

Where College Meets High School

June 2018

Report of the Dual Credit Task Force

Convened by
The University of Texas System
and
The Texas Association of Community Colleges

Preface by Task Force Co-Chairs

We are pleased to present the report of the Dual Credit Task Force, *Where College Meets High School*, to education, workforce, and other policy stakeholders across Texas. The Task Force was convened with broad statewide input, including multi-sector and multi-system engagement. This broad engagement across sectors was unprecedented in our experience. There were many entities and interests at the table for this endeavor—some of them competing—and yet, the Task Force stayed focused throughout the process on Texas students and how to position them to move more successfully along the pathways from high school to and through college.

Our hope is that this report will inform policy discussions of the Texas 86th legislative session, as well as educational decisions being made across the state. While the report is grounded in Texas data, policy, and practice, we know that it will be read with interest by states across the country as the nationwide expansion of dual credit and other concurrent enrollment programs raises similar challenges and opportunities in other states.

We are grateful to the Task Force members, who demonstrated exemplary commitment to the process and to Texas students. We know that Texas is a bellwether state and if we can get dual credit right here, we will be a model to the rest of the country.

Sincerely,

Wanda Mercer & Jacob Fraire



THE UNIVERSITY of TEXAS SYSTEM
FOURTEEN INSTITUTIONS. UNLIMITED POSSIBILITIES.



**Texas Association of
Community Colleges**

Dual Credit Task Force

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Writing Credits: The report of the statewide Dual Credit Task Force, *Where College Meets High School*, was written by task force members Kelty Garbee, Rebecca Karoff, Amanda Longtain, Elizabeth Mayer, with additional writing and editing support from Jacob Fraire, Carrie Griffiths, Kevin Lemoine, and Wanda Mercer.

I. Executive Summary

Where College Meets High School represents the work of the Dual Credit Task Force, co-convened by The University of Texas System and the Texas Association of Community Colleges (TACC), to assess the rapidly evolving landscape of dual credit in Texas.

This report explores the issues most germane to dual credit in an era of statewide expansion. It proposes areas for strategic attention to strengthen dual credit in Texas in order to position more students for success in college and the workforce. While research and data underpin key findings and recommendations of this report, it is not a research study. It seeks, rather, to understand dual credit in the context of its continued growth, the changing demographics of Texas, and the new statewide higher education strategic plan – *60x30TX* – developed by the Texas Higher Education Coordinating Board, which includes the intentional alignment of P-16 and workforce goals.

About the Dual Credit Task Force

The Dual Credit Task Force convened for one year, from January 2017 to January 2018, to bring together stakeholders from across educational and workforce sectors. Members were identified from K-12 school districts, community colleges, universities, university systems, several state agencies—including the Texas Education Agency (TEA), the Texas Higher Education Coordinating Board (THECB), and the Texas Workforce Commission (TWC)—and from non-profits and associations focused on education.

Task Force Findings

The report spends time unpacking the complexity of dual credit and it is this complexity in how dual credit is offered, funded and transferred in to Institutions of Higher Education (IHE) that generated the report's key findings, organized into the areas of Access and Equity, Funding, and Alignment, some of which are highlighted below.

Access and Equity:

Early data indicate that dual credit is an important contributor to successfully reaching the goals of the *60x30TX Plan*. Examined data show that students statewide have access to some kind of dual credit program. However, the data also indicate that this access is not consistently equitable in terms of demographics, geography, program availability, infrastructure, and funding. Access to high-quality programs is also not equitable. More specifically:

- Statewide equity gaps exist for certain student populations in terms of access, eligibility, enrollment, and participation.
- Regional equity gaps exist due to geographic variance in access to programmatic models, infrastructure and faculty, proximity to institutions of higher education (IHE), and availability of funding, with some gaps being more pronounced in rural parts of the state.
- The variability and level of funding available to school districts has an impact on the equity, quality, and availability of dual credit programs for the students who live in these districts.
- Career and Technical Education (CTE) programs have distinct equity challenges, and the quality and funding components are exacerbated because of their higher costs, especially the need for qualified teachers and industry partners.

Funding:

- There is great variance in *how* dual credit courses are funded across Texas and in *who* bears the cost, ranging from colleges, school districts, and/or parents and students.
- This variability prevents clear delineation of costs of dual credit, both in terms of what it costs, and who funds and who pays for it.

- The variance and inconsistency in funding models also contribute to issues of equity and quality, with a particular impact on CTE programs with their high costs and capacity challenges—particularly in the areas of faculty and industry partnerships.
- There is a growing need to increase funding for CTE programs.

Alignment:

The issues of alignment arise from: variability in institutions of higher education regarding which courses are accepted for transfer and which apply to degrees; a host of communication issues, some germane to dual credit only and some to transfer more broadly; and variability of school districts offerings. The findings reveal:

- Implementation of dual credit programs differs based on agreements between individual IHEs and school districts; there is no statewide model of where and how most courses are taught.
- Variability in dual credit programs and in course offerings and program requirements among IHEs affects transferability and degree applicability of dual credit Semester Credit Hours (SCH).
- The lack of a coordinated, statewide infrastructure inhibits meaningful communication among stakeholders, although there are examples where stakeholders make significant efforts to work together across institutions and sectors.
- In particular, students and families have difficulty getting readily available and understandable information about all aspects of dual credit: costs, applicability, grading, impact on Grade Point Average (GPA)/class standing, integration into high school program requirements, etc.
- Just as they have marked equity and funding challenges, CTE programs also have distinct alignment challenges.
- Shared understanding and assurance of quality in dual credit programs would help alleviate alignment challenges.

Task Force Recommendations

In arriving at a set of recommendations, Task Force members spent considerable time discussing impact and consequences, both intended and unintended, for what would be proposed. Members were especially concerned with making recommendations that would result in unfunded mandates for resource-constrained school districts, colleges and universities.

At the same time, Task Force members collectively felt a sense of urgency to leverage this era of dual credit expansion to position more of Texas’s students for success in higher education and the workforce. Members believe in both the remarkable opportunities afforded to the state and its students by dual credit and the potentially negative consequences of not addressing the challenges raised in this report, synthesized into the areas of access and equity, funding, and education pipeline alignment. This is essential if Texas is to achieve the goals outlined in *60x30TX*. The stakes are high given the state’s changing demographics and the need for strategic attention to economic vitality and social mobility.

The report recommendations cover the three key areas identified in the findings as most critical for attention and action. They are strategic and formulated to ensure that quality dual credit programs in Texas grow deliberately while addressing (1) access and equity, (2) funding disparities, and (3) alignment challenges. The Task Force’s overarching or foundational recommendation calls for shared responsibility, enhanced coordination, and monitoring of these three areas.

Interspersed throughout the report are several spotlights which feature exemplary Texas programs referenced in or aligned with recommendations.

Dual Credit Task Force Recommendations

Foundational Recommendation:

Recommendation 1: Establish and fund a dual credit advisory committee with stakeholders from K-12, higher education, and workforce, including the Texas Education Agency, the Texas Higher Education Coordinating Board and the Texas Workforce Commission (the “tri-agencies”). The committee should develop policy solutions grounded in data to address the issues identified by the Task Force in the following three areas: Access and Equity, Funding, and Alignment. Additionally, the committee will address questions of quality and rigor, preparation, and subsequent success of students. The committee would help organize and analyze relevant data; follow-up on implementation of recommendations; and ensure enhanced coordination, cohesion and communication of quality dual credit policy and programs in helping to achieve the goals of 60x30TX.

Recommendation 2 (Access & Equity):

The dual credit advisory committee should establish equity goals distinct to dual credit and in support of the targets and strategies in 60x30TX, specifically for economically-disadvantaged, African-American, Hispanic and male students.

Recommendation 3 (Access & Equity):

The Coordinating Board and TEA should provide disaggregated dual credit participation data to school districts and IHEs through an existing reporting mechanism, such as The Texas Public Higher Education Almanac or Texas Public Education Information Resource (TPEIR), to identify and measure opportunity and achievement gaps.

Recommendation 4 (Funding and Access & Equity):

Incentivize IHEs to adopt open educational resources (OER) to eliminate or significantly reduce the high costs of college textbooks. Strategies would include identification and use of existing OER and grant programs from state agencies (such as THECB OER grant program) or private foundations, and the inclusion of language stipulating use of OER in memoranda of understanding (MOUs) between school districts and colleges.

Recommendation 5 (Funding and Access & Equity):

The Legislature should create a new need-based grant program to make financial aid awards to eligible students enrolled in dual credit programs.

Recommendation 6 (Funding and Access & Equity):

Increase Career and Technical Education (CTE) funding for equipment, faculty training, and workforce alignment.

Recommendation 7 (Alignment):

High schools and IHEs should align dual credit courses to endorsements, established by HB 5 (2013 Legislative Session), as well as Field of Study Curricula for academic transfer courses, and Programs of Study for career and technical courses.

Recommendation 8 (Alignment):

THECB, TEA, and TWC should develop online and print resources for counselors, students and families that clearly communicate types of dual credit (CTE and academic), eligibility requirements, and the costs and benefits of participating in dual credit programming.

Recommendation 9 (Alignment):

Require colleges to provide advising to dual credit students upon entry and at 15 SCH. Upon entry, advising should provide students with clear information on college and career paths. At 15 SCH, advising should provide a map of the courses necessary to complete a postsecondary credential in a timely and affordable manner and, if transfer to a university is anticipated, the map should not exceed the maximum number of transferable SCH.

II. Background

The Task Force sought to identify the primary issues emerging from a period of expansion of dual credit policy and practice in Texas. In order to understand the many and evolving facets of dual credit, the Task Force convened five working groups that drew on the expertise of the members in the areas of Access & Equity; Program Quality; Transferability; Career and Technical Education (CTE) & Workforce; and Funding, Law and Policy. The working groups identified relevant questions, reviewed program and funding models, and examined data on student performance and success. The Task Force evaluated major aspects of dual credit, including whether there is equitable access to and participation in effective and high-quality dual credit programs for all students statewide. The Task Force also considered how to provide students with the strongest foundation possible to complete postsecondary credentials (certificates, associate degrees, and baccalaureate degrees) and enter the workforce.

The Task Force met over a period of time when numerous national studies were coming out and when several significant Texas studies were underway.¹ These reports and studies contributed to the iterative nature of the Task Force's work. Subsequent to the completion of the formal meetings, a core writing group met from January through May 2018. The writing group included the Task Force co-chairs, as well as staff from the UT System, TACC, and Educate Texas. The group was able to examine additional data in drafting the report's context and landscape analysis, as well as the report conclusions.

This report stakes new ground in its close look at the most recently available Texas data, its delineation of unexamined data, and its identification of the challenges that ensue from this unexamined data. Section III provides an introduction to the topic, and Section IV highlights the areas discussed by the Task Force and lays out the recommendations, with rationales and key findings. Section V provides landscape analysis, with a deeper review of recent statewide data (up through 2016-17) for the school-aged populations that constitute the state's higher education pipeline.

¹ Several of the national studies identify some of the same areas of concern that this report does, pointing to the fact that the context in Texas has many similarities with the national context. At the same time, some of these studies focus more on quality and accountability than this report does (see, for example, the College Board's 2017 Working Group Report, *College Credit in High School*, and the College in High School Alliance's *How to Scale College in High School* February 2017 report.). Meanwhile, the Texas studies referenced in the Annotated Bibliography and Resources (THECB/Rand Phase 1; Gianni, et al, Eklund, Garbee, and Villareal) provide data analysis critical to the deliberations and findings of the Task Force. However, two major forthcoming Texas studies (the UT System research study on Dual Credit and UT student outcomes by Troutman *et al*, and THECB/AIR Phase 2 studies), are not yet complete at the time of writing. An annotated bibliography is found in Appendix C.

III. The Complexity of Dual Credit

Because dual credit is where college meets high school, it combines aspects of K-12 education with higher education and, as a result, is both complex and multifaceted. When designing or evaluating a program, there are numerous questions to consider, including funding options; program models; delivery modality and location; facility and equipment infrastructure and needs; faculty credentialing, development, affiliation and compensation; textbook policies and fees; advising models; and transferability versus applicability of credits; among others. Across the state, how these programmatic, academic, infrastructure and financial elements are realized vary considerably and span policy and practice considerations, capacity, and decision-making.

Some of the questions the Task Force considered include:

- **Course Location:** Are courses taught on the high school or college campus?
- **Delivery Mode:** Are courses offered face-to-face, online, or in a hybrid mode?
- **Instructor Status:** Are dual credit instructors primarily employed by the high school or college?
- **Source of Faculty Compensation:** Are instructors paid by the college or by the school district, or in a hybrid model?
- **Facility and Equipment Needs:** Does the course require resources other than textbooks such as laboratories, specialized equipment, or computer access?
- **Transportation:** Do students travel to the college or do faculty travel to students?
- **Textbook Policies:** Are there agreements to use the same edition of a college textbook for more than one year, or is the school district or student purchasing new books each year?
- **Fees:** Are there additional fees associated with enrolling at the college or in particular courses? Are they waived or reduced by the college partner?
- **Advising Models:** Are there counselors at the high school who provide dedicated college counseling or transition counselors on the college campus dedicated to a cohort of students from a district, program or region? Which partner pays for these expenses?
- **Early College High School Status:** Is the high school designated as an ECHS, which requires a specific program of study enabling students to earn up to 60 college credit hours? Are the courses provided in a model similar to the ECHS design, but not necessarily recognized by the TEA?

The Task Force did not attempt to answer all of these questions and issues. In trying to keep the focus of its review on how best to position students for success, the Task Force realized that developing policy recommendations and solutions requires an understanding of the scope of dual credit and a recognition that the decisions higher education institutions and their K-12 partners make in these areas contribute to the complexity of dual credit. These decisions also impact the levels of access and equity, funding variance, alignment, and quality, topics critical to assessing and strengthening dual credit in Texas.

Changing Demographics, Educational Outcomes, and Dual Credit in Texas

With a median age of 34.2 years old, Texas has one of the youngest populations of any state in the country; in fact, only two states (Alaska and Utah) have younger populations.² Texas is a majority-minority state and this population growth is projected to increase. Currently, 59% of the population is non-Anglo, and by 2037 this number will increase to 70% of the population. These changing demographics present a positive outlook for a growing and productive workforce comprised of younger people contributing to a stable tax base and economic competitiveness—elements critical to the economic, social, health, and civic well-being of Texas.

Far less positive—and thereby a threat to the state’s economic competitiveness and well-being—are lagging educational attainment rates for school-aged populations. According to 8th grade cohort data produced by the THECB, approximately 300,000 students begin 8th grade in Texas public schools each year and, of those, only 22% will earn any type of postsecondary credential by the time they are 24 years old.³

Disaggregating the data reveals achievement gaps by race and ethnicity. African American and Hispanic male students are the least likely to earn a higher education degree or certificate. African American and Hispanic female students fare only slightly better with completion rates of 17% and 18%, respectively.

Moreover, the gap in high school and postsecondary attainment is further differentiated by geographic location (i.e., whether students live in rural versus urban districts). Students who live in urban areas are less likely to complete a higher education credential than those in rural areas, with the discrepancy significantly impacted by economic disadvantage.

These data are more completely represented in Section 2 of the report. They provide a compelling picture of the need to strengthen the student pipeline from high school into postsecondary education. They also serve as backdrop for recent legislative changes, specifically the expansion of eligibility of dual credit to younger students and removing the limitation on the number of dual credit courses a student can take, and for THECB’s newest strategic plan, *60x30TX*.

² Source: Texas Demographic Center. (2016). Aging in Texas: Introduction. Austin: Author. Accessed at : <http://demographics.texas.gov>

³ <http://www.txhighereddata.org/index.cfm?objectId=F2CBE4A0-C90B-11E5-8D610050560100A9>



THE NEW TEXAS HIGHER
EDUCATION STRATEGIC PLAN

Educated Population: At least 60% of young adults (ages 25-34) in Texas will hold some type of postsecondary credential by 2030.

Completion: The number of students earning certificates and degrees (associate, bachelor’s, and master’s) from institutions of higher education will increase each year and meet the following benchmarks.

YEAR	NUMBER OF DEGREES
2020	376,000
2025	450,000
2030	550,000

Marketable Skills: All college graduates in Texas will have completed programs with identified marketable skills by 2030.

Student Debt: Undergraduate student loan debt will not exceed 60% of first-year wages for graduates of Texas public institutions by 2030.

Many stakeholders across Texas will need to collaborate to meet each target. Two- and four-year institutions are encouraged to be creative, to develop local and regional plans, and to pursue their own distinct missions as they work toward the 60x30TX goals.

In recent biennia, the legislature has formally signaled its intent to increase educational opportunities for all Texans, especially for populations traditionally underrepresented in higher education. School districts and institutions of higher education are embracing programming that seeks to sustain rigor while closing performance and attainment gaps and increasing college completion. A number of state agencies and organizations, including the THECB, are implementing strategic initiatives that emphasize institutional partnerships and increased alignment across the educational landscape. Many Texans have united around the goal of increasing college-going numbers, increasing workforce-ready young adults, and ensuring equity of opportunity for all populations.

One of Texas’s most prominent mechanisms for increasing college access, achievement, and completion is providing the opportunity for students to earn college semester credit hours (SCH) while still enrolled in high school. Texas law (Texas Education Code 28.009) refers to these opportunities as college credit programs, which exist in a variety of models. Dual credit, one such college credit program, has existed since the late 1990s and has grown significantly in recent years, both nationally and in Texas.

The Definition of Dual Credit

As the report title suggests, the Task Force views dual credit as a critical learning space and opportunity *where college meets high school*. For the purpose of this report, the Task Force adopts the definition of dual credit as the process by which a high school student enrolls in a college course and receives simultaneous credit from both the college and the high school. In keeping with TEA’s definition, the Task Force also acknowledges that the level of instruction should be beyond or in greater depth than a high school course.

The Growth of Dual Credit

There has been significant growth in the number of students participating in dual credit since 1999 when TEA and THECB began collecting dual credit data. As of 2017, 10% of all students enrolled in higher education in Texas are high school students participating in dual credit courses, and dual credit enrollments generated more than 820,000 SCH at Texas institutions of higher education. This is nearly 14 times the number of SCH generated by dual credit enrollments in 1999, and it is expected that this number will continue to increase.

The growth of dual credit has important implications for the state. Early indications show that dual credit is working to level the playing field for college access and, to a lesser extent, college completion in Texas, especially for Hispanics who constitute the fastest growing segment of the state’s population. Increasing college access and completion are critical to achieving the state’s goals for educational attainment, a productive workforce, and economic competitiveness. Despite these increases, there are challenges that still need to be addressed, especially in terms of equitable access, completion of high-quality dual credit, and funding inequities. In order to address and resolve these challenges, the Task Force believes that dual credit demands a level of coordination and collaboration between K-12 and higher education institutions that currently does not exist. In its review of the Texas dual credit landscape, the Task Force both highlights some existing inadequacies and inequities of the system and presents opportunities for resolution.

The Texas Education Agency and the Texas Higher Education Coordinating Board each define dual credit in similar, but not identical ways.

The **Texas Education Agency** (TEA) defines dual credit as “a process through which a student may earn high school credit for successfully completing a college course that provides academic instruction beyond, or in greater depth, than the Texas Essential Knowledge and Skills (TEKS) for a corresponding high school course.” (https://www.legacypreparatory.com/wp-content/uploads/2017/10/TEA_Dual_Credit_FAQ.pdf).

The **Texas Higher Education Coordinating Board** defines dual credit as “a system under which an eligible high school student enrolls in college course(s) and receives credit for the course(s) from both the college and the high school.” (19 Texas Administrative Code [TAC], Subchapter D, §4.83).

Partnership Models

Dual credit is offered through partnerships between IHEs and school districts. All dual credit partnerships are required by Texas Administrative Code §4.84 to have a written document, or memorandum of understanding (MOU), approved by both institutions outlining the major aspects of the dual credit relationship. The MOU includes topics such as student and course eligibility, academic policies, faculty selection, and curriculum, among others.

While all dual credit programs in Texas meet this requirement, delivery of dual credit varies not only by region, but also by how the programs are designed by the partnering K-12 and higher education institutions. As the following figure indicates, the content of dual credit courses can be either academic (i.e., designed for transfer to institutions of higher education in completion of associate or baccalaureate degree programs) or career and technical education (CTE). Courses may be taught on a college campus, a high school campus, or online. The employment status of the faculty who teach may be either part-time or full-time, and the faculty may also be high school teachers. As such, faculty may be employed by the college or both the high school and the college. The complexity of dual credit arises in part, then, from the fact that it is a collaboration and a set of agreements between two different educational sectors, K-12 and higher education.



El Paso Collaborative for Academic Excellence

The El Paso Collaborative for Academic Excellence, based at The University of Texas at El Paso, is a broad-based, citywide collaboration of education, business and civic leaders that has worked for 25 years to transform the PreK-16 educational pipeline and ensure academic success for all young El Pasoans.

In 1991, the education landscape of El Paso reflected a historical disparity in school performance closely linked to race, ethnicity, and poverty. Concerned that El Paso's students were being poorly prepared for higher education and careers, and unwilling to accept traditional excuses such as language barriers or poverty, local leaders embraced a new framework for reform whereby school districts, the community college and university would work with the entire community in a broad partnership to build capacity to offer all El Paso students high-quality schooling and bring about system-wide and sustainable improvements, from kindergarten through university graduation. Thus, at the invitation of the University of Texas at El Paso (UTEP), the Collaborative was formed in fall 1991, and began work in early 1992.

The Collaborative has been recognized as one of the most innovative and effective education reform efforts in the United States. Moreover, it has established a robust action agenda that over the years has:

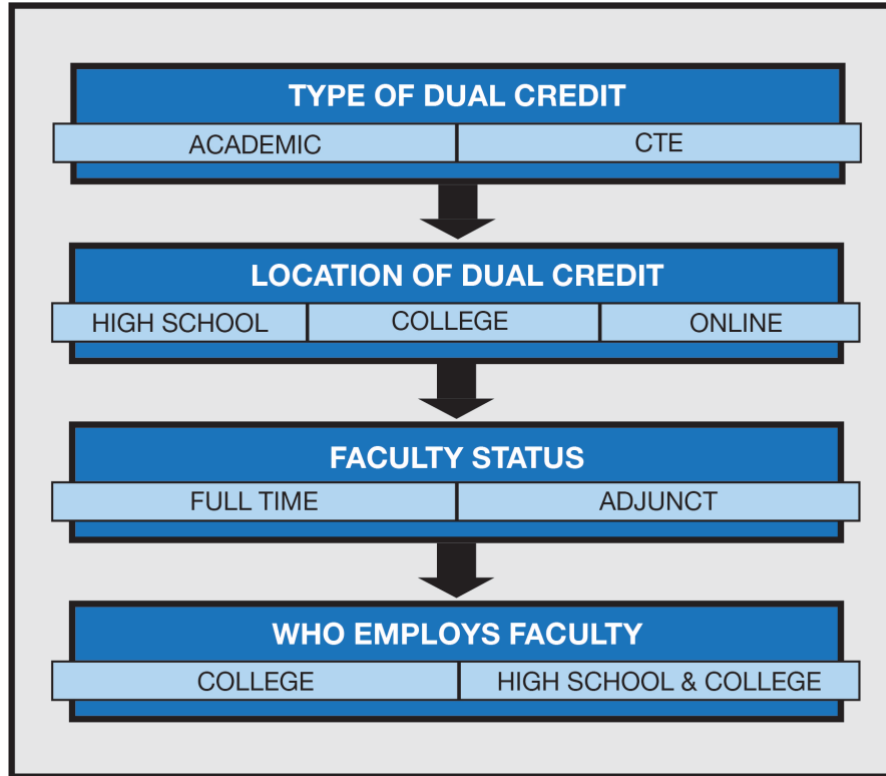
- ✦ Provided intensive long-term professional development to thousands of administrators and teachers in the region;
- ✦ Established high standards and developed and implemented rigorous curricular programs to bring those standards to life in classrooms across the region;
- ✦ Advocated for policies requiring all students to be enrolled in high-quality academic programs;
- ✦ Supported a culture of accountability among all stakeholders for academic success among all students, PK-16;
- ✦ Worked toward systemic, sustainable change in all classrooms, schools and districts in the greater El Paso area.

This work has been generously supported by grants, principally from the National Science Foundation. Other funders include the Pew Charitable Trusts, the U.S. Department of Education, the Lucent Technologies Foundation, the Exxon Foundation, the Texas Education Agency, the Greater Texas Foundation and the Meadows Foundation.

The El Paso Collaborative for Academic Excellence has fostered major changes in attitudes, aspirations, and behaviors across the Paso del Norte region over the past 25 years, but there is still much work to be done. The current priorities include:

- ✦ Expand the number of dual credit and advanced courses offered in high school
- ✦ Prepare more teachers with credentials required to teach these college-level courses
- ✦ Engage business and civic leaders and other stakeholders in supporting not only a variety of EPCAE initiatives but in expanding the number of well-paying jobs across the region
- ✦ Rise to the challenge of the 60X30TX plan

Variation in Components of Dual Credit



College Credit Program Models

Since 2006, school districts in Texas have been required by statute (TEC 28.009) to provide high school students the opportunity to earn a minimum of 12 college credit hours. These college credit programs provide students with credits that may be earned through a variety of modalities including concurrent enrollment/dual credit, International Baccalaureate (IB), and Advanced Placement (AP). Thus, depending upon the program(s) offered by a college and its partnering school districts, the term dual credit may refer to individual courses or a complete curriculum of courses that high school students can take in order to earn both college and high school credit simultaneously.

Dual credit students must meet the same college readiness requirements as their college counterparts or meet dual credit eligibility requirements. A high school student who wants to enroll in an academic dual credit course must meet all of the college's prerequisite requirements designated for that course, and also demonstrate readiness through an exam known as the Texas Success Initiative Assessment (TSIA) or equivalent tests (such as SAT, PSAT, ACT or high school end-of-course exams). Exact eligibility requirements can be found in Appendix B, Definitions, and on the THECB's website at: <http://www.thecb.state.tx.us/reports/PDF/1514.PDF>.

Students enrolled in dual credit earn college credit by receiving a passing course grade. ECHSs use dual credit to allow students to earn an associate degree or up to 60 college credit hours as part of their high school program of study.

Varying Motivations for Enrolling in Dual Credit

The intent of dual credit is to enable qualified high school students to earn college credit during high school, smoothing their transition to college by “serving as a path to academic degree programs or college-level workforce education courses”⁴ (THECB, 2008). However, the motivations to participate in dual credit are diverse and can vary by stakeholder. For example, students can use the “signaling value” of dual credit to show selective colleges that they are motivated and academically high-achieving.⁵ One aspect of the signaling power of dual credit is through grade point average (GPA), which determines class rank. While the weight for dual credit and other college credit courses varies by school district, dual credit and AP classes are generally weighted, which allows students who successfully complete these courses to boost the overall GPA. Because class rank is an important factor in college admissions in Texas, some students choose classes based on their cumulative impact on high school GPA.

Dual credit can also help students perceive themselves as college-bound while building knowledge and experience in college. Dual credit is the foundation of a school model that seeks to provide academic rigor with student support systems: by blending high school and college coursework, ECHSs give students, particularly historically underserved and at-risk students, the opportunity to earn up to two years of college credit (60 hours), tuition-free, while earning a high school diploma. Thus, dual credit is a mechanism for providing college pathways for students, but they may be at different starting points and their motivations may differ based on their level of knowledge about the process of applying to college.

⁴ Texas Higher Education Coordinating Board. (2008).

⁵ Speroni, C. (2011). High school dual enrollment programs: Are we fast-tracking students too fast? (National Center for Postsecondary Research Working Paper). Retrieved from <http://www.postsecondaryresearch.org/>

Recent Dual Credit Data and Legislative Changes

The THECB has commissioned two reports to delve deeply into dual credit in Texas. The first report was completed by the RAND Corporation in 2017, and the second is to be conducted by the American Institutes for Research (AIR) with a scheduled release of the final report in December 2018. The RAND report provided valuable information about how dual credit is being delivered statewide.⁶ The report identified that in 2015, 48% of courses were taught on a high school campus and 52% were taught on a college campus. From 2012 to 2015, there was significant growth in dual credit course seats delivered by an ECHS, which increased from 9% to 19% for the time period. In 2015, most dual credit was delivered face-to-face (83%), with a smaller (13%), but increasing portion being offered online with the remaining courses offered in a hybrid format. This report also showed that 54% of dual credit was taught by part-time faculty members.

Statutory changes in recent biennia have expanded access to dual credit. Beginning in 2015, HB 505 (84R) allowed students in ninth grade through twelfth grade to take dual credit and removed the cap on the number of dual credit courses in which students can enroll in any given semester. Previously, dual credit was limited to high school juniors and seniors, and students could only take two dual credit courses per semester unless they were enrolled in an ECHS or unless the high school and college determined that an individual student could take courses sooner or take more dual credit. Since HB 505 passed, CTE dual credit courses have increased.

The Impact of Demographic Shifts on Dual Credit

Early indications show that dual credit is increasing enrollment in higher education, especially for Hispanics. The THECB's previous strategic plan, Closing the Gaps by 2015 (CTG), which was implemented in 2000, included a significant focus on increasing participation and success for underrepresented students. The graduation gap between White students and minorities has narrowed, in the same time period that dual credit enrollment has expanded, especially for Hispanic students. Higher education in Texas has become more representative of the state's diverse population. However, there are still areas for improvement that were identified in the most recent 60x30TX strategic plan.

Based on 2017 THECB dual credit enrollment data, 10% of Texas high school students are participating in dual credit programs. Hispanic students represent just over half of the high school population (51%) and they are increasingly participating in dual credit. In fact, Hispanic students represented 45% of the dual credit population in 2017. African American students represent 13% of high school students, but only 7% of dual credit enrollments. Additionally, students who are economically disadvantaged, males, or not participating in gifted and talented (GT) programs are less likely to enroll in dual credit. While these indicators suggest that dual credit is increasing the potential for students, and Hispanic students in particular, to complete college, some inequities persist. It is clear

⁶ Miller, T., Kosiewicz, H., Wang, E.L., Marwah, E.V., Delhommer, S. and Daugherty, L. (2017). Dual Credit Education in Texas: Interim Report. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2043.html.

that barriers to access exist for some populations, but how best to remove these barriers requires a more comprehensive understanding of the dual credit context and a continued commitment to data collection and analysis.

Alignment of Dual Credit to Academic Pathways

There are differences in alignment based on program type. While CTE courses are largely intended for students to earn specific certifications (Level 1 and 2), most stand-alone academic dual credit is not directly aligned to high school endorsements or postsecondary pathways. ECHSs are required, by design, to provide students with pathways to a high school diploma and either an associate degree or up to 60 college credit hours. In all three cases, it is ideal for students to receive various types of support built into their program of study, such as advising and access to college resources like tutoring. However, this is not common outside of an ECHS program.

Geography

Inequities exist in dual credit participation and offerings in terms of geography, and the data are complex. Where a student lives is a significant factor in the types of resources and programming available to that student. There are regional differences determined by rural or urban settings that impact program models and delivery options, ranging from what courses are available to students and who teaches dual credit, whether an ECHS is available, and where dual credit is taught (at a high school, on a college campus or online). Urban and suburban areas tend to provide students access to more dual credit courses and ECHS programs than rural areas. However, the RAND report found that graduates of rural high schools were more likely to participate in dual credit than those students from suburban or urban high schools.⁷ There are high rates of dual credit participation at rural schools, which have used dual credit to augment their curricular offerings, but these students may have limited offerings compared to students in urban and suburban areas.

Unique Challenges in Rural Regions

Rural regions face distinct challenges with regard to dual credit, which include proximity to colleges, recruiting and retaining teachers with credentials to teach dual credit, funding for equipment and supplies for CTE programs, and access to broadband. Limited internet access prevents students from accessing online courses and supports. Similarly, the distance to higher education institutions can be prohibitive in rural regions; in West Texas, the average distance between ISDs and community colleges is 38 miles.⁸ Finally, school districts and colleges in rural areas often have more limited budgets due to lower

⁷ Miller, T., Kosiewicz, H., Wang, E.L., Marwah, E.V., Delhommer, S. and Daugherty, L. (2017). Dual Credit Education in Texas: Interim Report. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2043.html.

⁸ The Bush School of Government and Public Service. (2014). Postsecondary Completion in Rural Texas: A Statewide Overview. College Station, TX: Shuyu Chen et al.

student enrollments, making it difficult to waive tuition and fees for students enrolling in dual credit.

What do we mean by quality in dual credit?

The Dual Credit Task Force had multiple discussions on quality over the course of its deliberations. While the Task Force elected not to separate out recommendations on quality, quality considerations are present in several of the recommendations.

Members identified the following dimensions of quality that impact how students gain access to, experience and succeed in dual credit programs. These dimensions relate to both academic and programmatic quality, as well as the Task Force's three areas of focus, Access & Equity, Funding and Alignment:

- Outcomes-based curricular design with clear learning outcomes, skills and knowledge identified
- Consistently high standards for student performance
- Guided Pathways in which dual credit courses are aligned with the Texas Core Curriculum and degree programs for seamless transfer, and in which career pathways are indicated
- Clear and consistent communication to students and families
- Student Support (including advising, tutoring, financial and career counseling, non-academic support)
- Program Mode and Delivery
- Teacher Credentialing, Support and Professional Development to assure college-level instruction and learning
- Infrastructure: state-of-the-art laboratories and equipment for STEM and CTE programs
- Strong partnerships between K-12 schools/districts and colleges
- Data Infrastructure that includes accuracy; transparency; and cross-sector sharing, monitoring, and accountability for aggregated and disaggregated data

It is important to note that several of these quality dimensions are the same for dual credit programs as for any other college programs. In Texas, it is the responsibility of the college offering dual credit to ensure quality. At the same time, dual credit programs are monitored by TEA, the THECB, and the regional accrediting body for Texas, the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

There is one national accrediting body, the non-profit National Alliance for Concurrent Enrollment Programs (NACEP) that works to ensure that college courses taught by high school teachers are as rigorous as courses offered on the sponsoring college campus. NACEP is the sole national accrediting body for concurrent enrollment partnerships. At the time of writing, no Texas dual credit programs are accredited by NACEP.

Task Force members found two resources particularly helpful in defining quality and rigor. The new TEA ECHS Blueprint offers a framework for quality in early college high

schools and its focus in Benchmark #5 on Academic Rigor and Readiness offers clear guidance on student achievement and the TSI. The Northwest Comprehensive Center at Education Northwest, in partnership with the Washington State Office of Superintendent of Public Instruction, offers a set of rubrics and self-assessments that are designed to empower partnerships and institutions to examine quality and rigor. Both these resources are included in Appendix C, along with references to additional reports, resources and organizations that describe quality components more comprehensively.

The Task Force was not able to reach consensus on certain questions about program quality. The THECB over time has raised questions regarding how to ensure that academic dual credit courses adequately prepare students for subsequent courses, and that career and technical courses adequately prepare students for the workforce. These are important considerations as we expand dual credit opportunities.



Early College High Schools (ECHS)

Overview:

By blending high school and college coursework, ECHS give students, particularly historically underserved and at-risk students the opportunity to earn up to two years of college credit (60 hours), tuition-free, while earning a high school diploma. Early College High Schools provide students with highly personalized attention and encourage lasting relationships with teachers and classmates. The experience creates a college-like culture that encourages students to continue their higher education journey.

The ECHS Blueprint:

The TEA developed a roadmap of benchmarks and program requirements that are essential to the model's success:

- ★ **Design Elements:** All designated ECHSs (Provisional, Early College, Distinguished Early College) are required to meet all of the design elements for each benchmark annually.
- ★ **Outcomes-Based Measures (OBMs):** All designated ECHSs (Provisional, Early College, Distinguished Early College) are required to meet OBMs on data indicators related to access, achievement, and attainment.

Benchmark 1: Target Population

The ECHS shall serve, or include plans to scale up to serve, students in grades 9 through 12, and shall target and enroll students who are at risk of dropping out of school as defined by the Public Education Information Management System (PEIMS) and who might not otherwise go to college.

Benchmark 2: Partnership Agreement

The ECHS shall have a current, signed MOU for each school year that - (1) Defines the partnership between the school district(s) and the institution(s) of higher education, (2) States that the school district or charter in which the student is enrolled shall pay for college tuition (for all dual credit courses, including retakes), fees (including TSI admin fees), and required textbooks to the extent those charges are not waived by the partner IHE, (3) Defines an active partnership between the school district(s) and the IHE(s), which shall include joint decision-making procedures that allow for the planning and implementation of a coherent program across institutions, and (4) Includes provisions and processes for collecting, sharing, and reviewing program and student data to assess the progress of the ECHS.

Benchmark 3: P-16 Leadership Initiatives

The school district and institution(s) of IHE partners shall develop and maintain a leadership team that meets regularly (e.g. quarterly) to address issues of design, implementation, ongoing implementation, and sustainability. Membership should include the ECHS leader and individuals with decision-making authority from the district(s) and the IHE(s).

Benchmark 4: Curriculum and Support

The ECHS shall provide a rigorous course of study that enables a participating student to receive a high school diploma and complete the Texas Higher Education Coordinating Board's (THECB) core curriculum (as defined by the Texas Administrative Code (TAC) §4.28), obtain certifications, or earn an associate's degree, or earn at least 60 credit hours toward a baccalaureate degree during grades 9-12. The ECHS shall provide students will academic, social, and emotional support in their course of study.

Benchmark 5: Academic Rigor and Readiness

The ECHS shall administer a Texas Success Initiative (TSI) college placement exam (as defined by TAC §4.53) to all accepted ECHS students to assess college readiness, design individual instructional support plans, and enable students to begin college courses based on their performance exam.

Benchmark 6: School Design

The ECHS must provide a full-day program (i.e., full day as defined in PEIMS) at an autonomous high school (i.e., a high school with ECHS leader assigned to ECHS responsibilities who has scheduling, hiring, and budget authority), an IHE liaison with decision-making authority, and a highly qualified staff with support and training.

IV. Dual Credit Task Force Findings and Recommendations

The findings and recommendations that follow cover the key areas identified by the Task Force as most critical for attention and action. They are strategic and formulated to ensure that quality dual credit programs in Texas grow deliberately while addressing three key areas: (1) access and equity, (2) funding disparities, and (3) alignment challenges.

The Task Force's overarching or foundational recommendation calls for shared responsibility, enhanced coordination and monitoring of these three areas.

Foundational Recommendation

Recommendation 1: Establish and fund a dual credit advisory committee with stakeholders from K-12, higher education, and workforce, including the Texas Education Agency, the Texas Higher Education Coordinating Board and the Texas Workforce Commission (the “tri-agencies”). The committee should develop policy solutions grounded in data to address the issues identified by the Task Force in the following three areas: Access and Equity, Funding, and Alignment. Additionally, the committee will address questions of quality and rigor, preparation, and subsequent success of students. The committee would help organize and analyze relevant data, follow up on implementation of recommendations, and ensure enhanced coordination, cohesion, and communication of quality dual credit policy and programs in helping to achieve the goals of 60x30TX.

Rationale: The introductory section of the report covers remarkable progress and growth in dual credit programs across the state of Texas in recent years. It also summarizes the complexity of dual credit offerings and policies, and the impacts of that complexity on students, school districts, and postsecondary providers. While responsibility and accountability for dual credit resides in multiple locations, the Task Force believes that for the benefit of students and the more seamless P-16 pipeline at the heart of the state's educational attainment goals, enhanced coordination and monitoring of access and equity, funding, and alignment are needed. The proposed committee would provide that coordination and monitoring, as well as work towards policy solutions grounded in keen attention to data and strategically aligned with the goals of 60x30TX. It would review the results of the forthcoming studies of student outcomes to further inform future directions and implementation of recommendations. This review would include issues addressing how dual credit data is collected and publicly shared. Finally, the committee could engage more deeply with issues relating to rigor and quality, how well dual credit courses prepare students for subsequent college coursework and the workforce, along with transfer challenges.

Access and Equity

Issue: Access to dual credit exists statewide, but it is not consistently equitable in terms of demographics, geography, program availability, quality, infrastructure, or funding.

Charge: Arrive at a more comprehensive understanding of dual credit data, with a specific focus on access and equity, in order to establish clear equity goals for dual credit participation.

Overview: The Task Force defines access as making quality dual credit programs available to more students across Texas, thereby expanding the opportunity to attend and be successful in college. Expanding access entails creating conditions that enable equitable opportunities for participation, and for removing barriers that prevent students from participating in dual credit. Examples include barriers created by affordability, geography, broadband access, among others.

The Task Force defines equity as the result of systemic efforts to improve educational outcomes for all dual credit students. Equity is determined by looking at student outcomes disaggregated by student populations across multiple dimensions of dual credit participation, including eligibility, program availability, infrastructure, enrollment, and completion. Equity exists when:

- Students enroll, participate, and succeed in dual credit courses at rates comparable to their representation in Texas school-age populations and school districts disaggregated by race/ethnicity, gender, and income/SES, and according to geographic region;
- Quality dual credit programs are similarly available to students in terms of program offerings, costs, delivery mode, and infrastructure at rates comparable to their representation in Texas school-age populations and school districts disaggregated by race/ethnicity, gender, and income/SES, and according to geographic region.

Based on this understanding of access and equity, the Task Force surveyed the Texas landscape and analyzed data on dual credit participation and offerings, and reflected upon the following questions:

1. Who has access to and is eligible for dual credit programs?
2. Are Texas students participating in and completing dual credit programs equitably?

3. Are different types of dual credit program equitably available?
4. Does data suggest that certain student populations enroll more or less in academic or CTE dual credit courses?

Based on the THECB dual credit enrollment reports, in 2017, of all higher education enrollment (1,531,243), 10% were Texas high school students enrolled in dual credit. Of these dual credit students, 37% are White, 46% are Hispanic, and 7% are African American.

When comparing the dual credit student populations by race/ethnicity, the rate of participation among Hispanics students (46%) is higher than White students (37%). African American students, who represent 13% of all students in higher education, have the lowest rates of participation (7%) compared to their peers of other races/ethnicities and to their own representation in the population.⁹

Early data indicate that dual credit is an important contributor to successfully reaching the goals of the *60x30TX Plan*. Examined data show that *access* to dual credit exists statewide. However, the data also indicate that this access is not consistently *equitable* in terms of demographics, geography, program availability, infrastructure, and funding. While more difficult to measure and ascertain, there are also quality dimensions embedded in equity gaps.

Given the complexity of the data, Task Force members believe that deeper analysis of data at both the state and institutional level is critical to understanding the equity of dual credit. In particular, it will be insightful to analyze data that become available for student participation and outcomes, disaggregated by student demographics, following changes made through HB 505 in 2015. This requires both authentic commitment to addressing equity gaps, and local and statewide culture changes in how data is collected and analyzed.

Key Findings:

- Access and equity issues are multidimensional and broad in scope.
- Statewide equity gaps exist for certain student populations in terms of access, eligibility, enrollment, and participation.
- Regional equity gaps exist due to geographic variance in access to infrastructure and faculty, proximity to IHE, and availability of funding.

⁹ Texas Higher Education Coordinating Board (2017). Texas Public Higher Education Almanac. Accessed at <http://www.thecb.state.tx.us/reports/PDF/9435.PDF?CFID=76564817&CFTOKEN=19465439>

- Quality is integral to access and equity: All students should have access to and be able to participate in quality dual credit programs. Equity does not exist without the assurance of quality.
- Funding challenges are also equity challenges.
- The level of funding available to school districts has an impact on the equity, quality, and availability of dual credit programs for the students who live in these districts. There is variation in the school district funding and resources, determined by the levels of Average Daily Attendance (ADA). Additionally, some school districts have enough funding to create education foundations that generate funding for dual credit programs or scholarships.
- CTE programs have distinct equity challenges, and the quality and funding components are exacerbated because of their higher costs:
 - There is a need in CTE programs to accelerate access to high-quality, industry-aligned Level 1 and Level 2 certificates;
 - Demand for qualified CTE teachers for high-demand and emerging CTE courses outpaces the supply of available faculty;
 - CTE opportunities need to be expanded for students with disabilities;
 - Rural districts face unique challenges in launching high quality CTE programs and partnerships.

Recommendation 2: The dual credit advisory committee should establish equity goals distinct to dual credit in support of the targets and strategies in 60x30TX, in particular for economically disadvantaged, African American, Hispanic, and male students.

Rationale: The 60x30TX Plan outlines a statewide agenda for education attainment and calls upon regions to work together to meet common goals. Similarly, the MOUs developed by school districts and colleges outline the expectations and intended goals of dual credit programs. Equity goals signal a state-level commitment to using dual credit as a tool for increasing equity and create targets toward which education institutions and regions can work.

Recommendation 3: THECB and TEA should provide disaggregated dual credit participation data to school districts and IHEs through an existing reporting mechanism, such as The Texas Public Higher Education Almanac or TPEIR, to identify and measure opportunity and achievement gaps.

Rationale: While school districts and IHEs have some dual credit data available at the individual institutional level, it is neither common practice, nor the expectation for dual credit partners to examine a common set of metrics. By providing disaggregated dual

credit data in an agreed upon format, dual credit partners, state agencies, and other stakeholders will have information to monitor participation and outcomes.

Recommendation 4: Incentivize IHEs to adopt open educational resources to target the high costs of college textbooks. Incentives would include grant programs from state agencies (THECB OER grant program) or private foundations and the use of language stipulating use of OER in MOUs between ISDs and IHEs.

Rationale: There is a growing body of research on the high costs of college textbooks as barriers to student success, and the impact is greatest on those students historically underrepresented in college. Likewise, the high cost of college textbooks is a barrier to student participation in dual credit. As the number of students participating in dual credit courses has increased, access to low- or no-cost textbooks becomes a critical avenue to ensure more equitable participation. Dual credit partnerships have attempted to decrease the cost of textbooks by developing agreements to use books for a specified amount of time. However, this is more common in ECHSs than traditional dual credit programs, and it does not always guarantee that textbooks will not be changed. OERs can be distributed widely at little cost. Thus, they are a tool for substantially reducing the cost of textbooks in an equitable way.

Funding

Issue: State formula funding helps finance dual credit courses, but there is great variability across the state in terms of what students and families pay.

Charge: Arrive at a more comprehensive understanding of the funding of dual credit in order to develop a clear set of recommendations.

Overview: To tackle the funding variability issue, the Task Force addressed a series of questions, including:

1. How is dual credit funded?
2. What are the cost drivers of dual credit?
3. What explains the variance in the cost of dual credit statewide, regionally, and by institution?
4. What should the legislature's role be in funding dual credit?

There is limited research available in Texas that addresses the complexity of dual credit funding. In 2011, the American Institutes for Research (AIR) and Gibson Consulting Group, Inc. conducted a study for TEA that examined the major costs of dual credit and the available sources of funding. The costs and funding sources are detailed in the table

below, and it should be noted that the study indicated that this was not an exhaustive list of all possible funding for dual credit.

Major Costs of Dual Credit	Sources of Dual Credit Funding
<ul style="list-style-type: none"> • Instruction: salaries or course-based payments to per-course adjunct professors for teaching courses for dual credit. • Textbooks: college textbooks used by students in dual credit courses. • Administrative: the costs of running dual credit programs at the Local Educational Agency (LEA) and the community college levels. • Transportation: student travel to and from college campuses to attend courses for dual credit. 	<ul style="list-style-type: none"> • State: Appropriations to community colleges, as well as state funding to districts (e.g., Foundation School Programs [FSP], State Compensatory Education funds, High School Allotment funds, funds allocated through state discretionary and formula-funded grants). • Family Payments: Student payments to community colleges for tuition/fees and textbooks for courses for dual credit. • Federal: Federal funds used by community colleges and school districts for courses for dual credit. • Local and other: Local funds used by community colleges and school districts for courses for dual credit.

When examining the costs of dual credit and the sources of funding, the question of “who pays” often arises. Dual credit programs are funded like other college courses, through a blend of state appropriations, including formula funding, and tuition and fees charged to students. However, unlike traditional college students, dual credit students are not eligible for state and federal student financial aid to help cover tuition and fees. Thus, the cost of dual credit may be borne by the IHE through tuition and fee discounts and/or waivers, by the school district, or directly by students and parents.

Because the 50 public community colleges provide 93% of dual credit offered in Texas, it is useful to understand fee waiver policies at the community colleges. In fall 2016, TACC conducted an informal survey of its members and found substantial variance in tuition waivers by IHE. As detailed in the table below, some institutions waive all tuition and fees; some institutions waive partial tuition and/or fees based on multiple factors; and some institutions do not waive any tuition or fees. While these data continue to change, they provide insight into cost variability

Community College Dual Credit Tuition and Fee Policies

11	Waive all tuition fees
25	Waive partial fees
3	Waive tuition and fees for some students
5	Partial waivers based on location
6	Do not offer any waivers

Source: TACC

Getting a true sense of the cost of dual credit is difficult, especially in terms of the impact of this funding variability on different student populations. The Task Force was not able to discern a complete funding picture of dual credit in Texas. *Only with a more thorough examination of funding data across sectors can all of the stakeholder’s devise policy solutions.* The Texas Higher Education Coordinating Board-sponsored AIR report, to be completed in 2018, will help inform this picture and may result in the identification of clearer policy directions.

Key Findings:

- There is great variance in how dual credit courses are funded and who bears the cost, ranging from colleges, school districts, and/or parents and students.
- State formula funding helps to finance dual credit courses, but determining the exact cost of dual credit courses is difficult due to the substantial variability of funding models.
- Variance and inconsistency in funding models contribute to issues of equity and quality.
- There is a growing need to offer and fund CTE, but CTE programs have distinct capacity challenges—particularly in the areas of faculty and funding—that impact equity and quality. Regions and institutions with fewer resources are particularly challenged given the infrastructure requirements of CTE (e.g., labs, machinery, technology, broadband access, etc.).

Recommendation 5: The Legislature should create a new need-based grant program to make financial aid awards to eligible students enrolled in dual credit programs. Eligible students can receive grants to pay for up to 12 credit hours in the core academic subjects, or up to 12 credit hours in CTE so long as the courses lead to a certificate or an industry-recognized certification.

Rationale: Although dual credit participation has increased statewide, the issue of cost for families continues to be a barrier to equitable access. The proposed grant program would provide targeted funding for students from populations historically underrepresented in college to be able to enroll in and earn dual credit in high school.

Recommendation 6: Increase CTE funding for equipment, faculty training, and workforce alignment.

Rationale: CTE courses are designed to prepare students for specific career pathways in the labor market. CTE instructors are experts in their fields and are expected to remain current to ensure they adequately prepare students for the careers they are pursuing. This requires providing students with hands-on experiences and access to equipment that is not outdated. It also requires ongoing professional development and collaboration and partnership with workforce organizations and employers. Pockets of innovation exist statewide in Industry Innovation Academies, PTECH and other models, where access to high-quality higher education Level 1 and 2 industry-aligned and -recognized certificates are available. Additional funding is needed to meet demand and replicate and scale the strong models that already exist in Texas. Providing adequate funding is critical to ensuring that CTE students and faculty have the resources necessary to prepare for successful participation in their chosen career fields.

Please note that the two funding recommendations were the most controversial among Task Force members because of concerns that they would generate competition for scarce resources. Nonetheless, the will of task force members was to include them.



JET Program

Overview:

The Jobs and Education for Texans (JET) grant program allocates \$10 million each biennium to defray start-up costs associated with the development of career and technical education programs to public community and technical colleges, and independent school districts.

House Bills 3 and 1935 passed in the 81st Legislative Session established the Jobs and Education for Texans (JET) Grant Program (the "Program"). House Bill 3062 and Senate Bill 1351, 84th Legislature, Regular Session (2015), transferred the Program from the Texas Comptroller of Public Accounts to TWC. The Program is administered by TWC.

TWC is charged with developing strategies to target high-growth, high-demand and emerging occupations that are critical to the state and local economies. Commonly referred to as "Target Occupations," these lists of occupations are determined by Local Workforce Development Boards (Boards) based on a number of economic indicators and local wisdom, and are used to guide workforce customers into aptitude-appropriate and economically relevant occupational training. Key economic data about occupations and in-demand industries along with information about labor market trends and economic conditions, enable individuals and employers to make informed decisions.

Eligibility Criteria:

An Eligible Offeror under this RFP is:

- ★ A public junior college or public technical institute defined by Texas Education Code § 61.003(2) and (7);
- ★ A Texas ISD that has entered into a partnership with a public junior college or public technical institute; or,
- ★ A Texas ISD that has entered into a partnership with a public junior college or public technical institute in collaboration with other Texas ISDs.
- ★ Offerors must offer a new or existing CTE program or course(s) that leads to a license, certificate or post secondary degree program in the area listed.

Education Pipeline Alignment

Issue: The diversity of the educational landscape in Texas hinders alignment between and among sectors.

Charge: Arrive at a more comprehensive understanding of the alignment challenges impacting dual credit programs and students.

Overview: Dual credit programs are well-positioned to create seamless transitions between high school and college for students. Yet, the diversity of the educational landscape in Texas hinders alignment between and among the education sectors, and this has a particular impact on dual credit programs. The issues of alignment have to do with: variability in institutions of higher education regarding the courses that transfer and apply to degrees; a host of communication issues, some germane to dual credit only and some to transfer more broadly; and variability of school districts offerings.

The Task Force addressed questions particular to the issues of alignment, including:

1. What alignment challenges can be addressed by changes in state policy? By institutional partnerships?
2. How do issues of transfer and applicability impact dual credit?
3. How do issues of communication impact dual credit?

Given the rich diversity and sheer size of the educational landscape in Texas, institutional alignment is challenging, both horizontally and vertically. Educational institutions, including both school districts and IHEs, operate autonomously and in separate systems. In addition, the regions or service areas differ for K-12, higher education, and workforce contingent on governing agencies (i.e., TEA, THECB, and TWC). As a result, the alignment required for effective dual credit programs and coordination across institutions and sectors is a significant challenge. While there are examples of dual credit programs or ECHS that have overcome these challenges (see sidebar on the El Paso Collaborative for Academic Excellence), these are neither simple to establish nor widespread.

The Task Force believes that in order for dual credit to achieve its promise, state agencies and regions, including IHEs, school districts, and workforce boards, must develop systems and processes for working together to share dual credit information and resources.

Lack of collaboration among stakeholders can affect program quality and alignment in the dual credit landscape. This, in turn, may inhibit the potential of dual credit to be

expanded equitably, and with meaningful and sustained excellence. For instance, within higher education, course offerings and program requirements vary across institutions for the same majors. As a result of this variability, courses may be neither transferable nor applicable to majors and degrees. These issues of course transferability and applicability existed prior to and independent of dual credit, but they have a significant impact on dual credit.

These concerns are magnified when considered through the lens of dual credit and *60x30TX*. *If the policy goal is to reduce time-to-degree and student debt for all students—including students who are completing college-level coursework in high school—then it is incumbent upon education leaders and decision-makers to ensure that courses are transferable and applicable toward majors and degrees for all students, including dual credit students.*

By its very design, dual credit operates both within and between the K-12 and higher education sectors. However, precisely because of this cross-sector design, gaps exist in communication across stakeholder groups. Communication challenges occur both between IHEs and ISDs, and between families and the education systems. Examples of communication challenges between institutions include misaligned attendance requirements, calendars, testing schedules, and inconsistencies in transferability and applicability, as previously discussed. Meanwhile, communication challenges between families and educational institutions (both high schools and colleges) can result in an incomplete understanding of requirements for eligibility and college-readiness, as well as the potential costs and benefits of participating in dual credit. For example, the recent availability of dual credit to high school freshman as a result of HB 505 has created a need for postsecondary advising in middle school. This becomes a significant resource, as well as a communication, challenge.

Key Findings:

- Variability in course offerings and program requirements among IHEs affects transferability and degree applicability of dual credit SCH.
- The current counseling and advising infrastructure does not provide adequate guidance to students and families.
- The design and implementation of dual credit programs can differ based on decisions made by each individual IHE and school district or campus.
- There is no coordinated, statewide infrastructure to facilitate meaningful communication among stakeholders, unless stakeholders make significant efforts to work together across institutions and sectors.
- CTE programs have distinct alignment challenges:

- There is a need for greater industry alignment to create meaningful CTE certificates and pathways that enable students to graduate workforce-ready with the appropriate skills for their chosen profession.
- Strategic replication and scaling of high-quality industry-aligned models is needed and includes more coherent sequencing of CTE, additional rigorous capstone courses, and greater focus on recognized certification.
- CTE course credits do not apply to many degree programs at universities. Therefore, it is important that advisors ensure that students are fully counseled into dual credit courses that clearly support their postsecondary or workforce pathways.

Education Pipeline Alignment Recommendations

Recommendation 7: High schools and IHEs should align dual credit courses to endorsements, established by HB 505 (84th Texas Legislative Session), as well as Field of Study Curricula for academic transfer courses, and Programs of Study for career and technical courses.

Rationale: Dual credit represents the first time a student participates in higher education. As such, education institutions have an early opportunity to help students begin understanding how many and what types of courses they need in order to complete a postsecondary degree or credential. By working together to align and scaffold dual credit courses with endorsements, Fields of Study, and Programs of Study, institutions will provide students with greater clarity about their available degree pathways. Endorsements, in particular, might be weighed more heavily as indications of college readiness and/or in university admissions as they have been deemed to be rigorous (i.e., they meet the State Board of Education’s test of quality rigor).

Recommendation 8: THECB, TEA, and TWC should develop online and print resources for counselors, students and families that clearly communicate types of dual credit (CTE and academic), eligibility requirements, and the costs and benefits of participating in dual credit programing.

Rationale: The goal of providing dual credit resources for various stakeholders is to ensure equal access to information about dual credit in more depth than is currently available. There is an opportunity to leverage existing platforms to provide access to this information. For example, Texas OnCourse may be used to provide high-quality college and career counseling resources focused on dual credit and to extend this advising into middle school. The Texas CTE Resource Center webpage and the TWC’s Labor Market and Career Information webpage may also serve as platforms for providing CTE dual credit information.

Recommendation 9: Require colleges to provide advising to dual credit students upon entry and at 15 SCH. Upon entry, advising should provide students with clear information on college and career paths. At 15 SCH, advising should map the courses necessary to complete a postsecondary credential in a timely and affordable manner that should not exceed the maximum number of transferable SCH.

Rationale: It is important for students to understand the options for, and implications of, participating in dual credit. However, it can be difficult to make sense of all of the different requirements at once, particularly because dual credit blends high school and college. The purpose of recommending that colleges provide advising to dual credit students at two different points is to provide targeted information about college-level requirements when it is necessary, relevant, and actionable.



Texas OnCourse

Texas OnCourse is the state's definitive source for college and career planning, serving students, families and educators.

Launched in 2015, Texas OnCourse improves college and career planning for middle and high school students across the state with free, best-in-class resources available and accessible to all teachers, counselors, and advisers. The Texas OnCourse website also provides a roadmap of other high-quality college and career resources from leaders in the field.

Texas OnCourse Resources Include:

The Texas OnCourse Academy: This professional learning platform includes more than 25 on-demand, self-paced modules that prepare educators to advise all students for any post-high school opportunity.

MiddleGalaxy: This career exploration game, developed with MIT's Media Lab and the Institute for Applied Neuroscience, makes career exploration accessible and fun for middle school students.

The Texas OnCourse Curriculum Guide: Lesson plans and activities integrate Texas OnCourse resources and align to Texas Essential Knowledge and Skills (TEKS) in this user-friendly guide for middle school educators.

MapMyGrad: With this online graduation planning tool, students and families better understand endorsements and careers. MapMyGrad also helps students zero in on their skills and interests so they build a graduation plan based on the endorsement and course offerings within their selected school.

Share Your Road: A website, developed in partnership with Roadtrip Nation, where Texas students can engage with the career journeys of real Texas professionals. Students and educators can use this tool to help map out a career pathway.

Future resources include Texas Roadtrip documentaries with Roadtrip Nation, which will debut in the fall of 2018 on PBS stations across the state. Educators can use these films and other footage in the classroom with supporting lessons from the Texas OnCourse Curriculum Guide.

Over 65% of the school districts in Texas have implemented Texas OnCourse. Over 7,500 educators and nearly 10,000 students use Texas OnCourse resources. The initiative aims to help the over 2.3 million middle and high school students in Texas to have a plan for what's next.

Texas OnCourse is an innovation made possible by educators, employers, and state agencies working together. An initiative led by The University of Texas at Austin, Texas OnCourse was created with support from the Texas Legislature. Over 2,500 educators helped build Texas OnCourse and continue to contribute to its improvement. Texas OnCourse works in partnership with the Governor's Tri-Agency Workforce Initiative, which includes the Texas Education Agency, the Texas Higher Education Coordinating Board, and the Texas Workforce Commission.

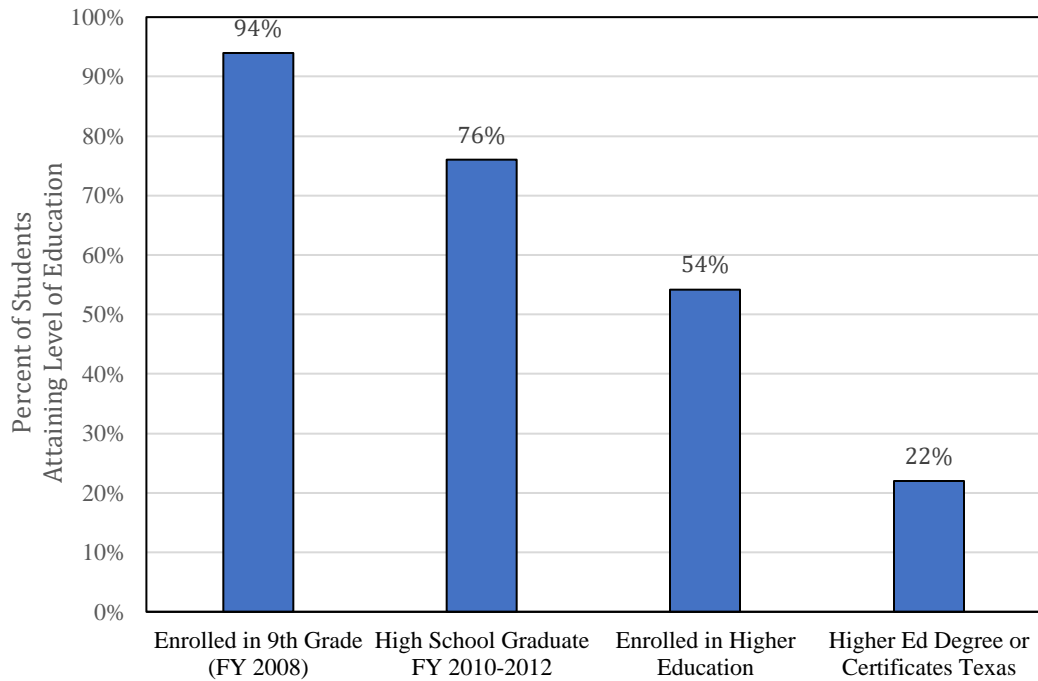


Texas OnCourse

V. Landscape of Dual Credit in Texas

According to 8th grade cohort data produced by the THECB, approximately 300,000 students begin 8th grade in Texas public schools each year and, of those, only 22% will earn any type of postsecondary credential by the time they are 24 years old.¹⁰

Statewide 8th Grade Cohort (Fall 2006)
Tracked through Higher Education 2017

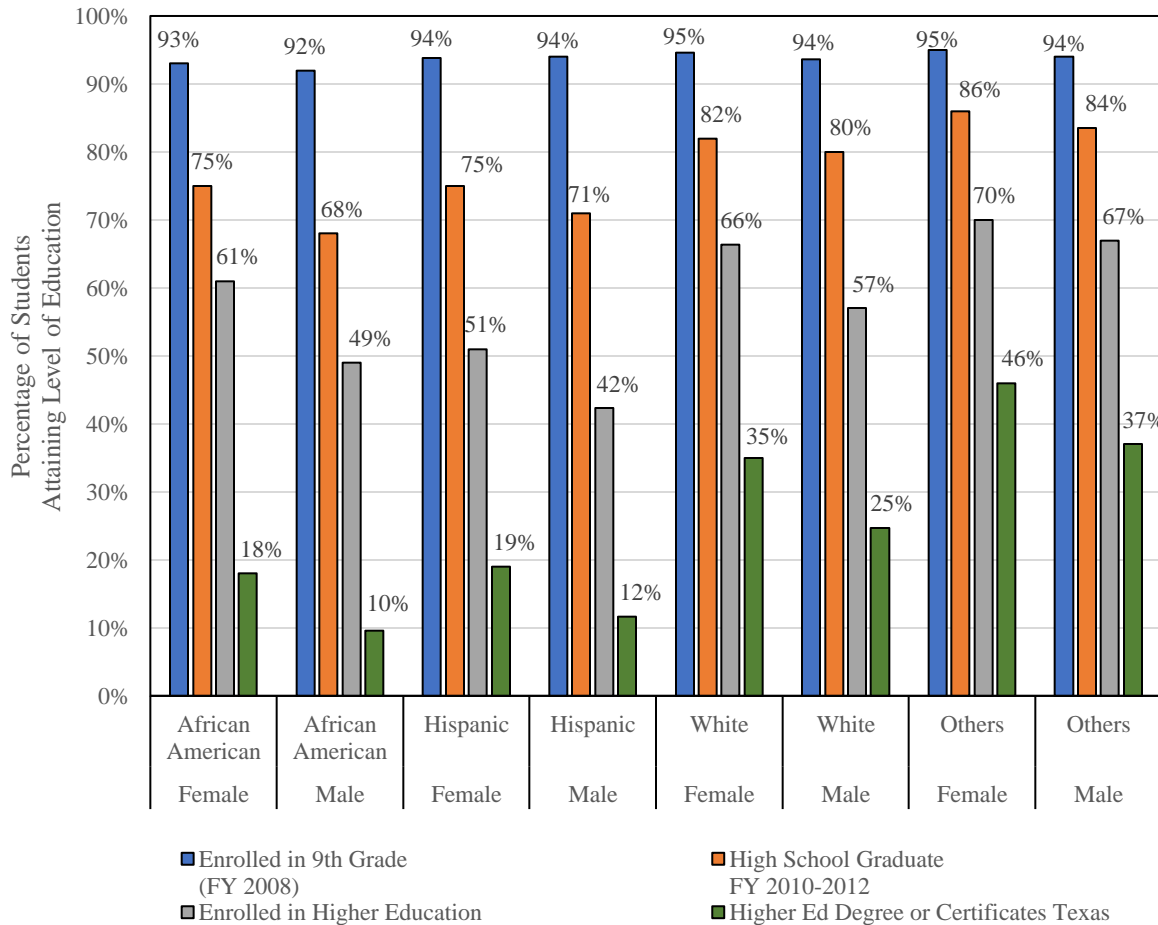


Source: THECB.

¹⁰ <http://www.txhighereddata.org/index.cfm?objectId=F2CBE4A0-C90B-11E5-8D610050560100A9>

Disaggregating the data reveals achievement gaps by race and ethnicity. African American and Hispanic male students are the least likely to earn a higher education degree or certificate. African American and Hispanic female students fare only slightly better with completion rates of 18% and 19%, respectively.

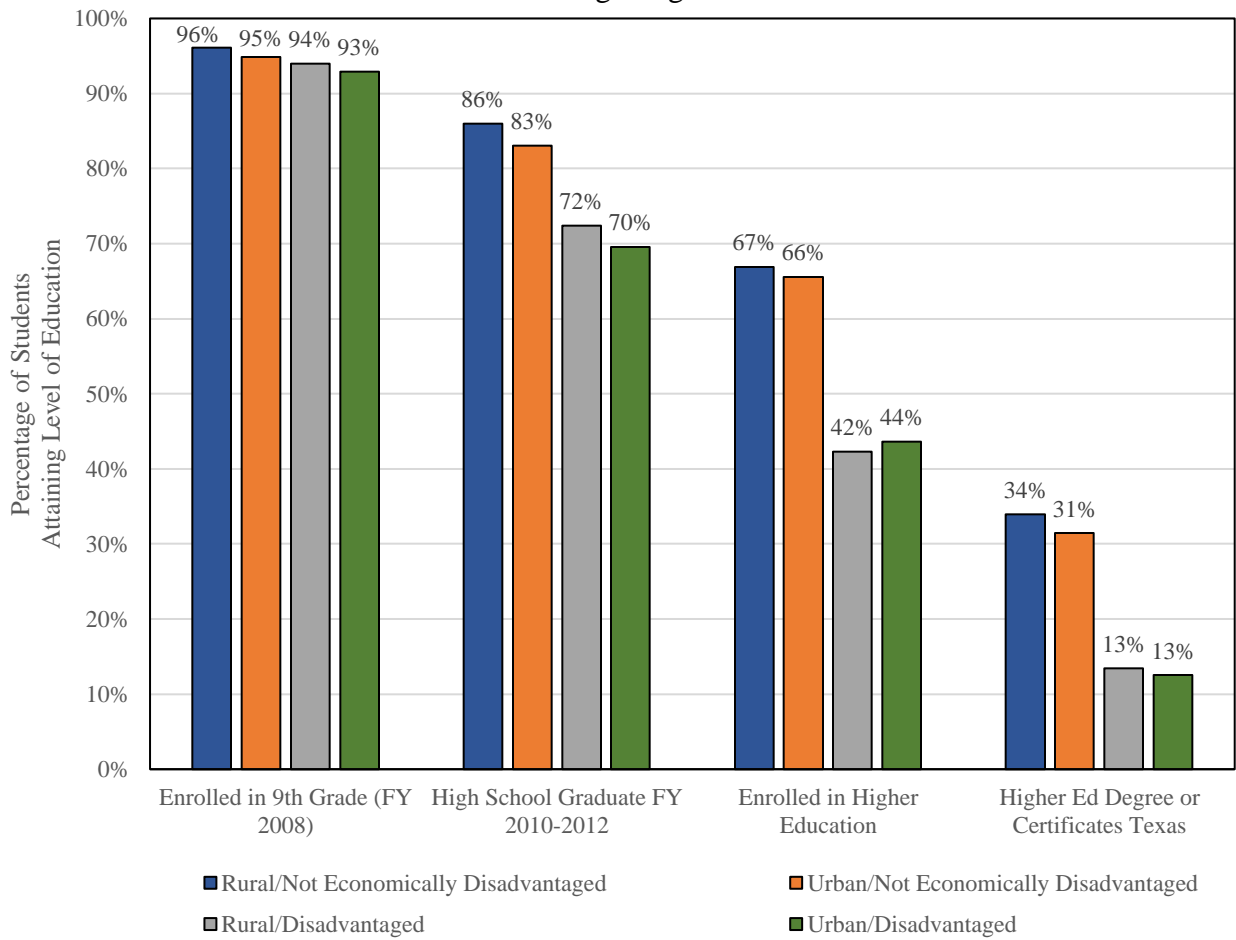
Statewide 8th Grade Cohort (Fall 2006) of
Ethnicity and Gender
Tracked through Higher Education 2017



Source: THECB.

Moreover, the gap in high school and postsecondary attainment is further differentiated by geography (i.e., whether students live in rural versus urban districts). While there appears to be a slight difference between the rural and urban students who are not economically disadvantaged, there is no significant difference between rural (13.5%) and urban (12.5%) economically disadvantaged students in completing a higher education credential.

Statewide 8th Grade Cohort (Fall 2006)
 Students by Geography and Economic Status
 Tracked through Higher Education 2017

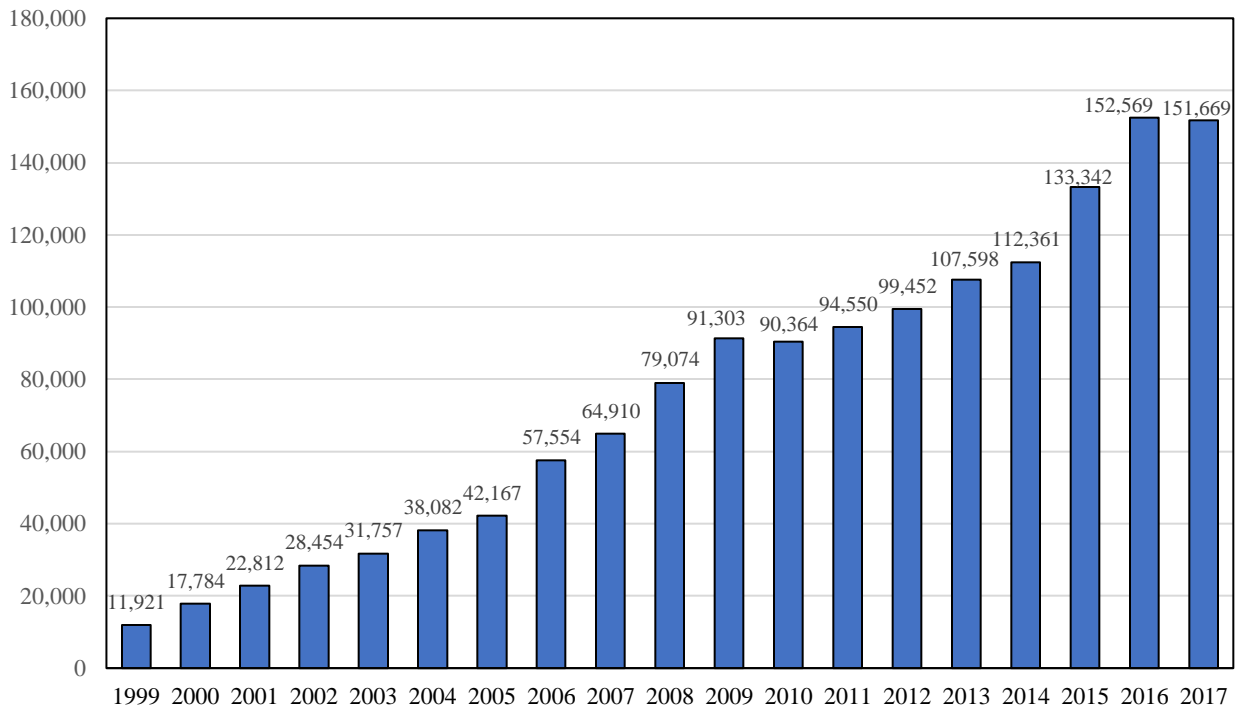


Source: THECB and Department of State Health Services.

The Growth of Dual Credit

There has been significant growth in the number of students participating in dual credit since 1999 when TEA and THECB began collecting dual credit data. As of 2017, 10% of those enrolled in higher education in Texas were high school students enrolled in dual credit. This is nearly 14 times the 1999 figure, and it is expected that this figure will continue to increase.

Dual Credit Fall Enrollment in Texas High Schools,
Fall 1999 to Fall 2017



Source: THECB

The growth of dual credit has important implications for the state. Early indications show that dual credit is working to level the playing field for college access and completion in Texas, especially for Hispanics who constitute the fastest growing segment of the state's population. Increasing college access and completion is critical to achieving the state's goals for educational attainment, a productive workforce, and economic competitiveness. Despite these increases, there are challenges that still need to be addressed. We must also ensure equitable participation and completion, as well as quality experiences for all students. In order to accomplish these objectives, dual credit demands a level of coordination and collaboration between K-12 and higher education institutions. In its review of the Texas dual credit landscape, the Task Force both highlights some existing inadequacies and inequities of the system and presents opportunities for resolution.

**Total Number and Percentage of Higher Education and
Dual Credit Enrollment at Texas IHEs**

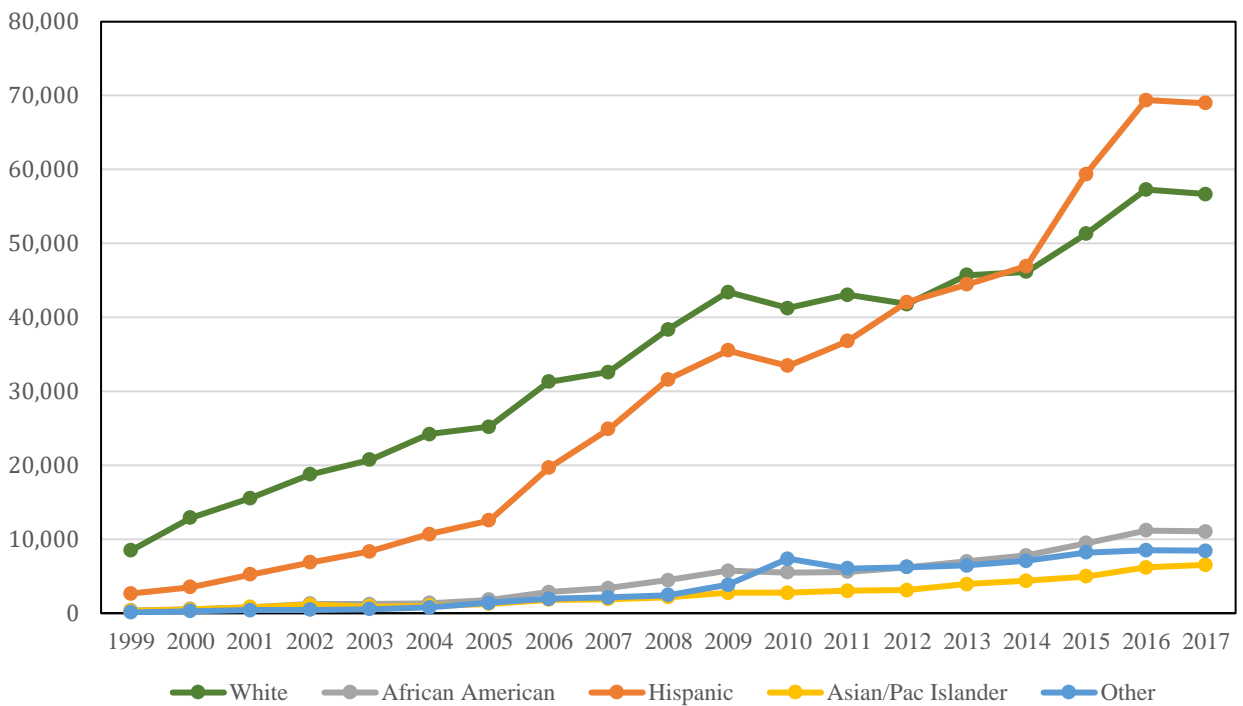
	Non-Dual Credit Students		Dual Credit Students		Total
Fall 1999	837,958	99%	11,921	1%	849,879
Fall 2000	858,646	98%	17,784	2%	876,430
Fall 2001	900,577	98%	22,812	2%	923,389
Fall 2002	1,072,278	97%	28,454	3%	1,100,732
Fall 2003	1,108,809	97%	31,757	3%	1,140,566
Fall 2004	1,133,323	97%	38,082	3%	1,171,405
Fall 2005	1,140,635	96%	42,167	4%	1,182,802
Fall 2006	1,142,260	95%	57,554	5%	1,199,814
Fall 2007	1,153,716	95%	64,910	5%	1,218,626
Fall 2008	1,183,106	94%	79,074	6%	1,262,180
Fall 2009	1,273,608	93%	91,303	7%	1,364,911
Fall 2010	1,354,793	94%	90,364	6%	1,445,157
Fall 2011	1,373,517	94%	94,550	6%	1,468,067
Fall 2012	1,356,709	93%	99,452	7%	1,456,161
Fall 2013	1,344,564	93%	107,598	7%	1,452,162
Fall 2014	1,352,128	92%	112,361	8%	1,464,489
Fall 2015	1,354,915	91%	133,342	9%	1,488,257
Fall 2016	1,368,647	90%	152,569	10%	1,521,216
Fall 2017	1,379,574	90%	151,669	10%	1,531,243

Source: THECB

The Impact of Demographic Shifts on Dual Credit

Early indications show that dual credit is increasing enrollment in higher education, especially for Hispanics. The THECB's previous strategic plan, Closing the Gaps by 2015 (CTG), which was implemented in 2000, included a significant focus on increasing participation and success for underrepresented students. The graduation gap between White students and minorities has narrowed, in the same time period that dual credit enrollment has expanded, especially for Hispanic students. Higher education in Texas has become more representative of the state's diverse population. However, there are still areas for improvement that were identified in the most recent 60x30TX strategic plan.

Dual Credit Enrollment by Ethnicity,
Fall 1999 - Fall 2017



Source: THECB.

Based on 2017 THECB dual credit enrollment data, 10% of Texas high school students are participating in dual credit programs. Hispanic students represent just over half of the high school population (51%), and they are increasingly participating in dual credit. In fact, Hispanic students represented 45% of the dual credit population in 2017. African American students represent 13% of high school students, but only 7% of dual credit enrollments. Additionally, students who are economically disadvantaged, males, or not participating in a gifted and talented (GT) programs are less likely to enroll in dual credit. While these indicators suggest that dual credit is increasing the potential for students, and Hispanic students in particular, to complete college, some inequities persist. It is clear that barriers to access exist for some populations, but how best to remove these barriers requires a more comprehensive understanding of the dual credit context and a continued commitment to data collection and analysis.

Percent of Dual Credit Enrollment by Ethnicity

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
White	71%	72%	68%	66%	65%	64%	60%	54%	50%	49%	48%	46%	46%	42%	42%	41%	38%	38%	37%
African American	3%	3%	3%	4%	4%	4%	4%	5%	5%	6%	6%	6%	6%	6%	7%	7%	7%	7%	7%
Hispanic	22%	20%	23%	24%	26%	28%	30%	34%	38%	40%	39%	37%	39%	42%	41%	42%	45%	45%	45%
Asian/Pac Islander	3%	3%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%
Other	1%	2%	2%	2%	2%	2%	3%	3%	3%	3%	4%	8%	6%	6%	6%	6%	6%	6%	6%

Source: THECB.

Statewide Outcomes

From 2010 to 2017, the number of students entering an IHE in Texas with dual credit has shifted over time. The most substantial increases were in the number of students attempting 30 to 59 SCH, which increased from 2,202 in 2010 to 5,719 (159%). The number of students who attempted 60 SCH or more also increased from 488 to 2,181 (347%) for the same time period. While these increases are significant, the number of students taking 30 or more hours represents 5% of the 151,669 dual credit students in Texas in 2017. The growth in the number of students attempting more SCH are likely due to several factors, including the rise in the number of ECHSs, which provide a 60 college credit hour plan, and state policies that have removed limits on the number of courses a student can take.

Entering FTIC Students Semester Credit Hours Attempted

	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017
1-12	32,587	33,357	31,426	30,358	29,950	25,923	26,814	28,284
13-29	13,508	14,904	15,717	15,744	17,384	15,843	17,168	19,195
30-59	2,202	2,892	3,432	3,408	3,886	3,677	4,584	5,719
60+	488	597	1,032	877	1,244	1,339	1,799	2,181
Total	48,785	51,750	51,607	50,387	52,464	46,782	50,365	55,379

Source: THECB.

According to the THECB, in 2017, 26.6% of Texas undergraduates (including those attending two-year colleges and independent institutions) participated in dual credit at a Texas IHE while in high school. Though increasing the number of students participating in dual credit is critical for Texas to achieve the goals of the *60x30 Plan*, it is essential that more students complete.

VI. Conclusion

Achieving the goals of *60x30TX* and state goals for economic competitiveness can only be accomplished through equitable completion of high school and college across all student populations. If dual credit programs are going to reach their maximum value for students and serve as a key strategy for *60x30TX*—a more intentional approach is needed.

The data and findings presented in this report, including those addressing the state's changing demographics, paint a picture of the complexity of dual credit and point toward the policy recommendations explained above. Most assuredly, dual credit programs, in all forms and delivery modes, have helped to enhance the college-going culture in Texas. At the same time, without more attention to the issues of access and equity, along with greater attention to concomitant infrastructure, funding and alignment challenges, its potential will be curtailed.

The recommendations put forth by the Task Force aim to address these concerns and are intended to give coordination to an area that has historically functioned with minimal communication among stakeholders. The foundational recommendation to establish a dual credit advisory committee seeks to redress this lack of coordination and provide the in-depth communication needed to ensure that all stakeholders are working together with full transparency and common purpose. The sharing of data by the tri-agencies to those throughout the education pipeline will be key to statewide monitoring to ensure that education goals that have been set are on track. The recommendations herein are meant to address the uneven growth of dual credit programs and its impact on who gets to participate in high-quality programs, both academic and CTE, how students pay for their participation, and how to make college more affordable. Given increased demand for dual credit programs statewide, students and families need more consistent and clear information, as well as more proactive and better advising. Dual credit in all its forms will not support the effort to graduate profession- and workforce-ready students with marketable skills, unless the programs and models are more intentionally aligned, and unless they are offered with quality and fidelity.

The Task Force process provides a model for the kind of inter-agency and cross-sector communication, transparency and coordination essential for dual credit programs to position students for success in school, college and beyond. Moving forward, through the proposed dual credit advisory committee, there is opportunity for more intentional shared responsibility and clearer accountability. There is also opportunity to engage more deeply with the quality questions the Task Force was not able to cover comprehensively, supported by the data emerging from two forthcoming Texas studies and other emerging research. Given its size, diversity of students, and the scale of the dual credit expansion taking place in recent years, Texas has unprecedented opportunity and a unique role to play nationally in offering inclusive, equitable and quality dual credit programs that will reach students in every corner of the state.

VII. Appendices

- A. Table of Public Institutions Offering Dual Credit (Fall 2017)
- B. Definitions
- C. Annotated Bibliography and Resources

APPENDIX A
Number of dual credit students and semester credit hours (SCH)
Public institutions
Fall 2017

Community Colleges

Institution	Number Dual Credit Students	Dual Credit SCH	Dual SCH Per Dual Student
ACCD Northeast Lakeview College	0	0.0	.
ACCD Northwest Vista College	3,637	21,088.0	5.80
ACCD Palo Alto College	2,462	15,845.0	6.44
ACCD San Antonio College	2,834	16,345.0	5.77
ACCD St. Philip's College	3,561	21,355.0	6.00
Alvin Community College	2,030	11,019.0	5.43
Amarillo College	277	967.0	3.49
Angelina College	1,654	8,634.0	5.22
Austin Community College	6,562	35,827.0	5.46
Blinn College	1,644	7,817.0	4.75
Brazosport College	1,073	5,197.0	4.84
Central Texas College	1,645	9,709.0	5.90
Cisco College	776	4,261.0	5.49
Clarendon College	690	3,943.0	5.71
Coastal Bend College	1,347	5,690.0	4.22
College of the Mainland Community College District	1,287	8,346.0	6.48
Collin County Community College District	5,555	27,836.0	5.01
DCCCD Brookhaven College	624	3,416.0	5.47
DCCCD Cedar Valley College	1,311	9,052.0	6.90
DCCCD Eastfield College	1,167	6,401.0	5.49
DCCCD El Centro College	1,013	4,727.0	4.67
DCCCD Mountain View College	825	5,560.0	6.74
DCCCD North Lake College	907	4,167.0	4.59
DCCCD Richland College	1,207	13,514.5	11.20
Del Mar College	2,189	12,389.0	5.66
El Paso Community College District	6,188	36,774.0	5.94
Frank Phillips College	785	5,050.0	6.43
Galveston College	399	2,402.0	6.02
Grayson County College	1,088	6,226.0	5.72

HCJCD Howard College	2,128	9,698.0	4.56
HCJCD Southwest Collegiate Institute for the Deaf	0	0.0	.
Hill College	1,254	6,058.0	4.83
Houston Community College	7,095	38,531.0	5.43
Kilgore College	1,274	5,886.0	4.62
LSCSD Cy-Fair College	3,379	18,888.0	5.59
LSCSD Kingwood College	325	1,179.0	3.63
LSCSD Montgomery College	2,847	13,598.0	4.78
LSCSD North Harris College	1,742	10,876.0	6.24
LSCSD Tomball College	1,311	7,494.0	5.72
LSCSD University Park	2,244	12,165.0	5.42
Laredo Community College	2,950	11,072.0	3.75
Lee College	1,803	10,480.0	5.81
McLennan Community College	1,967	9,420.0	4.79
Midland College	1,557	8,262.0	5.31
Navarro College	3,134	18,073.0	5.77
North Central Texas College	2,100	10,262.0	4.89
Northeast Texas Community College	855	4,489.0	5.25
Odessa College	1,715	10,402.0	6.07
Panola College	586	3,623.0	6.18
Paris Junior College	1,565	9,253.0	5.91
Ranger College	1,114	6,374.0	5.72
San Jacinto Community College Central Campus	1,595	7,469.0	4.68
San Jacinto Community College North Campus	1,672	9,933.0	5.94
San Jacinto Community College South Campus	1,265	7,000.0	5.53
South Plains College	1,580	7,632.0	4.83
South Texas College	11,531	75,346.0	6.53
Southwest Texas Junior College	2,430	14,302.0	5.89
Tarrant County College District Connect Campus	114	510.0	4.47
Tarrant County College District Northeast Campus	1,731	8,331.0	4.81
Tarrant County College District Northwest Campus	1,633	8,634.0	5.29
Tarrant County College District South Campus	1,242	7,074.0	5.70
Tarrant County College District Southeast Campus	2,557	14,291.0	5.59

Tarrant County College District Trinity River Campus	777	5,471.0	7.04
Temple College	1,092	7,439.0	6.81
Texarkana College	1,663	10,412.0	6.26
Texas Southmost College	2,400	10,319.0	4.30
Trinity Valley Community College	2,121	13,531.0	6.38
Tyler Junior College	374	3,109.0	8.31
Vernon College	611	2,958.0	4.84
Victoria College	726	3,383.0	4.66
Weatherford College	1,837	9,176.0	5.00
Western Texas College	809	4,609.0	5.70
Wharton County Junior College	806	3,628.0	4.50
Community Colleges Total	138,248	774,197.5	5.60

TSTCs and Lamars

Institution	Number	Dual Credit	Dual SCH
	Dual Credit	SCH	Per Dual
	Students		Student
Lamar Institute of Technology	312	1,542.0	4.94
Lamar State College-Orange	603	2,928.0	4.86
Lamar State College-Port Arthur	662	3,127.0	4.72
Texas State Technical College-Fort Bend	2	11.0	5.50
Texas State Technical College-Harlingen	525	2,539.0	4.84
Texas State Technical College-Marshall	24	96.0	4.00
Texas State Technical College-North Texas	22	75.0	3.41
Texas State Technical College-Waco	422	2,137.0	5.06
Texas State Technical College-West Texas	401	1,255.0	3.13
TSTCs and Lamars Total	2,973	13,710.0	4.61

Universities

Institution	Number	Dual Credit	Dual SCH
	Dual Credit	SCH	Per Dual
	Students		Student
Angelo State University	2,868	15,034.0	5.24
Lamar University	283	1,407.0	4.97
Midwestern State University	14	83.0	5.93

Prairie View A&M University	0	0.0	.
Sam Houston State University	0	0.0	.
Stephen F. Austin State University	293	1,688.0	5.76
Sul Ross State University	131	507.0	3.87
Sul Ross State University Rio Grande College	0	0.0	.
Tarleton State University	0	0.0	.
Texas A&M International University	631	4,656.0	7.38
Texas A&M University	0	0.0	.
Texas A&M University at Galveston	0	0.0	.
Texas A&M University-Central Texas	0	0.0	.
Texas A&M University-Commerce	453	2,052.0	4.53
Texas A&M University-Corpus Christi	0	0.0	.
Texas A&M University-Kingsville	1,078	4,842.0	4.49
Texas A&M University-Texarkana	0	0.0	.
Texas A&M University-San Antonio	0	0.0	.
Texas Southern University	0	0.0	.
Texas State University	0	0.0	.
Texas Tech University	20	100.0	5.00
Texas Woman's University	879	3,909.0	4.45
The University of Texas at Arlington	125	594.0	4.75
The University of Texas at Austin	0	0.0	.
The University of Texas at Dallas	0	0.0	.
The University of Texas at El Paso	0	0.0	.
The University of Texas at San Antonio	50	150.0	3.00
The University of Texas at Tyler	736	3,871.0	5.26
The University of Texas-Permian Basin	2,227	9,674.0	4.34
The University of Texas-Rio Grande Valley	578	5,912.0	10.23
University of Houston	1	3.0	3.00
University of Houston-Clear Lake	0	0.0	.
University of Houston-Downtown	0	0.0	.
University of Houston-Victoria	81	345.0	4.26
University of North Texas	0	0.0	.
University of North Texas-Dallas	0	0.0	.
West Texas A&M University	0	0.0	.
Universities Total	10,448	54,827.0	5.25

Source: THECB.

APPENDIX B

Definitions

The definitions below are from the Texas Administrative Code, where available, or were developed and adapted during Task Force deliberations.

Access: The Task Force defines access as making quality dual credit programs available to more students across Texas, thereby expanding the opportunity to attend and be successful in college. Expanding access entails creating conditions that enable equitable opportunities for participation, and for removing barriers that prevent students from participating in dual credit.

Advanced Placement: College-level courses and exams available to secondary students and through which they earn college credit and placement. Advanced Placement (AP) courses are administered by the College Board, a national not-for-profit organization that prepares and administers standardized tests that are used in college admission and placement. Students may only earn college credit under the auspices of an approved College Board program.

Career and Technical Education (CTE) courses: CTE courses are designed to prepare students for specific career pathways and provide students with the opportunity to earn a career or technical certificate or associate degree. CTE dual credit can only be applied toward the requirements for a Workforce Certificate or Applied Associate Degree, and is generally not applicable to an academic associate or baccalaureate degree program. In contrast to most CTE courses, academic dual credit can be applied toward the core curriculum or to other specific degree program requirements of an academic associate degree or baccalaureate degree.

Career and Technical Education Programs of Study: The CTE Programs of Study help students, parents, and counselors with college and career planning by providing students enrolled in high school or college with information about clear and efficient pathways to obtain an associate degree. Currently, there are more than 120 state-recognized CTE Programs of Study aligned with the 16 federally designated career clusters. At least one CTE Program of Study has been developed for each of the career cluster pathways.

The Texas Education Agency requires secondary school districts to offer a minimum of one coherent sequence of CTE courses from at least three different clusters. Each state-recognized CTE Program of Study includes rigorous secondary academic courses, provides opportunities for students to complete industry-recognized CTE courses, and provides a pathway for students to progress through a postsecondary education program leading to an associate degree.

(Source:

<http://www.thecb.state.tx.us/reports/pdf/6073.pdf?CFID=69483424&CFTOKEN=86252527>)

College Readiness: A high school student who wants to enroll in an academic dual credit course must meet all of the college’s prerequisite requirements designated for that course and also meet any one of the following criteria to be determined *college ready*:

- “The student demonstrates college readiness for reading, writing, and/or math intensive courses by achieving the minimum passing standards under the provisions of the Texas Success Initiative authorized by Texas Education Code Sec. 51.333 and specified in Texas Administrative Code, Chapter 4, Subchapter C, Section 4.57 as follows:
 - Reading 351
 - Math 350
 - Writing – a placement score of at least 340 and an essay score of at least 4 or a placement score of less than 340 and an ABE Diagnostic level of at least 4 and an essay score of at least 5; **or**
- The student achieves a score of 4000 on the English II STAAR EOC and/or a score of 4000 on the Algebra I STAAR EOC and in conjunction, a passing grade in the Algebra II course relevant to the courses to be attempted; **or**
- On a PSAT/NMSQT exam administered prior to October 15, 2015, the student achieves a combined score of 107 with a minimum of 50 on the critical reading and/or mathematics test relevant to the courses to be attempted; **or**
- On a PSAT/NMSQT exam administered on or after October 15, 2015, the student achieves a score of 460 on evidence-based reading and writing test and/or a score of 510 on the mathematics test relevant to the courses to be attempted; **or** The student achieves a composite score of 23 on the PLAN with a 19 or higher in mathematics and/or English, or a mathematics score of 431 and/or an English score of 435 on the ACT-Aspire relevant to the course to be attempted.”

(Source: <http://www.thecb.state.tx.us/reports/PDF/1514.PDF>)

Concurrent Enrollment: See definition for Dual Credit.

Dual Credit: The Texas Education Agency and the Texas Higher Education Coordinating Board each define dual credit in similar, but not identical ways.

The **Texas Education Agency** (TEA) defines dual credit as “a process through which a student may earn high school credit for successfully completing a college course that provides academic instruction beyond, or in greater depth, than the Texas Essential Knowledge and Skills (TEKS) for a corresponding high school course” (Source: https://www.legacypreparatory.com/wp-content/uploads/2017/10/TEA_Dual_Credit_FAQ.pdf)

The **Texas Higher Education Coordinating Board** defines dual credit as “a system under which an eligible high school student enrolls in college course(s) and receives credit for the course(s) from both the college and the high school.” (Source: 19 Texas Administrative Code [TAC], Part 1, Chapter 4, Subchapter D, §4.83).

Dual Enrollment: Refers to a system under which a student is enrolled in more than one educational institution (including a high school and a public institution of higher education). When a student in a dual enrollment system enrolls in courses that student earns appropriate course credit from each distinct educational institution that offered the course. Dual enrollment is not equivalent to dual credit. (Source: Texas Administrative Code, Title 19, Part I, Chapter 1, Subchapter D, Rule 4.83)

Early College High School (ECHS): A school established under the Texas Education Code (TEC), §29.908, that enables a student in Grade 9, 10, 11, or 12 who is at risk of dropping out, as defined by the TEC, §29.081, or who wishes to accelerate completion of high school to combine high school courses and college-level courses. An ECHS program must provide for a course of study that, on or before the fifth anniversary of a student's first day of high school, enables a participating student to receive both a high school diploma and either an associate degree or at least 60 credit hours toward a baccalaureate degree. (Source: Texas Administrative Code, Title 19, Part 2, Chapter 102, Subchapter GG, Rule 102.1091). Here is the link to the TEA page that provides the recently developed ECHS Blueprint: <https://tea.texas.gov/ECHS/>.

Endorsements: High school endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. Students must select an endorsement in the ninth grade. (Source: <https://texasoncourse.org/educators/resource/high-school-endorsements-and-career-paths>)

Equity: The result of systemic efforts to improve educational outcomes for all students. Equity is focused on giving students what they need to be successful, and recognizing that treating everyone the same is not treating everyone fairly. Equity is determined by looking at student outcomes disaggregated by student populations across multiple dimensions of dual credit participation, including eligibility, program availability, infrastructure, enrollment, and completion.

Field of Study Curriculum (FOSC): A set of courses that will satisfy the lower-division requirements for a baccalaureate degree in a specific academic area at a general academic teaching institution. A field of study curriculum affects academic degree programs at public junior colleges, public technical institutes, or universities as designated within the particular field of study curriculum. (Source: Texas Administrative Code, Title 19, Part I, Chapter 4, Subchapter B, Rule 4.23)

Industry Cluster Innovation Academies: Industry Cluster Innovative Academies are open-enrollment secondary schools that offer career pathways based on high-demand local workforce need and focus on graduating students with industry certification(s) and 60 hours of college credit and/or an Associate's degree by the time they graduate from high school. (Source: <https://tea.texas.gov/industrycluster/>)

Pathways in Technology Early College High School (P-TECH): A public school established under the TEC, §29.553, that enables a student in Grade 9, 10, 11, or 12 who is at risk of dropping out, as defined by the TEC, §29.081, or who wishes to accelerate

completion of high school to combine high school courses and college-level courses. A P-TECH program must provide for a course of study that, on or before the sixth anniversary of a student's first day of high school, enables a participating student to receive both a high school diploma and a credential and/or an associate degree and must include work-based education programs. (Source: Texas Administrative Code, Title 19, Part 2, Chapter 102, Subchapter GG, Rule 102.1095)

Texas Success Initiative Assessment (TSI): The Board-approved assessment instrument designated in §4.56 of this title (relating to Assessment Instrument) for use by institutions of higher education for assessing a student's readiness to enroll in an entry-level freshman course. (Source: Texas Administrative Code, Title 19, Part 1, Chapter 4, Subchapter C, Rule 4.53)

APPENDIX C

Dual Credit Annotated Bibliography and Resources

National Resources & Studies

Bragg, D., Kim, E., & Rubin, M., (2005, November). Academic pathways to college: Policies and practices of the fifty states to reach underserved students. Paper presented at the annual meeting of the Association for the Study of Higher Education, Philadelphia, PA. Retrieved from http://www.manukau.ac.nz/_data/assets/pdf_file/0008/40868/academic-pathways.pdf

This 2005 national study conducted a nationwide “inventory” of academic pathways through which high school students, and particularly underserved populations, transition to college in ways other than the traditional college preparatory track. The study examined nine pathways, including Advanced Placement (AP); bridge programs; College-Level Examination Program (CLEP); virtual schools and distance learning; dual credit, dual enrollment or concurrent enrollment; early or middle college high schools; General Educational Development (GED) bridging to college settings, International Baccalaureate (IB), and Tech Prep or College Tech Prep. The research team also asked state officials if the models they implemented were designed to purposefully provide high school students with access to college. The study identified a lack of state-level coordination between the many academic pathways and noted that because most of the models were implemented at the high school level, there was much more interest at the secondary than the postsecondary level. The authors recommended conducting carefully designed evaluations that incorporate a series of elements, including not only an understanding of the available programs but also attention to students’ backgrounds, needs, goals, and abilities. They also suggest that in order to fully understand these programs and their impact, we need to know more about access to higher education based on students’ personal, academic, financial, and cultural perspectives.

Fink, J., Jenkins, D., and Yanagiura, T. (2017). What Happens to Students Who Take Community College Dual Enrollment Courses in High School? Community College Research Center. Columbia, NY.:

This dual credit study tracked over 200,000 high school students during a six-year period from fall 2010 to summer 2016 (five years after high school). While 88 percent of these students entered college and many of them earned a degree or credential, or transferred from a two-year to a four-year college, the outcomes were highly varied by state. The largest gaps were based on levels of family income. The study provides useful state-level benchmark data for Texas on a number of metrics. Texas ranks in the top 10 states based on the percentage of students in dual enrollment as a percentage of first time in college enrollments at community colleges (25% of students). However, there is gap in credential attainment between lower and higher income dual credit students when comparing Texas students to their national counterparts. The gap in attainment is lower for bachelor’s degree

recipients (13 points) than associate's recipients (25 points). The authors suggest that colleges and states measure and monitor student outcomes in high school and college, and benchmark performance at both the national and state levels.

Thomas, N., Marken, S., Gray, L., and Lewis, L. (2013). *Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2010–11* (NCES 2013-001). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>

This report presents national data on the prevalence and characteristics of dual credit and exam-based courses (including Advanced Placement and International Baccalaureate) in public high schools. Previously, the National Center for Education Statistics (NCES) collected data on these courses in 2002–03. To gather this data, NCES fielded an updated survey of public high schools and a complementary survey of postsecondary institutions. The survey finds that 82 percent of high schools reported that students were enrolled in dual credit, 69 percent reported enrollments in AP or IB courses and 59 percent reported that students were enrolled in both types of courses. Nationally, this translates into 2 million enrollments in dual credit courses and about 3.5 million enrollments in AP or IB courses. The report also highlights findings related to the number and percentage enrollment in academic and technical dual credit, who teaches courses, how they are taught, how costs are allocated, and how many students earn postsecondary credit, among other topics.

Marken, S., Gray, L., and Lewis, L. (2013). *Dual Enrollment Programs and Courses for High School Students at Postsecondary Institutions: 2010–11* (NCES 2013-002). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>

This report provides descriptive national data on the prevalence and characteristics of dual credit programs in the United States. NCES previously collected for the 2002–03 academic year from postsecondary institutions and high schools. To gather current data, NCES fielded an updated survey of postsecondary institutions and a complementary survey of high schools. This study presents data collected for the 2010–11 academic year from postsecondary institutions on the enrollment of high school students in college-level courses within and outside of dual enrollment programs, and dual enrollment program characteristics. The selected findings highlighted in this report demonstrate the continued growth of dual credit, including that during 2010–11 academic year, 53 percent of all institutions reported high school students took courses for college credit.

National Center for Education Statistics. (2011). *PEQIS 18: Public-Use Data Files and Documentation: Dual Enrollment Programs and Courses for High School Students, 2010-11* (NCES 2013-006) [Data file and code book]. Retrieved from: <https://nces.ed.gov>

This file contains data from a quick-response survey titled "Dual Enrollment Programs and Courses for High School Students, 2010-11." The survey was designed to provide descriptive national data on the prevalence and characteristics of dual enrollment programs at postsecondary institutions in the United States. This survey collected information on the enrollment of high school students in college-level courses within and outside of dual enrollment programs. Institutions reported on the types of eligibility requirements for high school students to participate in dual enrollment programs. Other survey topics included where and how courses were taught and whether the courses were taught by college or high school instructors. The survey also examined the various sources which provide tuition and the types of expenses paid out of pocket by students and their parents. Data on whether dual credit is geared specifically toward high school students at risk of educational failure were also collected. NCES released the results of the survey in the publication, "Dual Enrollment Programs and Courses for High School Students at Postsecondary Institutions: 2010-11" (NCES 2013-002).

Pierson, A., Letgers, N. and Leong, M. (2017). Dual-Credit Analytic Report, A Guide for District and School Leaders. Northwest Comprehensive Center. Retrieved from <http://www.k12.wa.us/secondaryEducation/careercollegereadiness/dualcredit/>

This report was developed by the Northwest Comprehensive Center at Education Northwest in partnership with the Washington state Office of Superintendent of Public Instruction. It provides data analytics by district on current programs and student participation. It also provides a companion guide for district and school leaders that includes the rationale for expanding dual credit in Washington, tools for understanding dual credit data, a self-assessment and suggested action steps and rubrics for building an impactful dual credit program.

Zinth, J.D., (2016). 50 State comparison: Dual/Concurrent Enrollment Policies. Education Commission of the States. Retrieved from <https://www.ecs.org/>

This resource documents dual credit policies in all 50 states and allows for comparisons across states in five major categories including program basics, access, finance, ensuring program quality, and transferability. The key takeaways from examining policies are as follows: Schools and districts may not promote dual credit without a requirement that eligible students participate. Similarly, the way in which funding is allocated can either incentivize or dis-incentivize participation among schools. There are concerns about course rigor of classes taught by high school teachers as compared to courses taught by postsecondary faculty on college campuses. There are also concerns by some critics that there is no way to ensure that the rigor of a dual credit course matches a traditional college class without an end-of-course assessment. Finally, if a postsecondary institution denies transfer credit, it negates the value of dual credit in saving time and money for students.

Zinth, J.D., (2016). Early College High Schools: Model Policy Components. Education Commission of the States. Retrieved from <https://www.ecs.org/>

This policy brief defines early college high schools, clarifies how they differ from traditional dual credit, provides recent research on the positive impact of early college high school participation on academic outcomes for traditionally underserved students, and sets forth the model state policy components that provide the necessary supports to ensure program access, quality and transferability of credit.

Zinth, J.D., (2015). Dual Enrollment Course Content and Instructor Quality. Retrieved from <https://www.ecs.org/>

This document examines state policies regarding expectations for dual credit course content and instructor quality and finds that these policies exist in thirty-seven states. The key takeaways are that the majority of dual credit courses are taught by high school instructors on high school campuses. Policies exist on a wide spectrum ranging from placing all authority for content and instructor policy with colleges to requiring that all courses taught by high school instructors who are accredited by NACEP. Across this spectrum of policies, states have taken four distinct approaches, each of which has benefits and drawbacks.

Education Commission of the States. 50 state Comparison. Dual Enrollment: CTE Component. (database). Retrieved from <https://www.ecs.org/>

Most dual credit has traditionally been framed as academic rather than technical. However, students in career/technical education programs deserve opportunities to earn early credit toward a certificate or credential. This database indicates whether state policy explicitly allows high school students to enroll in career/technical education courses for high school and postsecondary credit. Forty-two states specify in statute or regulation that high school students may enroll in CTE courses for postsecondary credit.

College Credit in High School Working Group Report (2017). The College Board. Retrieved from <https://secure-media.collegeboard.org/pdf/research/college-credit-high-school-working-group-report.pdf>

The College Board convened a College Credit in High School Working Group in 2016-17 to address surging demand and growing numbers of college credit in high school (CCHS) programs, including AP, CTE, dual enrollment and early college high schools. The Working Group's report identified four factors essential to strong CCHS programs: Program Quality and Accountability; Value for Time and Dollars invested; Equity and Access; and Transparency Around Credit Transfer. The report also developed a checklist of related questions for state and local policymakers, as well as for school and program leaders seeking to promote highly effective CCHS programs.

Legislative & State Agency Resources & Studies

Friedman, L.B., Hoogstra, L., Swanlund, A., Miller, S. R. Wong, M., O'Brien, D., Yeates, E. (2011). Research Study of Texas Dual Credit Programs and Courses. Interim Report. American Institutes for Research. Chicago, IL.

The Texas Education Agency and the Texas Higher Education Coordinating Board contracted with American Institutes for Research (AIR) and Gibson Consulting Group, Inc. to conduct a research study of dual credit programs and courses in Texas. The three objectives were: (1) to investigate the state context for dual credit delivered in 2009–10, (2) to analyze how the delivery of dual credit courses are funded in Texas and determine the cost of dual credit, (3) and to make policy recommendations for the 82nd Texas Legislative Session.

Texas Legislature. Legislative Budget Board (2017). Ensure Adequate Oversight of Dual Credit Programs to Maximize Effectiveness and Efficiency. (Staff Report ID: 3729, pages 317-326). Austin, TX. Author. Retrieved from http://www.lbb.state.tx.us/Higher_Education.aspx

This staff report from the Legislative Budget Board to the Texas Legislature examines dual credit, which has grown significantly over the years. From the 2010 to 2014 fall semesters, dual credit grew by 25 percent. However, in fall 2015, legislation was implemented which removed limits on the number of dual credit courses students could take and fall enrollment grew by almost 20 percent compared fall 2014 enrollment. This report argues that the state would benefit from a comprehensive strategy to administer and evaluate dual credit programs and their outcomes for students. It outlines facts and findings and provides three potential strategies, including benefits and concerns and potential fiscal impacts of each strategy.

Miller, T., Kosiewicz, H., Wang, E.L., Marwah, E.V., Delhommer, S. and Daugherty, L. (2017). Dual Credit Education in Texas: Interim Report. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2043.html

This interim report shares findings from Phase I of a two-year study that examines dual credit programs in Texas. It was designed to provide information to state lawmakers during the 85th Texas Legislative Session. This study, which was contracted by The Texas Higher Education Coordinating Board, provides insights on the accessibility, diversity, quality, and efficiency of dual credit in Texas and proposes areas of further research for the second phase of the study. The most notable findings in Phase I are that recent high school graduates who took dual credit performed better in follow-on courses and achieved higher rates of collegiate success than peers who did not take dual credit. In addition, high school students who earned college credit through dual credit did not retake the courses at high rates after enrolling in college and were just as likely to graduate with a similar number of

semester credit hours as students who never took dual credit. Areas of further research include examining differences in faculty and course characteristics; investigating guidance and information counselors give to dual credit students; estimating the causal impact of different approaches to dual credit on student outcomes; calculating the cost and any savings, for students and the state, associated with implementing dual credit; investigating causes behind disparities in dual credit participation across demographic groups; and assess how higher education institutions have responded to HB 505, which removed grade-level and semester credit hour restrictions for students participating in dual credit.

Texas Education Agency & Shapley Research Associates (2011). Study of the Intersection of Dual Credit Course Policies and End-of-Course Requirements Authorized by House Bill 3, 81st Texas Legislature, 2009. Austin, TX: Author. Retrieved from <https://tea.texas.gov>

This study makes recommendations to the legislature based on a study of the feasibility of allowing students to satisfy end-of-course requirements by successfully completing a dual credit course through an institution of higher education. The report recommends that the Texas Education Agency (TEA) and Texas Higher Education Coordinating Board (THECB) work collaboratively with representatives from colleges and universities, school districts, and legislators to address necessary policy and data supports for the state's dual credit programs including, but not limited to, (a) accurately and consistently reporting dual credit course data; (b) linking college courses to high school academic foundation courses, especially those subject to STAAR EOC assessments; (c) improving institutional agreements and partnerships for dual credit programs; (d) monitoring and oversight of dual credit courses; (e) enhancing communication among education sectors about dual credit programs, requirements, and best practices; and (f) improving student and parent understanding of dual credit opportunities and limitations. At the time of the study, sufficient data were not available to recommend whether dual credit courses could be used to satisfy end-of-course requirements. Therefore, the report recommended that TEA and THECB develop a research plan to gather the necessary data.

Texas Education Agency Early College High School Blueprint. Retrieved from <https://tea.texas.gov/ECHS/>

The ECHS Blueprint identifies design elements and benchmarks that all designated Early College High Schools must meet annually. The benchmarks cover target populations, partnership agreements, P-16 leadership initiatives, curriculum and support, academic rigor and readiness, and school design. All designated ECHSs are also required to meet outcomes-based measures on data indicators relevant to access, achievement, and attainment. TEA engaged Jobs For the Future (JFF) and national ECHS experts to assist in the process and develop recommendations to the ECHS Blueprint and Designation process, which were approved by Commissioner Morath to be effective for the 2018-2019 school year.

U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2017, February). Transition to College Intervention Report: Dual Enrollment Programs. Retrieved from <https://whatworks.ed.gov>

A systematic review of research by The What Works Clearinghouse (WWC) that examines 35 studies to determine the effects of dual credit for high school students. The analysis was conducted using design standards from two sources: WWC Procedures and Standards Handbook, v3.0, and the Transition to College review protocol. Five of the 35 studies met design standards and are included in the report. These five studies, which represent 77,249 students, are included in one of two categories: meeting WWC design standards without reservations (2 studies) and meeting WWC design standards with reservations (3 studies). Results are reported by the extent of evidence (small, medium or large) demonstrating positive effects for students across a range of outcomes including college degree attainment, college access and enrollment, credit accumulation, completing high school, high school academic achievement, staying in high school, college readiness, high school attendance, college academic achievement.

Texas Resources & Studies

Appleby, J., Ashton, K., Ferrell, J., Gesing, E., Jackson, S., Lindner, T. ... Wu, Y. (2010). A Study of Dual Credit Access and Effectiveness in the State of Texas. Retrieved from <http://hdl.handle.net/1969.1/152074>.

In 2010, with the support of the Greater Texas Foundation (GTF), the Bush School of Government and Public Service at Texas A&M University initiated a study of dual credit opportunities in the state of Texas through a capstone course directed by Professor Jeryl L. Mumpower. The capstone conducted a literature review and analyzed data to address seven research questions in two topic areas: access to dual credit and the effectiveness of current dual credit programs. The study found that dual credit would continue to increase, provided that adequate funds are available within school districts and colleges. It also found that program alignment is central to success of dual credit programs. However, the literature did not provide a consensus on the key to dual credit effectiveness.

The Bush School of Government and Public Service. (2014). Postsecondary Completion in Rural Texas: A Statewide Overview. College Station, TX: Shuyu Chen et al.

In 2014, with support from Educate Texas, the Bush School of Government and Public Service at Texas A&M University examined postsecondary education in rural regions through a capstone led by Dr. Wynn Rosser. This project included a literature review, stakeholder interviews, and analysis of descriptive statistics using data from the Texas Higher Education Coordinating Board and the Integrated Postsecondary Education Data System (IPEDS). While this study is not specifically about dual credit, because it examines many facets of rural postsecondary education, it provides useful insights related to dual credit in rural regions. The study finds that access to postsecondary education in rural areas can be addressed through dual credit and ECHS.

Eklund, J. A. (2009). *Exploring Dual Credit Data Alignment, Student Populations, and Coursework Patterns in Texas Using a P-16 Framework* (Unpublished doctoral dissertation). University of Texas at Austin. Retrieved from doi:<http://www.library.utexas.edu/etd/d/2009/eklundj05642/eklundj05642.pdf>

This study of dual credit programs in Texas was motivated by perceived discrepancies in dual credit data reporting and a lack of comprehensive state-level information about dual credit student populations and coursework patterns. The author explored alignment issues that influence the delivery of dual credit programs and the tracking of dual credit participants in Texas. Study findings emphasized the value of improving dual credit data reporting and course alignment practices. Important state-level goals were identified, such as ensuring that students have access to rigorous, quality programs; that educators and policymakers have access to accurate data; and that dual credit partnerships maintain the flexibility to innovate and respond to student needs while preserving program quality and equity.

Garbee, K. T. (2015). *College Credit in High School: An Examination of the Impact of Dual Credit on College Success and Completion in Texas* (Unpublished doctoral dissertation). University of Texas at Austin. Retrieved from doi:<https://repositories.lib.utexas.edu/bitstream/handle/2152/31003/GARBEE-DISSERTATION-2015.pdf?sequence=1>

Dual credit is thought to promote student success in higher education. This quantitative study examines the relationship between dual credit and student success in college, specifically freshman grade point average and college graduation. The study, which uses using Ordinary Least Squares and Logistic analysis to control for student background characteristics, examines state-level data from the Texas Higher Education Coordinating Board for the 2008 cohort. Results suggest that dual credit positively influences college outcomes. Recommendations for improving success and completion include defining the purpose of dual credit and setting goals, measuring the progress of dual credit programs, and ensuring equal access to dual credit among all student populations.

Giani, M. & Alexander, C. & Reyes, P. (2014). Exploring Variation in the Impact of Dual-Credit Coursework on Postsecondary Outcomes: A Quasi-Experimental Analysis of Texas Students. *The High School Journal* 97(4), 200-218. The University of North Carolina Press. Retrieved March 12, 2018, from Project MUSE database.

This study examines state-level data to estimate the impact of dual credit on postsecondary access, first-to-second year persistence, and college attainment. Using propensity score matching to address selection bias, this study looks at the number of dual credit courses students complete, the subject areas, and compares dual credit to other

advanced course alternatives. This study found that dual credit is a promising strategy for increasing access, persistence, and degree completion. However, there is significant variation in the benefit of dual credit.

Villarreal, M. U. (2017) The Effects of Dual-Credit on Secondary and Postsecondary Student Outcomes Working paper presented to the Texas Association of Community Colleges. Retrieved from <https://raymarshallcenter.org/2017/11/27/the-effects-of-dual-credit-on-secondary-and-postsecondary-student-outcomes/>

This study estimates the effects of dual credit on outcomes from high school through graduate degree completion. This study investigates the effects of dual credit program attributes, including subject areas, mode of instruction, location of classes, and instructors with a doctoral degree and if dual-credit courses located on a high school campus produce a different impact than those located on university or community college campuses. Using panel data with school district fixed effects, this study finds dual credit is associated with increases in high school graduation and university application, admission, and enrollment. It quickens the pace to degree attainment and completion rates. Compared to AP, dual credit courses produce larger increases in bachelor's degree completion rates. Finally, evidence suggests that schools can further amplify dual credit effects by prioritizing certain subjects, using certain instruction modes, and locating dual credit instruction on community college campuses.

Report of the Dual Credit Task Force

June 2018



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