



A Comparative Analysis of Texan CTE and Australian VET Programs

Abigail Zuhlke, B.S. Secondary Social Studies Education, Texas Christian University
Faculty Advisor: Dr. Curby Alexander



Background

Based on 2020 research from the National Skills Coalition, Texas is facing a skilled worker crisis. 54% of Texas jobs fall in the “middle skills” category requiring educational qualifications beyond a high school diploma, but less than a 4-year degree. Only 45% of the Texas working age population meet this skill requirement, thus generating a skilled-worker mismatch for over 1 million jobs.¹ *Career and Technical Education (CTE)* is a Texan secondary school framework that aims to “provide individuals with rigorous academic content and relevant technical knowledge and skills needed to prepare for further education and careers.”² CTE exposure is just one of the many avenues of advancement Texas schools are pursuing in hopes of resolving the worker crisis in middle-skill industries. While capitalizing on CTE for social advancement, it is important to frequently review the effectiveness of the Texas framework and refer to comparable systems internationally to better inform curriculum decisions and revisions.

Research Question

How can Texas integrate aspects of the Australian VET model into its present CTE framework to simultaneously address the middle-skilled worker crisis while providing a more fruitful and flexible student experience?

Purpose

To investigate and suggest potential improvements to Texan CTE based on the findings of a comparative analysis of Texan and Australian vocational frameworks.

Methodology

I have collected my data via three avenues of query: interviews with subject matter experts, surveys of current CTE students, and references to scholarly sources.

Subject Matter Experts:

1. Interviewed Maggie Howard, CTE Coordinator for White Settlement ISD.
2. Interviewed Ruby Larsen, Secondary School Educator in Canberra, Australia.

Student Surveys:

1. Collected student questionnaires concerning experience with CTE and career aspirations.

Scholarly Research:

1. Consulted countless international government databases and peer-reviewed articles to construct my analysis and support my suggested revisions.

Texan CTE Framework

In Texas, the mission of *Career and Technical Education (CTE)* is to offer exposure to vocational pathways by providing skills-based training for an array of in-demand industries to champion workforce ready graduates.²

- CTE is a supplement to the traditional high school curriculum, not an alternative option in place of conventional credit acquirement.
- The outcomes of Texan CTE programs range from diploma endorsements to *industry-based certifications (IBCs)* from Texas Education Agency approved providers.³

In *White Settlement ISD (WSISD)*, over 2000 students in grades 8-12 participate in one or more of the 21 CTE programs of study offered. 40.1% of CTE students fully complete their program of study by the time they graduate. Moreover, 191 CTE students are anticipated to graduate with a school-funded industry certificate in the spring of 2023, representing a 140% certification increase from the 80 IBCs awarded in 2022.³

- Surveys from 4-year participants in WSISD CTE programs revealed an 87% approval rating of CTE offerings while also highlighting a desire for more hands-on learning and industry exposure in workplaces within their field of study.⁵
- WSISD does not currently offer any apprenticeship opportunities to students. In fact, Texas state law requires applicants for Registered Apprenticeships to possess a high school diploma.⁴

Australian VET Framework

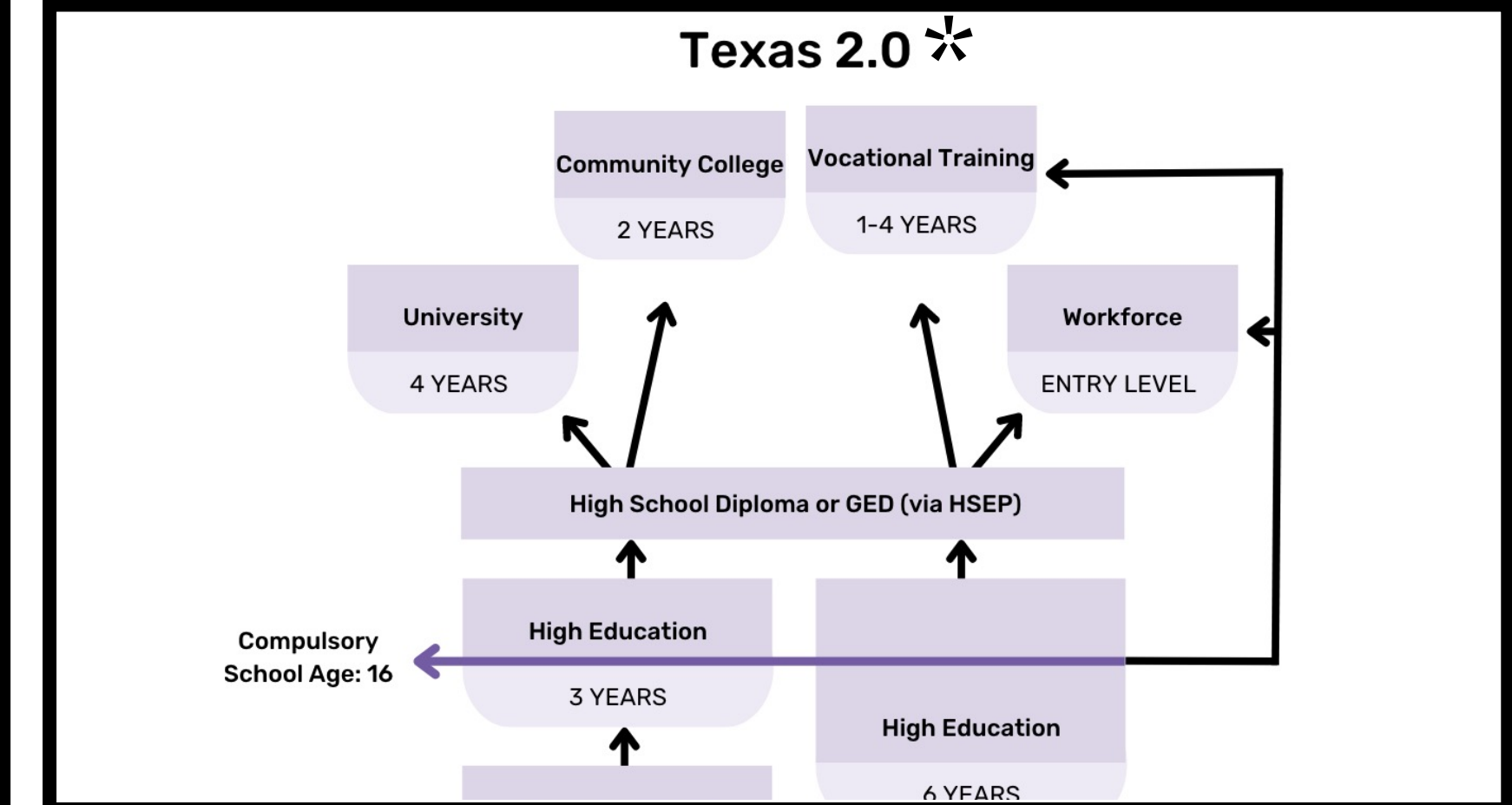
Vocational Education and Training (VET), referred to as *VfSSS* at the secondary school level, is a joint program between the national and territorial governments that offers cost-effective, flexible pathways to earn workforce training, certifications, apprenticeships and postgraduate diplomas.⁶

- VfSSS is integrated into a student’s *Senior Secondary Certificate of Education (SSCE)* credit requirements.⁷
- VET programs are facilitated by 4,000+ *registered training organizations (RTOs)* that are accredited by the Australian Qualification Framework.⁷

School-based Apprenticeships and Traineeships (SBAT) are an offshoot of VET that enable secondary school students to pursue paid work placements in a vocational industry of choice.⁸

- *The Head Start Program* is an offering within SBAT. This program requires students to spend 2-3 full school days, or 13 hours per week in their SBAT workplace during year 11 and 12. Students in this program earn their SSCE while also graduating with a certificate III qualification in their vocational industry.⁹

Furthermore, Australian students who choose not to pursue a SSCE are permitted to end their conventional education at age 16 upon proving either full-time employment or apprenticeship status.¹⁰ Secondary school teacher, Ruby Larsen, witnessed the benefits of this non-traditional pathway in offering an alternative career readiness option to students during her time teaching Year 10.¹¹

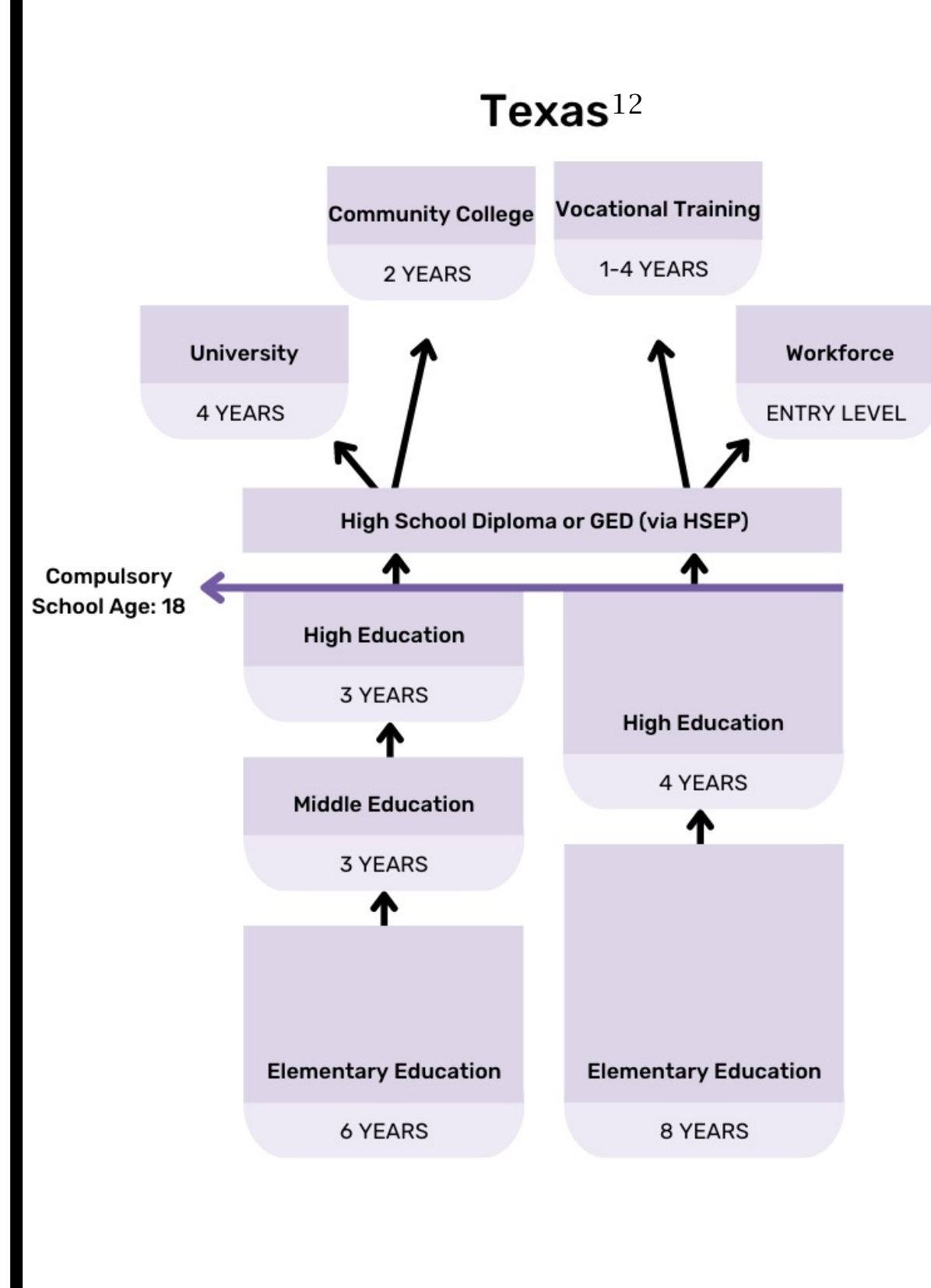


Proposed Revisions

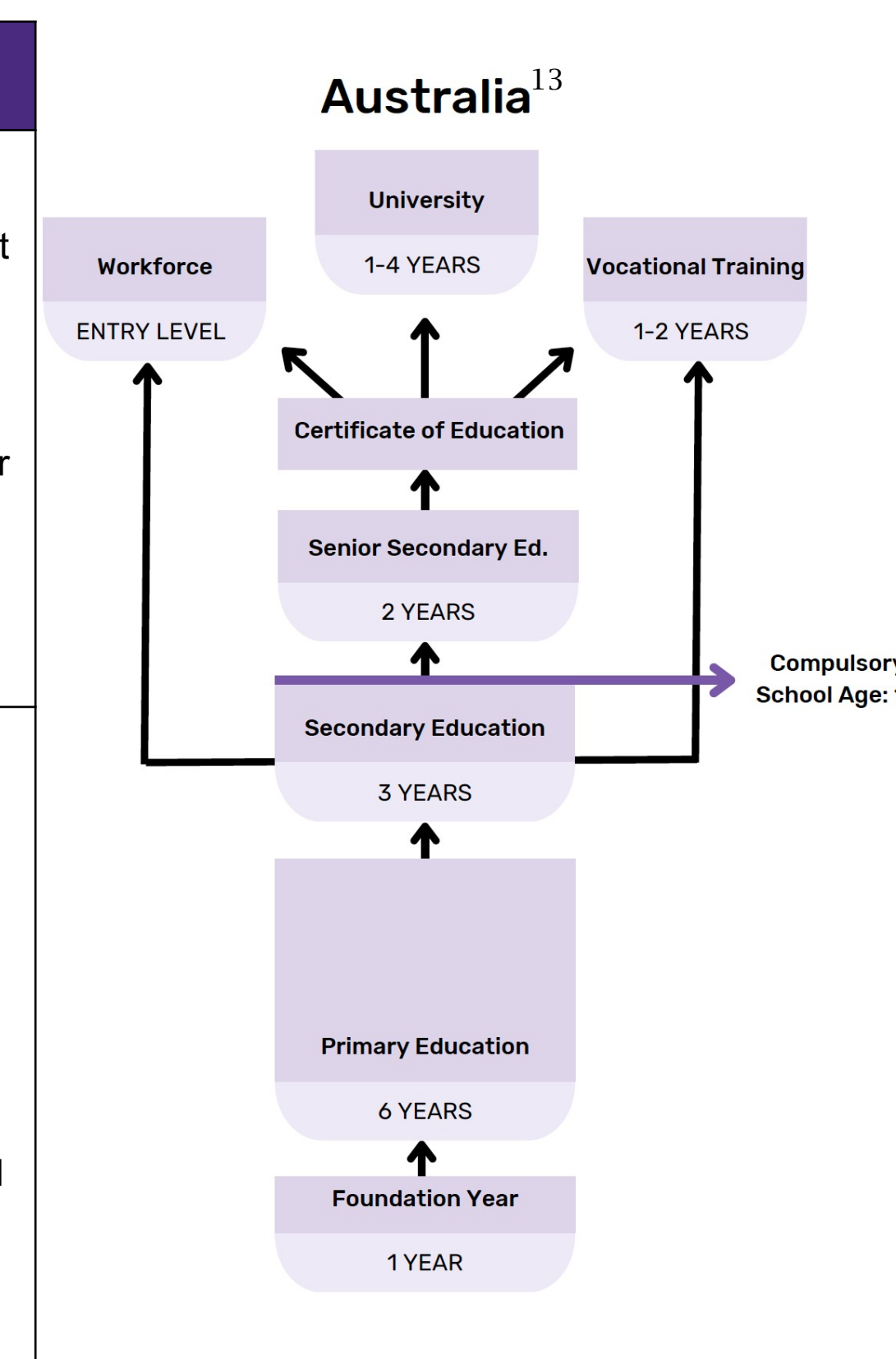
Texas schools are not reaching their full potential in supporting students seeking alternatives to traditional higher education after secondary school. To better serve Texas’s diverse range of students while simultaneously addressing the middle skills deficit, I propose a two-fold revision inspired by the Australian system.

First, Texas should develop a strong offering of paid, school-based apprenticeships for students. This is necessary because it would allow students to bypass current apprentice diploma requirements and get an early start on their vocational career. A program like SBAT would enable districts to develop fruitful relationships with industry partners in their community, thus establishing a CTE to workforce pipeline for graduates. To initiate this caliber of offering, districts should designate an apprenticeship liaison to match students with an industry partner in their desired field. After matching with a host employer, students will split their time between school and their workplace. Due to the unconventional nature of an apprentice’s schedule, students would likely front load graduation credit requirements in their 9th and 10th grade years and supplement additional credit needs with online learning. The paid aspect of the Australian SBAT framework is a vital revision to Texas CTE because it offsets the opportunity cost for students enrolling in apprenticeships and incentivizes recruitment and retention. The comprehensive integration of apprenticeships into Texas CTE would revolutionize current offerings by supporting students in forming profitable relationships with future employers, gaining training/certification in their field, and earning their high school diploma.

Second, Texas should conditionally lower the compulsory school age to 16. This would permit students living in districts with underdeveloped SBAT programs to diverge from conventional pathways and enter the workforce or enroll in a registered apprenticeship full-time. Students would be placed on an expedited diploma track and would only be permitted to leave school after graduating and proving full-time employment or enrollment in a registered vocational program.



Texan CTE	Australian VET
<p>Strengths</p> <ul style="list-style-type: none"> • Most Texas high schools follow a work-based learning model that produces workforce-ready graduates from an extensive range of program offerings.³ • Texas requires all high schools to offer a minimum of 3 CTE programs, each with a defined entry and exit point.³ • Programs are taught by instructors who are highly qualified and possess substantial experience in their field.³ • CTE participation is steadily increasing, with a notable 73% increase from 2008 to 2018.¹⁴ <p>Weaknesses</p> <ul style="list-style-type: none"> • Texas CTE makes limited use of workplaces as a learning environment and employer engagement with the CTE system is highly variable according to locality.¹⁵ • Retention through the certification stage of CTE is extremely low. In 2022, only 1.2% of those who participated in CTE earned an industry certificate.^{16, 17} - Since most upper-level CTE courses are double blocked, program participation prevents students from having a free period to take an additional class or pick up more hours at a part-time job. This was noted as a major contributing factor to the retention difficulties in WSISD CTE.³ 	<p>Strengths</p> <ul style="list-style-type: none"> • High employer/industry partner engagement.¹⁸ • Nationally established standards and qualifications that guarantee reciprocity and unity among territories.²⁰ - Standards are set by industry professionals, ensuring they reflect real-world skills. • The salary outcomes of VET graduates match or exceed those being achieved by graduates from higher education pathways.¹⁹ • Comprehensive apprenticeships contribute to the national economy and leave 82% of employers satisfied with their VET partnerships.¹⁹ <p>Weaknesses</p> <ul style="list-style-type: none"> • Lack of cooperation between territorial and federal funding of VET programs.¹⁹ - Federal funding of VET decreased by 25% in 2015.¹⁹ - Higher education pathways have more reliable funding and are thus receiving more students.¹⁹ • "VET has become the poor cousin to higher education and the perception of its value is lower than the reality."¹⁹ • Significant decline (40%) in registered apprentices and trainees from 2012 to 2017.¹⁹ • Inconsistencies among the territories concerning VET integration into SSCEs and procedures.¹⁸



Comparative Analysis

In analyzing the complexities of both the Australian VET framework and the Texan CTE framework, I have deduced that VET’s focus is on students meeting industry-based standards and earning workforce qualifications via on-site experience while CTE is largely designed to expose students to diverse post-graduation career options. This is demonstrated by a data comparison of vocational program enrollments and vocational program certification in each country. Texas data shows that although 70-80% of high school students participated in CTE to some extent in 2022, only 1.2% of those enrolled in CTE programs earned industry-applicable certifications.^{16, 17} Conversely, Australian data reports from 2021 show that 26.8% of participating vocational students obtained a certification.²⁰ **While Texas CTE may offer a broader and more extensive range of vocational programs for students to explore, Australian VET offers more depth of outcome, most notably in the form of high-level IBCs and accessible, rewarding apprenticeships within desired fields. In terms of public perception of vocational careers, both Texan and Australian societies continue to devalue and misunderstand the impact of educational programs like VET and CTE.**