers. "*Career Technical Education is the future. It's basically future jobs and future opportunities,"* said an EFE director. This required a rethinking of curricula and practices to be more in synchrony with current market trends. Another EFE director explained, *"We really need to look at our industry and where things are going, look at our local data and national data to figure out what direction we want to go. That's been difficult for our folks here because they want to do what we've always done. We need to look to our labor partners to decide how we can align what we do at our school to our industry needs, which is very different from what it was 5 or 10 years ago."*

The importance of sustaining local economies

It was important to some educators, especially in the rural regions, to meet the needs of their local economies.  In the words of a HS CTE director, *"We are an agricultural-based community. So, our community definitely sees the value in a hands-on education and going directly into the workforce. So, we support that philosophy in our district*." There was motivation to shape Grow Your Own programs to local labor market demands. *"The goal of CTE would be to get kids these skill sets, make them employable, and keep them right here,"* according to an ACC director.

**B.  Characteristics of Participating Districts and Students**

Figure 1. Type of School Districts

Figure 2. School District Size



Figure 1. Type of School Districts
26%
74%
■ High schools (n=58)  ■ K-12 schools (n=165)

Figure 2. School District Size
14%
40%
46%
■ Small (n=33)  ■ Medium (n=102)  ■ Large (n=88)
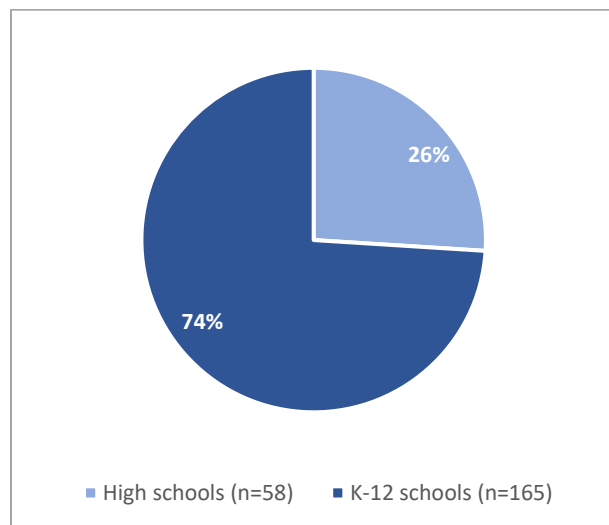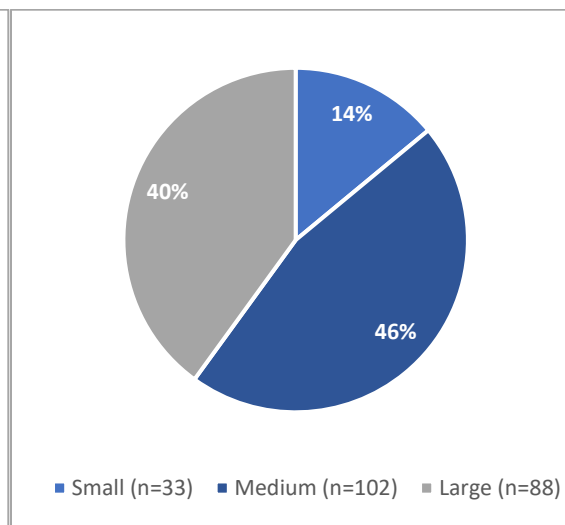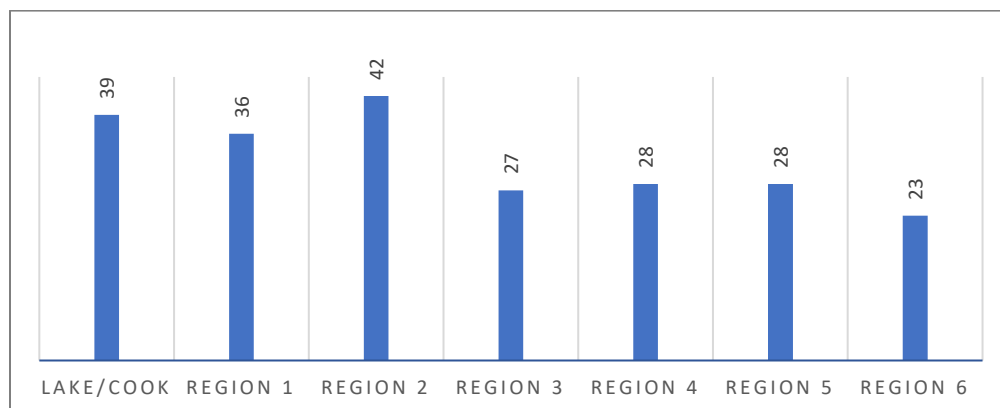
Source: Illinois School Report Card 2020-21 (n=223)

Figure 3. Number of School Districts by Region



Source: Illinois School Report Card 2020-21 (n=223)

As shown in **Figures 1-3**, 223 school districts were represented in the CTE evaluation study. Of these, 74% were K-12 districts and the remaining 26% were high school districts. In terms of size, 46% were considered medium, another 40% were large, and 14% were small.[3] Regionally speaking, the regions with the largest number of districts were Region 2 and Lake/Cook Counties, with 42 and 39 districts, respectively. On the other end, Region 6 was the smallest with 23 districts.  The remaining regions housed 27-36 districts.

Table 1. Characteristics of Student Participants in CTE Evaluation

|  | HS CTE students (n=90,530) | ACC CTE students (n=6,450) |
|---|---|---|
| Grade level |  |  |
| 9th grade | 23% | 7% |
| 10th grade | 24% | 7% |
| 11th grade | 24% | 38% |
| 12th grade | 29% | 48% |
| Gender identity |  |  |
| Male | 56% | 53% |
| Female | 41% | 44% |
| Non-binary | 2% | 2% |
| Prefer not to answer | 1% | 1% |
| Race/ethnicity |  |  |
| White | 59% | 72% |
| Black or African American | 10% | 7% |
| Hispanic | 18% | 11% |
| Asian | 4% | 1% |
| Other* | 7% | 8% |
| Prefer not to answer | 2% | 1% |
| Participant of special education | 8% | 20% |
| Participant of English Language Learner program | 21% | 11% |

* Includes Native Pacific Islander, American Indian/Alaskan, and 2 or > races. Counts can be duplicative.

---

[3] These proportions do not match up with the state's overall distribution of type and size of districts because the study was targeted to districts with CTE programs. See Table A2 in Appendix A for sample and population %s. Lake/Cook counties, Regions 1 and 2 were overrepresented in the sample.

The evaluation included 96,980 students, which represents 42% of the students who participated in CTE courses in Illinois.[4] **Table 1** lists the characteristics of the students who completed CTE courses at the high schools and at the Area Career Centers.

## C. IL's CTE System

Figure 4. CTE Governance Structure
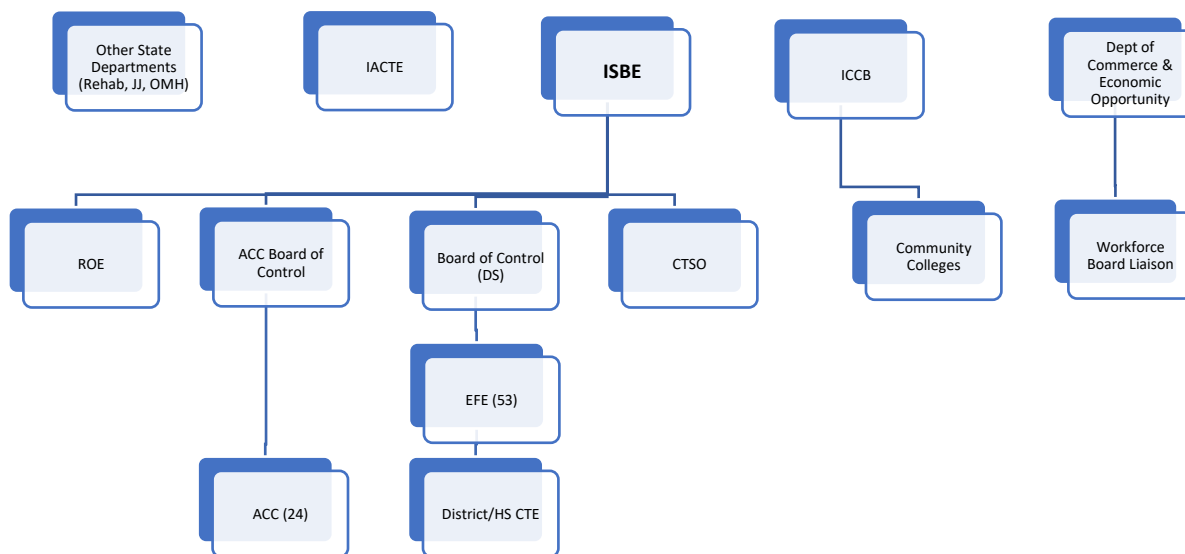


As seen in **Figure 4** above, Illinois' CTE system is a hierarchical organization of several entities at the state, regional, and local levels. At the top level sits ISBE and other state agencies, whose charge is to bring their expertise and resources to bear on various regional CTE-related agencies. The Department of Juvenile Justice (JJ), Rehabilitation, and Mental Health operate CTE programs for students they serve, albeit at smaller scale, but nevertheless aimed at equipping them with employability skills and exposure to CTE programs of study. The Illinois Community College Board (ICCB) is a policy-setting group that coordinates the Illinois Community College System, which is comprised of 48 colleges. The Illinois chapter of the Association for Technical Education (IACTE) leverages state and federal resources to benefit the CTE mainstream of high schools and colleges—primarily in professional development. Their mission is to advance the cause of CTE in Congress and at state and national conferences.  The State Department of Commerce liaises with CTE through its Local Workforce Boards (LWB) and advises educators on market needs and trends.

At the regional level sit Boards of Control whose main function is oversight and accountability of CTE programs. Their membership is comprised of CTE and school district administrators. The Regional Offices of Education (ROE) are tangentially associated with CTE programs; in a minority of regions, they may be responsible for disbursement of funding. The Career and Technical Student Organization (CTSO) is staffed by elected student officials representing eight programs of study.

---

[4] Includes the number of students who completed the IL CTE Student Survey. The participation rate is based on the total number of CTE students reported in 2021 IL CTE report presented to the Governor's office. See Table A4 in Appendix A for the percentage of participating students relative to the different regions of the state.

Finally, at the local level reside the key drivers of CTE implementation. The 53 Education for Employment (EFE) directors are responsible for CTE implementation in the state's high schools. They directly disburse funding, supervise programs, recruit staff, and are the chief advocates of CTE. Alongside the EFE directors are 24 Area Career Center (ACC) directors who operate standalone CTE campuses in the region. The ACCs offer a full suite of CTE programs of study. The bulk of Illinois' CTE programs are operated at high schools throughout the state. According to the State Superintendent's report, 38% of all high school students were enrolled in CTE coursework in 2021 at 541 out of 706 public high schools and all 24 ACCs (Ayala, 2022).

## D. CTE Context Summary

Stakeholders held a vision of CTE that collectively embraced career exploration, employability skills, college and career readiness, preparation for future jobs, and sustaining local economies. This vision was aligned with ISBE's Strategic Plan as well as its Perkins V Plan.

Most of the study's participating districts were configured as K-12 districts of medium size. Region 2 and Lake/Cook Counties comprised the largest number of districts. Students in the evaluation were predominantly white and identified as male. Females made up between 41-44% of the participants. Other race/ethnicity groups represented included Hispanic (11-18%), black/African American (7-10%), Asian and other (7-11%). Students who participated in special education and English Language Learner programs accounted for less than 25% of the sample.

The CTE system was administered by ISBE and its partner organizations at the state level. At the regional level sat Boards of Control that provided oversight. The bulk of CTE implementation occurred at the local level, driven by EFEs, ACCs, and high schools. Over a third of the state's public and charter high school students enrolled in CTE coursework.

# III. IL CTE System Supports

This section of the report summarizes data on the main entities that were involved in Illinois' CTE system.  They included the following groups:
- ➢ EFE System and Directors
- ➢ Area Career Center Directors
- ➢ EFE Boards of Control
- ➢ High School CTE Directors
- ➢ Community Colleges
- ➢ Local Workforce Boards
- ➢ Illinois State Board of Education
- ➢ Illinois Community College Board (ICCB)
- ➢ Illinois Association for Career and Technical Education (IACTE)

For each entity, the evaluation assessed its CTE-related staff and the clarity of their roles as perceived by other stakeholders. The evaluation also assessed the levels of communication, collaboration, and support provided by each group, which were also based on the perceptions of key stakeholders. See **Appendix B** for regional differences in levels of support, communication, and collaboration by entity.

## A. EFE Directors

### CTE staff and role clarity

EFE offices ranged in the number of full- and part-time staff. Seen in **Table 2**, the state average for the number of full-time staff was 1.9, and the average for part-time staff was 1.7.

Table 2. Number of Staff at EFE Offices
*state and regional averages (range)*

|  | Full-time staff | Part-time staff |
|---|---|---|
| State average | 1.9 (0-5) | 1.7 (0-5) |
| Lake/Cook Counties | 2 (2-2) | 3 (3-3) |
| Region 1 | 2.8 (1-5) | 1 (1-1) |
| Region 2 | 2.2 (0-4) | 1.7 (1-3) |
| Region 3 | 1.4 (1-3) | 1.4 (0-2) |
| Region 4 | 2.1 (0-4) | 2.8 (1-5) |
| Region 5 | 1.6 (1-2) | 1 (1-1) |
| Region 6 | 1.3 (1-2) | 1.7 (1-3) |

Source: IL CTE Program Survey (n=51 EFE directors)

Also seen in the table are the average number of staff by region. The tables shows that EFEs in and around the Chicagoland area (i.e., Lake/Cook Counties, Regions 1 and 2) had a higher number of staff, which correlates with the larger student population in these areas. Region 4 also had a relatively higher staff load, particularly in the number of part-time staff. Conversely, the southern regions of the state

(i.e., region 5 and 6) had a lower-than-average number of staff in both groups, which is likely due to the smaller student population in these areas.

In addition to variations in the number of staff across EFEs, there were differences in how directors filled their roles. More specifically, 32 people served solely in the role of EFE director, while the remaining 19 individuals served in the dual role of EFE director and ACC director or HS CTE director. **Figure 5** shows the number of people in the singular and dual director role by region of the state.

Figure 5. Number of People in Single or Dual Director Roles
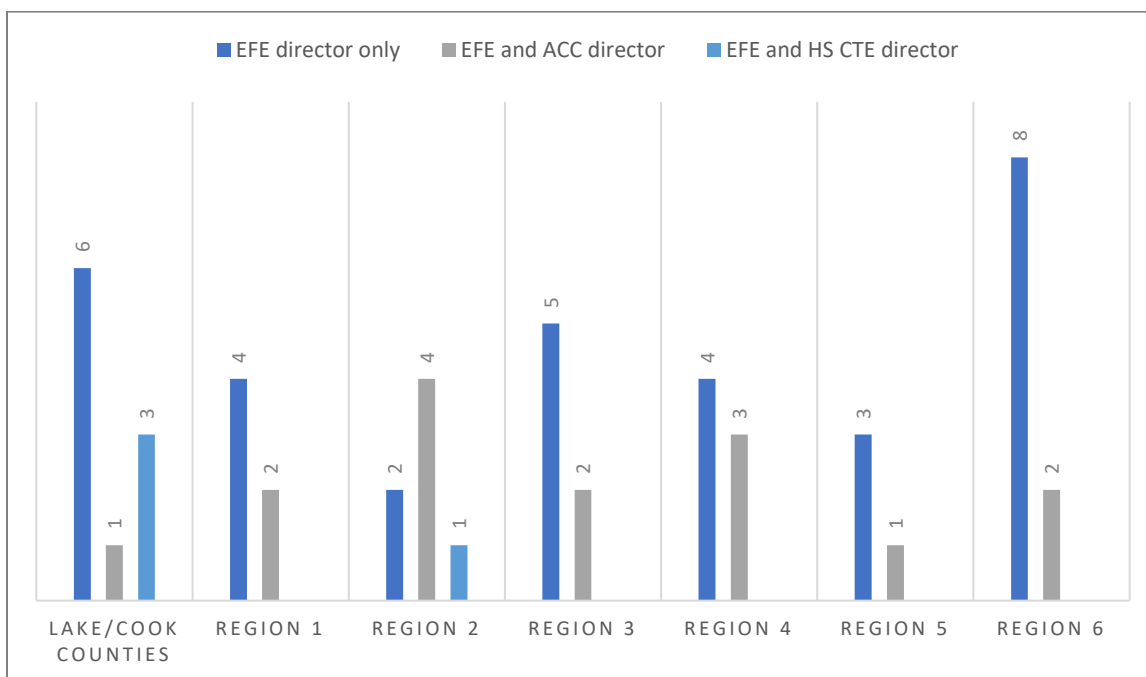


Source: IL CTE Program Survey (n=51 EFE directors)

On the IL CTE Program Survey, the directors who served more than one role were asked why they served multiple roles. Their reasons included:
  ➢ to improve/streamline coordination of CTE programming/implementation (39%),
  ➢ the size of CTE program does not require 2 administrators (22%),
  ➢ insufficient funds in the region to support employment of a person in each position (28%), and
  ➢ difficulty finding qualified staff to fill each position (6%).

Similarly, district superintendents were asked if the EFE Boards of Control had difficulty hiring an EFE director. Only 15% of superintendents reported difficulty, and their reasons were on par with EFE directors' reasons for serving multiple roles. They included: 1) lack of a competitive salary and benefit package, 2) geographic isolation to find a pool of applicants, and 3) shortage of persons who met qualifications for the position. In the words of one Superintendent, "The certification for a role that combines administration and CTE has significantly limited the number of applicants. We would like to see this adjusted to a general administration license to broaden our search. It has created a revolving door at our position."

Regardless of their employment status, however, all (100%) ACC directors[5] not in a dual role as EFE director and 84% of school/district CTE staff were *moderately* or *very clear* on the roles and responsibilities of EFE directors. It should be noted that more of the respondents (over 65%) were *very clear* compared to *moderately* clear.

## Communication and collaboration

**Figure 6** shows that EFE directors met with most school/district CTE staff and ACC directors monthly or more frequently, according to EFE directors.

Figure 6. Frequency of Meetings with School/District CTE Staff and ACC Directors[6]
*percentage of EFE directors*
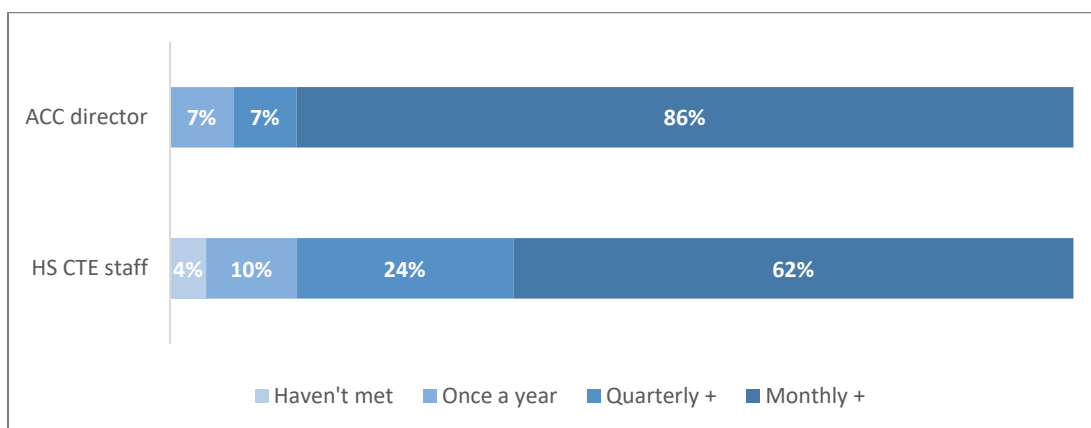


Moreover, most ACC directors, school/district CTE staff, and superintendents rated the EFE directors as *good* or *excellent* on their communication (see **Table 3**). They also gave high ratings to the quality of collaboration and level of support from the EFE director.

Table 3. Communication, Collaboration, and Support from EFE Directors
*percentage of ACC directors, school/district CTE staff and superintendents reporting **good or excellent***

|  | ACC directors[7] | School/district CTE staff | Superintendents |
| --- | --- | --- | --- |
| Clarity of communication | 100% | 94% | 95% |
| Timeliness of communication | 100% | 94% | 93% |
| Quality of collaboration | 86% | 92% | 91% |
| Level of support provided | 86% | 92% | 92% |

Source: IL CTE Program Survey (n= 7 ACC, 185 school/district staff), IL CTE Superintendent Survey (n=139)

---

[5] Included ACC Directors in the singular role as ACC and **not** also serving as EFE Director

[6] Source: IL CTE Program Survey that included EFE respondents who have an affiliate ACC (n=13). Fifty EFE directors responded to the frequency of HS CTE meetings

[7] ACC Directors who did not also serve as an EFE Director

## Support Provided by EFE Directors

**Table 4** lists the various supports provided by EFE directors, as reported by school/district CTE staff and the EFE directors, the latter of which was included as a point of comparison. It should be noted that Illinois' Perkins V Plan does require specific supports; however, it does identify current functions of the EFE system to help in the delivery of CTE, many of which are listed in the table.

### Table 4. EFE Director Support to High Schools
*percentage of school/district CTE staff and EFE directors*

|  | School/district CTE staff | EFE directors |
|---|---|---|
| Manage and disburse CTE funding | 91% | 100% |
| Identify goals and direction for CTE | 84% | 98% |
| Communicate state-mandated regulations & requirements | 84% | 96% |
| Review CTE programs for state compliance | 80% | 96% |
| Advocate for CTE at the regional and state level | 76% | 88% |
| Provide networking opportunities | 74% | 92% |
| Assist in start-up of new CTE programs/courses | 72% | 100% |
| Provide/authorize PD for instructors | 67% | 94% |
| Build partnerships with businesses | 66% | 90% |
| Serve as a liaison to workforce industry | 64% | 88% |
| Serve as a liaison to community college | 64% | 94% |
| Provide PD to counselors | 63% | 86% |
| Share info on best practices | 63% | 88% |
| Promote nontraditional course enrollment | 57% | 88% |
| Assist in recruitment of CTE instructors | 51% | 74% |
| Identify equity gaps in CTE access | 51% | 82% |
| Assist increased access to CTE programs for special populations | 61% | 82% |

Source: IL CTE Program Survey (n=51 EFE directors and 187 school/district CTE staff)

The table shows that EFE directors' assessment of the support they provide was in every case higher than that perceived by school and district CTE staff. There are several plausible explanations for their higher ratings: 1) EFE directors have a wider perspective on the support they give, and 2) there was bias in their self-reports.

Even still, there was agreement between the groups on supports that were related to program monitoring and oversight. For example, 75% of respondents from both groups identified the following as frequently provided supports:

➢ Managing and disbursing CTE funding
➢ Identifying the goals and direction for CTE
➢ Communicating state-mandated regulations and requirements
➢ Reviewing CTE programs for state compliance, and
➢ Advocating for CTE programs at the regional and state level.

To add, EFE directors provided support in a variety of other areas not related to program monitoring, which are also listed in the table. For example, they assisted schools in the start-up of new CTE programs or courses, according to 72% of school/district CTE staff. To add, most school/district CTE staff reported that EFE directors helped to build partnerships with businesses and served as a liaison to the workforce industry, as well as to local community colleges.

Substantiating the survey data, high school CTE directors and ACC directors who participated in focus groups were unanimous in their opinion that EFE directors were vital to the implementation of CTE. Areas of critical support that were cited during the focus groups included serving as a liaison between several entities within and outside K-12 education, serving as a chief advocate for CTE, and providing programmatic and technical help for CTE program growth. Below are several comments that capture the general sentiment of focus group participants.

> "*I look at that relationship as my lifeline*"

> "*…without having that person in that position [EFE], I don't think our schools in*
> *our area would be anywhere close to where we are with some of these things.*
> *That person is kind of our eyes and ears and keeps us attuned to what's going on.*
> *And seeing that from the Board of Control side of it, having an EFE to work with*
> *in our areas that are top notch, that drives our programs.*"

One area of concern, on the other hand, was the extent to which EFE supports to high schools differed based on individuals serving as an EFE director in a single or dual role. **Table 5** compares supports from EFE directors in single or dual-role status, as reported by school and district CTE staff. It includes only the support areas where differences between the two types of directors were statistically significant.[8]

---

[8] Based on Chi-Square analyses which can be found in Appendix C.

## Table 5. Comparison of Supports Provided by Single or Dual-Role EFE Directors
### *percentage of school/district CTE staff*

|  | Single-role EFE directors | Dual-role EFE directors |
|---|---|---|
| Identify goals and direction for CTE | 89% | 72% |
| Communicate state-mandated regulations & requirements | 90% | 70% |
| Review CTE programs for state compliance | 87% | 65% |
| Advocate for CTE at the regional and state level | 85% | 56% |
| Provide networking opportunities | 86% | 47% |
| Assist in start-up of new CTE programs/courses | 81% | 53% |
| Provide/authorize PD for instructors | 81% | 33% |
| Build partnerships with businesses | 73% | 49% |
| Serve as a liaison to workforce industry | 71% | 46% |
| Serve as a liaison to community college | 71% | 47% |
| Provide PD to counselors | 74% | 39% |
| Share info on best practices | 72% | 40% |
| Assist in recruitment of CTE instructors | 60% | 32% |
| Identify equity gaps in CTE access | 57% | 39% |
| Assist increased access to CTE programs for special populations | 67% | 47% |

Source: IL CTE Program Survey (n=187 school/district CTE staff)

Overall, the table shows that a larger percentage of school/district CTE staff with a single-role EFE director received support compared to school/district staff with a dual-role EFE director. The differences between the groups were over 20 percentage points in most of the support areas. Most alarming were discrepancies between the groups on program oversight and monitoring activities, such as reviewing CTE programs for state compliance and communicating state-mandated regulations and requirements.

Moreover, the largest discrepancies between the groups included supports that focused on building the capacity of CTE school staff such as:
➢ Providing PD to instructors (81% single-role vs 33% dual-role),
➢ Providing networking opportunities (86% single-role vs 47% dual-role),
➢ Providing PD to school counselors (74% single-role vs 39% dual-role), and
➢ Sharing information on best practices (72% single-role vs 40% dual-role).

These capacity-building supports were deemed important to the high school staff. For example, focus group discussions highlighted the value of professional learning opportunities, according to high school directors. Put by one person, "*Our EFE does a great job of having content area meetings every year and working on some things and pushing out what PD is available.*" For example, roundtables, a home-grown variety, were successful approaches for idea exchange and problem-solving between CTE instructors and industry representatives. One high school director said, "*We have roundtables where different groups, whether it be manufacturing, hospitality, and tourism, come together. And she [EFE Director] brings in teachers, administrators, and people in that industry. And then we just have discussions. It's really well run.*"

EFE directors also arranged local workshops on subjects that instructors and counselors sought, drawing speakers from business and industry, their advisory boards, and community colleges, according to high

school directors. *"We're very blessed to have an active EFE, who puts on a lot of workshops geared specifically for CTE teachers."* commented one HS CTE Director. *"Sometimes they will even go cross-curricular, math and CTE or ELA and CTE, inviting math and language arts teachers, as well as counselors. We have a very strong workshop presence through the EFE and so we will recommend and encourage our teachers and send them to those workshops to participate."*

## B. Area Career Centers (ACC)

### CTE staff and role clarity

In terms of oversight and management, ACC directors reported an average of 3 full-time administrative staff (ranging from 1 to 8) and 2 part-time administrative staff (ranging from 0 to 5) at their Center offices. Of the 22 ACC directors who completed the survey, 27% (6) were solely ACC directors. Another 68% (15) also served in the role of the EFE director for an average of 53% of their time. Lastly one ACC director also served in the role of high school CTE director for 40% of their time.

The IL CTE Program Survey showed that 54% of school/district CTE staff[9] and all (100%) the EFE directors were *moderately* or *very clear* on the roles and responsibilities of ACC directors.

### Communication and collaboration

**Figure 7** shows that many of the ACC directors (64%) met with school/district CTE staff monthly or more frequently. All the ACC directors reported that they met with the EFE director monthly or more frequently. This was higher than what was reported by EFE directors.

Figure 7. Frequency of meetings with School/district CTE staff and EFE Directors[10]
*percentage of ACC directors*
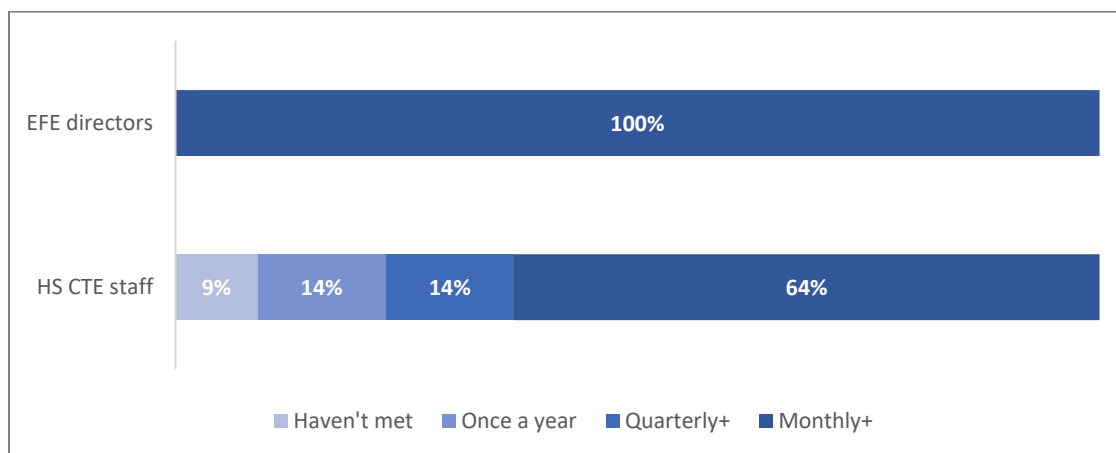


All the EFE directors and most school/district CTE staff rated communication, collaboration, and support provided by ACC directors as *good* or *excellent* (see **Table 6**).

---

[9] Only included school/district CTE staff with an ACC affiliated with their school/district, n=72
[10] Source: IL CTE Program Survey (n=6 ACC directors for meetings with EFE directors and 22 for HS CTE staff)

Table 6. Communication, Collaboration, and Support from ACC Directors
*percentage of EFE directors and school/district CTE staff reporting **good or excellent***

|  | EFE directors | School/district CTE staff |
|---|---|---|
| Clarity of communication | 100% | 82% |
| Timeliness of communication | 100% | 86% |
| Quality of collaboration | 100% | 80% |
| Level of support provided | 100% | 88% |

Source: IL CTE Program Survey (n=26 EFE directors and 51 school/district CTE staff)

Focus group findings also showed that EFE and high school directors had good relationships with ACCs. Of greatest value was the ACC's bandwidth to offer more CTE programs with dual credit and work-based learning than was possible in most high schools.  This was particularly helpful to small school districts that were unable to implement their own CTE programs. One high school director said, "*They're great to work with. They offer a wide variety of things. The one thing I am glad that they are offering is cybersecurity. I actually have kids taking that class and I really think that there's a huge need for that.*" One ACC director had this to say about their relationship with schools, "*I'd say our feeder-school relationships are extremely positive. We work together to make sure we're not duplicating programs at the center similar to what is at the high school.*"

There were instances, however, in which respondents felt that high schools and ACCs competed for programs and students. Large districts were able to start CTE classes on their campus, thereby saving the cost of ACC tuition and student transportation. Put by one ACC director, "*I just heard…that one of my large schools is going to start a multimedia video production class. The problem is that we already have that up and running here. And the thing is, they can do that because they don't need us or additional funding.*"

## C.  High Schools

### CTE staff and role clarity

District and school level staff who were charged with overseeing and implementing CTE programs in the high school varied across the state. According to EFE directors, many districts had a person who was designated as the high school CTE director; however, that person could hold other titles at the district or school, thus making their role as the CTE director part-time. In other districts and schools, particularly those with smaller high schools, there was not a designated HS CTE director.

## Table 7. Other School/District Titles Held by High School CTE Directors and Average % of Time in CTE Director Role

|  | School/district staff | % of time in CTE director role |
|---|---|---|
| High school principal | 28% | 29% |
| District staff (e.g., Assistant Superintendent, Curriculum Director, etc.) | 20% | 51% |
| CTE classroom teacher | 14% | 33% |
| District superintendent | 8% | 13% |
| Assistant principal | 8% | 21% |
| School counselor or career staff | 8% | 28% |
| Other (i.e., WIOA supervisor and Director of Business operations) | 1% | 25% |

Source: IL CTE Program Survey (n=200 school/district CTE staff)

To gain more information about the titles held by high school CTE directors, the IL CTE Program Survey asked district and school CTE staff to report the other titles that they held at the school/district. Only 11% of respondents held the title of HS CTE director, devoting two-thirds of their time to the role. All others serving as HS CTE directors also held other roles as shown in **Table 7** along with the average percentage of time each title dedicated to the duties of the high school CTE director.

As seen in the table above, high school principals and district staff were typically assigned the duties of the high school CTE director or point of contact relative to the other titles. When it was district-level staff, they were able to dedicate more time to the CTE director role (51% of their time) than the principals (29%). Comparatively, district superintendents who were fulfilling the duties of the CTE director had the least amount of time to do so (13%). Lastly, regardless of the variation in district or school staff assigned to the role of high school CTE director, nearly all of EFE/ACC Directors (95%) were clear on the role.

### Communication and collaboration

## Table 8. Communication, Collaboration, and Support from High School CTE Directors
*percentage of EFE/ACC directors and superintendents reporting **good or excellent***

|  | EFE/ACC directors | Superintendents |
|---|---|---|
| Clarity of communication | 96% | 96% |
| Timeliness of communication | 94% | 93% |
| Quality of collaboration | 98% | 94% |
| Level of support provided | 98% | 95% |

Source: IL CTE Program Survey (n=46 ACC/EFE directors), IL CTE Superintendent Survey (n=105)

**Table 8** shows that both most EFE/ACC directors and district superintendents gave high marks to the communication, collaboration, and support provided by high school CTE directors, underscoring that in their supervisory role, the former were more than satisfied with high school CTE leadership.

## D. Community Colleges

### CTE Staffing and Role Clarity

Community college staff who interacted with EFE/ACC directors and high school staff varied widely across the state. According to focus group participants, community college staff included the Dean, President, or other college-level leadership, CTE Department Chairs, and CTE instructors.

What's more, there was a range in the number of community colleges that partnered with the EFEs. For example, 53% of the EFE directors reported that they partnered with one community college, but 38% partnered with two to three community colleges, and 8% partnered with four to six.

Despite the variety of interactions with community college staff, most of the school/district CTE staff (80%) and EFE and ACC directors (83%) were *moderately* or *very* clear on the roles of the community colleges in the CTE system.

### Communication and collaboration

Also varied was the frequency with which school/district CTE staff and EFE/ACC directors met with the different types of community college staff. For example, **Table 9** shows that around one-third of EFE/ACC directors met monthly or more frequently with the Dean/President and the CTE Department Chair. They met less frequently with CTE instructors. School/district CTE staff also met infrequently with community college staff at all levels.

Table 9. Frequency of Meetings with Community College Staff
*percentage of EFE/ACC directors and school/district CTE staff*

|  | Dean/President | | CTE Department Chair | | CTE Instructors | |
|---|---|---|---|---|---|---|
|  | Directors | HS CTE | Directors | HS CTE | Directors | HS CTE |
| Monthly+ | 34% | 15% | 32% | 28% | 24% | 27% |
| Quarterly+ | 37% | 14% | 22% | 17% | 21% | 14% |
| 1x year | 21% | 33% | 30% | 27% | 36% | 32% |
| Have not met | 8% | 37% | 16% | 29% | 19% | 26% |

Source: IL CTE Program Survey (n=58 EFE/ACC directors and 204 school/district CTE staff)

**Table 10** (following page) shows that the majority of directors, school/district CTE staff and superintendents (71% to 77%) rated the communication, collaboration, and level of support from community colleges as *good* or *excellent;* however, these ratings were lower than the ratings on these activities among other groups such as the directors (both EFE and ACC), as well as school/district CTE staff.

Table 10. Communication, Collaboration, and Support from Community Colleges
*percentage of EFE/ACC directors, school/district staff and superintendents reporting **good or excellent***

|  | EFE/ACC directors | School/district CTE staff | Superintendents |
|---|---|---|---|
| Clarity of communication | 73% | 72% | 74% |
| Timeliness of communication | 74% | 77% | 74% |
| Quality of collaboration | 79% | 74% | 75% |
| Level of support provided | 76% | 73% | 71% |

Source: IL CTE Program Survey (n=58 EFE/ACC directors, 186-192 school/district CTE staff), IL CTE Superintendent Survey (n=134)

Focus groups participants (including EFE/ACC directors and high school CTE directors) had mixed reviews on the quality of collaboration from community colleges. While some spoke very favorably, others felt that the relationships were uneven or poor. Some of the concerns voiced by participants included the following:

➢ Dual credit terms were dependent on intergovernmental agreements, i.e., college specific.
➢ Collaboration was "people-based", rather than policy-based. If the community college point of contact resigned/retired, EFE/ACC Directors and district/school level staff would need to re-establish the terms of collaboration with a new person
➢ Colleges varied in their requirements for high school CTE instructor qualification for dual credit course
➢ Colleges exacted course fees that students were unable to pay.
➢ Colleges were in competition for student enrollment. In the words of one ACC Director, "*I think the colleges feel that we're taking their jobs, so if our students earn dual credit at the Career Center, that's fewer kids that are going to be headed their way. That's been a challenge of ours and our region for years.*"

It seems that a big issue with the community colleges is conflict over the dual credit qualifications. For example, 86% of school/district CTE staff reported that teacher qualifications for dual credit courses imposed by the community colleges was a barrier to offering dual credit courses. To add, the extent to which there was a process in place for secondary and postsecondary CTE staff to collaborate on dual credit course articulation varied. More specifically, 66% of school/district CTE staff reported that there was a process for collaboration. When asked to characterize the nature of the collaboration,

➢ 33% reported that the collaboration was consistent across departments and content areas,
➢ 31% reported some collaboration but that it was not consistent across departments and content areas,
➢ 28% reported little collaboration that was limited and highly dependent on Individuals, and
➢ 8% reported no collaboration.

## Support provided by community colleges

The primary area of support provided by community colleges was dual credit programs that allowed qualified high school students to enroll in college-level classes that earn both high school and college credit. Nearly all (99%) of directors reported that dual credit courses were offered in their region.

**Table 11** lists other supports that were provided by community colleges, reported by school/district CTE staff and EFE/ACC directors. The two groups also rated the extent to which the supports were important to the success of CTE in their school/region. Looking at the support provided by community colleges, it appears that the most frequently provided support other than dual credit was open houses for middle/high students at the college and career exploration events. EFE/ACC directors were more likely than school/district CTE staff to report that the community colleges hosted Regional Advisory Board meetings and provided space on campus for CTE courses, but these supports are primarily provided to EFE and ACCs rather than schools.

Table 11. Supports Provided by Community College
*percentage of school/district CTE staff and EFE/ACC directors*

|  | Support Provided | | Deemed "Very Important" | |
|---|---|---|---|---|
|  | School/ district | EFE/ACC directors | School/ district | EFE/ACC directors |
| Open house for MS/HS students at the college | 79% | 82% | 54% | 54% |
| Career exploration events | 63% | 74% | 63% | 68% |
| PD for CTE HS instructors | 55% | 58% | 67% | 62% |
| PD for CTE HS counselors | 54% | 56% | 59% | 52% |
| Host for Regional Advisory Board meetings | 45% | 84% | 58% | 69% |
| Space on campus for CTE activities and PD | 29% | 65% | 66% | 61% |
| Equipment/materials for CTE courses | 29% | 33% | 74% | 74% |

Source: IL CTE Program Survey (n=196 school/district CTE staff, 57 EFE/ACC directors)

Switching to the level of importance that was assigned to each support, the table reveals several pertinent mismatches between the provision of support and their importance to high school and director staff. Most noteworthy is that 74% of school/district CTE staff and EFE/ACC directors rated equipment/materials for CTE courses as very important; however, less than one third of the respondents from the groups indicated that these were provided by the community colleges. Another discrepancy was space on the campus for CTE activities and professional learning. Only 29% of school/district CTE staff reported it being available to their schools, but 66% deemed it as very important to the success of their CTE programs.

Conversely, while most reported that open house at the campus was available to their middle and high school students, 54% of school/district CTE staff and EFE/ACC directors deemed it as very important to the success of CTE programs.

## E. EFE Boards of Control

### CTE staff and role clarity

District superintendents provided information on the primary positions of the members of the EFE Boards of Control (BOC), which are listed in **Table 12**. As seen in the table, only 61% of superintendents reported that they served on the BOC. This is concerning because Illinois' Perkins V Plan specifies that the BOC "consist of the district superintendents in the region" (pg. 75, Illinois State Board of Education 2020). On the EFE director survey, however, nearly all EFE directors (97%) indicated that district superintendents served on the EFE BOC.

Table 12. EFE Boards of Control Members
*percentage of district superintendents reporting BOC membership*

|  | Superintendents |
|---|---|
| Superintendent | 61% |
| School leaders (principal, assistant principal) | 12% |
| HS CTE director | 11% |
| CTE teachers | 5% |
| Local industry/trades | 3% |
| Community colleges | 15% |
| Area Career Center directors | 14% |
| Regional Office of Education | 18% |

Source: IL CTE Superintendent Survey (n=236)

What's more, the BOC member list was small, according to district superintendents. For instance, only 11-12% of the EFE BOCs included school leaders or high school CTE directors. Only 3% of the EFE BOC included local industry/trades, and 5% included CTE teachers.

These findings did not reveal a clear picture about the membership on the EFE BOC. It appeared that there was much variation both in number and role, with some regions having more robust representation than others.

Finally, only 68% of school/district CTE staff were clear on the roles and responsibilities of the BOC. On the other hand, 97% of EFE directors were *moderately* or *very* clear on the roles of the EFE BOC.

### Communication and collaboration

According to district superintendents, the EFE BOC met monthly in 48% of the districts (see **Figure 8**). Another 51% met in varying frequencies throughout the year. Only 1% met once a year.

Figure 8. Frequency of EFE BOC Meetings
*percentage of district superintendents*



Legend:
- ■ Monthly
- ■ Bi-monthly
- ■ Quarterly
- ■ Several times a year
- ■ Once a year

Pie chart values: 48%, 11%, 28%, 12%
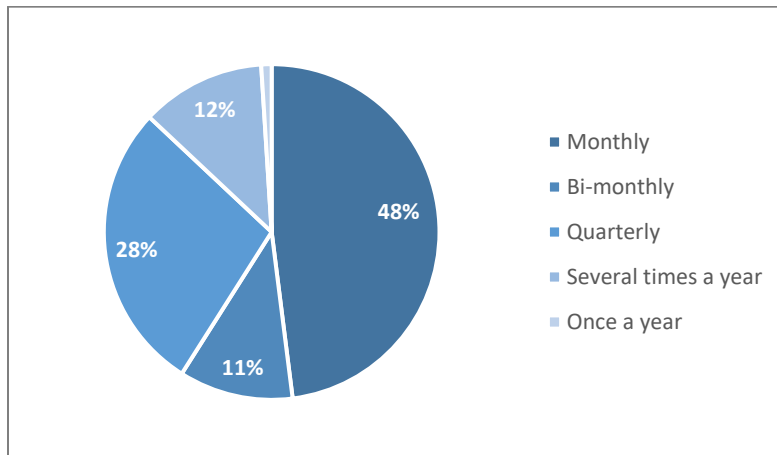
Source: IL CTE Superintendent Survey (n=151)

**Table 13** shows that EFE directors and school/district CTE staff gave high marks to the communication, collaboration, and support from the EFE BOC. The high marks provided by school/district CTE staff are odd considering that most were not aware of the roles and responsibilities of the EFE BOC. It is difficult to determine if the positive reports were inflated because of the supervisory role of the superintendent to CTE school and district staff members.

Table 13. Communication, Collaboration, and Support from EFE BOC
*percentage of EFE/ACC directors and school/district CTE staff reporting **good or excellent***

|  | EFE/ACC directors | School/district CTE staff |
|---|---|---|
| Clarity of communication | 98% | 86% |
| Timeliness of communication | 97% | 87% |
| Quality of collaboration | 98% | 84% |
| Level of support provided | 98% | 85% |

Source: IL CTE Program Survey (n=58 EFE/ACC directors and 128-134 school/district CTE staff)

## Support provided by EFE Boards of Control

According to the State's Perkins V Plan, the primary function of the EFE BOC was to "develop an intergovernmental agreement between districts and the EFE" and decide how funds were to be distributed in the region (pg. 75 Illinois State Board of Education, 2020). Most district superintendents and EFE directors agreed that the EFE BOC provided support via oversight of funding, but also in other areas, which are listed in **Table 14** (on the following page).

The table shows that the primary areas of oversight reported by half or more of the superintendents and over 80% of EFE directors included:
- ➢ Approval of CTE expenditures,
- ➢ Procurement and disbursement of funds,

➢ Performance evaluation of the EFE director, and

➢ Implementation and adherence to state regulations.

Table 14. CTE Oversight Provided by the EFE Boards of Control
*percentage of superintendents and EFE directors reporting various functions*

|  | Superintendent | EFE Director |
|---|---|---|
| Approval of CTE expenditures | 59% | 90% |
| Procurement and disbursement of funds | 57% | 84% |
| Performance evaluation of EFE director | 57% | 96% |
| Implementation/adherence to state regulations | 50% | 82% |
| Audit/monitoring of CTE programs | 47% | 76% |
| Resources to support CTE | 44% | 65% |
| Professional learning opportunities for CTE instructors and counselors | 42% | 53% |
| Advocacy efforts to promote CTE | 42% | 59% |
| Developing partnerships with local business and industry | 42% | 39% |
| Setting regional policy or procedures that support CTE | 38% | 78% |
| Regional strategic CTE planning | 35% | 67% |
| Develop partnerships with community colleges, other schools/districts | 44% | 63% |

Source: IL CTE Program Survey (n=51 EFE directors), IL CTE Superintendent Survey (n=236)

Nevertheless, it appears that district superintendents and EFE directors were not in agreement on areas of oversight. Overall, a larger percentage of EFE directors reported oversight by the EFE BOC than district superintendents. Several areas showed large discrepancies between the two groups. For example, 76% of EFE directors indicated that the EFE BOC was involved in monitoring CTE programs in their schools; however, only 47% of district superintendents reported the same. At the bottom of the table, most EFE directors (67%) reported that the EFE BOC was involved in overseeing regional policy and procedures that support CTE and regional strategic CTE planning, but far less than half of the district superintendents reported the same. Given the fact that close to 40% of district superintendents do not serve on the EFE BOC, they may be less clear on the areas of oversight compared to EFE directors.

## F. Local Workforce Boards (LWB)

### CTE staff and role clarity

The evaluation did not formally assess personnel who were involved in the local workforce boards. It did include, however, school/district CTE staff's and EFE/ACC directors' understanding of the roles and responsibilities of their local workforce boards. More specifically, the Survey data showed that 59% of

school/district CTE staff and 67% of directors were *moderately* or *very* clear on the roles of the local workforce boards.

## Communication and collaboration

**Table 15** summarizes data on the communication, collaboration, and support provided by local workforce boards, as perceived by EFE/ACC directors, school/district CTE staff, and superintendents. The ratings were consistent across the three groups, with many of respondents rating the local workforce boards as *good* or *excellent* in all four areas. The ratings, however, were lower than what was provided to most of the other entities including the EFE and ACC director, high school CTE directors, community colleges, and the EFE BOC.

Table 15. Communication, Collaboration, and Support from the Local Workforce Boards
*percentage of EFE/ACC directors, school/district staff and superintendents reporting **good or excellent***

|  | EFE/ACC directors | School/district CTE staff | Superintendents |
|---|---|---|---|
| Clarity of communication | 70% | 65% | 68% |
| Timeliness of communication | 68% | 69% | 73% |
| Quality of collaboration | 66% | 66% | 71% |
| Level of support provided | 62% | 65% | 76% |

Source: IL CTE Program Survey (n=53 EFE/ACC directors, 134 school/district CTE staff); IL CTE Superintendent Survey (n=82)

Focus groups with EFE, ACC, and high school CTE directors suggested that there were strong and active partnerships with their LWB. Members were tapped to provide work-based learning, to be guest speakers, and to offer workshops to CTE students. They also advised EFE and ACC leaders on curricula and labor market needs. According to an EFE director, "*It's large, and a lot of manufacturing people come to it, and a lot of other businesses come to it. And it's really good for us to collaborate with those industry people pertaining to what we should be teaching and what we should be offering in high schools.*"

Likewise, interviewees representing local workforce boards reported they had historically connected with out-of-school youth and students in postsecondary education, so those relationships were more numerous. More recently, some have extended their reach into high schools, offering internships and apprenticeships, though many had not seen the federal Perkins regulations. In the words of a member, "*We're working on a regional basis with several high schools, so that when seniors apprentice with our member businesses, they have the option to move into that company when they graduate.*" And more specifically, "*We are engaged with secondary education, primarily through our youth committee, we have 2 regional superintendents of schools, who are very active in participating on that committee, one is on our local workforce development board.*"

Nonetheless, a few respondents cited hurdles to such a partnership. The geographical regions covered by the EFE did not align with those of LWB, a longstanding issue. *"One EFE might deal with several workforce boards but only one community college. You can have one workforce board straddling a region covered by two community colleges,"* according to an ISBE representative. The pandemic limited opportunities for LWB members to work directly in schools. A high school CTE director commented,

---

*"Partner integration has been challenging through COVID-19. We haven't had a lot of partners coming into the building over the last school year…"*

## G. ISBE's CTE and Innovation Department

### CTE staff and role clarity

The IL CTE Program Survey asked respondents to rate their level of understanding of the roles and responsibilities of the CTE and Innovation Department and its Principal Consultants. The data showed that 70% of directors (EFE and ACC) and 62% of school/district CTE staff were *moderately* or *very* clear about the roles and responsibilities of the CTE and Innovation Department. As for the Principal Consultants, 81% of directors were moderately/very clear about their roles and responsibilities. Conversely, only 50% of school/district CTE staff reported the same level of clarity about Principal Consultants.

### Communication and collaboration

**Table 16** summarized ratings on the communication, collaboration, and support from the ISBE Principal Consultants as reported by EFE/ACC directors, school/district CTE staff, and superintendents. Overall, the ratings were lower than ratings provided to other CTE support entities.

Table 16. Communication, Collaboration, and Support from ISBE
*percentage of EFE/ACC directors, school/district staff, and superintendents reporting **good or excellent***

|  | EFE/ACC directors | School/district CTE staff | Superintendents |
|---|---|---|---|
| Clarity of communication | 71% | 60% | 64% |
| Timeliness of communication | 62% | 62% | 63% |
| Quality of collaboration | 65% | 56% | 61% |
| Level of support provided | 60% | 61% | 61% |

Source: IL CTE Program Survey (n=58 EFE/ACC directors, 135-188 school/district CTE); IL CTE Superintendent Survey (n=105-132)

Focus group respondents' foremost concerns with ISBE was the quality and frequency of communication. They pointed out that delays in communication, particularly around grant requirements, often created downstream programmatic difficulties. The untimely communication also made it difficult for them to meet deadlines for grants, reports, and other accountability requirements. Put by one director, *"They tee it up and we can't be late with anything, but they can be very late on everything. That's just how it goes."*

Finally, communication was sometimes contradictory or changing, which resulted in the spread of misinformation and confusion. *"Sometimes the data that they do choose to give us… we question if it's correct. Or we've been given data that is blatantly… I mean, you have to take a second look at it, and you know that something is wrong."*

Some participants attributed these concerns to frequent staff turnover at the ISBE level. *"It's difficult, because you don't have any of those relationships,"* said one director. *"They change, the principal consultant changes all the time."*

## H.  Illinois Community College Board (ICCB)

The following information on the Illinois Community College Board (ICCB) was derived from a structured interviews with their representatives.

ICCB's mission is *"to be that pathway for students who are coming not only from secondary [education] but individuals who are already in the workforce, adult education students."*

With respect to their relationship with K-12 schools, our respondent replied, *"At the state level, we don't have a whole lot of contact; we pretty much leave that to ISBE."*

Their professional development is largely geared to colleges for which ICCB has contracted with a university to develop training modules, while maintaining their advisory role. She explained that it is the individual community colleges that have ties with high schools. *"Each of the colleges is locally controlled, but there is one Community College District that covers several colleges in their jurisdiction."* Much emphasis was placed on Perkins V as a legislative mandate that forced collaborations between CTE entities.

ICCB's dealings with business and industry are run through the State Department of Commerce, i.e., ICCB has no direct role. *"A lot of the employer engagement stuff we do is through them."*

What was very telling in our interview is that ICCB functions as a regulatory agency, *"so we can't tell anyone to do anything."* Their primary responsibility is to oversee community college operations, but the actual policy setting is done by the colleges. In other words, there is wide variation in how individual colleges operate their CTE programs and their partnerships. In her words, *"each college is required to do a program review every five years. We make that clear to them. But other than that, it's kind of like, 'Here's the information. Now you do what's going to work best for you.'"*

ICCB meets with ISBE on a quarterly basis. The relationship has improved from previous years.

The obstacle that ICCB sees with respect to secondary school CTE is that school counselors are not well-versed in CTE, unlike their counterparts in community colleges who have *"a dedicated CTE advisor. So even if they are advising a student about going to the community college, it's usually on the transfer side."*

## I.  Illinois Association of Career and Technical Education (IACTE)

The following information on the IACTE was derived from a structured interviews with their representatives.

The mission of IACTE is to *"professionally grow our members."* Because they are a member-driven organization, they support teachers from middle school through postsecondary education. *"IACTE provides professional development, recognition, advocacy at the national, state, and regional levels."* A vehicle for doing this is to connect teachers to a network of teachers. IACTE brings them together

through conferences that cover timely topics, such as, *"creating a course pathway, KL-12, and postsecondary collaboration strategies."*

According to the IACTE representative, the relationships between high schools and community colleges are mixed. Some have genuine collaboration while others experience tensions. Most of the latter revolve around articulation of CTE coursework that results in dual credit courses. *"Some of the tensions are administrative. Others may be ACC directors and teachers afraid of the dual credit because they feel the college is going to come in and take over their programs."* There is also inconsistency around payment structure. In her words, *"In some parts of the state, students are not required to pay a fee for the dual credit course. Yet in other regions, they must pay a fee. Other times, a college doesn't want to provide the credit for high school students."*

IACTE does its part to address the CTE teacher shortage. It has delivered *"some training for those coming into education from business and industry so they're not going in blind. I think we can improve on that."*

## J. CTE Supports Summary

### EFE directors
On average, there were up to two staffers in an EFE office with more staffers in regions with greater student populations. Most individuals were sole EFE directors, but it was not uncommon for some to also assume ACC and high school CTE directorships. Reasons for serving dual roles included helping to streamline CTE programming, small size of CTE programs, and insufficient funds in the region.

The quantity and quality of communication and support from EFE directors was rated highly by the CTE leadership community. In large numbers, survey respondents concurred that EFE directors focused their efforts on oversight and accountability of programs. However, there were sharp distinctions between how single- and dual-role directors were perceived: those in single-roles were more supportive, especially in building the capacity of CTE staff.

### ACC directors
Their offices were staffed by two or more personnel. Over half of all directors also assumed EFE directorships. The frequency and quality of communication that ACC directors had with other CTE leaders was more than satisfactory. They maintained cordial relationships with feeder high schools that mostly valued the CTE opportunities afforded to their students by the ACCs.

### High school directors
At high schools, the responsibility for CTE management was mostly assumed by staff who held other positions—principals, district administrators, CTE teachers, etc. Here again, their role functions, communication, and collaboration with other CTE entities was of high quality.

### Community colleges
Secondary school CTE leaders primarily communicated with college executives, such as presidents, deans, and CTE department chairs. About half the EFE directors had partnerships with one college; a third or fewer had collaborations with multiple colleges.

Overall, communication with colleges was good, but the actual support from colleges for CTE programs was, in some instances, less than what survey respondents expected. There were tensions with respect to dual credit courses and the credentialing of high school staff to teach them. These perceptions varied widely among survey respondents.

---

### EFE Boards of Control (BOC)

Most EFE directors stated that the district superintendent served on the BOC, but far fewer district superintendents had the same view. Overall, there were small numbers of other entities on the BOC, such as high school CTE directors, ROE directors, and community college representatives.

By and large, the EFE BOC provided oversight to various areas such as funding, administrative tasks, compliance monitoring, and the evaluation of the EFE director. There were large discrepancies between the report of district superintendents and EFE directors in terms of areas of oversight provided by the BOC. Moreover, while most school and district staff were pleased with the communication and support, far fewer understood the roles and responsibilities of the BOC.

### Local Workforce Boards (LWB)

CTE stakeholders appeared to be satisfied with the quality of the LWBs in terms of communication and support. Traditionally, LWBs were more involved in serving out-of-school youth and students in college; more recently, they are playing a greater role in secondary school CTE advisement.

### ISBE's CTE and Innovation Department

The State's CTE and Innovation Department received lower ratings on communication and support than did other CTE entities in this evaluation. Communication delays due to staff turnover at the Department were cited as the primary reason for the difficulties that regional and local CTE stakeholders have experienced.

### ICCB

The Illinois Community College Board (ICCB) works primarily at the post-secondary level. As a regulatory body, it maintains oversight over the state's community colleges, but leaves CTE policy setting to individual institutions.

### IACTE

At the state level, the Illinois Association for Career and Technical Education (IACTE) leverages its expertise through the provision of professional development, advocacy, and promoting networking for CTE teachers at the secondary and post-secondary levels. Its relationship with schools and colleges was seen as mixed.

# IV. IL CTE Implementation

This section of the report focuses on CTE program implementation in the high schools and Area Career Centers (ACCs). It includes a summary of findings related to:

➢ Levels of implementation – extent to which high schools and ACCs implemented *best practices* that exemplify high-quality CTE programs[11]
➢ Student participation – students' involvement in CTE Pathways/program, CTE-related activities, CTSOs, and career plans
➢ Equity in student participation
➢ Barriers – to implementation and quality programming

Like the previous section, the evaluation looked for regional differences, which are reported in **Appendix B**. The section ends with a summary of key findings.

## A. Levels of Implementation

**Table 17**, on the following page, lists *best practices* of high-quality CTE programs and the extent to which each was implemented at the high schools (HSs) and Area Career Centers (ACCs). The levels were self-reported by school/district CTE staff and ACC directors[12], respectively (see Box 1 for description of implementation levels).

Overall, several conclusions can be drawn from the table. One, many (over 50%) schools and ACCs were routinely implementing various best practices including the following.
➢ Project-based learning integrated into CTE courses.
➢ Curriculum that incorporates workplace skill standards, e.g., teamwork, workplace etiquette.
➢ Instruction that includes strong connections between academic and technical knowledge and skills
➢ Facilities, equipment, technology, and materials provided in ways to ensure all students can succeed
➢ Formative and summative assessments that are integrated to validate student learning gains.
➢ Supportive services are provided to ensure all students can achieve success.

> **Box 1. Levels of Implementation**
>
> **None/planning**: Not implementing and could be planning to implement
>
> **Emerging**: Beginning stages with major gaps
>
> **Partial**: In place but with some gaps
>
> **Routine**: fully implementing with no major gaps

Collectively, high implementation of these practices suggests that CTE courses provide rich experiences for students to engage in exploration and knowledge/skill building activities that are relevant to their career choice. What's more, supports are in place to ensure equity of experience for all students.

---

[11] Identified from ACTE's Quality CTE Program of Study Framework www.acteonline.org/high-quality-CTE. The same framework was used by the ISBE's CTE and Innovation Department to develop their Program Quality Review form.

[12] Includes 22 Directors who served in the dual role of EFE and ACC Director (n=15) and sole ACC Directors (n=7).

**Table 17. Level of Implementation of CTE Best Practices**
*percentage of school/district CTE staff and ACC directors reporting each level*

| | Groups | None/ planning | Emerging | Partial | Routine |
|---|---|---|---|---|---|
| Project-based learning is integrated into CTE courses. | HSs | 3% | 9% | 24% | 64% |
| | ACCs | | 4% | 14% | 82% |
| Curriculum incorporates workplace skill standards, e.g., teamwork, workplace etiquette. | HSs | 3% | 10% | 20% | 67% |
| | ACCs | | 14% | 9% | 77% |
| Facilities, equipment, technology, and materials are provided in ways to ensure all students can succeed. | HSs | 4% | 8% | 22% | 66% |
| | ACCs | | | 27% | 73% |
| Formative and summative assessments are integrated to validate student learning gains. | HSs | 5% | 11% | 26% | 58% |
| | ACCs | 4% | 9% | 14% | 73% |
| CTE curriculum is aligned with industry-validated technical standards. | HSs | 6% | 11% | 34% | 49% |
| | ACCs | | 4% | 23% | 73% |
| Supportive services are provided to ensure all students can achieve success. | HSs | 4% | 10% | 29% | 57% |
| | ACCs | 4% | | 27% | 68% |
| Instruction includes strong connections between academic and technical knowledge and skills. | HSs | 5% | 7% | 24% | 64% |
| | ACCs | | 13% | 23% | 64% |
| Assessments provide objective information on student attainment of industry-validated technical skills and knowledge. | HSs | 6% | 13% | 31% | 50% |
| | ACCs | | 4% | 27% | 68% |
| Partnerships are formed with a diverse range of stakeholders who represent differing perspectives. | HSs | 14% | 25% | 36% | 25% |
| | ACCs | | 14% | 38% | 48% |
| Business partners support the programs of study in tangible ways. | HSs | 16% | 22% | 38% | 24% |
| | ACCs | | 14% | 38% | 48% |
| CTE classroom infrastructure is upgraded to meet current industry standards. | HSs | 6% | 14% | 37% | 43% |
| | ACCs | | | 57% | 43% |

| | Groups | None/ planning | Emerging | Partial | Routine |
|---|---|---|---|---|---|
| Students are actively recruited from traditionally underrepresented populations. | HSs | 10% | 19% | 36% | 35% |
| | ACCs | 4% | 9% | 46% | 41% |
| Work-based learning experiences are intentionally aligned with each student's goals. | HSs | 12% | 22% | 30% | 36% |
| | ACCs | | 4% | 64% | 32% |

Source: IL CTE Program Survey (n=196-201 school/district CTE staff, 22 ACC directors)

Two, when comparing the two groups, ACCs had higher levels of implementation for most of the *best practices* compared to high schools. For instance, 82% of ACCs *routinely* implemented project-based learning compared to 64% of high schools. Also, 77% of ACCs *routinely* implemented employer skills standards in the curriculum compared to 67% of high schools. Other gaps between the two groups were larger, as was the case with aligning curriculum with industry-validated technical standards (73% at ACCs vs 49% at HS) and using formative and summative assessments to validate student learning gains (73% at ACCs vs 58% at HSs).

The higher implementation levels reported at the ACCs compared to high schools is likely a result of their infrastructure which gives them a leg up on course offerings. For example, ACCs do not have to compete with other curricula for budgetary decisions. They can offer more applied academic and technological experiences for students, such as automotive technology, welding, Certified Nurse Assistants training, where students have access to work-related equipment and projects that are hands-on. High schools, on the other hand, might have work-related equipment but typically offer conceptual and project design opportunities.

Three, while half or more of the high schools and ACCs were routinely implementing the same *best practices* (see the first seven listed in the table), areas of lower implementation were also the same for both groups. More specifically, less than half of the high schools and ACCs were routinely implementing the following features:
➢ Partnerships with a diverse range of stakeholder who represent differing perspectives
➢ Business partners support Programs of Study in tangible ways.
➢ CTE classroom infrastructure is upgraded to meet current industry standards.
➢ Students are actively recruited from traditionally underrepresented populations.
➢ Work-based learning experiences are intentionally aligned with each student's goals.

## B. Student Participation in CTE Courses and Activities

The evaluation surveyed students who participated in CTE courses at varying levels including:
➢ Non-concentrator-students who participated in one CTE course in a career-related program,[13] during their time at high school
➢ HS CTE concentrator-students who participated in two or more CTE courses in the same career-related program, during their time at high school

---

[13] This group could include students who participated in courses in several career-related programs but not more than 1 in each program.

➤ ACC CTE concentrator-students who participated in two or more CTE course in the same career-related program, during their time at high school, which included course(s) at an Area Career Center
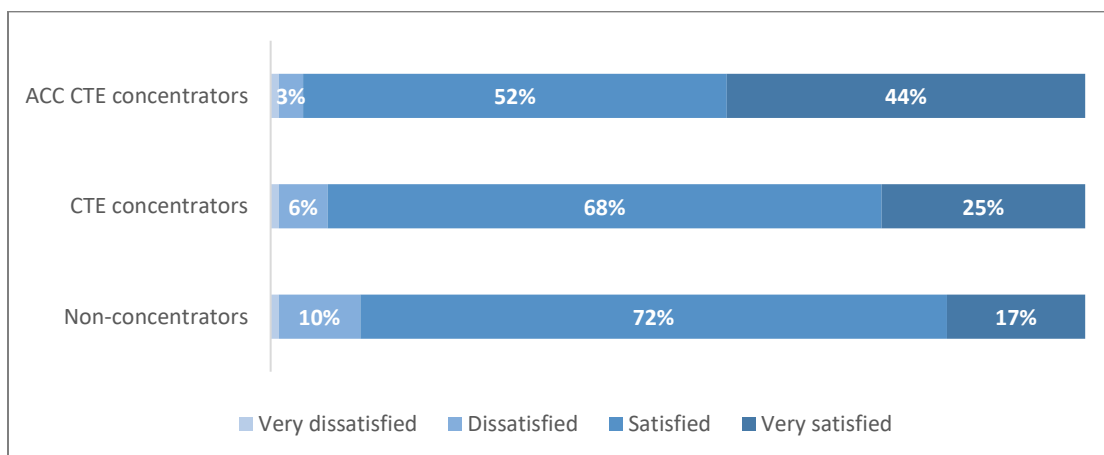
Table 18. Student Participation in Career Pathways/Programs
*percentage of non-concentrators, HS CTE concentrators, ACC CTE concentrators*

| | Non-concentrators | HS CTE concentrators | ACC CTE concentrators |
|---|---|---|---|
| Agriculture, food, and natural resources | 22% | 26% | 19% |
| Arts and communication | 17% | 22% | 11% |
| Finance and business services | 35% | 40% | 14% |
| Health sciences and technology | 17% | 20% | 23% |
| Human and public services | 21% | 25% | 26% |
| Information technology | 16% | 21% | 1% |
| Manufacturing, engineering, and trades | 29% | 37% | 37% |

Source: IL CTE Student Survey (n=36,809 non-concentrators; 53,426 HS concentrators; 2,692 ACC concentrators)

On the survey, students identified the Career Programs/Pathways for which they were enrolled in coursework. Seen in **Table 18**, the two Career Programs/Pathways with the highest percentage of participation from non-concentrators were finance and business services (35%) and manufacturing, engineering, and trades (29%). This was also true of HS CTE concentrators (40% and 37%, respectively). ACC CTE concentrators, on the other hand, typically participated in manufacturing, engineering, and trades (37%), human and public services (26%), and health sciences and technology (23%).

Figure 9. Student Satisfaction with CTE Course Experiences
*percentage of non-concentrators, HS CTE concentrators, ACC CTE concentrators*



| | Very dissatisfied | Dissatisfied | Satisfied | Very satisfied |
|---|---|---|---|---|
| ACC CTE concentrators | | 3% | 52% | 44% |
| CTE concentrators | | 6% | 68% | 25% |
| Non-concentrators | | 10% | 72% | 17% |

Source: IL CTE Student Survey (n=36,809 non-concentrators; 53,426 HS concentrators; 2,692 ACC concentrators)

When asked about their CTE course experiences, students were both satisfied with them and interested in taking additional CTE courses. More specifically, **Figure 9** on the previous page shows that 89% or more of the students, regardless of their level of course participation, were *satisfied or very satisfied* with their CTE courses. Moreover, levels of satisfaction increased with additional course participation. For instance, 98% of ACC CTE concentrators were satisfied with courses at their ACC. Not reported in the table, 61% of students expressed interest in taking more courses in their career field of choice.

Unfortunately, over one quarter (i.e., 26%) of students reported that there were career-related courses at their high school that they wanted to take but couldn't. The most frequently cited reasons for not being able to take a course were:
➢ scheduling conflicts (44%),
➢ high school didn't offer it (39%), and
➢ sections were full (23%).

On the other hand, only 17% of students at an Area Career Center couldn't take the courses that they wanted.

In addition to their enrollment in CTE courses, students participated in various other career-related activities. These are listed in **Table 19**, along with the percentage of all students in each group. The table shows that over half of the students in each of the three groups participated in discussions about career choices in classes, advisory, or with a career counselor. Many also took an introductory course in middle school or their freshman year to learn about different career choices.

Table 19. Student Participation in CTE Activities
*percentage of non-concentrators, HS CTE concentrators, ACC CTE concentrators*

|  | Non-concentrators | HS CTE Concentrators | ACC CTE Concentrators |
|---|---|---|---|
| Discussions about career choices in other classes or in advisory | 78% | 85% | 86% |
| Introductory course in middle school or freshman year to learn about and explore different career choices | 62% | 70% | 68% |
| Discussion with my school counselor about career choices | 53% | 65% | 75% |
| Dual credit courses | 41% | 55% | 67% |
| Career fairs offered in my school district | 37% | 47% | 59% |
| Opportunity to earn an industry-recognized credential | 22% | 29% | 46% |
| Internships, apprenticeships, and work-based learning | 22% | 30% | 40% |

Source: IL CTE Student Survey (n=36,809 non-concentrators; 53,426 HS concentrators; 2,692 ACC concentrators)

Moving down the table, a higher percentage of HS CTE concentrators and ACC CTE concentrators took dual credit courses compared to non-concentrators (67% and 55% vs 41%, respectively). Similarly, HS CTE concentrators (47%-59%) were more likely to participate in career fairs than non-concentrators (37%).

Few students, however, participated in work-based learning experiences. The bottom of the table shows that only 22% of non-concentrators and 30% of CTE concentrators reported that they participated in work-based experiences. The percentage jumped to 40% at the Area Career Center. Furthermore, 46% of CTE concentrators had opportunities to earn an industry-recognized credential at their ACC compared to 29% of CTE concentrators at the high school.

ISBE has recently increased its focus on promoting work-based learning opportunities. For example, ISBE collaborated with partners to develop the work-based learning manual which was released in time for the 2021-22 school year. This resource will be a living document, capturing feedback from and responding to educator users during the first year. It is possible, however, that this increased focus has yet to translate into more student participation in WBL.

For their part, high schools and ACCs reported that they offered a variety of work-based learning opportunities, chief among them were job-shadowing, cooperative work agreements, internships, paid work, and team-based challenges (see **Table 20**). Nearly all the ACCs (91%) provided advanced work-based learning such as internships and clinical experience. Even still, these offerings have not resulted in more student participation.

Table 20. Work-Based Learning Opportunities
*percentage of school/district CTE staff and ACC directors*

|  | School/district CTE staff | ACC Directors |
|---|---|---|
| Job-shadowing | 67% | 82% |
| Cooperative work agreements | 58% | 64% |
| Internships | 57% | 91% |
| Paid work experiences | 53% | 77% |
| Team-based challenges through CTSOs | 51% | 91% |
| Clinical experiences | 48% | 91% |
| On job training | 37% | 54% |
| Apprenticeships | 32% | 54% |
| School-based enterprises | 27% | 50% |
| Student-led enterprises | 23% | 32% |
| Career-related service learning | 23% | 64% |
| We do not offer WBL | 5% | 0% |

Source: IL CTE Program Survey (n=203 school/district CTE staff, 22 ACC Directors)

The evaluation also assessed students' participation in the various CTSOs that are available in the state. We found that few students from all three groups (16%) participated in a CTSO, which lines up with the participation rates that were reported in the IL CTE 2021 report to the Governor's office.[14] It should also be noted that approximately 40% of students reported on the survey that they weren't sure if they participated in a CTSO.

For those who did participate in a CTSO, the experience was positive. For example, during focus group discussions, student participants unanimously agreed that their leadership skills had been enhanced by their involvement with CTSO chapters. More specifically, they reported exponential growth in public speaking, organization, networking, and advocacy. One student said, "*I'm very introverted. I find it really hard and difficult to try to broadcast my voice and to establish a point or position. As state president, it's really pushed me to build greater confidence in myself.*" Student leaders also learned how to advocate for CTE. "*We went to Washington, DC. And there we had two to three advocacy training meetings. So that was like a really big thing that I had never really experienced before. And then we got to put that into practice when we talked to some different legislators from Illinois.*"

The students went on to say that exposure to industry was also made possible through team competitions judged by business leaders. For example, several students were mentored by industry professionals. One student commented, "*For my engineering design and development course, we had a mentor who provided design insights, materials, and recommendations. Overall, we had a few online meetings with him. And it was really a joy. He was a professional engineer, and he was working in a startup company at the time. And he knew what it was like to be in our shoes.*"

Lastly, the evaluation was interested in learning about the development of career plans as part of overall high school guidance. Specifically, what proportion of students had explicit career plans, who assisted them in the formulation of these plans, and how often were they revised?

Figure 10. Career Plan Development
*percentage of High School CTE students and ACC students*
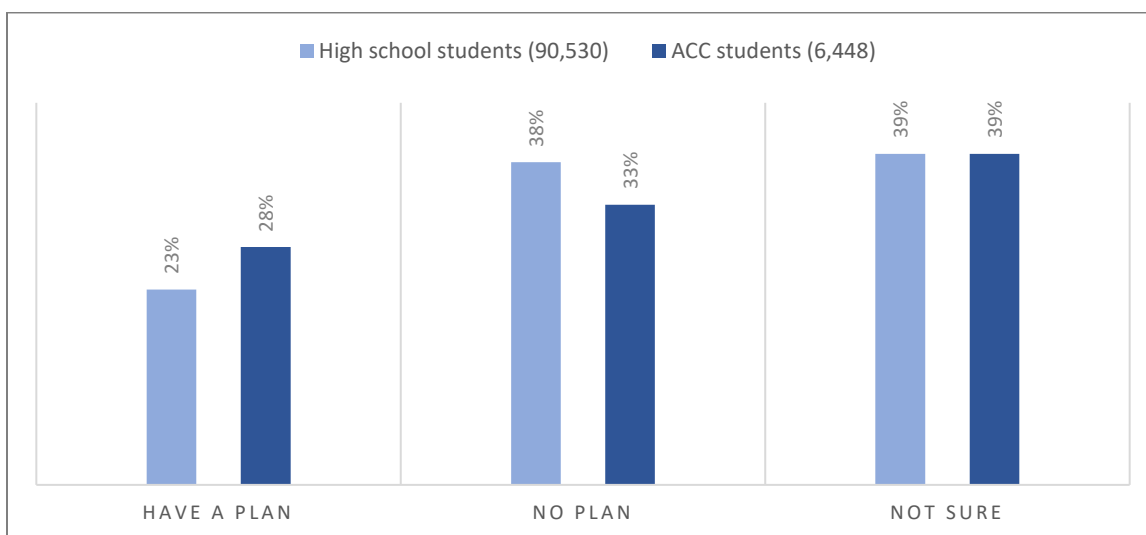
According to **Figure 10** above, there were no appreciable differences in career plan development between High School CTE and ACC students. About 23% -28% were certain that they had a plan, but

---

[14] The 2021 CTE report to the Governor reported that 16% of students participated in a CTSO.

many more (over 70%) reported that they were not sure or did not have one. Half the respondents attributed the help they received to their parents; between 35% and 43% received help from teachers or counselors; and 18% - 20% got no help. In terms of revision, slightly over half the students attested that their career plan changed more than once a year.

These proportions are not high, suggesting that *formal career planning could receive more attention in the high school experiences of CTE students because the research shows that it is associated with positive student outcomes.* When students receive adult support, they are significantly more likely to complete a college preparatory curriculum and enroll in post-secondary education. An annual review of career plans positively influences submitting the FAFSA (Free Application for Federal Student Aid) as well as college application and enrollment (Torre Gibney & Rauner, 2021).

## C. Equity in Participation

Table 21. Special Groups CTE Participation and Statewide Student Population
*percentage of CTE participants and secondary students statewide*

| Student Subgroup/Special Populations | CTE Participants | Statewide Secondary Students |
|---|---|---|
| Male | 56% | 51.3% |
| Female | 44% | 48.7% |
| Students with Disabilities (SWD) | 11.8% | 19.1% |
| English Learners (EL) | 4.8% | 6.7% |

Source: Excerpts from ISBE FY 2021 Career and Technical Education Report (Ayala, 2022)

According to **Table 21** above, male students are over-represented in Illinois' CTE programs, while female students, students with disabilities and English Learners fall below statewide proportions. In our study, we wanted to go beyond enrollment counts and ascertain how these demographic subgroups perceived their CTE experiences. Therefore, unlike the data in **Table 12**, the findings below are self-reported.

## Figure 11. Differences in CTE Experiences by Gender
### *percentage of males, females*
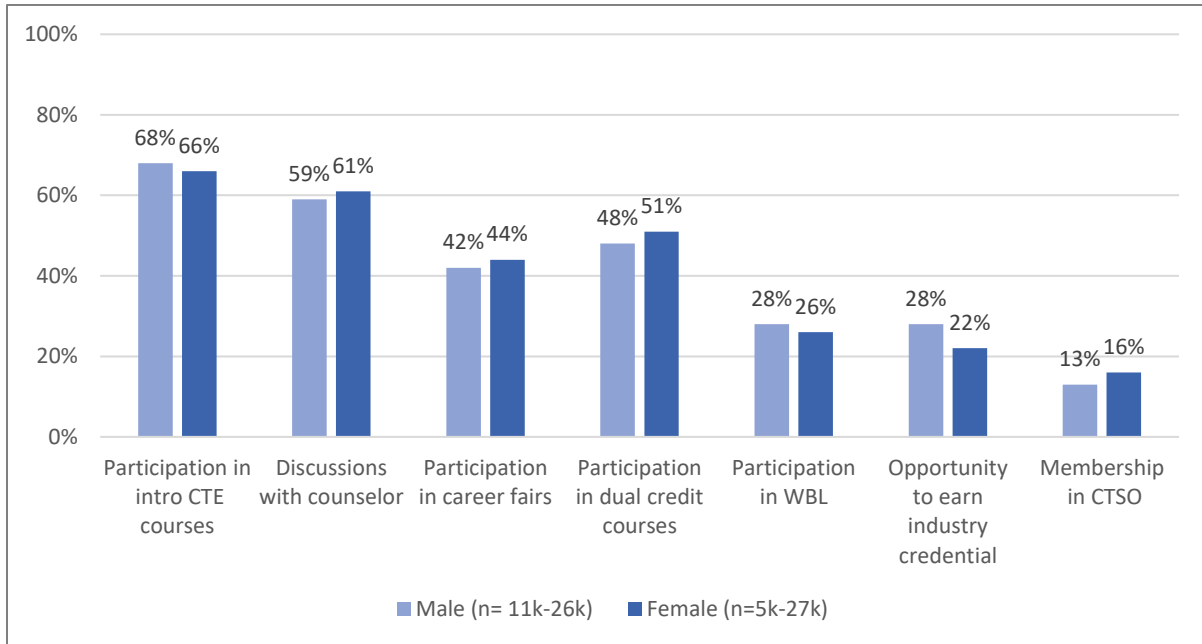


Source: CTE Student Survey, * all differences statistically significant (p < 0.00)

Shown in **Figure 11**, male and female students significantly differed in their perceptions of CTE experiences. More males reported that they took part in introductory CTE courses in middle school, in WBL opportunities, and had access to earning an industry credential. By contrast, more female students discussed their career plans with counselors, attended career fairs, participated in dual credit courses, and were members of CTSOs.

## Figure 12. Differences in CTE Experiences by SWD Status
### *percentage of students with disabilities (SWD), and students without disabilities (non-SWD)*
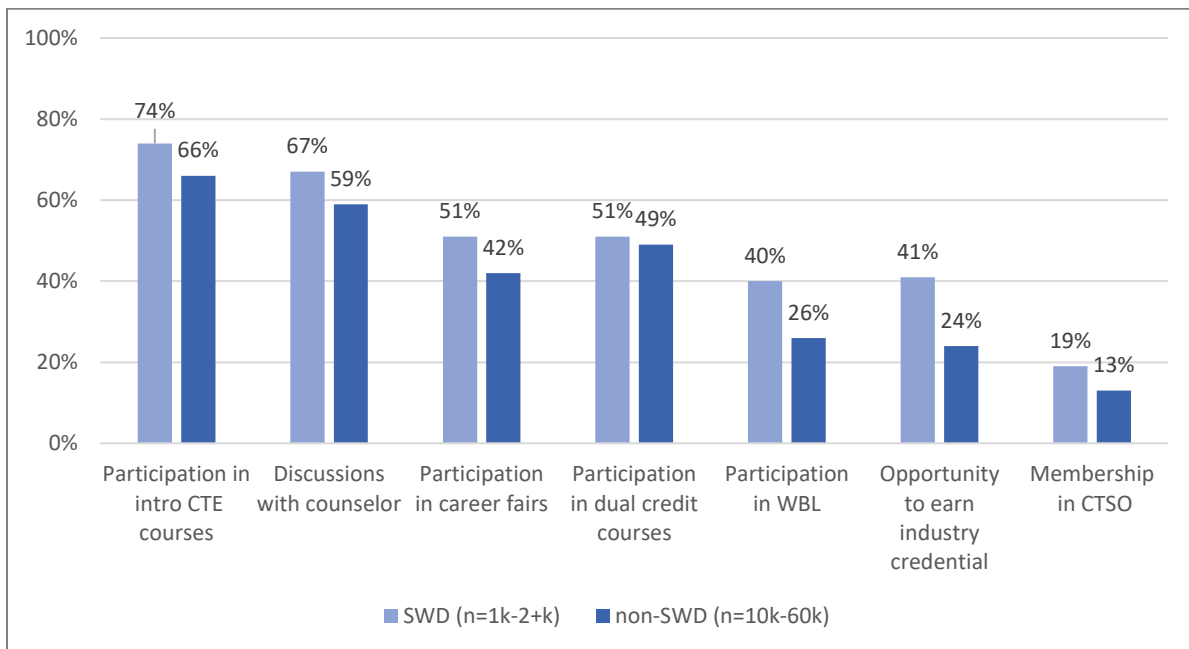


Source: CTE Student Survey. * All differences are statistically significant (p < 0.01)

**Figure 12** shows that significantly more students with disabilities reported involvement in *all* aspects of their CTE experience than those without disabilities.[15] One interpretation is that guidance and programming for special education students traditionally steer them towards career exploration as part of high-school transition planning, formally or informally. It is also possible that SWD have more room in their class schedules to explore WBL and other real-world work experiences than do non-SWD who may be steered towards advanced academic courses and college preparation.

Figure 13. Differences in CTE Experiences by EL Status
*percentage of students that are English Learners (EL), not English Learners (non-EL)*
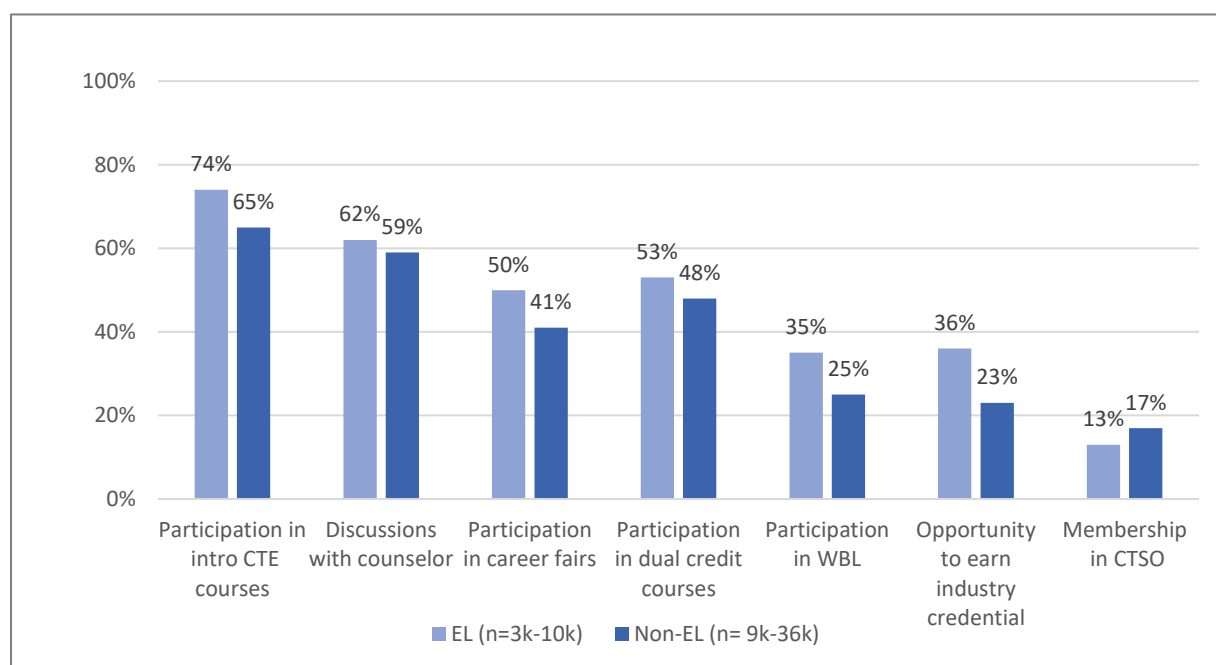


Source: CTE Student Survey. * All differences are statistically significant (p < 0.01)

We saw similar trends among English Learners (see **Figure 13**). Compared to their non-EL peers, significantly greater numbers of them reported participation in all CTE experiences *except* membership in CTSOs. This last-named difference might be attributable to the need for strong communication/language proficiency in leadership, public speaking, and advocacy roles that are often expected of CTSO members.

## D. Barriers

**Table 22** (following page) lists the barriers to quality CTE programming and implementation that were reported by school/district CTE staff and ACC directors. By far the largest barrier reported by both groups was hiring qualified CTE teachers (87% of school/district CTE staff and 96% of ACC directors). This finding is in contrast with actual CTE data showing that unfilled CTE positions accounted for only 1.5% of all unfilled teaching positions in Illinois in 2022. This perception among respondents might need further examination.

Focus group discussions also revealed that finding appropriately credentialed staff and offering salaries at par with industry stood in the way of CTE program growth. In rural regions of the state, CTE programs

---

[15] This may be an artifact of the survey administration experience where students might have been influenced by teacher suggestions on how best to respond to the items.

were even more difficult to staff. "*It's hard to showcase the value of becoming a CTE educator when the salary just isn't a large one,*" said an ACC director who went on to say, "*Somebody who goes to school for nursing won't want to come work at a high school and teach the CNA program because of the education requirements.*"

Table 22. Barriers to CTE Programming and Implementation
*percentage of school/district CTE staff and ACC directors reporting **moderate or major** barrier*

| | School/district CTE staff | ACC directors |
|---|---|---|
| Hiring qualified CTE teachers | 87% | 96% |
| Ability to keep up with or meet industry trends | 71% | 62% |
| Identifying staff who can dedicate time to find business partners | 61% | 68% |
| Course scheduling conflicts | 58% | 86% |
| Retaining qualified CTE teachers | 57% | 62% |
| Community college endorsement for dual credit courses | 57% | 66% |
| Meeting the POS criteria | 44% | 45% |
| Declining student population | 42% | 45% |
| COVID19 pandemic and related mitigation efforts | 42% | 77% |
| Travel time and distance between institutions and WBL locations | 41% | 73% |
| Graduation requirements | 40% | 82% |
| Equitable appropriation of CTE funds | 34% | 62% |
| Geographic isolation | 34% | 50% |
| Inadequate transportation | 33% | 50% |
| Course fees for dual credit | 30% | 73% |
| Cost of travel | 29% | 59% |
| Lack of equipment/resources | 28% | 32% |
| Lack of importance ascribed to CTE by administration | 21% | 28% |
| Competing with schools/ACCs for CTE students | 19% | 55% |

Source: IL CTE Program Survey (n=194-201 school/district CTE staff and 22 ACC Directors)

The table shows other barriers reported by many of the school/district CTE staff that included:
- Keeping up with/meeting industry trends (71%),
- Identifying staff who can dedicate time to find business partners (61%),
- Course schedule conflicts (58%),
- Retaining qualified CTE teachers (57%), and
- Community college endorsement for dual credit courses (57%)

Conversely, other barriers reported by ACC Directors involved
- Course scheduling conflicts (86%),
- Graduation requirements (82%),
- COVID19 pandemic and related mitigation efforts (77%),
- Travel time and distance between institutions and WBL locations (73%), and
- Course fees for dual credit (73%).

Below are comments from HS CTE directors, ACC and EFE Directors that speak to the barriers.

> Graduation requirement conflicts: *"All my superintendents would be willing to affirm that our CTE programs fulfill [graduation] requirements, but I don't think we can get the state to go along with taking technical math in lieu of regular math. You know, they've got to have algebra one, geometry, algebra two…That's just the hurdle of trying to get the State to say 'yeah, we'll accept that as a credit for graduation.'" [EFE director]*

> Time, distance, and transportation issues: *"I think the only disadvantage in our EFE is distance. We have schools that do not send kids to the [ACC] because of how long they would have to be on a bus. One of our schools in our region is closer to another EFE's career center than it is to ours. That center is 15 minutes away, but we're sending kids out here and it takes them 40 to 45 minutes." [EFE director]*

> Perception of CTE: *"At the end of the day, when a strong student that is college bound must choose between an AP course or a CTE course, they won't take the CTE course. I think the systems that we've set up, like not making it a graduation requirement, puts CTE in a lesser position." [High School CTE director]*

## E. CTE Implementation Summary

Many schools and ACCs reported high implementation of key best practices that provided students with hands-on, career-related experiences. Nevertheless, there was a higher level of CTE *best practice* implementation at ACCs than at high schools. Even so, in both settings WBL and business partnerships were not well developed. This showed in the low levels of student participation in work-based learning opportunities.

The highest program enrollments among *high school* CTE concentrators and non-concentrators were in Finance and Business Services. For CTE concentrators at *ACC*s, it was Manufacturing, Engineering, and Trades.

Students in large numbers were satisfied with their CTE courses but could not take more because of scheduling conflicts at their high schools. In general, students discussed career choices in classes and with counselors. More CTE concentrators at ACCs appear to take advantage of dual credit courses and WBL than do their HS peers. Less than a fifth of all students surveyed confirmed participation in a CTSO,

but many more were uncertain if they had such an experience. Formal career planning in middle and high school was not widespread despite its evidence-based benefits.

With respect to equity in CTE participation, more male students than females enrolled in WBL and had access to industry credentials; more female students took part in career fairs, dual credit courses, and CTSOs. A higher proportion of SWD than non-SWD participated in all CTE experiences. The same was true of EL compared to non-EL, except for CTSO membership.

The most prominent obstacle to CTE programming was recruitment of qualified staff. High school leaders had greater difficulty staying abreast of industry trends. ACC directors' challenges were course scheduling and graduation requirements.

# V. IL CTE Outcomes

This section summarizes data on program and student outcomes at the high schools and ACCs. It includes reports from school/district CTE staff, ACC Directors, and students.

## A. Program Outcomes

Illinois' vision for CTE, articulated in their Perkins V Plan is to "empower and support all students to achieve their life and career goals through an aligned, equitable, and high-quality career pathway system" (pg. 4, Illinois State Board of Education 2020). To this end, the State outlined the following six goals of their plan.

1. Increase the percentage of students who obtain a postsecondary certificate, degree, or industry-recognized credentials.

2. Strengthen CTE offerings by improving access, program quality, and transition points between education and workforce systems and programs.

3. Increase participation in CTE dual credit coursework.

4. Increase responsiveness to local, regional, and state workforce needs based on labor market information and employer input.

5. Recruit and retain a robust and sustainable pipeline of CTE educators.

6. Expand access to quality work-based learning for all students

The evaluation found that most schools and ACCs were addressing these goals and more with success. More specifically, **Table 23** on the following page identifies program improvements over the past two years as reported by school/district CTE staff and ACC directors. The top three improvements from school/district CTE staff included 1) increased awareness and enhanced image of career and technical education, 2) adding new CTE courses to meet industry needs/student interests, and 3) offering college and career pathway endorsements. Most ACC directors also reported increased awareness of CTE as the top program improvement, along with increased WBL opportunities, and increased parent knowledge of CTE, to round out the top three.

In three areas—new course offerings, college and career pathway endorsements, and increases in CTE concentrators—a greater percentage of school district respondents noted improvements. In all other areas, more ACC respondents cited improvements.

Table 23. Program Improvements

*percentage of school/district CTE staff and directors*

|  | School/district CTE staff | ACC directors |
|---|---|---|
| Increased awareness and enhanced image of career and technical education | 85% | 86% |
| Added new CTE course to meet industry needs and/or student interest | 74% | 71% |
| Offered College and Career Pathway endorsements | 69% | 50% |
| Improved the accessibility of programs to nontraditional students | 61% | 74% |
| Increased WBL opportunities | 59% | 86% |
| Created more business partnerships | 57% | 81% |
| Increased the number of CTE concentrators | 56% | 47% |
| Implemented/developed a team-based challenge | 56% | 76% |
| Increased dual credit course options | 45% | 76% |
| Increased CTSO participation | 42% | 58% |
| Increased parent knowledge of CTE | 41% | 84% |
| Increased collaboration with community colleges | 40% | 60% |
| Increased the number of students enrolled in CTE course | 27% | 67% |

Source: IL CTE Program Survey (n=144-190 school/district CTE staff, 19-21 ACC directors)

These improvements also line up with key findings from focus group data. In reference to changes in the image of CTE, for instance, participants reported that CTE was shifting away from being an exit pathway for non-college bound students to a necessary pathway for a well-rounded education. Equally important, CTE was viewed as a greater promise of employment and less financial debt compared to the cost of tuition. In the words of a school counselor, "*We're kind of a white-collar community. Most of our kids are on the college path. And we've been fighting that for years because it's almost a mindset. And so, I've just now started to see a huge switch to where I'm seeing kids whose parents have PhDs supporting them going into the trades.*"

Similarly, focus group participants reported that high schools and ACCs have recently offered a greater variety of CTE courses and programs. Of note were growth in educator pathways and non-traditional programs, which has led to increased student enrollment. One ACC director said, "*The Career Center enrollment has gone up every year. It's the highest it's been in probably 20 years. We have over 900 students in the Career Center.*" Indeed, over half of the school/district CTE staff and directors (56% and 57%, respectively) reported that the number of CTE concentrators has increased over the past two

years.  Later in the report, the evaluation will showcase better outcomes for CTE concentrators compared to non-concentrators.

Another improvement area seen in the survey and focus group data was the increase in work-based learning opportunities. In the survey, 59% of school/district CTE staff and 86% of ACC Directors reported increased opportunities for students to participate in work-related activities such as job shadowing, internships, apprenticeships, etc. Many viewed increased WBL opportunities resulting from Perkins V requirements and increased partnerships with businesses and industry. Put by a HS CTE Director, "*We now have more businesses on board for internships than we've ever had. So that gets the students exposure to the work environments to see if they like it.*"

It should be noted, however, that student participation in WBL opportunities was low, at least by the student reports. It is possible that there has been an increase in opportunities but a lack of participation because of the COVID19 pandemic, which hindered in-person opportunities for students. If programs retain business partnerships, we expect student participation to increase over the next year.

Additionally, some focus group participants cited that their programs made it more possible for students to earn industry credentials. For example, one ACC director commented, "*We have students coming out of our programs with industry credentials right out of high school. This allows many of those students to go right into the workforce if they so choose. That's been positive in our region.*"

Other reported strengths were strong support from educational leadership, improved pedagogy skills among teachers, funding, and CTSO team challenges.  "*There is a huge level of support from my board of superintendents for career tech ed programming, where they are wanting to grow that,*" said an EFE director.

## B.  Student Outcomes

Table 24 (following page) identifies improvements in student outcomes over the past two years as reported by school/district CTE staff and ACC directors. Similar to the program outcomes, some of the student outcomes line up squarely with Illinois' Perkins V Plan. For example, the table shows that most school/district staff (61-67%) and ACC directors (64%-73%) cited the same two outcomes, increased dual credit completion and increased knowledge of career options—both were key components of the State's Perkins V plan. Additionally, 50% of ACC Directors reported improvements in high school graduation rates. This was also identified by 46% of school/district CTE staff.

On the other hand, the table shows that less than a third in both groups reported improvements in students' placement in college and apprenticeships. Focus group discussions revealed that tracking students' postsecondary choices after they graduate from high schools was difficult; therefore, it is possible that directors could not report accurate data. Employment placement was higher in ACCs than high schools, but ACCs also serve mostly upperclassmen.

Table 24. Student Outcome Improvements
*percentage of school/district CTE staff and ACC directors*

| | School/district CTE Staff | ACC directors |
|---|---|---|
| Dual credit completion | 67% | 73% |
| Knowledge of career options | 61% | 64% |
| Identification of postsecondary goals | 46% | 45% |
| Graduation from high school | 46% | 50% |
| Knowledge and skills to perform tasks related to career interests | 45% | 45% |
| Employability skills | 42% | 45% |
| Placement in employment | 33% | 45% |
| Placement in college | 21% | 23% |
| Placement in apprenticeships | 21% | 32% |

Source: IL CTE Program Survey (n=120 school/district CTE staff, 22 ACC directors)

Students were also asked to report outcomes of their participation in CTE courses and activities. **Table 25** lists the top five outcomes from three groups of students, including non-concentrators, high school CTE concentrators, and ACC CTE concentrators. Similar to school/district CTE staff and ACC directors, the top outcome reported by students from all three groups (over 90%) was increased knowledge of different career options. The other four outcome areas identified by most students in all three groups included:

➢ identifying possible careers that might be of interest to them,
➢ learning important skills for any job,
➢ engaging in hands-on learning lessons that got them excited about learning, and
➢ learning how to perform tasks related to their career choice.

When comparing the responses for each group, the table shows a pattern of increased agreement as students were more involved in CTE courses and participants of the ACCs. For example, across all five outcomes, ACC concentrators reported the strongest agreement with the statements compared to the other two groups. The second highest level of agreement came from students who were enrolled in more than one course in their field of study. The third highest level of agreement came from students who were enrolled in one CTE course.

**Table 25. Top 5 Outcomes of CTE from Students**
*percentage of non-concentrators, high school concentrators, and ACC concentrators*

| | Student Groups | Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| Increased student's knowledge of different career options | Non-concentrators | 7% | 64% | 28% |
| | High school concentrators | 5% | 58% | 37% |
| | ACC concentrators | 3% | 49% | 48% |
| Helped student to identify possible careers that would be of interest to them | Non-concentrators | 12% | 61% | 28% |
| | High school concentrators | 8% | 56% | 37% |
| | ACC concentrators | 4% | 47% | 49% |
| Learned important skills for any job | Non-concentrators | 13% | 60% | 27% |
| | High school concentrators | 10% | 47% | 47% |
| | ACC concentrators | 6% | 45% | 49% |
| Engaged in hands-on learning that got the student excited about learning | Non-concentrators | 21% | 54% | 25% |
| | High school concentrators | 14% | 51% | 35% |
| | ACC CTE concentrators | 7% | 40% | 52% |
| Learned how to perform tasks related to the student's career choice | Non-concentrators | 23% | 56% | 21% |
| | High school concentrators | 17% | 54% | 28% |
| | ACC concentrators | 8% | 45% | 47% |

Source: IL CTE Student Survey (n=36,809 non-concentrators; 53,426 HS concentrators; 2,692 ACC concentrators)

Not reported in the table, but other benefits reported by students (to a lesser extent), included the following:
➢ Improved their performance in academic courses (76% of *all* students)
➢ Helped improved time management skills (74% of *all* students)
➢ Increased their knowledge about places in the community where they could get a job (72% of *all* students).

Focus group discussions with students highlighted some of the benefits of CTE that align with outcomes reported on the survey. For instance, one of the main themes that emerged was that CTE courses gave them real-life applications of theoretical knowledge, in diverse areas ranging from agriculture to STEM. *"You tested stuff out, and the teacher was there just to guide you. We were conducting the experiments*

*and taking charge of our learning. And I think that helped me a lot. Not just for DECA, but in life, work experiences, and different internships."*

They also benefited from the varied strengths that their CTE instructors brought to the classroom. Most teachers were former employees of industries and could pass on useful real-life knowledge. "*While we're doing demos of a recipe or sewing, instructors will interject with tips and tricks that they have learned through their career to help us become better at what we do.*"

Lastly, when asked about their career preparation plans after high school, again, differences between non-concentrators and CTE concentrators emerge, with high school concentrators reporting more confidence in their plans than non-concentrators and with ACC participation as an added benefit. More specifically, **Table 26** shows that only 17% of ACC concentrators and 20% of high school concentrators weren't sure of their plans, compared to 26% of non-concentrators. The differences were statistically significant and independent of students' grade level.

Table 26. Postsecondary Plans[16]
*percentage of non-concentrators, high school concentrators, and ACC concentrators*

| | Non-concentrators | High school concentrators | ACC concentrators |
|---|---|---|---|
| Apprentice program | 12% | 15% | 21% |
| Job in the field | 27% | 32% | 45% |
| Industry credential | 5% | 7% | 10% |
| 2-year degree | 18% | 21% | 26% |
| 4-year degree | 47% | 54% | 42% |
| Advanced degree | 28% | 28% | 22% |
| Military enrollment | 7% | 7% | 9% |
| Not sure | 26% | 20% | 17% |

Source: IL CTE Student Survey (n=36,809 non-concentrators; 53,426 HS concentrators; 2,692 ACC concentrators)

The table also shows that while all three groups were likely to select a 4-year degree and obtain a job in the fields as their top choices, the percentages varied. Starting with ACC concentrators, most were looking to get a job in the field (45%), with the four-year degree as secondary after graduating.

The reverse was the case for high school concentrators with over half (54%) interested in a 4-year degree and another 32% were interested in obtaining a job in the field. This pattern held true for non-concentrators, though the percentages were lower.

Currently, the picture is sobering with respect to postsecondary college enrollment. According to the National Student Clearinghouse (2021), nationwide college enrollment has declined by 5.1% since the

---

[16] Student could select more than 1 choice, therefore % do not add up to 100.

beginning of the pandemic. The freshmen enrollment class in fall 2021 was 9.2% smaller compared to pre-pandemic levels in fall 2019. Closer to home, Illinois has seen a 2.7% decline in public 2-year college enrollment in fall 2021 compared to the previous year, while that of 4-year public colleges declined 1.3%. In **Table 26**, more students select college education as a future plan than any other option, but the highest percentage among these hovers at 54%. It is possible pandemic-related concerns give many students pause.

## C. CTE Outcomes Summary

Stakeholders cited the positive image of CTE, additional course offerings, and increased enrollments as key examples of *program-level* improvements that have occurred in recent years. Also, more staff at ACCs than high schools reported increased access to WBL opportunities and nontraditional students. In terms of *student-level* improvements, there were greater numbers of students enrolling in dual credit courses. Overall, both staff and students concurred that CTE programs have resulted in increased awareness and knowledge of career options. Among students, a higher proportion of CTE concentrators reported better outcomes than did non-concentrators.

Qualitative findings confirmed the value of real-world applications of theoretical knowledge that the CTE experience afforded. Having access to instructors who were former industry employees was a bonus.

Concentrators were significantly more certain of their post-graduation plans than were non-concentrators. But here, the prolonged COVID-19 pandemic might have tempered students' confidence in their future plans.

# VI. Supports Associated with Implementation and Outcomes

Research-based education programs that are implemented well have a significant impact on student outcomes. In the field of career and technical education, a growing body of research literature has identified key features of quality CTE programs. The current evaluation assessed implementation of these features in high schools and Area Career Centers. Like most large-scale programs, the data summarized thus far in this report reveal that the delivery of practices and strategies associated with quality CTE programs varied in the real-world education setting.

To better understand this variation, the evaluation looked to identify factors that were related to higher implementation as well as better outcomes. In doing so, it provides the Illinois CTE system with valuable information on three fronts. One, it helps to identify the supports that are most important to quality implementation and that maximize outcomes. Two, it identifies strengths and weaknesses in the delivery of services and supports. Finally, understanding how CTE can be best supported and implemented will help to ensure its long-term sustainability.

The evaluation examined the relationship between supports (bulleted below) and CTE implementation and outcomes at the high schools. Area Career Centers were not included in the analyses due to their small sample size.
  ➢ EFE Directors – total number and types of supports (see **Table 4** on page 11 for list of supports)
  ➢ Community colleges – total number and types of supports (see **Table 11** on page 19 for list of supports)
  ➢ EFE BOC oversight – total number and types of oversight areas (see **Table 14** on page 22 for list of oversight areas)

## A. Predictors of CTE Program Implementation

Statistical analyses via regression found that support from the EFE director and community colleges were significant predictors of CTE implementation. In other words, high schools reported higher CTE implementation when they were well supported by the EFE director and community colleges. Alternatively, EFE BOC oversight was not related to CTE implementation.

Additional analyses via individual t-tests identified specific supports from EFE directors and community colleges that were related to significantly higher CTE implementation at the high schools. **Table 27** lists them in order of the differences from highest to lowest on the following page.

**Appendix C** contains a summary of all statistical analyses.

Table 27. EFE Director and Community Supports Related to CTE Implementation

| EFE supports |
|---|
| Review school CTE programs to ensure compliance with state requirements |
| Share information on best practices |
| Provide professional learning opportunities for school counselors |
| Provide opportunities for CTE staff to network and share information |
| Communicate state-mandated regulations and requirements |
| Assist recruitment of CTE instructors |
| Serve as a liaison to the community college |
| Advocate for CTE at the regional and state levels |
| Identify equity gaps in CTE access and outcomes across different student groups |
| Promote non-traditional enrollment |
| Serve as a liaison to the workforce industry |
| Provide/authorize professional learning for instructors |
| Assist increased access to CTE programs/experiences for special populations |
| **Community College supports** |
| Equipment and materials for CTE courses |
| Support for career exploration events/activities at the school |

The table shows that 13 or 72% of the different types of EFE director supports that were listed on the survey, were related to CTE implementation at the high school. For instance, high schools reported higher implementation when their EFE directors reviewed their programs to ensure compliance with state requirements. They also had higher implementation when the EFE director provided information sharing opportunities, such as profession development for school counselors and CTE instructors, networking, best practice information, and state-mandated regulation and requirements. Their support as a liaison to workforce industry and community colleges was important, as well as their support for CTE programming such as recruiting instructors and access to CTE for special populations.

Recall that back in **Table 4** on page 11 (Chapter III), *most* high schools received supports from their EFE director, such as communicating state-mandated regulations/requirements, reviewing CTE programs, and providing networking opportunities. On the other hand, there were other supports not provided to the majority of schools and were less so when the EFE director served in the position on a part-time basis. For example, less than half of the part-time EFE directors served as a liaison to the workforce industry and community colleges, provided professional learning and best practices, to name a few (see **Table 5** on pages 12-13). Given their importance to higher CTE implementation, it would behoove ISBE and EFE directors to explore ways in which these supports can be prioritized.

Moving on to community college supports, **Table 27** shows that only two types of supports were related to CTE implementation, which is equipment and materials for CTE courses and support for career exploration or activities at the school. Unfortunately, few schools (29%) reported that their community colleges offered equipment and materials for CTE courses. The percentage of high schools receiving support for career exploration increases to 63%, nevertheless, this leaves many schools without a valuable resource to their programs. Again, ISBE and ICCB may want to reconsider setting stronger guidelines on the types of support offered by community colleges.

## B. Predictors of CTE Program Outcomes

Switching to outcomes, the regression analyses found that support from the EFE director and community colleges were also significant predictors of improved CTE program outcomes. In other words, high schools that reported more support from the EFE director and community college also reported more program level outcomes. Individual supports from each group that resulted in better outcomes are listed in **Table 28**.

**Appendix C** contains a summary of all statistical analyses.

Table 28. EFE and Community College Supports Related to Program Outcomes

| EFE supports |
| --- |
| Assist increased access to CTE programs/experiences for special populations |
| Assist recruitment of CTE instructors |
| Provide networking opportunities for CTE staff to share information/resources |
| Promote non-traditional course enrollment |
| Share information on best practices |
| Identify equity gaps in access and outcomes across different student groups |
| Assist in the start-up of new CTE programs |
| Provide/authorize professional learning opportunities for CTE instructors |
| Build relationships/partnerships with local business and industry |
| **Community College supports** |
| Support for career exploration activities or events at the school |
| Space on the campus to use for CTE activities or professional learning |
| Professional learning opportunities for CTE high school instructors |
| Host Regional Advisory Board meetings |
| Equipment and materials for CTE courses |

The table shows that half of the EFE director supports listed on the survey were related to more program outcomes. For example, high schools that received support to increase access to CTE programs and experiences for special populations also reported more outcomes such as increased number of students enrolled in CTE courses and improved the accessibility of programs to nontraditional students. Discussed above, the extent to which these supports are provided to the high schools vary and will need further examination.

The table also shows that the list of community college supports related to outcomes is longer than the list for implementation. Several of the supports are provided to half or more of the high schools, such as career exploration and professional learning for CTE HS instructors; however, the rest of the supports are provided to few high schools.

Lastly, none of the supports were *directly* related to the student outcomes that were assessed in the evaluation, e.g., graduation rates, knowledge of career options. Nevertheless, schools that reported higher CTE implementation also had better student outcomes. We can then infer an *indirect* relationship between EFE director and community college supports and student outcomes.

## C. Support-Implementation-Outcome Summary

The findings presented in this section underscore the vital role that EFE directors play in supporting CTE implementation, which, ultimately, also resulted in better outcomes in high schools. Furthermore, the analyses identified specific supports that should be universal across all programs. Recognizing that the availability of resources varies across the state, e.g., funding for full-time EFE directors, access to qualified individuals, the State will need to identify priority areas of supports and the ways in which these supports can be provided.

For their part, community colleges also provide valuable resources to high schools that impact implementation and outcomes. The level of access to these supports, however, varies across the state. Again, the State will need to identify priority areas and perhaps set a different level of expectation for community college involvement.

# VII. Conclusions and Recommendations

In recent years, this country is witnessing an increased interest in Career and Technical Education (CTE) programs. The renewed interest has resulted from a loss in America's leadership rank as a global competitor, increased costs of college tuition, and greater demands from industry sectors not requiring a 4-year college degree (The Burning Glass Institute, 2022). CTE programs provide students with technical training for specific career fields, work-based learning to help build skills and connections to the workforce, and employment preparation at a fraction of the cost of college tuition. What's more, research has documented positive outcomes for CTE students, including in the state of Illinois.

CTE programs are regulated and funded by the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), which was passed by Congress in 2018. In May 2020, the Perkins V State Plan for Illinois was one of the first in the nation to be approved by the United States Department of Education. The plan, developed through a partnership between ISBE and ICCB, along with collaboration from educators, businesses, and students, called for increased rigor in programming, a larger emphasis on work-based learning opportunities, and greater access to CTE for special populations. Several years into its implementation, the CTE & Innovation Department at ISBE, which oversees the CTE delivery system, wanted to assess the implementation and effectiveness of career and technical education in the state under this new plan. This report, the first of its kind, has uncovered key findings from a one-year comprehensive evaluation that was conducted by Measurement Incorporated, with contributions from the Consortium for Educational Research and Advancement (CERA), a minority/women owned business located in Illinois. These findings result in the following conclusions.

Illinois operates a multi-tiered system that include oversight, accountability, and support for CTE programs. The evaluation assessed the system's structure and all key entities. It found that *the overall governance structure was satisfactory and that most entities provide good support and communication.* Most notable, EFE directors played a vital role in the CTE multi-tiered system. In fact, the triangulation of positive feedback for EFE directors from other key constituent groups, including school and district CTE staff, was highly consistent relative to other support entities. To add, our analyses demonstrated that support from the EFE director was the *best* predictor of CTE implementation and program-level outcomes, and indirectly related to student level outcomes.

Moving on to CTE implementation, the evaluation found that most schools and ACCs reported high implementation of over half of the key CTE best practices. In other words, CTE programs in Illinois have many of the key components that provide rich, expansive opportunities for students to engage in career exploration and build their knowledge and skills in their career choice. What's more, supports are in place to ensure equity of experience for all students. For certain, ACCs were further along in their implementation of CTE best practices than high schools. Most notable, they were implementing project-based learning, assessments, and support services at higher implementation levels compared to high schools. Also, their curriculum was better aligned to industry-validated technical standards, and they had more business partners and others providing support and providing feedback. This translated into better experiences and outcomes for students who participated in coursework at the ACC.

Finally, the findings in this report provide *solid evidence that CTE is of great value to students who participate in CTE-focused coursework and related activities*. Moreover, the vast majority of students

who participated in CTE courses and activities, regardless of location (i.e., high school or ACC) and background (e.g., gender, ethnicity, special populations) were very satisfied with their experiences and reported positive outcomes. For instance, CTE concentrators reported greater participation in work-based learning and other important career-related events, as well as better outcomes such as increased knowledge and identification of career options, and increased skills for their career choice. And while there were disproportionately fewer students with disabilities, English Learners, and females in CTE programs, those who did participate had access to a wide variety of activities and experiences.

The evaluation also found areas within the support system that have room for improvement. Each is described below.

➢ Community colleges: They play a vital role in dual credit courses; however, there is variability in their course requirements and educator qualifications, both of which create barriers for dual credit offerings at the high schools. There appears to be no formal mechanism for communication and collaboration on dual credit course articulation, which contradicts state legislation regarding dual credit, i.e., Dual Credit Quality Act. To add, some of the supports that community colleges provide, which were found to be predictors of CTE implementation and outcomes, were not readily available to all high schools. These included equipment and materials for CTE courses and support for career exploration events and activities.

➢ EFE BOC: The structure, membership, and roles of the EFE BOC were unclear, and many areas of oversight overlapped with supports provided by the EFE director. In several regions of the state, district superintendents did not serve on their BOC.

➢ ISBE's CTE & Innovation Department: Quality and frequency of communication is in great need of improvement as is staffing stability.

➢ EFE directors: The evaluation found that they were best able to support schools when they had monthly meetings with school-level personnel and could dedicate 100% of their time to the position. Important yet not widely available were information sharing supports, such as professional development and best practices, and making connections with the workforce industry and community colleges. There were also differences in supports provided between regions, which need further examination.

➢ ACC director: Since many of them served as ACC and EFE directors, more clarity between the roles of EFE and ACC director is needed.

➢ Local workforce boards: Similar to ACC directors, the role of the boards was unclear to school and district CTE staff, most likely as a result of the boards historically serving out-of-school youth and post-secondary students rather than CTE program. More frequent communication, which could be funneled through the EFE director, will help to improve their levels of understanding, in addition to their greater involvement in the CTE area, which is increasing. Another area of concern was the misalignment of geographical regions between the boards, community colleges, and the EFE that resulted in discrepancies and variations in policies and procedures left to the EFE director to navigate.

➢ High school staff responsible for the oversight of CTE implementation: Few staff served the position full-time. The evaluation showed that when the oversight was shared with other duties, a district level person was best able to dedicate time to the CTE director role. Conversely, the district superintendent was least able to fulfill the duties.

➢ ICCB and IACTE: Both partners appear to be distally connected to CTE implementation in secondary schools.

Additionally, the evaluation flagged three main areas in need of improvement to enhance students' experiences in CTE. They included access to work-based learning, CTSO participation, and career plans.

➢ While many high schools and ACCs reported that they offered a variety of work-based learning opportunities, few students reported participating in them.

➢ Few students participated in CTSOs; however, those who did reaped benefits such as increased exposure and access to industry, and growth in leadership skills.

➢ Few students had a formal career plan that was reviewed regularly. Having a formal career plan has been shown in the research literature to be associated with better post-secondary preparation outcomes.

Finally, the evaluation found that *the universal barrier to CTE implementation was lack of qualified CTE instructors,* including finding teachers who met community colleges' criteria for teaching dual credit courses. This was seconded by the inability to keep up with or meet industry trends, particularly at the high schools. It should be noted that this perceived difficulty in CTE staff recruitment did not align with the State's CTE data that indicated little to no shortage.

Based on the above conclusions, we suggest the following recommendations to elevate and sustain the status of CTE programs in Illinois.

1. **Re-examine the roles and supports provided by the various entities involved in the CTE delivery system.** Illinois' CTE system operates at several levels, with some of the players performing more than one role, resulting in limited capacity to support local programs. Furthermore, the leadership staffing is far from even across regions. This creates an opportunity for ISBE to take a hard look at the policies expected of downstream leaders— BOCs, EFEs, ACCs, and high school directors—so that (a) efficiencies and (b) supports can be rendered in a more equitable manner. Such a re-balancing of staffing and roles can enhance the implementation and growth of CTE programs. Closely related is an opportunity to re-align regions, so that there is greater access to resources—workforce boards and community colleges—for high schools and ACCs.  Lastly, we encourage more explicit articulation of the roles, responsibilities, and expected supports from each entity.  As the system evolves and improvements are made, regular and repetitive communication about the CTE system, expectations, and supports to the field, i.e., high schools, is imperative to the success of the program.

2. **Ensure that CTE is afforded equal play in the State's high school graduation requirements.** In recent years, the state and national CTE data have confirmed that CTE students post better outcomes than do their peers who do not pursue a CTE high school program. Yet most high school students do not have room in their schedules to enroll in CTE. In fact, many academically advanced students are discouraged from enrolling in CTE in favor of an AP program.  Given the state of the global economy, worker shortages, and enormous college student debt, now is the time to seriously advocate for giving CTE parity with AP in high school graduation policy.

3. **Streamline policies for CTE dual credit.** ISBE could encourage greater involvement from ICCB to level the playing field by creating more policy equity across the state, as recommended by the Dual Credit Quality Act (Illinois General Assembly, 2018). Currently, decisions on dual credit are left up to the individual community colleges. To add, as per the State's Perkins V Plan, ICCB and ISBE should continue their focus on other supports identified for expanding dual credit, such as continued expansion of stackable credentials, improved access to higher education for underrepresented groups, and implementation of the State's Model Partnership Agreement.

   We would also recommend that HS CTE leadership has a seat at the table. Included in these discussions should be considerations for providing equipment and materials to support dual course classwork at the high school, as this was an important predictor of CTE implementation and outcomes.

4. **Continue to focus on certain areas of CTE implementation, including work-based learning opportunities and meeting industry needs.** Improving supports to high schools is one way to improve implementation. For their part, high schools should consider staffing the director role so that CTE program oversight gets its fair share of attention at the schools. Several areas of implementation that need improvement are business partners and work-based learning experiences, which go hand in hand. Ensuring that the CTE classroom meets current industry needs is another area of improvement and likely related to staffing and funding.

5. **Improve data tracking and create more efficient protocols and processes for oversight.** High schools and Area Career Centers do not have the bandwidth to track post-secondary plans for students after they leave high school; however, ISBE could partner with ICCB and the Department of Labor to track post-secondary education participation, earnings, etc. Demonstrating participation in the labor force, particularly related to CTE courses will lend credibility to the program.

   To add, our review of protocols and processes developed by the CTE & Innovation department indicated that the department is taking positive steps towards improving tools, such as the Program Quality Review form, which is based on best practices outlined in ACTE's program of study framework. Even so, there are other tools that could be improved to increase their effectiveness and efficiency. For instance, the CLNA form is vague, the data are not quantifiable, and the information is highly subjective. Consider a survey format for the CLNA which can yield more useful information. Similarly, the desk audit and on-site monitoring form requires a lot of qualitative data entry, most of which can be converted to quantifiable fields which are better suited for aggregate analyses.

6. **Intensify focus on the recruitment and preparation of a sustainable pipeline of CTE educators.** In its Perkins V Plan, the State has outlined several strategies that include licensure rule revisions, the development of a bridge program to recruit and prepare educators holding a teaching license in another area to teach CTE, and educator preparation programs such as the CTE Education Career Pathway grant that could include a more intensified focus on CTE. To this list we add the Educators Rising programs, which can be tailored to CTE educator preparations[17] and consideration of universal criteria for teacher qualification of dual credit

---

[17] See article: *https://www.newamerica.org/education-policy/reports/grow-your-own-teachers/a-look-at-the-data/*

courses, the latter of which will alleviate EFE directors' task of navigating variations across community colleges and create more equitable access to CTE instructors across the state.

7.  **Consider the use of an external evaluation more regularly.** This evaluation was the first of its kind and limited to one year. More frequent and longer evaluation studies will help the State to better track implementation progress and identify areas for continuous improvement. It can also be used to monitor the contributions of, and provide unbiased feedback to, the various support entities. Finally, external evaluation provides state-level data on the strengths of the CTE program, which can be used to advocate for more funding, participation, etc.

# Appendix A. Methodology

In June 2021, the Illinois State Board of Education contracted Measurement Incorporated (MI) to conduct a one-year evaluation to assess the implementation and effectiveness of its Career and Technical Education program. The evaluation featured a robust design that reflects MI's approach to conducting evaluation studies, including a comprehensive conceptual framework to guide the evaluation and data collection; multiple data sources to check the validity and reliability of findings; and mixed methods (i.e., quantitative and qualitative data collection procedures) to achieve a balance between breadth and depth of information.

The primary data collection activities for the evaluation are outlined in **Table A1**. Following is a brief description of each activity. An introductory letter was emailed to all key constituent groups in September 2021 to inform them of the evaluation purposes and their expected involvement in the data collection activities.

Table A1. Data collection activities, participants, and timeline for completion

| Data collection activities | Sampling and Participant Groups | Timeline |
|---|---|---|
| Document review<br>• 2019-20 Comprehensive Local Needs Assessment (CLNA) reports<br>• 2020 and 2021 annual CTE state level report submitted to the Governor's office in January 2021<br>• IL CTE website materials | • 103/513 CLNA reports, a 20% stratified sample by EFE | July, 2021 |
| Focus group and individual interviews | • 100% (7/7) ISBE personnel<br>• 87% (46/53) EFE Directors<br>• 58% (14/24) ACC Directors<br>• 88% (7/8) students representing each of the 8 CTSOs<br>• 26% (17/66) HS CTE Directors sampled<br>• 61% (14/23) members of Local Workforce Advisory Boards sampled<br>• 7 staff representing the Regional Office of Education<br>• 1 member each from Illinois Association for Career and Technical Education and Illinois Community College Board | October to December, 2021 |

| Data collection activities | Sampling and Participant Groups | Timeline |
|---|---|---|
| Online surveys<br>• IL CTE Program Survey<br>• IL CTE Superintendent Survey<br>• IL CTE Student Survey | • 96% (51/53) of EFE directors<br>• 92% (22/24) of ACC directors<br>• 52% (244/464) District Superintendents<br>• 49% (223/450) school/district CTE staff<br>• 39% (90,530/228,797) of high school students who participated in CTE courses[18]<br>• 6,448 ACC students who participated in CTE course[19] | January 2022-Student Survey<br><br>March-April 2022-IL CTE Program Survey Superintendent Survey |

## Document Review

The evaluation obtained documents from the Illinois State Board of Education, most of which were found on its career and technical education [website](). They included information materials and resources related to program implementation and oversight, such as CTE monitoring tools, Comprehensive Local Needs Assessment resources, and the State's Perkins V plan and related resources for grantees. The purpose of the document review was threefold; 1) to gather information about context and program operations, 2) to assess the degree of communication, guidance and oversight, and 3) to determine additional data collection needs for the evaluation.

The evaluation also conducted a qualitative review of district and ACC level CLNA reports that were randomly sampled and stratified by EFE region and included all 24 ACCs. The CLNA is submitted every two years, with the last submission made in 2020; therefore, the evaluation reviewed reports from two years ago. The review protocol was designed to obtain information related to overall strengths and weaknesses and areas considered for expansion.

## Focus group and individual interviews

Virtual focus groups were conducted with members of various constituent groups that were identified in collaboration with the CTE & Innovation Department. Field researchers that included members of the Consortium for Educational Research and Advancement (CERA), a minority/women owned business located in Illinois, participated in a half-day training session conducted by Measurement Incorporated in September 2021 to review the focus group protocols and procedures. Invitations were sent via email to all participants, along with a doodle poll to identify dates and times for the meeting. The focus group protocols included questions in the following categories:
  ➢ Communication and collaboration
  ➢ CTE monitoring
  ➢ CTE programming
  ➢ CTE governance structure
  ➢ Facilitating and impeding factors in the system

---

[18] The student response rate is estimated from the total number of CTE students reported in 2021 IL CTE report presented to the Governor's office.
[19] The evaluation did not have the total number of students who participated in an Area Career Center; therefore, the response rate could not be calculated.

Online surveys

The evaluation included three online surveys, 1) IL CTE Program Survey, 2) IL CTE Superintendent Survey, and 3) IL CTE Student Survey. Each is described below.

The IL CTE program Survey included items on 1) staffing, 2) communication, collaboration and decision making across key constituency groups, 3) EFE Boards of Control membership and oversight, 4) community college supports, 5) EFE director supports, 6) CTE program implementation at the high school/ACC, 6) challenges, and 7) outcomes.

The survey was administered to all EFE and ACC directors, as well as the CTE point person at the high school or district level. One of the challenges administering the survey at the high school/district level was identifying the appropriate individual to complete the survey. The evaluators came to learn that there was wide variation in titles and oversight at these levels. For example, some high schools had a CTE director or point person, whereas others had someone at the district level who represented all high schools in the district. Contact information was obtained from the EFE and ACC directors. The final list included a combination of individuals at the school and district level. Sample characteristics are provided in the report. **Table A2** shows the number and percentage of surveys submitted relative to the population in each of the seven regions of the state.

Table A2. IL CTE Program Survey: School/District Representation by Region
total number of schools/districts and percentage (n) that submitted a survey
(n=223)

| Regions | Total number of schools/districts | Percentage (n) surveys completed |
|---|---|---|
| Lake/Cook Counties[20] | 51 | 76% (39) |
| Region 1 | 56 | 64% (36) |
| Region 2 | 56 | 75% (42) |
| Region 3 | 79 | 34% (27) |
| Region 4 | 80 | 35% (28) |
| Region 5 | 54 | 52% (28) |
| Region 6 | 74 | 31% (23) |

The IL CTE Superintendent Survey included items on 1) EFE Boards of Control (BOC) membership, 2) frequency of meetings, 3) areas of CTE oversight, and 4) EFE director evaluation processes. The evaluation faced a similar problem identifying the appropriate individual to complete the survey because we came to learn that some superintendents did not serve on the EFE BOC. Contact information was obtained from the EFE directors. The survey was administered in April 2022. **Table A3** shows the number and percentage of districts relative to the population that were represented in the study in each of the seven regions of the state.

---

[20] Includes Chicago Public Schools

Table A3. IL CTE Superintendent Survey: Districts Representation by Region
*total number of districts and percentage (n) of superintendents who submitted a survey*
*(n=244)*

| Regions | Total number of districts | Percentage (n) surveys completed |
|---|---|---|
| Lake/Cook[21] | 62 | 47% (29) |
| Region 1 | 47 | 45% (21) |
| Region 2 | 59 | 56% (33) |
| Region 3 | 76 | 67% (51) |
| Region 4 | 84 | 50% (42) |
| Region 5 | 58 | 59% (34) |
| Region 6 | 78 | 44% (34) |

The IL CTE Student Survey included items on 1) student characteristics (i.e., grade level, gender identification, race/ethnicity, enrollment in special education and ELL programs), 2) participation in course in the main career programs/pathways, 3) interest in additional coursework, 4) participation in career exploration, other career-related activities, work-based learning and dual credit, 5) perceived benefits of and satisfaction with CTE participation, 6) CTSO participation, 7) career plans, and 8) post-secondary plans.

The evaluators coordinated survey administration with the EFE and ACC directors. The survey links were sent to the directors, along with instructions on how to complete the survey. The directors sent the links to their respective schools and Area Career Centers. The survey was administered to students in January 2022. Sample characteristics are provided in the report. **Table A4** shows the number of schools and percentage of students by region and **Table A5** shows the percentage of students by ACC.

Table A4. IL CTE Student Survey: School and Student Representation by Region
number of schools represented and percentage of students
(n=90,530)

| Regions | Number of schools | Percentage of students |
|---|---|---|
| Lake/Cook[22] | 115 | 24% |
| Region 1 | 79 | 33% |
| Region 2 | 62 | 11% |
| Region 3 | 73 | 9% |
| Region 4 | 53 | 7% |
| Region 5 | 28 | 7% |
| Region 6 | 70 | 9% |

---

[21] Includes Chicago Public Schools
[22] Includes Chicago Public Schools

**Table A5**. IL CTE Student Survey: Student Representation by Area Career Center
(n=6,450)

| ACCs | Percentage of students |
|---|---|
| Bloomington Area Career Center | 5% |
| Capital Area Career Center | 10% |
| Career Center of Southern IL | 2% |
| Collinsville Area Career Center | 6% |
| Five County Regional Vocational System | <1% |
| Fox Valley Career Center | 4% |
| Galesburg Area Vocational Center | <1% |
| Grundy Area Vocational Center | 8% |
| Heartland Technical Academy | 4% |
| Indian Valley Vocational Center | 6% |
| Jo Daviess-Carroll Area Vocational Center | <1% |
| Kankakee Area Career Center | 9% |
| KEC Area Vocational Center | 0% |
| Lake County High School Tech Campus | <1% |
| LaSalle-Peru Area Career Center | 2% |
| Lincolnland Technical Education Center | 2% |
| Livingston Area Career Center | 3% |
| Mt. Vernon Area Vocational Center | <1% |
| Okaw Area Vocational Center | <1% |
| Quincy Area Vocational Center | 3% |
| Technology Center of DuPage | 4% |
| Unity Township Area Career Center | 3% |
| Whiteside Area Career Center | 16% |
| Wilco Area Career Center | 7% |

# Appendix B. Regional Differences

## A. Supports

**EFE Directors**

The evaluation found statistically significant regional differences in some of the supports that are typically provided by EFE Directors. The supports that were different across regions are listed in **Table B1**, along with the percentage of school/district level staff who reported that the support was provided by their EFE Directors.

When compared to the state average, which represents the average of all seven regions, there was a higher percentage of school/district CTE staff from regions 3, 4, and 5 that received the support listed in the table from their EFE Director compared to the other regions. Also noteworthy is that the percentage of school/district CTE staff from region 2 was consistently lower than the average for all support listed. The remaining three regions (Lake & Cook, regions 1 and 6) varied.

Table B1. Regional Comparison of EFE Director Supports
*percentage of school/district CTE staff*

| The EFE director… | State average | Lake & Cook | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 |
|---|---|---|---|---|---|---|---|---|
| Assists recruitment of CTE instructors | 51% | 50% | 51% | 26% | 60% | 62% | 83% | 43% |
| Serves as a liaison to the workforce industry | 64% | 57% | 69% | 47% | 68% | 75% | 89% | 52% |
| Serves as a liaison to the community colleges | 64% | 57% | 74% | 38% | 80% | 79% | 89% | 39% |
| Communicates CTE state-mandates | 84% | 75% | 94% | 71% | 92% | 87% | 94% | 78% |
| Reviews school CTE for compliance | 80% | 79% | 94% | 59% | 84% | 79% | 94% | 78% |
| Manages and disburse CTE funding | 91% | 89% | 100% | 79% | 96% | 92% | 100% | 83% |
| Advocates for CTE at the regional and state levels | 76% | 82% | 91% | 56% | 76% | 79% | 83% | 65% |
| Shares information on best practices and research | 63% | 64% | 74% | 41% | 64% | 67% | 83% | 52% |
| Provides PL opportunities to school counselors | 63% | 54% | 71% | 50% | 72% | 75% | 83% | 43% |

**EFE BOC**

There were statistically significant regional differences in school/district staff's perceptions of the communication, quality of collaboration, level of support, and several areas of oversight provided by the EFE Boards of Control. **Table B2** shows the data by region.

Regarding communication, collaboration, and level of support, most regions had favorable reports from school/district CTE staff. Region 2, on the other hand, had consistently lower percentages than the state average. The areas of oversight provided by the EFE BOC were also lower in region 2, as well as region 4, compared to the state average.

Table B2.  Regional Comparison of EFE BOC Supports
*percentage of school/district CTE staff*

| The EFE BOC provides… | State average | Lake & Cook County | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 |
|---|---|---|---|---|---|---|---|---|
| Clarity of communication | 86% | 87% | 86% | 66% | 94% | 92% | 100% | 87% |
| Timeliness of communication | 87% | 93% | 86% | 61% | 100% | 92% | 100% | 87% |
| Quality of collaboration | 84% | 86% | 86% | 50% | 94% | 92% | 100% | 87% |
| Level of support | 85% | 86% | 92% | 52% | 100% | 92% | 100% | 87% |
| Types of oversight | | | | | | | | |
| Implementation of state regulations | 68% | 79% | 62% | 48% | 81% | 53% | 70% | 87% |
| Resources to support CTE | 58% | 54% | 62% | 36% | 76% | 47% | 55% | 79% |
| Developing partnerships with community colleges | 67% | 75% | 81% | 45% | 81% | 53% | 60% | 75% |
| Developing partnerships with local business and industry | 60% | 54% | 78% | 33% | 67% | 63% | 70% | 62% |

## Community Colleges

There were statistically significant differences across the regions in school/district CTE staff's reports of the support provided by community colleges. Seen in **Table B3**, regions 4, 5, and 6, which represent middle east and south parts of the state were less likely to receive the support listed in the table compared to their north and middle west counterparts.

Table B3. Regional Comparison of Community College Supports
*percentage of school/district CTE staff*

| Community colleges provide… | State average | Lake & Cook | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 |
|---|---|---|---|---|---|---|---|---|
| Open house for MS and HS students at the college | 79% | 76% | 91% | 84% | 88% | 85% | 45% | 72% |
| Professional learning opportunities for CTE HS instructors | 55% | 59% | 71% | 65% | 68% | 38% | 30% | 40% |
| Professional learning opportunities for school counselors | 54% | 48% | 71% | 49% | 60% | 42% | 30% | 68% |
| Host Regional Advisory Board meetings | 45% | 59% | 68% | 22% | 40% | 27% | 65% | 44% |

## ISBE

Lastly, there were statistically significant regional differences in school/district CTE staff's perceptions of communication and the quality of collaboration from ISBE. Seen in **Table B4**, school/district CTE staff from regions 5 and 6 gave higher ratings to ISBE's communication, both in terms of clarity and timeliness. Conversely, school/district CTE staff from region 1 gave lower ratings on all three areas listed in the table. The remaining regions had mixed reviews.

Table B4. Regional Comparison of ISBE Supports
*percentage of school/district CTE staff*

| ISBE provides… | State average | Lake County | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 |
|---|---|---|---|---|---|---|---|---|
| Clarity of communication | 51% | 57% | 35% | 45% | 54% | 48% | 60% | 64% |
| Timeliness of communication | 49% | 38% | 35% | 50% | 50% | 44% | 60% | 68% |
| Quality of collaboration | 41% | 35% | 23% | 36% | 43% | 42% | 55% | 35% |

## B.  Levels of Implementation

The evaluation examined differences in CTE implementation reported by school/district CTE staff and ACC directors from the seven regions of the state. First, there were no significant regional differences in implementation at the Area Career Centers. Second, there were statistically significant regional differences in high school level implementation of quality CTE programs on five out of the 13 features (38%). They are listed in **Table B5**, along with the percentage of schools in each region that reported *routine* implementation.

Table B5. Regional Comparison of CTE Implementation of Best Practices
*percentage of school/district CTE staff reporting <u>routine </u>implementation*

|  | State average | Lake/Cook County | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 |
|---|---|---|---|---|---|---|---|---|
| Instruction includes strong connections between academic and technical knowledge and skills | 64% | 52% | 91% | 53% | 54% | 54% | 86% | 58% |
| Formative and summative assessments are used to validate student learning gains | 58% | 48% | 66% | 43% | 69% | 64% | 76% | 46% |
| Assessments provide objective information on student attainment of industry-validated technical skills and knowledge | 50% | 36% | 71% | 33% | 68% | 40% | 62% | 42% |
| Facilities, equipment, technology, and materials support success of all students | 66% | 55% | 80% | 50% | 61% | 65% | 76% | 77% |
| Supportive services are provided to ensure all students can achieve success in the program of study, as appropriate. | 57% | 54% | 73% | 35% | 58% | 68% | 67% | 50% |

The table reveals several patterns. One, a relatively higher percentage of high schools in regions 1 and 5 were *routinely* implementing all the features compared to the other regions. Most notable was the percentage of high schools routinely implementing instruction that included a strong connection between academic and technical knowledge and skills (e.g., 91% in region 1 and 86% in region 5).

Two, implementation in the Lake & Cook County region and region 2 was below the state average in all areas. For example, only 36% of schools in Lake & Cook County and 33% of schools in region 2 were

routinely implementing assessments to provide objective information on student attainment of industry-validated skills and knowledge. The state average was 50%, with some regions including 1, 3, and 5 reporting even higher percentages of schools. Both regions also rated lower on using formative and summative assessments in all programs of students to validate student learning gains.

All other regions had strengths and weaknesses across the different features.

# Appendix C. Statistical Analyses

## Section III. Supports

EFE director

Chi-square analyses on full-time and part-time EFE director supports.

| | Chi-square value (df=1, n=187) | Significance (2-sided) |
|---|---|---|
| Identify goals and direction for CTE | 8.8 | .00 |
| Communicate state-mandated regulations & requirements | 11.5 | .00 |
| Review CTE programs for state compliance | 12.0 | .00 |
| Advocate for CTE at the regional and state level | 17.5 | .00 |
| Provide networking opportunities | 31.2 | .00 |
| Assist in start-up of new CTE programs/courses | 15.6 | .00 |
| Provide/authorize PD for instructors | 41.5 | .00 |
| Build partnerships with businesses | 10.1 | .00 |
| Serve as a liaison to workforce industry | 11.5 | .00 |
| Serve as a liaison to community college | 9.3 | .00 |
| Provide PD to counselors | 21.1 | .00 |
| Share info on best practices | 17.2 | .00 |
| Assist in recruitment of CTE instructors | 12.8 | .00 |
| Identify equity gaps in CTE access | 5.3 | .02 |
| Assist increased access to CTE programs for special populations | 6.3 | .01 |

## Section VI. Support Associated with Implementation and Outcomes

Implementation analyses

Regression analysis to identify supports that were related to CTE implementation.

- Dependent variable: CTE implementation total score (see **Table 17** on page 29 for list of implementation variables),
- Independent variables: total number of EFE support areas (**Table 4**, page 11), total number of community college support areas (**Table 11**, page 19), and total number of EFE BOC oversight areas (**Table 14**, page 22)

|  | Regression statistics |
| --- | --- |
| Multiple R | 0.28 |
| R Square | 0.08 |
| Adjusted R Square | 0.06 |
| Standard Error | 7.11 |
| Observations | 182 |

| ANOVA | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | df | SS | MS | F | P value |
| Regression | 3 | 818.6 | 272.8 | 5.39 | .001 |
| Residual | 179 | 9055.7 | 50.5 |  |  |
| Total | 182 | 9874.4 |  |  |  |
| **Coefficients** | | | | | |
|  | Coefficients | SE | T stat | P value | % variance |
| (constant) | 49.5 | 1.8 | 27.0 | .00 |  |
| Total EFE supports | 0.30 | 0.12 | 2.3 | .01 | 20% |
| Total community college supports | 0.63 | 0.31 | 2.0 | .04 | 15% |
| Total EFE BOC oversight | 0.00 | 0.17 | 0.0 | ns |  |

T-tests to identify specific EFE and community college supports related to total CTE implementation score (score could range from 13 to 65)

|  | Support Group Mean (n) | No Support Group Mean (n) | T stat | P value |
| --- | --- | --- | --- | --- |
| **EFE Director** | | | | |
| Review school CTE programs to ensure compliance with state requirements | 56.4 (175) | 49.9 (30) | 4.2 | .00 |
| Share information on best practices | 56.8 (143) | 52.4 (62) | 3.6 | .00 |
| Provide professional learning opportunities for school counselors | 56.7 (140) | 52.7 (65) | 3.4 | .00 |
| Provide opportunities for CTE staff to network and share information | 56.4 (165) | 51.7 (40) | 3.3 | .00 |
| Communicate state-mandated regulations and requirements | 56.1 (178) | 51.2 (27) | 3.0 | .00 |
| Assist recruitment of CTE instructors | 56.9 (117) | 53.6 (88) | 2.9 | .00 |
| Serve as a liaison to the community college | 56.5 (145) | 53.0 (60) | 2.8 | .00 |
| Advocate for CTE at the regional and state levels | 56.2 (166) | 52.2 (39) | 2.8 | .00 |
| Identify equity gaps in CTE access and outcomes across different student groups | 56.6 (122) | 53.8 (83) | 2.4 | .01 |
| Promote non-traditional enrollment | 56.5 (133) | 53.6 (72) | 2.5 | .01 |
| Serve as a liaison to the workforce industry | 56.4 (143) | 53.3 (62) | 2.5 | .01 |

| | | | | |
|---|---|---|---|---|
| Provide/authorize professional learning for instructors | 56.2 (151) | 53.3 (54) | 2.3 | .02 |
| Assist increased access to CTE programs/experiences for special populations | 56.3 (137) | 53.8 (68) | 2.1 | .03 |
| **Community Colleges** | | | | |
| Equipment and materials for CTE courses | 57.5 (65) | 54.5 (147) | 2.3 | .01 |
| Support for career exploration events/activities at a school | 56.3 (144) | 53.4 (68) | 2.3 | .01 |

<u>Outcome analyses</u>

Regression analyses to identify support related to CTE program outcomes

- Dependent variable: CTE program outcome total score
- Independent variables: total number of EFE support areas, total number of community college support areas, and total number of EFE BOC oversight areas

| | Regression statistics |
|---|---|
| Multiple R | 0.36 |
| R Square | 0.13 |
| Adjusted R Square | 0.10 |
| Standard Error | 3.7 |
| Observations | 102 |

| **ANOVA** | | | | | |
|---|---|---|---|---|---|
| | *df* | *SS* | *MS* | *F* | *P value* |
| Regression | 3 | 218.7 | 72.9 | 5.1 | .003 |
| Residual | 99 | 1414.3 | 14.2 | | |
| Total | 102 | 1633.1 | | | |
| **Coefficients** | | | | | |
| | *Coefficients* | *SE* | *T stat* | *P value* | *% variance* |
| (constant) | 4.0 | 1.12 | 3.5 | .001 | |
| Total EFE supports | 0.18 | 0.08 | 2.0 | .03 | 24% |
| Total community college supports | 0.54 | 0.23 | 2.3 | .02 | 24% |
| Total EFE BOC oversight | -0.12 | 0.12 | NS | NS | |

T-tests to identify specific EFE and community college supports related to CTE program level outcomes (score could range from 0 to 14)

| | Support Group Mean (n) | No Support Group Mean (n) | T stat | P value |
|---|---|---|---|---|
| **EFE Director** | | | | |
| Assist increased access to CTE programs/experiences for special populations | 8.6 (76) | 5.2 (35) | 4.4 | .00 |
| Assist recruitment of CTE instructors | 8.5 (62) | 6.3 (49) | 3.8 | .00 |
| Provide networking opportunities for CTE staff to share information/resources | 8.0 (90) | 5.2 (21) | 2.9 | .00 |
| Promote non-traditional course enrollment | 8.4 (67) | 6.1 (44) | 2.9 | .00 |
| Share information on best practices | 8.2 (78) | 5.9 (33) | 2.8 | .00 |
| Identify equity gaps in access and outcomes across different student groups | 8.4 (61) | 6.4 (50) | 2.6 | .00 |
| Assist in the start-up of new CTE programs | 8.0 (87) | 5.7 (24) | 2.4 | .01 |
| Provide/authorize professional learning opportunities for CTE instructors | 8.0 (84) | 6.0 (27) | 2.3 | .02 |
| Build relationships/partnerships with local business and industry | 8.0 (82) | 6.1 (29) | 2.2 | .02 |
| **Community Colleges** | | | | |
| Support for career exploration activities or events at the school | 8.4 (78) | 5.4 (35) | 3.7 | .00 |
| Space on the campus to use for CTE activities or professional learning | 8.7 (56) | 6.2 (57) | 3.3 | .00 |
| Professional learning opportunities for CTE high school instructors | 8.2 (71) | 6.1 (42) | 2.7 | .00 |
| Host Regional Advisory Board meetings | 8.5 (58) | 6.4 (55) | 2.7 | .00 |
| Equipment and materials for CTE courses | 8.7 (36) | 6.9 (77) | 2.2 | .02 |

# References

Ayala, C.I. (2022). *FY 2021 Career and technical education report.* Retrieved June 2022 from
https://www.isbe.net/Documents/FY-2021-CTE-Annual-Report.pdf

Hughes, K. (2022). *News from the CTE Research Network: What are we learning about the impact of CTE for students?* Retrieved June 2022 from https://cteresearchnetwork.org/sites/default/files/2022 04/APRIL22_TECHmagazine_%20CTERN_0.pdf

Dual Credit Quality Act 2018 (Il)(USA). Retrieved from
https://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3117&ChapterID=18

Illinois State Board of Education (2020). *Illinois State Plan for the Strengthening Career and Technical Education for the 21st Century Act (Perkins V).*Retrieved July 2022 from
https://www.isbe.net/perkins

Illinois State Board of Education (2022). *Illinois State Board of Education. 2020-2023 Strategic Plan.* Retrieved July 2022 from https://www.isbe.net/strategicplan

National Student Clearinghouse Research Center (2021). *Current term enrollment estimates, Fall 2021.* Retrieved June 2022 from https://nscresearchcenter.org/wp-content/uploads/CTEE_Report_Fall_2021.pdf

Neild, R.C., Boccanfuso, C., & Byrnes, V. (2015). *Academic impacts of career and technical schools.* Career and Technical Education Research, 40 (1), pp. 28-47. DOI:10.5328/cter40.1.28.

Perkins Collaborative Resource Network (2022). *History of the Act.* Retrieved June 2022 from
https://cte.ed.gov/legislation/perkins-v

Schwab, K. (2019). *The global competitiveness report.* World Economic Forum. Retrieved June 2022 from https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

The Burning Glass Institute (2022). *The emerging degree reset. How the shift to skills-based hiring holds the keys to growing the U.S. workforce at a time of talent shortage.* Retrieved July 2022 from www.burningglassinstitute.org

The OECD Programme for International Student Assessment (2018). *PISA 2018 results.* Retrieved June 2022 from https://www.oecd.org/pisa/publications/pisa-2018-results.htm

Torre Gibney, T., & Rauner, M. (2021). *Education and career planning in high school: A national study of school and student characteristics and college-going behaviors* (REL 2022-127). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Education Laboratory West. Retrieved May 2022 from https://ies.ed.gov/ncee/edlabs