A Comparative Analysis of Texan CTE and Australian VET Programs
Abigail Zulhe, 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. 44% of Texas jobs fall in the "middle skill" category requiring educational qualifications beyond a high school diploma, but less than 4-year degree. Only 44% of the Texas working age population meet this skill requirement, thus generating a skilled worker mismatch for over 1 million jobs.1 Careeer 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." 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 centralizing 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-skill worker crisis and provide a more flexible and strong student experience?

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

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

Subject Matter Experts:
1. Interviewed Maggie Heward, CTE Coordinator for White Settlement ISD.

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 graduation.
- 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 89 IBCs awarded in 2022.4

- 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.
- WSISD does not currently offer any apprenticeships opportunities to students. In fact, Texas law requires apprenticeships for Registered Apprenticeships to posses 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 qualifications.5

- VfSSS is integrated into a student’s Senior Secondary Certificate of Education (SSCE) credit requirements.7
- VET programs are overseen by 4000+ registered training organizations (RTOs) that are accredited by the Australian Qualification Framework.
- School-based Apprenticeships and Traineeships (SATs) are an offshoot of VET that enable secondary school students to pursue paid work placements in a vocational industry of choice.8
- The Victorian Partnership Program (VPP) is an example of a VET program. This program requires students to spend 2-3 full school days, or 11 hours per week in their SBAT workplace during years 11 and 12. Students in this program earn their SSCE while also graduating with a certificate III qualification in their vocational industry.9

Furthermore, educators 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 teachers, Ruby Larsen, witnessed the benefits of this non-traditional pathway in offering an alternative career readiness option to students during her teaching year 10.10

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-skill 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 all 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 coordinator to match students with an industry partner of 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 from the ninth grade, 10th, and 11th 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 recruiting 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 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 accelerated diploma track and would only be permitted to leave school after graduating and proving full-time employment or enrollment in a registered vocational program.

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.11, 12 Conversely, Australian data reports from 2021 show that 26.8% of participating vocational students obtained a certification.13 While Texas CTE may offer a broader and more extensive range of vocational programs for students to explore, Australian CTE offers a deeper depth of course, most notably in the form of high-level IBCs’ accessibility, rewarding apprenticeships within desired fields. In terms of public perception of vocational careers, both Texas and Australian societies continue to devalue and misunderstand the impact of educational programs like VET and CTE.

Texas CTE Strengths
- Most Texas high school students are enrolled in a work-based learning model that produces workforce-ready graduates from an early age and range of program offerings.
- Texas requires all high schools to sponsor a minimum of 3 CTE programs, each with a defined entry and exit point.1
- Programs are taught by instructors who are highly qualified and possess substantial experience in their field.
- CTE participation is steadily increasing, with a notable 73% increase from 2003 to 2018.14

Texas CTE Weaknesses
- 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
- Since most upper-level CTE courses are a 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.17

Australian VET Strengths
- High employer/industry engagement.18
- Nationally established standards and qualifications that guarantee recognition and unity among territories.19
- Standards are set by industry professionals, meaning vocational qualifications are credible and respected.20
- The salary outcomes of VET graduates match or exceed the median salary of university graduates.21
- Apprenticeships and traineeships contribute to the national economy and leave 82% of employers satisfied with the VET partnership.22

Australian VET Weaknesses
- Lack of cooperation between territorial and federal funding of VET programs.23
- Federal funding of VET decreased by 25% in 2020.24
- Higher education pathways have more reliable funding and are therefore receiving more students.25
- "VET has become the poor cousin to higher education and therefore, receives less attention and is not valued highly."26
- Significant degree (45%) of registered apprentices and trainees from 2012 to 2017.27
- Inconsistencies among the territories concerning VET integration into SSCES and procedures.28