

THE IMPACT OF HIGH-QUALITY CTE PROGRAMS ON STUDENTS,
SCHOOLS, AND THE COMMUNITY



REDEFINING CAREER EDUCATION

for ALL STUDENTS

Introduction

Education is undergoing a metamorphosis driven by multiple factors including of course the COVID-19 pandemic, but also the forces of a rapidly evolving job market that is redefining the skills and experiences students will need to be prepared for success in today's and the future's workforce. COVID dramatically impacted how students learn, forcing educators to rethink factors like the role of technology and the balance of face-to-face and virtual learning. At the same time, the evolution of the job market is causing educators to rethink what is being taught—what skills students need to be successful in their future career and life.

Technological advances such as artificial intelligence (AI) and advanced robotics are accelerating change and creating new career opportunities that require different technical skills focused on critical thinking, technology, creativity, and empathy and that have fewer barriers to entry than jobs requiring a bachelor's degree. It is estimated that 17.9 million workers in the U.S. will need to transition to new occupations by the year 2030, and 14.9 million of these workers will need to transition to a completely different occupational category (McKinsey Global Institute 2021). In addition, it is estimated that the United States will experience a deficit of 6.5 million skilled workers over the next decade (Korn Ferry 2018). These changes have significant implications for educators as they adapt their career and technical education (CTE) programs to this new paradigm of



Why Reimagine CTE?

17.9M

By 2030 17.9 million U.S. workers will need to transition to a new job (McKinsey 2021).

14.9M

14.9 million will transition to completely different job categories (McKinsey 2021).

6.5M

Over the next decade the U.S. will require 6.5 million more skilled workers (Korn Ferry 2018).

teaching and learning to ensure programs are fully engaging and preparing students for the careers and workplace of the future.

One school system that is embracing this change, leading the way, and adapting to new future opportunities is Vigo County School Corporation (VCSC) in Indiana. As Lindsay Wilhoite, virtual liaison for Vigo Virtual Success Academy explains, "We've really worked to reimagine and reinvent what education looks like in our district. We know that students today need choices. For some students a traditional college experience works for them, but for other students, college just isn't on their radar. We're working to provide opportunities for all our students to succeed in school and in life whether their path to success takes them through a 4-year college, a community college, technical school, or straight into the workforce."

Expanding Learning Opportunities for All Students

Located along the Wabash River on the western border of Indiana and Illinois, Vigo County has a long history of agriculture, steel manufacturing, and mining. Today, Vigo has evolved to a global economy based on advanced manufacturing industries including steel, plastics, automotive OEM (original equipment manufacturer), and food products. As the county evolves to keep pace with changes in the local and global economy, Vigo County School Corporation is also innovating to ensure its students are well prepared for the jobs of the future. That innovation includes adding virtual learning options for all students and reimagining its career education program.

With considerable preparation and planning, in 2019 VCSC launched its new virtual school, Vigo Virtual Success Academy (VVSA), with the goal of providing new opportunities to help all students succeed. To ensure success, it made a conscious decision to start small and initially limit its focus to students with the highest need—middle and high school students who were struggling, were behind, were at risk of dropping out, or had already dropped out. VVSA also made the decision to partner with Edmentum and leverage EdOptions instructional services, online courses, and experienced virtual teachers to support the launch of VVSA.

At the beginning of the 2019 school year, everything was going according to plan. As Wilhoite explains, “It was a blast in the beginning of the year—hectic but really great with enthusiastic kids and parents coming to us wanting to enroll and get started. Things were going great! Then in March, COVID hit,

“The first year of COVID our enrollments increased more than 500% and we expanded our school from serving middle and high school students to accepting elementary enrollments, becoming a K-12 school. There was just this huge need and we couldn’t say no to parents and students who needed us!”

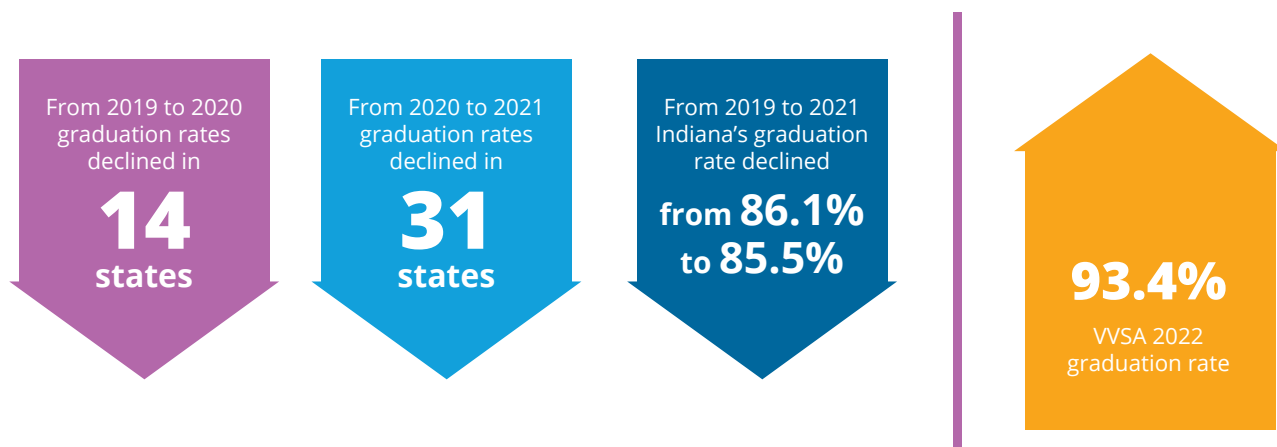
LINDSAY WILHOYTE
Virtual Liaison
Vigo Virtual Success Academy

and everything changed. Everything shut down. Fortunately for us, we were ahead of the game because we were already comfortable with virtual education and our kids were successfully engaged with EdOptions and learning virtually. The first year of COVID our enrollments increased more than 500%, and we expanded our school from serving middle and high school students to accepting elementary enrollments, becoming a K-12 school. There was just this huge need, and we couldn’t say no to parents and students who needed us!”

Achieving Success Against All Odds

When a new school opens, it can often take years or even decades to achieve high levels of student outcomes. And when the launch of that new school happens in the face of a worldwide pandemic, the odds are truly stacked against success. A recent analysis of state graduation rates found that pandemic disruptions are rolling back years, and in some cases a decade, of progress with at least 31 states seeing lower graduation rates in 2021 (Education Week 2022). During the period from 2019 to 2021, Indiana's statewide graduation rate declined from 86.1% to 85.5%. Despite launching their new school during the challenges of COVID, in 2022 VVSA achieved a graduation rate of 93.4%, significantly above both the state and national average.

As the pandemic drives declining graduation rates,
VVSA achieves a 93.4% rate



Wilhoite is the first to admit that success hasn't come easy. She describes designing the right virtual program for the Vigo district and community saying, "The principal and I worked together to develop the program that the district and the community needed. That meant understanding our students, families, and community. What are the risk factors for our population? What jobs opportunities are available and what skills do our students need? Our community has a high rate of poverty with our student population being about 55% free and reduced lunch. We also have a high dropout rate. We knew these kids needed something different for them to be successful and contribute to our community. We knew they needed something outside of a traditional education experience because for many of them school really wasn't on their radar. They had so many challenges in their lives. They had to work and many had challenging family responsibilities. These were 18-year-old seniors working until 3:00 AM, then trying to get up and go to school. So, kids were either dropping out of school or going to another virtual school. We knew that our school principals needed another tool to help our students succeed—and that was VVSA and EdOptions."

CTE that Meets Community & Family Needs

An important part of reimagining career education at VVSA is introducing students to a wide variety of career choices early in their education so students can begin to see themselves in a career pathway that aligns with their individual interests and passion. At VVSA this means starting in middle school taking career exploration courses in sixth grade as part of their FACS (Family and Consumer Science) program. The goal is to have students understand a number of critical things such as: the wide variety of career pathways available to them; what a technical school, apprenticeship, or career certification could mean to their future; and what a two-year or four-year degree might mean to them.

Wilhoite explains VVSA goals for early career exploration saying, “We want our students to start thinking about the career opportunities that resonant with them while they are in middle school so that when they get to ninth and tenth grade, they are concentrating on the courses that align with their career goals, and then by their junior and senior years they are gaining the job experience needed to move right into that career.”

Authentic work experience through apprenticeships and internships is another critical CTE initiative at VVSA. “One of the things we’re focused on expanding,” says Wilhoite, “is our work study program. Some are paid internships, and some are unpaid work-based programs. We’re in the process of matching students’ CTE classes with apprenticeships or work study programs that make sense for each student. Then we’re partnering with local businesses—a nearby auto shop, local restaurants, an Old Navy store, and other businesses to provide the work experience needed. This is a really exciting thing to me because kids just don’t know where to go or how to start getting this authentic work experience, and we’re going to make it happen for them.” Wilhoite offers a personal example of success saying, “One of the really popular pathways is the medical careers pathway. My nephew graduated with CNA (Certified Nursing Assistant) certification and was able to earn his diploma from VCSC, get a job right away, and start nursing school all at the same time.”

**Career Exploration
+ CTE Concentration
= Work Experience
Certification**



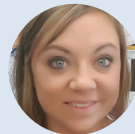
Career Success

Achieving Student Success and Program Compliance

Vigo Virtual Success Academy—like many schools and districts across the country—is not only adapting its CTE program to meet the evolving needs of its community, it is also adapting to changes in the federal Perkins V program and new state policy and funding requirements. In Indiana last year, freshman students transitioning to sophomores were required to meet the Indiana “Next Level” CTE requirements.

As Wilhoyte describes, “Kids coming in as freshman now are okay because they’re starting fresh under the new requirements. It’s the juniors and seniors who are really in a tough boat. They started under the old requirements but are now having to complete their program of study under the new system. Our challenge is to get them to graduate with a CTE certificate and meet the new requirements.”

One example of this in Indiana is the new requirement for face-to-face hours of CTE instruction. This makes it especially difficult for virtual programs to comply with the regulation. As Wilhoyte explains, “We’ve had to be very creative to make sure our kids don’t have to start over and repeat coursework. One of the out-of-the-box solutions that is working for our students is to build multiple partnerships across the district and our community so our virtual students who need face-to-face hours can get them by attending class onsite at one of the other district campuses or by attending community programs like CPR classes to gain a certificate that aligns with their career pathway and meets the requirements for onsite class hours. This works for a number of pathways, like autobody, welding, culinary arts, and anything that requires actual face-to-face time and produces a tangible product. So, the transition to the new state and federal CTE requirements has been complicated and challenging, but we’ve been creative and focused on doing what’s best for our students and we’re making it work.”



LINDSAY WILHOYTE
Virtual Liaison
Vigo Virtual Success Academy

Lindsay Wilhoyte was a member of the team that initially founded Vigo Virtual Success Academy. The goal was to serve all students who wanted or needed an alternative to a traditional school experience. They found that students thrived, especially those who needed the flexibility of virtual learning — athletes, advanced placement students, those with a job, or a medical condition. They also found that many students who initially came to VVSA because of the COVID crisis are staying with virtual education and VVSA. As Wilhoyte explains, “We have a whole population of students that never had a traditional high school experience. They were ripped out of school as freshman when COVID hit, had several years of virtual learning, and now that they are seniors they’re ready to move on with life. They got a taste of the freedom and flexibility of virtual learning and they’re not going back. I’ve seen our virtual students developing the life skills they need to be successful beyond high school. Through EdOptions they’ve learned to manage time, balance work and school, and they’ve learned so many life lessons that they are just ready to make that next transition to college or work”

Building Relationships that Lead to Student Success

VVSA also has a team of Success Coaches who Lindsay Wilhoyte credits with building powerful relationships that lead to positive outcomes. “We wouldn’t have achieved a graduation rate above 93% last year without the great work of our Success Coaches,” say Wilhoyte.

Each Success Coach is assigned a group of students who they work with holistically. VVSA utilizes an early warning system to assess students’ academic, non-academic, and social-emotional needs. This helps Success Coaches, teachers, and staff provide distinct levels of support for all students, including students who are on-track and doing well, are at-risk of falling behind, or are drastically behind and need immediate help. Success Coaches make home visits, call parents and students, and communicate through text, email, and sending postcards.

When students are identified for immediate help, Wilhoyte describes, “It’s all-hands on deck with an entire team including our counselors, EdOptions teachers, the Dean of Students, our Principal, and myself—all led by our Success Coach and with everyone communicating and onboard with whatever the student needs.” Often the need is for basic resources like food, clothing, housing, or medical services. In these cases, coaches provide referrals to local services to make sure students and families have everything they need to be successful.

Measuring Success One Student At A Time

Sometimes the success of an educational program is best measured one student at a time. One very special student came to Vigo Virtual Success Academy in 2019, the very first year of the program, because she truly needed a different education experience to meet her unique needs. According to Lindsay Wilhoyte, “She had some significant health issues with lots of doctor appointments and physical therapy and was missing more school than she was attending. So, her parents enrolled her in VVSA and right away she was very successful because of the flexibility of the virtual program and the support of EdOptions teachers.”

Wilhoyte goes on to say, “She had an interest in a medical career and enrolled in our CTE medical careers pathway. She was able to work through her sophomore, junior, and senior years and was so successful she not only got back on track with her classes and credits, she was able to graduate early, in December, earning both her high school diploma and her CNA certification. She started college in January at Ivy Technical College, and because she had earned her CNA certification, she was able to get a job at the local hospital. And in May we invited her to be our inspirational speaker at our graduation ceremony.”

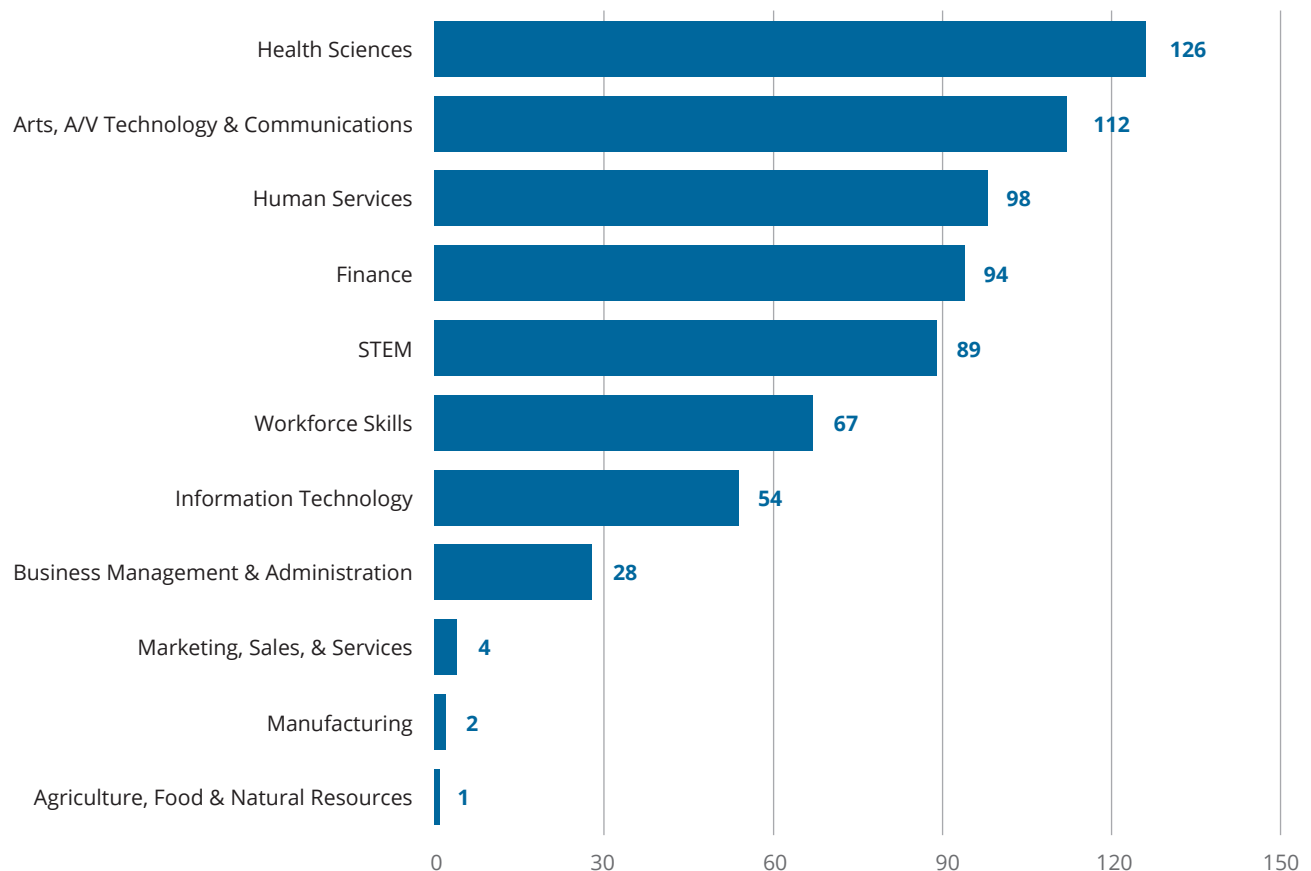
“When she walked graduation, she had already received her diploma, her CNA certification, she had completed her first semester of college, and was working in a hospital. She showed such great perseverance and through our program was able to get healthy, focus on her education, find a career she was passionate about, and be successful at all of that! In her graduation speech she said she simply could never have had this success without the support of our program.”

Building Relationships that Lead to Student Success

During the 2021-22 school year, VVSA and EdOptions instructors taught a total of 437 CTE course enrollments in 10 different career clusters and the general category of workforce skills.

- The Health Sciences career cluster had the largest number of enrollments (126) and includes a variety of courses such as Health Science 1: The Whole Individual; Health Science 2: Patient Care and Medical Services; Health and Personal Wellness; and Medical Terminology.
- The broad career category of Arts, A/V (Audio/Visual) Technology & Communications had the second largest number of student enrollments with 112 and includes a number of popular courses like Graphic Design, Fashion Design, Digital and Interactive Media, Game Design, and Photography.
- Human Services was the third most popular career cluster with 98 enrollments in the 2021-22 school year.
- Finance was the fourth most popular with 94 enrollments.
- STEM rounds out the top five with 89.

2021-22 VVSA CTE Enrollments by Career Cluster



Voice of the CTE Educator - Preparing Students for Work & Life

Renee Goeb has over 18 years teaching in both a traditional classroom and virtually, and is one of EdOptions' CTE Instructors currently teaching students at VWSA. With a strong business and math background Goeb says, "Because of my background, I really love teaching finance, accounting, and business." She tries to help her students think about their future in meaningful ways saying, "We often emphasize the importance of education without the why—without helping them understand what their education could mean and what their life might look like in the future, including potential future income, spending power, and lifestyle."

Goeb appreciates Edmentum's holistic approach to career education saying, "Our courses do a great job introducing students to potential careers and then engage them in ways that is relevant to their individual interests. Our instructional model helps them access their prior knowledge and build the skills needed for a future career. I believe we have a great atmosphere at Edmentum—we really focus on the whole child and what's best for each individual student!"

As a virtual teacher, Goeb also understands the real value of virtual learning saying, "I see a significant population of students where face-to-face learning isn't working and virtual learning does work—it meets their needs. I'm also finding that many of the kids who are successful in the classroom can actually excel even more through virtual learning. While a traditional classroom education does work for them, what they do when they come to virtually learning can be truly amazing. We saw this during COVID. Parents were so uninformed about the potential of online learning that when schools reopened they wanted their kids to go back to the classroom right away. But many of my students wanted to continue learning virtually and asked me how they could stay online. For these kids, virtual learning has really brought out the best in them—and isn't that what we want for all our kids?"



RENEE GOEB
Virtual Teacher
EdOptions Academy

When thinking about the future of career education, Goeb sees a real need to rethink CTE with an understanding that a 4-year college student degree is not the best path for every student. "For many years, and still today, our education system emphasizes the importance of a 4-year college degree, and we often value the jobs connected to that more than other jobs. But in reality we need the engineer who designs our roads as much as the person that builds our cars or the mechanic who fixes them. Society just doesn't value technical school and the trades as much as a college degree. This creates a stigma that discourages students from a career path that might work for them. We need to find ways to value all the potential career opportunities—those that require a college degree and those that can be obtained through technical school or an apprenticeship."

Conclusions

Multiple forces are compelling educators to rethink our existing education systems, assumptions, and teaching and learning practices. Certainly, the disruption has prompted many educators to rethink how we educate students, how we leverage technology, and where learning occurs (in a classroom or virtually). Secretary of Education Miguel Cardona, speaking about the impact that the COVID-19 pandemic is having on education stated, “There may be an opportunity to reimagine what schools will look like.” Also reflecting on the impact of COVID, Dan Domenech, Executive Director of AASA, the school superintendents’ association, went even further in his assessment declaring, “There are a lot of positives that will happen because we’ve been forced into this uncomfortable situation. The reality is that this is going to change education forever.” (Washington Post, 2021)

At a time when we’re considering unprecedented change in how we educate children, an accelerated evolution in our job market is driving educators to reimagine what is taught based on the skills and knowledge that workers will need to be prepared for the careers of the future. Within this shifting paradigm, educators like those at Vigo County School Corporation and Edmentum are fully embracing the opportunity to innovate and reimagine an educational system that meets the needs of students today and into the future. This innovation includes embracing technology platforms that optimize virtual and blended learning, adopting an online catalog of courses that includes a depth and breadth of CTE course pathways from career introduction through certification, and building local partnerships that provide apprenticeships and authentic work-based experiences.

Lindsay Wilhoyte summarizes VVSA’s success saying, “Building relationships has been the key to our success. We truly operate as a team. From our Success Coaches to our EdOptions teachers and our VVSA staff, we are always focused on building relationships and doing what’s best for each individual student. From the very beginning when we were imagining what VVSA would be, we were given the support and the freedom to design our program to meet the unique needs of our population. Today we’re growing quickly, we’re graduating more students each year, and one thing I’m really proud of is we’ve been asked to help other schools around the state that are looking for advice and help to build programs that ensure success for their students, families, and community.”

CTE Facts & Research

**2%
increase**

2% Increase in Wages per CTE Course

There is a significant link between taking CTE courses and higher wages, especially among students who took upper-level CTE courses (Kreisman & Stange 2017).

75%

75% Pursue Post-Secondary Studies

75% of high school students who take CTE coursework also pursue post-secondary studies shortly after graduation (ACTE 2017).



CTE Credits Increase College Attendance

Students who take three or more credits as a CTE concentrator are more likely to go to college than equivalent students who did not (Giani 2019).



CTE Increases Student Engagement in School

CTE is associated with higher levels of student engagement in school (Cheng & Hitt, 2018).



CTE Students Have Higher Grades

A 2010 literature review found students enrolled in CTE courses had higher grades than student not taking CTE courses (Stern et al. 2010).

**7-10%
increase**

7-10% Increase in Graduation Rates

Participation in a high-quality CTE program boosts the probability of on-time high school graduation by 7 to 10 percentage points (Dougherty, S. 2018).

94%

94% Graduation rate for CTE Concentrators

The average high school graduation rate for CTE concentrators is 94% compared to the national rate of 85% (NCES 2018).



CTE Concentrators Less Likely to Dropout

Students taking CTE concentrators are associated with reduced dropout rates (Gottfried & Plasman, 2017).

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