



From Alternative to Mainstream: How Florida is Redefining Career and Technical Education for the 21st Century



The national conversation in education policy is firmly focused on career-connected, work-based and skills-based learning across the US. Research on the positive effects of this approach also continues to grow, showing more engaged, more dynamic students who are better prepared to enter the workforce. Florida leads in this space, creating innovative approaches to implementing career and technical education (CTE), partnering with organizations such as Network for Teaching Entrepreneurship (NFTE) to create industry leading standards and integrating CTE into the mainstream classroom in a way that provides all students with the benefits of this approach.

At NFTE, we believe in using proven models of success and adapting best practices. NFTE believes in encouraging students to look at multiple pathways for success. Career and Technical Education (CTE) is one of those pathways and aims to prepare students for the labor market using a variety of methods, from industry certification preparation classes to work-based, or career connected learning. Entrepreneurship skills and the development of entrepreneurial mindsets among students are integrated into CTE programs, especially in the state of Florida. The emphasis on improving CTE comes from the very top and the state aims to become first in workforce education by 2030. In 2023 Commissioner of Education Manny Diaz Jr. highlighted the state's work saying, "Under Governor DeSantis' leadership, workforce education has been the driving force of our economy, giving students the opportunity to pursue hands-on learning in vital areas of development. We know the impact that career and technical education has on our students, businesses and the future of our state; and we will continue to invest resources, time and energy to support its expansion."¹

Given the success of Florida's CTE and entrepreneurship education programs, we believe other states should use Florida's model in their own planning and implementation of CTE programming.

Career and technical education have a direct effect on student development. Research from the American Institutes for Research (AIR) shows direct links between earlier and more frequent CTE education and higher success rates for students. A longitudinal study over 20 years found that CTE has positive impacts on several high school outcomes including student academic achievement, high school completion, employability skills, and college readiness. CTE students are also more likely to enroll in 2-year colleges and to be employed after high school.²

1. Florida Department of Education. (n.d.). Governor Ron DeSantis recognizes February as Career and Technical Education Month. Florida Department of Education. <https://www.fldoe.org/newsroom/latest-news/governor-ron-desantis-recognizes-february-as-career-and-technical-education-month.html>

2. American Institutes for Research. (2024, February 13). New report finds positive effects of career and technical education in high school. American Institutes for Research. <https://www.air.org/news/press-release/new-report-finds-positive-effects-career-and-technical-education-high-school>

Strengthening Career and Technical Education for the 21st Century Act

Perkins V, also known as the Strengthening Career and Technical Education for the 21st Century Act, funds the improvement and implementation of CTE nationwide. Every year, Congress appropriates about \$1.4 billion via state formula grants which are distributed to states to fund their CTE education.³ Every state submits a detailed Perkins V State Plan outlining how they will reach the required criteria and benchmarks before receiving their share of the grant. The allotment per state is calculated using population per age group and per-capita income over the most recent three years.⁴ A minimum of 85% of the funds go toward local secondary and post-secondary education, with the remainder covering administrative costs. Florida has a robust plan to directly allocate their Perkins V funding via the CAPE Act, to support career readiness and student learning through course offerings, industry certifications, and entrepreneurship education and last year received just over \$82 million to implement its programming.⁵



NFTE students participating in the Broward Career, Technical and Adult Education Summer Entrepreneurship Internship Program.

Entrepreneurial Mindset in Career and Technical Education

Florida's Perkins V State Plan puts a unique emphasis on instilling entrepreneurial mindsets and capabilities in students going through the entrepreneurship pathway. "Get There Florida" was launched in 2020 by the Florida Department of Education to raise awareness on the importance of CTE programs. Get There Florida included important aspects of the entrepreneurial mindset, such as risk propensity, leadership, confidence, and resilience. They also cite the importance of entrepreneurial capabilities like accounting, financial marketing, successfully pivoting, and knowledge of marketing. Florida recognizes the importance of entrepreneurial capabilities, even if students do not all become small business owners themselves.⁶ Similarly, NFTE shares the goal of encouraging students to think like entrepreneurs, even if they do not ultimately start their own business. Research shows that the entrepreneurial mindset is a universal opportunity. In 2022, research from the MIT Sloan School of Management found that "entrepreneurial mindsets aren't just for startups".⁷ Learning how to create and manage a business promotes solution-orientated mindsets, anti-fragility, and adaptability. MIT's research concludes that entrepreneurs are needed across multiple sectors including government, non-profits, and academic institutions. Developing an entrepreneurial mindset, such as the skills within NFTE's curriculum are sector agnostic, allowing all students to benefit from this important mindset. Advance CTE, a national nonprofit that represents state CTE directors and state leaders of career technical education, agrees that entrepreneurship is a cross-cutting sector, as its skills are applicable across all other CTE programs and industries.⁸ Recently, Advance CTE created a separate cluster for entrepreneurship, allowing all students in every CTE programs to benefit from the skillset.

3. U.S. Department of Education, Office of Career, Technical, and Adult Education. (2024, April 8). Estimated fiscal year (FY) 2024 state allocations under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins V) [Program memorandum]. U.S. Department of Education. https://s3.amazonaws.com/PCRN/docs/FINAL_Program_Memo_-_Estimated_FY_2024_Perkins_State_Allocations.pdf

4. National Center for Education Statistics. (2003, April 28). Vocational education in the United States: The early 2000s (NCES 2003-028). U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/surveys/annualreports/pdf/vocedmanual20030428.pdf>

5. Florida Department of Education. (n.d.). Career and professional education (CAPE) secondary. Florida Department of Education. <https://www.fldoe.org/academics/career-adult-edu/cape-secondary/>

6. Florida Department of Education. (2023, June 12). EETF webinar memo for the 2023-2024 program year. Florida Department of Education. <https://www.fldoe.org/core/fileparse.php/7515/urlt/2324EETFundWebinarMemo.pdf>

7. Sweeney, M. (2023, November 7). 3 traits of an entrepreneurial mindset. MIT Sloan School of Management. <https://mitsloan.mit.edu/ideas-made-to-matter/3-traits-entrepreneurial-mindset>

8. Advance CTE. (n.d.). Management & entrepreneurship. <https://careertech.org/career-clusters/management-entrepreneurship/>

This further displays the increased importance entrepreneurial skills play in the broader education world. Gregory Grant, the Chief of Entrepreneurial Development in Jacksonville Florida, also believes that by, “keeping entrepreneurial education separate [from the business track], we ensure that students gain the hands-on experience and applied learning necessary to become job creators, not just job seekers.”

In 2021, former Chancellor of Florida’s Department of Education Division of Career, Technical and Adult Education, Henry Mack, spoke about Florida’s efforts to include entrepreneurial skills in CTE programs. “CTE programs on their own can be mechanisms for overall economic stabilization, along with growth in local and regional economies. By supplementing that instruction with the human skills employers need — and doing so while teaching interdisciplinary entrepreneurial competencies — Florida can ensure that a new generation of graduates will be ready for the jobs of the future.”⁹

Research shows that adding certifications improves academic performance, resulting in:

- Higher grade point averages
- Higher graduation rates
- Increased post-secondary enrollment
- Reduced dropout rates

Source: Certiport, 2019

Florida’s Entrepreneurship Education Training Grant and Curriculum Frameworks

As previously mentioned, Florida receives just over \$82 million in Perkins V grants, which the state strategically uses to fund their CTE programs, including entrepreneurship education. During the 2023-24 school year, Florida set aside \$2 million to increase investment in entrepreneurship education and help students grow their businesses. This grant program, known as Entrepreneurship Education Training (EET), funded student entrepreneurship boot camps, business pitch competitions, and mentorship pipelines with existing businesses.¹⁰ Grant programs like EET teach skills required by Perkins V and are an innovative way to encourage entrepreneurial skills in students.

There are also multiple curriculum frameworks provided by the Florida Department of Education targeted at grade 9-12 elective options. These elective courses fit into any industry framework and range from Business Management and Law to Principles of Entrepreneurship and Business Ownership.¹¹ NFTE courses align with the standards in Florida’s curriculum, providing seamless integration. Given that there are increasing numbers of students interested in entrepreneurship courses and growing shortage of teachers, many Florida high schools utilize NFTE’s comprehensive courses as a way to address higher demand, but fewer resources. NFTE’s Pathway Programs such as Entrepreneurship Essentials and Entrepreneurship 1 fulfill many of the requirements in these course frameworks and NFTE teachers are given access to a rigorous training program, AI platform, and continuous professional development, allowing a broader set of teachers to implement NFTE courses.

9. Education Commission of the States. (n.d.). Education for the 21st century: Entrepreneurship meets CTE. Education Commission of the States. <https://www.ecs.org/education-for-the-21st-century-entrepreneurship-meets-cte/>

10. Florida Department of Education. (2023, June 12). EETF webinar memo for the 2023-2024 program year. Florida Department of Education. <https://www.fldoe.org/core/fileparse.php/7515/urlt/2324EETFundWebinarMemo.pdf>

11. Florida Department of Education. (2024). Entrepreneurship Curriculum Framework: 2024–2025. https://files-backend.assets.thrillshare.com/documents/asset/uploaded_file/4493/Bps/1960cafa-aea2-4cf0-99a5-016b112ccfd1/Entrepreneurship%20SY25.pdf

Entrepreneurship and Small Business (ESB) Prep

The state of Florida worked with NFTE on the addition of the ESB Certification to Florida's industry credential list. NFTE also worked with districts to align courses with this certification. The ESB Certification is a certification delivered by Certiport, sponsored by Intuit and NFTE, and ensures tomorrow's leaders are prepared with the toolkit they need to get ahead in today's competitive landscape. It is globally recognized as an opportunity to validate business knowledge, increase marketability, and enhance credibility. The ESB Certification includes the core concepts of financial management, marketing, and comfort with risk. Additionally, students who pass this certification are able to bolster their résumé upon entering the workforce or college. To incentivize both teachers and schools to have their students take the ESB Certification, Florida allocates performance-based incentives for school districts and teachers when students pass CTE certification exams. In 2024, when a student passed the ESB Certification Exam, districts received \$921 per certification and teachers received a \$50 bonus per student if their course provided direct instruction to obtain the student's certificate.^{12 13} In 2023, Florida allocated \$8.5 million for these performance-based incentives.¹⁴

Industry credentials not only teach core concepts to students, but research suggests that when certificates are added to curriculum, schools see increased attendance, lower dropout rates, and higher-grade point averages.¹⁵ Furthermore, industry credentials provide proof of knowledge and help students build their résumés and portfolios. The use of credentials also increases the likelihood of better prepared, more competent, and knowledgeable young adults entering the workforce, and helps them acquire fulfilling long-term employment after high school in fields that combine their interests and skills.¹⁶



By creating a strong industry partnership with NFTE, Florida credentialing for entrepreneurship education was both academically rigorous and aligned with current industry standards. This ensures that students acquire the skills and knowledge needed to succeed in the workforce.¹⁷

The approval of the ESB Certification on the State's Industry Certification List bolstered entrepreneurship education across the state. The ESB Certification is now the third most popular certification globally. In 2022, Florida alone accounted for 30 percent of all ESB Certifications nationwide and helped the U.S. surpass China in ESB Certifications.¹⁸

12. Career and Technical Education. (2021, January). Florida: Career and Professional Education Act (CAPE). Advance CTE.

<https://careertech.org/resource/florida-career-and-professional-education-act-cape/>

13. Florida Department of Education. (2023). 2023–24 academic year: Industry certification articulation agreements.

<https://www.fldoe.org/core/fileparse.php/12012/urlt/23-24industrycertmemo.pdf>

14. Florida Department of Education. (2023, July). Workforce funding summary for 2023-2024 program year. Florida Department of Education.

<https://www.fldoe.org/core/fileparse.php/7529/urlt/2324-wf-fundingsummary.pdf>

15. Certiport. (n.d.). The value of certification. Certiport. <https://certiport.pearsonvue.com/About/The-value-of-certification.aspx>

16. Riley, S. (2015, March 25). Why is credentialing important? Advance CTE. <https://careertech.org/news/why-is-credentialing-important/>

17. Florida Department of Education. (n.d.). Curriculum frameworks.

<https://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/>

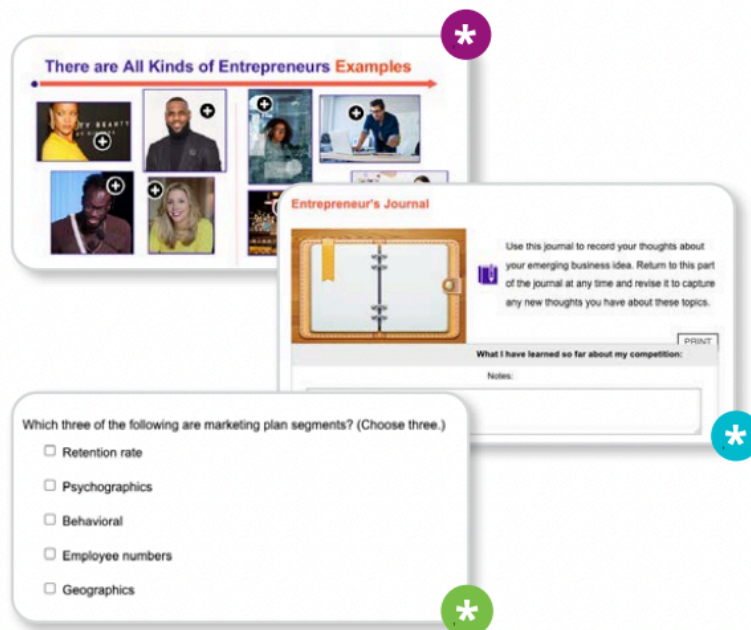
18. Florida Department of Education. (2024, February 12). ICYMI: Florida propels U.S. to surpass China in entrepreneurship and small business certifications.

Florida Department of Education. <https://www.fldoe.org/newsroom/latest-news/icymi-florida-propels-u-s-to-surpass-china-in-entrepreneurship-and-small-business-certifications.stml>

NFTE's Entrepreneurship and Small Business Prep Curriculum

NFTE's Entrepreneurship and Small Business (ESB) Prep course was a direct result of the high importance Florida placed on entrepreneurial education and the ESB Certification. The course prepares students for the ESB Certification Exam and sparks interest in entrepreneurship through comprehensive lessons. NFTE's ESB Prep Program was initially developed as a two-week post-secondary course to help people relaunch their businesses and careers after the pandemic. NFTE expanded it into a K-12 version, and in just five years, it has become a leading prep course for the ESB Certification in Florida. The course begins with an entrepreneurial mindset quiz and includes 18 lessons, each highlighting a foundational entrepreneurial skill and includes a recap of past lessons, interactive quizzes, and a journal for reflection. Lessons also include case studies and real-world applications to help students understand how they can apply the entrepreneurial mindset outside the classroom. As students learn, they work on their own business ideas. When the course concludes, students have their own complete business pitch and lean business model canvas.

The ESB Prep Curriculum also includes multiple short practice quizzes as students move through the material and full-length practice tests at the end. It prepares students for the ESB Certification Exam while simultaneously sparking interest in business and entrepreneurship. Although it is intended to be completed in a classroom, NFTE's ESB Prep is asynchronous and does not require teachers to have an entrepreneurial background to administer. It supports reading and math literacy and has audio and AI features to incentivize auditory learners and reduces barriers for all students. This innovative approach to preparing students for the ESB Certification is what sets the NFTE curriculum apart. NFTE's course is also an example of experiential learning, where students acquire the knowledge of concepts and facts, apply their knowledge to a real-world setting, and then reflect upon their experience. Experiential learning follows the "learn by doing" model and has been shown to promote academic curiosity in students while improving career and intellectual skills.¹⁹



NFTE Curriculum Sparks Long-Term Love of Entrepreneurship

When Indiraliz Gracia started her entrepreneurship experience she was a freshman in high school. "My NFTE teacher started the class with the 'entrepreneurial mindset,' where I learned to channel my ideas into something tangible through guidance. I come from a household where my single parent struggled to make ends meet. My family didn't have much to eat, and I had no hope of going to college. So here comes my first day and already I am being told that I can dare to hope for anything as long as I strive to achieve it. I believe that the moment you step into an NFTE classroom you don't leave. I've been wired to think differently now, and I can't help myself from starting new business ideas because, much like an artist, once an idea comes to me, I won't stop until I have created it."



Indiraliz Gracia

19. Center for Teaching & Learning. (n.d.). Experiential learning. Boston University. https://www.bu.edu/ctl/ctl_resource/experiential-learning/

How Other States Can Follow Florida’s Lead

NFTE believes there are several key places that other states can draw from to improve their entrepreneurship education pathway within their CTE frameworks. One innovative feature of Florida’s Perkins V Plan is the financial incentives for school districts and teachers. By paying teachers and school districts when a student passes the certification exam, Florida has greatly increased their passage rate on the test. The direct payout system has been so successful that as of 2024, Florida had nearly 800,000 K-12 CTE students, which accounts for almost a quarter of all Florida K-12 students. Over 5 million students have utilized CTE in the state since 2018.²⁰ Florida became a leader in CTE pathways by making passage of certification exams mutually beneficial. When developing updated CTE plans, states should look for ways to incorporate incentives into their budget planning.

While monetary incentives are a good initial step in creating buy-in for increased CTE and industry certifications, they are not the only way other states can adopt a more robust CTE framework. States can also replicate Florida’s success by offering more elective entrepreneurship classes in addition to integrating entrepreneurship principles into core classes like math and English. NFTE believes that integrating entrepreneurship into CTE frameworks is an investment in students, giving them the power to own their future and widen their opportunities throughout high school and beyond.

Florida also relies on strong industry partnerships such as the one with NFTE, enabling them to create a best-in-class curriculum and enhance skills alignment. By partnering with NFTE on the specific credentialing of the ESB Certification, Florida led the way for other states to adopt similar opportunities for industry partnership. Progress is already being made in states like Texas, which ramped up its industry-based certifications beginning in 2017. Other states should look to Florida and Texas as a model for their own programs.

“CTE curriculum enhances and promotes the necessary critical thinking and problem-solving skills used in traditional schools and curriculum.”

-Sarah Beauchamp, M.Ed.
Instructional Facilitator, Civic Engagement
Department of Applied Learning
Broward County Public Schools

Florida placed a high emphasis on innovative models to execute Perkins V funding with the CAPE Act. With nearly 20 years of success, other states should explore ways to develop similar legislation to improve talent pipeline by providing students with industry-recognized certifications and credentials, and encourage partnerships between schools and businesses to ensure that CTE programs meet industry needs across their state. Additionally, federal lawmakers should also focus more on industry-based certifications in the reauthorization of Perkins V to increase use of these highly effective certifications.

Finally, Florida places an emphasis on work-based learning, allowing it to integrate education with the unique needs of their workforce. CTE curriculum enhances and promotes the necessary critical thinking and problem-solving skills used in traditional schools and curriculum. NFTE programs promote this approach by centering curriculum on real-world application, skills development and inspire young people to own their future.

By developing a robust and coordinated CTE plan, Florida produces the highest level of opportunity for its students. They have taken career and technical education into the mainstream, and other states should look to their innovative policies in their efforts to do the same.

20. Florida Department of Education. (2024, February 1). Florida recognizes February as Career and Technical Education Month. Florida Department of Education. <https://www.fldoe.org/newsroom/latest-news/florida-recognizes-february-as-career-and-technical-education-month.stml>

Contributors & Contact Information

Elizabeth Gray
Jennifer Fay, M.P.A.
Ashley Hemmy, Ed.D

Policy Intern
Chief of Staff
Deputy Chief of Staff

For questions and inquiries:
reach out to policy@nfte.com