



Study of the Intersection of Dual Credit Course Policies and End of Course Requirements Authorized by HB 3, 81st Texas Legislature

A Report to the 82nd Texas Legislature

**Shapley Research Associates
Submitted to: Texas Education Agency**

**Study of the Intersection of Texas Dual Credit Course Policies
and End-of-Course Requirements Authorized by
House Bill 3, 81st Texas Legislature, 2009**

**Prepared by
Texas Education Agency
Office for Planning, Grants, and Evaluation
and
Shapley Research Associates**

January 31, 2011

Texas Education Agency

Robert Scott, Commissioner of Education

Office of Planning, Grants and Evaluation

Nora Ibáñez Hancock, Ed.D., Associate Commissioner

Division of Evaluation, Analysis, and Planning

Ellen W. Montgomery, Ph.D., Division Director

Citation

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.

Additional information about the report may be obtained by contacting the Texas Education Agency, Office for Planning, Grants and Evaluation, Division of Evaluation, Analysis, and Planning at (512) 463-8992 or by email at programeval@tea.state.tx.us

This report is available at Texas Education Agency's website:

http://www.tea.state.tx.us/index2.aspx?id=2147495222&menu_id=949

Acknowledgements

TEA Contributing Authors: Jennifer Broussard, Ph.D.

Shapley Research Associates Contributing Authors: Kelly Shapley, Ph.D.

The Office of Planning, Grants, and Evaluation wishes to thank the following TEA staff for their assistance in providing feedback on drafts of the report: Eishi Adachi, Kelly Callaway, Criss Cloudt, Anita Givens, Barbara Knaggs, and Gloria Zyskowski

The Office of Planning, Grants, and Evaluation wishes to thank the following Texas Higher Education Coordinating Board (THECB) staff for their assistance in providing feedback on drafts of the report: James Goeman and Julie Eklund.

Copyright© Notice: The materials are copyrighted © and trademarked ™ as the property of the Texas Education Agency (TEA) and may not be reproduced without the express written permission of TEA, except under the following conditions:

- 1) Texas public school districts, charter schools, and Education Research Service Centers may reproduce and use copies of the Materials and Related Materials for the districts' and schools' educational use without obtaining permission from TEA.
- 2) Residents of the state of Texas may reproduce and use copies of the Materials and Related Materials for individual personal use only without obtaining written permission of TEA.
- 3) Any portion reproduced must be reproduced in its entirety and remain unedited, unaltered and unchanged in any way.
- 4) No monetary charge can be made for the reproduced materials or any document containing them; however, a reasonable charge to cover only the cost of reproduction and distribution may be charged.

Private entities or persons located in Texas that are not Texas public school districts, Texas Education Service Centers, or Texas charter schools or any entity, whether public or private, educational or non-educational, located outside the state of Texas MUST obtain written approval from TEA and will be required to enter into a license agreement that may involve the payment of a licensing fee or a royalty.

For information

For information contact: Office of Copyrights, Trademarks, License Agreements, and Royalties, Texas Education Agency, 1701 N. Congress Ave., Austin, TX 78701-1494; phone 512-463-9270 or 512-936-6060; email: copyrights@tea.state.tx.us.

Texas Assessment of Knowledge and Skills™ (TAKS™) and Texas Assessment of Academic Readiness™ (STAAR™) are registered trademarks of the Texas Education Agency. Other product and company names mentioned in this report may be the trademarks of their respective owners.

Table of Contents

Introduction	1
Recommendations	2
Background	3
Dual Credit Courses in Texas.....	3
End-of-Course Assessments in Texas.....	8
Current Context for Dual Credit Programs	10
Governance for Dual Credit Programs.....	10
Quality of Dual Credit Course Data	12
Quality and Consistency of Academic Dual Credit Courses	13
Quality of Institutional Partnerships.....	16
Equitable Effects of Dual Credit Policies.....	17
Multiple Purposes for End-of-Course Assessments.....	19
Dual Enrollment and Increased Access to College.....	22
Benefits and Outcomes of Dual Credit Courses.....	23
Recommendations	24
Recommendation 1.....	24
Recommendation 2.....	27
References	28
Appendix A: Texas Policies Promoting College Credit Programs	29
Appendix B: Overview of Early College High Schools in Texas	31

Study of the Intersection of Texas Dual Credit Course Policies and End-of-Course Requirements Authorized by House Bill 3, 81st Texas Legislature, 2009

Introduction

During the last several legislative sessions, Texas policymakers have enacted laws to ensure that all students have the opportunity to achieve their highest educational potential, including legislation that sets standards and expectations for college and career readiness, offers college-level coursework to high school students, allows districts flexibility and financial support for college readiness initiatives, and incorporates higher education readiness indicators into state assessment and accountability systems. (See Appendix A for a summary of bills authorized by the 73rd through 81st Texas Legislatures promoting college credit programs.)

Legislators have made the seamless transition of students from secondary to postsecondary institutions a high priority. As early as 1995 (74th Texas Legislature), lawmakers passed bills to allow qualifying students to take courses and receive high school and college credit simultaneously—meaning that a student can earn *dual credit* for successfully completing one course. Later, the 78th Texas Legislature created the Middle College Education Pilot (Senate Bill [SB] 976, 2003). This legislation was amended by the 79th Legislature to establish the Early College High School program, which allows students to earn an associate degree or up to 60 college credit hours toward a baccalaureate degree by the time they graduate from high school (SB 1146, 2005).¹ House Bill (HB) 1 established the College Credit Program requiring all districts to implement a program under which students have an opportunity to earn a minimum of 12 college credit hours through advanced academic, dual credit, and/or advanced technical credit courses, including locally articulated courses (79th Texas Legislature, 3rd Called Special Session, 2005).²

Concurrently, policymakers have recognized that academic readiness is a key aspect of the high school-to-college transition, and the state's students must be better prepared for postsecondary opportunities. HB 1 (79th Texas Legislature, 3rd Called Special Session, 2005) authorized development of College and Career Readiness Standards specifying what students must know and be able to do to succeed, without remediation, in entry-level college courses.

¹ Appendix B provides a description of the Texas Early College High School program.

² Advanced technical credit courses and locally articulated courses have been linked with their equivalent college courses. All participating community colleges have agreed to offer students credit for these courses, provided the college offers the course and the student meets certain criteria. Additional information is available at http://www.atctexas.org/about_atc.asp

Legislation also required students to complete a “four-by-four” curriculum consisting of four years each of English language arts, mathematics, science, and social studies in order to graduate under the recommended or advanced high school programs and acquire knowledge essential for postsecondary success. Related, SB 1031 (80th Texas Legislature, 2007) replaced the Texas Assessment of Knowledge and Skills (TAKS) tests in Grades 9-12 with State of Texas Assessments of Academic Readiness (STAAR) end-of-course (EOC) assessments in core subjects. STAAR EOC assessments are required to include measures of students’ college readiness.

Acknowledging the intersection of policies promoting college-level opportunities for high school students and policies requiring rigorous assessment of students’ academic preparation HB 3, 81st Texas Legislature, 2009, Texas Education Code (TEC) §39.023(o), requires the Commissioners of Education and Higher Education to study the feasibility of allowing students to satisfy EOC requirements by successfully completing a dual credit course through an institution of higher education (IHE), and to make recommendations to the legislature based on that study.

This report addresses the statutory requirement through a focused synthesis research methodology involving the selective review of policy documents, written materials, research reports, and published articles; interviews with dual credit experts at TEA and THECB; and summarization and interpretation of existing data sources. Report sections to follow present (a) background information on the rules and requirements for dual credit programs and STAAR EOC assessments, (b) an analysis of the current context for dual credit programs and implications for decisions about student exemption from STAAR EOC assessments, and (c) recommendations for policies and actions relevant to dual credit programs and STAAR EOC requirements.

Recommendations

- The Texas Education Agency (TEA) and Texas Higher Education Coordinating Board (THECB) should 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.

- The Texas Legislature has asked TEA and THECB to study the feasibility of allowing students to satisfy EOC requirements by successfully completing a dual credit course through an IHE. Because such a study requires data that are not currently available, it is not possible to provide a definitive answer to the policy question posed by the legislature. Consequently, TEA and THECB should jointly develop a research plan to gather evidence to evaluate the feasibility of substituting successful completion of a course for dual credit for satisfactory performance on certain STAAR EOC assessments. Among other research inquiries, the study should address the Legislative Budget Board Staff (2011) recommendation calling for THECB to analyze the “instructional impacts on student outcomes for dual credit courses taken on high school campuses and on community college campuses.”³

Background

This section provides information concerning the rules and requirements for dual credit programs in Texas and also explains the structure and purposes of STAAR EOC assessments developed as part of the state’s new STAAR program.

Dual Credit Courses in Texas

Courses for dual credit are college-level courses taken by high school students for both high school and college credit. Courses are offered through local agreements between colleges and school districts or high schools. THECB defines dual credit as a “process by which a high school student enrolls in a college course and receives simultaneous academic credit for the course from both the college and the high school” (19 Texas Administrative Code [TAC], Subchapter D, §4.83).⁴ TEA defines dual credit as “a process through which a student may earn high school credit for successfully completing a college course that provides advanced instruction beyond, or in greater depth than, the Texas Essential Knowledge and Skills (TEKS) for a corresponding high school course.” The dual credit earned is college credit and high school credit for one course (19 TAC, Subchapter C, §74.25(b)).⁵ The TEA definition emphasizes school districts’ responsibility to ensure that students who take college courses for dual credit also master the TEKS.

Dual credit courses are often taught on the high school campus to high school students only, but high school students can also take courses on the college campus or through distance

³ Legislative Budget Board Staff (2011, January). Monitor outcomes and limit course offerings to ensure dual credit course quality. In *Texas state government effectiveness and efficiency, selected issues and recommendations* (pp. 471-475). Austin, TX: Author.

⁴ The TEC is the state law regarding education policy; the TAC is the set of agency rules and regulations that govern the TEC.

⁵ Texas Education Agency, Dual Credit, Frequently Asked Questions.

education. Course instructors may be high school or college faculty. Dual credit courses can be either career and technical courses (such as Automotive Technician I) or academic courses (such as English Literature and Composition). This report focuses on academic courses taken for dual credit because, with one exception, only academic courses could be used to satisfy EOC requirements.⁶

In order to take an academic course for dual credit, a student must meet certain eligibility requirements (19 TAC, Subchapter D, §4.85(b)). With few exceptions, a high school student must be in Grades 11 or 12,⁷ have demonstrated college readiness, and have satisfied all of the college's regular prerequisite requirements to be allowed to take a course for dual credit. In addition, students may take no more than two courses for dual credit in any one semester.⁸

A student can demonstrate college readiness in a number of ways, including:

- achieving a scale score of 2200 on the exit-level TAKS test in the corresponding subject (mathematics or English language arts with a written composition score of at least 3);⁹
- achieving the minimum passing standards under the provisions of the Texas Success Initiative (TSI),¹⁰ or demonstrating that he or she is exempt under the provisions of the TSI;
- achieving a combined score of 107 on the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) with a minimum of 50 on the critical reading and/or mathematics test relevant to the courses to be attempted;¹¹ or
- achieving a composite score of 23 on the Preliminary ACT test (i.e., the PLAN) with a 19 or higher in mathematics and English¹² (19 TAC, Subchapter D, §4.85).

⁶ Students are able to use one career and technology course, Principles of Technology, to satisfy their physics requirement. These students will still be required to perform satisfactorily on the Physics EOC.

⁷ Exceptions to the junior-standing requirement can be made for students with demonstrated outstanding academic performance and capability (as evidenced by grade-point average, PSAT/NMSQT scores, PLAN scores, or other assessment indicators) if approved by the principal of the high school and the chief academic officer of the college. Exceptions to this requirement are also made for students attending designated Early College High Schools (See 19 TAC, Part 1, Chapter 4, Subchapter G, §4.161).

⁸ Exceptions to this requirement for students with demonstrated outstanding academic performance and capability (as evidenced by grade-point average, ACT or SAT scores, or other assessment indicators) may be approved by the principal of the high school and the chief academic officer of the college. Exceptions to this requirement are also made for students attending designated Early College High Schools.

⁹ An eligible high school student who has enrolled in dual credit courses in the eleventh grade under this provision is not required to demonstrate further evidence of eligibility to enroll in dual credit courses in the twelfth grade.

¹⁰ "TSI requirements for dual credit enrollment may be satisfied by achieving a minimum passing standard on the Texas Higher Education Assessment (THEA), the Assessment Skills for Successful Entry and Transfer (ASSET), the Computer Adaptive Placement Assessment and Support System (COMPASS), or the ACCUPLACER Computerized Placement Test, depending on which is accepted and available at a particular institution" (The Texas P-16 Council, 2007).

¹¹ An eligible Grade 11 student who has enrolled in dual credit under this provision must demonstrate eligibility to enroll in dual credit courses in Grade 12.

A community college or university must also meet certain requirements to be able to offer courses for dual credit. Courses offered for dual credit by public universities must be in the approved undergraduate course inventory of the university, whereas courses offered for dual credit by community colleges must be identified as college-level academic courses in the current edition of the *Lower-Division Academic Course Guide Manual* adopted by THECB (THECB, 2010). Colleges and universities may not offer remedial and/or developmental courses for dual credit. In addition, the college or university must ensure that a dual credit course and the corresponding course offered at the main campus of the college are equivalent with respect to the curriculum, materials, instruction, and method/rigor of student evaluation. These standards must be upheld regardless of the student composition of the class (19 TAC, Subchapter D, §4.85).

Academic dual credit courses may be composed of dual credit students only, dual and college credit students, or dual credit and high-school-credit-only students. Classes that mix dual credit students with high-school-credit-only students are permitted only by meeting one of the following two conditions:

1. The high-school-credit-only students are College Board Advanced Placement (AP) students.
2. The course involved is required for completion under the recommended high school or distinguished achievement program graduation requirements, and the high school involved is otherwise unable to offer such a course (19 TAC, Subchapter D, §4.85).

All Texas school districts have been required to provide all qualifying students with the opportunity to earn the equivalent of at least 12 semester hours of college credit while in high school (HB 1, 79th Texas Legislature, 3rd Called Special Session, 2005; TEC §28.009). Dual credit courses are one way to satisfy that requirement.¹³ Predictably, the number of students participating in courses for dual credit has risen rapidly. Figure 1 illustrates the growth in academic dual credit course enrollment across time, based on TEA's Public Education Information Management System (PEIMS) records.¹⁴

¹² An eligible Grade 11 student who has enrolled in dual credit under this provision must demonstrate eligibility to enroll in dual credit courses in Grade 12.

¹³ Advanced Placement, International Baccalaureate, and advanced technical credit courses, including locally articulated courses, are other ways to satisfy the requirement.

¹⁴ The data for this report come from TEA's PEIMS database because those are the only data that indicate whether or not a dual credit course is being substituted for a high school course subject to EOC requirements. Data from THECB show similar growth in dual credit enrollments over time, but identify more individuals as dual credit students, at least partially because THECB data include students from private high schools and PEIMS data do not fully reflect summer school enrollments. See Eklund, J. A. (2009). Exploring dual credit data alignment, student

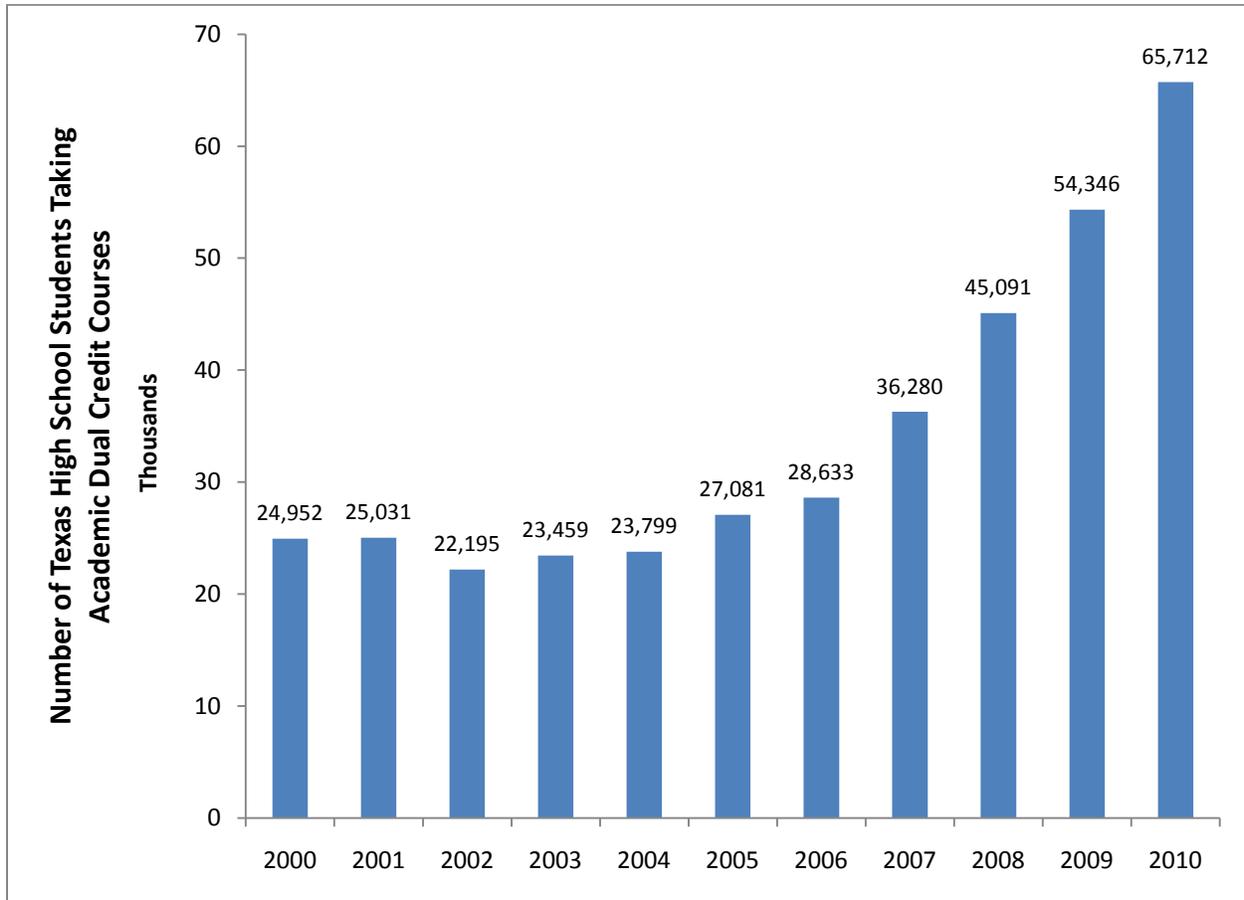
As the figure illustrates, the number of students participating in academic courses for dual credit more than doubled between the 2004-2005 school year (before enactment of the College Credit Program, as described in Appendix A) and the 2009-2010 school year. In 2004-2005, 27,081 students from 655 of the state's 1,229 school districts participated in academic dual credit courses; in 2009-2010, 65,712 students from 850 of the state's 1,235 school districts participated (a 143% increase in students taking academic courses for dual credit). Legislation in 2003 (78th Texas Legislature, HB 415), allowing both high schools and colleges to receive funding for teaching dual credit courses, may also have contributed to increased dual credit course offerings in Texas. For more information about dual credit enrollments and the demographic characteristics of students taking courses for dual credit, see the forthcoming *Research Study of Texas Dual Credit Programs and Courses*, prepared by American Institutes for Research to be published in February 2011.

Nearly all dual credit courses delivered in Texas (96%) are provided by community and technical colleges (both academic and career technical education). Public universities provided less than 4% of the total dual credit courses taken by Texas students in 2008-2009. None of the state's flagship universities—Texas A&M University, Texas Tech University, or the University of Texas at Austin—delivered any dual credit courses during 2008-2009 (the most recent year with complete THECB data).¹⁵

populations, and coursework patterns in Texas using a P-16 framework (Doctoral dissertation, University of Texas at Austin, 2009) for an in-depth discussion of dual credit data issues.

¹⁵ See <http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=1871>

Figure 1. Number of Public High School Students Taking Academic Courses for Dual Credit (EOC Assessment Courses and Other Academic Courses) by year, 1999-2000 through 2009-2010



Source. Analysis of PEIMS course completion data by State of Texas Education Research Center at Texas A&M University.

Note. Data come from TEA’s PEIMS records and, therefore, reflect the number of public high school students taking academic courses for dual credit during the regular school year. The year indicates the spring semester, so 2010 refers to the 2009-2010 school year.

A growing number of Texas students are taking their courses for dual credit online through the Texas Virtual School Network (TxVSN).¹⁶ The TxVSN was established by the 80th Texas Legislature (2007, SB 1788) to provide Texas students with equitable access to quality, supplemental, online courses. Each course in the TxVSN catalogue is reviewed for alignment to course TEKS and the International Association for K-12 Online Learning’s (iNACOL) National Standards of Quality for Online Courses. School personnel and students can review options to select approved online courses that best meet students’ needs and graduation plans. All courses are taught by a Texas-certified instructor who has completed TxVSN-approved

¹⁶ See <http://www.txvsn.org>

professional development for effective online instruction. Dual credit courses are taught by college or university staff members who meet both IHE and TxVSN requirements. During the spring 2011 semester, 5,621 high school students enrolled in online courses, with 1,782 courses taken for dual credit (32%). Many of the academic courses taken by Texas students for dual credit, whether delivered at a high school, on a college campus, or online, will be subject to EOC testing and graduation requirements that are described in the following section.

End-of-Course Assessments in Texas

Texas is in the process of replacing its existing student assessment program, the TAKS, with the STAAR program. Among other things, STAAR will replace the Grades 9, 10, and 11 TAKS tests with 12 EOC assessments. There will be three EOC assessments in each of four foundational content areas—English language arts (English I, English II, English III), mathematics (Algebra I, Algebra II, Geometry), science (Biology, Chemistry, Physics), and social studies (world geography, world history, and United States history). Each EOC assessment will test a range of course content knowledge and skills and will incorporate questions specifically designed to measure college readiness.

The transition from TAKS to STAAR is intended to accomplish multiple objectives. Foremost, STAAR will be a more rigorous testing system than TAKS. The STAAR tests will be aligned with newly revised curriculum requirements that address critical college and career readiness skills, and fewer skills will be assessed in a more focused and deeper way. The tests will also measure student performance on more challenging course material. For example, the TAKS tests did not cover the Algebra II curriculum, which will be the subject of one of the EOC assessments. Finally, the STAAR tests will measure not only a student’s content knowledge of the course or subject being assessed but also his or her growth in achievement across years within a content area, where appropriate.

The STAAR EOC assessments will become part of graduation requirements beginning with the incoming Grade 9 students in the 2011–2012 school year. In order to graduate, students will need to achieve a cumulative score above a designated threshold in each of the four content areas (English language arts, mathematics, science, and social studies).¹⁷ The threshold scale scores may differ from one content area to another, and are yet to be determined. Students planning to graduate under the Recommended High School Program will need to achieve a cumulative score that meets or exceeds the threshold in all four content areas, and perform satisfactorily on the EOC assessments for Algebra II and English III. Students planning to

¹⁷ In the language of the Texas Education Code, “a student is required to achieve... a cumulative score that is at least equal to the product of the number of end-of-course assessment instruments administered to the student in that subject and a scale score that indicates satisfactory performance.” A student must achieve a minimum score, as determined by the commissioner, for the score to count towards the student’s cumulative score (TEC §39.025).

graduate under the Distinguished Achievement Program will need to achieve a cumulative score that meets or exceeds the threshold in all four content areas and meets the college-readiness standards on Algebra II and English III. Students planning to graduate under the Minimum High School Program will only take the EOC assessments that correspond to the courses in which they are enrolled.

In addition, school districts will be required to use a student's score on each EOC assessment as 15% of the student's final grade for the corresponding course (TEC §39.023). As such, the EOC assessments will influence not only graduation rates but also grade-point averages, class ranks, and student eligibility for college admission under the Top 10 Percent rule (TEC §51.803).

Additionally, students' scores from EOC assessments will be used to assess and promote college readiness.¹⁸ HB 3 (81st Texas Legislature, 2009) mandates that college-readiness performance standards be set on the Algebra II and English III EOC assessments, and TEC §39.024 mandates both the collection of data and research studies to substantiate the correlation between performance on EOC assessments and college readiness, and the development of remediation courses to facilitate college readiness. TEC §39.024 also authorizes research studies to investigate the relationship between student performance on specific science and social studies EOC assessments and college readiness. Plans for conducting several empirical studies to inform college-readiness standard setting are currently underway.

Consistent with requirements of HB 3, TEA will also identify an indicator of advanced-course readiness on the Algebra I, English I, and English II EOC assessments that may be used to determine whether a student is on track to meet college-readiness standards. For students who do not demonstrate advanced high school course readiness, districts can use the readiness indicator to identify students in need of remediation and provide instructional intervention early in high school to help students strengthen their skills in those academic areas where they may need additional work.

Further, EOC assessment scores may be used for the appropriate placement of a student in developmental or entry-level college courses. TEC §39.0232 authorizes development of EOC assessments that can be used to place a student in a course of the same subject at an IHE. In addition, HB 3 allows the Commissioner of Higher Education to adopt rules requiring IHEs to adopt uniform standards for placement of students into developmental education or entry-level courses and provides an exemption for students who meet the college readiness performance standards on the Algebra II and English III EOC assessments.

¹⁸ Texas Education Agency (2010). *House Bill 3 Transition Plan, A Report to the 82nd Legislature from the Texas Education Agency*, Appendix B, End-of-Course Assessment Plan, College-Readiness and Advanced-Course Readiness. Available at <http://www.tea.state.tx/studentassessment/hb3plan/>

Current Context for Dual Credit Programs

This report section examines issues related to existing contextual conditions for the delivery and evaluation of dual credit coursework in Texas as a way to begin answering the study’s primary research question:

Is it feasible to allow students to satisfy EOC requirements by successfully completing a dual credit course through an IHE?

Evidence is summarized relative to statewide issues including:

- governance of dual enrollment programs,
- quality of available data,
- quality and consistency of academic dual credit courses being taken,
- strength of partner agreements between school districts and IHEs,
- equitable effects of policies on school districts and students,
- multiple purposes planned for EOC assessment scores,
- dual enrollment as a strategy for increasing access to college, and
- benefits and outcomes of dual credit courses being taken by students.

Governance for Dual Credit Programs

Establishing a statewide dual credit program in Texas is challenging because, as Table 1 illustrates, dual credit policies and programs require coordination among four distinct education sectors, each with its own mission, rules and regulations, practices, and priorities. In Texas, in contrast to some states, there is no one state-level entity that “owns” the dual credit program and has primary responsibility for policy development, administration, and guidance (Hoffman & Vargas, 2010).

Table 1. Education Sectors Responsible for Administration and Delivery of Dual Credit Programs and Courses for Texas Public School Students

Dual Credit	PK-12 Education	Higher Education
State Policies and Practices	Texas Education Agency (TEA)	Texas Higher Education Coordinating Board (THECB)
Local Policies and Practices	Public School Districts High Schools Early College High Schools	Public Colleges and Universities
Consumers	Students and their Parents	

TEA and THECB are both responsible for administering state-level dual credit policies and providing guidance for dual credit programs, which are developed and implemented locally through institutional agreements (i.e., partnership agreements) between school districts and postsecondary institutions. Collaboration between THECB and TEA on programs such as dual

credit occurs through the Texas P-16 Council, but this group is responsible for promoting collaboration between these entities, not establishing statewide policy.

Dual enrollment arrangements require significant communication between TEA and its constituency (districts and schools), THECB and its constituency (public colleges and universities), as well as collaboration and shared decision making between high schools and colleges and universities. THECB rules (19 TAC, Subchapter D, §4.84) require that any dual credit partnership between a secondary school and a Texas public college include an institutional agreement approved by the governing boards or designated authorities of both institutions. The institutional agreement must address at least the following nine elements: (1) eligible courses; (2) student eligibility; (3) location of class; (4) student composition of class; (5) faculty selection, supervision, and evaluation; (6) course curriculum, instruction, and grading; (7) academic policies and student support services; (8) transcribing of credit; and (9) funding. Additional detail on each of the nine elements is specified in 19 TAC, Subchapter D, §4.85.

High schools in Texas school districts and IHEs have considerable autonomy in developing institutional agreements for dual credit partnerships. THECB addresses “Frequently Asked Questions” about dual credit courses and student eligibility on its website from the higher education perspective, and TEA posts a document on its website that answers “Frequently Asked Questions” about dual credit programs from a public school district perspective. At this time, with the exception of the Early College High School program that has explicitly defined criteria for dual credit partnerships and a designation process to monitor implementation fidelity, there is no single informational manual or dual credit website that provides information and resources to guide development of effective dual credit partnerships between districts and their high schools and postsecondary institutions.

Perhaps even more important is how information about dual credit opportunities is communicated by education sectors to students and their parents. School districts are responsible for notifying the parents of students in Grade 9 and above of the opportunities available in the district for students to earn college credit, including AP and IB programs, dual credit programs, and joint high school and college credit programs (TEC §28.010). To date, no systematic evidence has been gathered on district compliance with this aspect of college credit programs, the types of academic counseling provided for students and families, or the effectiveness of outreach efforts. The sections that follow help explain how interactions among education sectors influence the delivery of dual credit coursework for students.

Quality of Dual Credit Course Data

Accurate and complete data are critically important in studying and evaluating Texas dual credit programs. Currently, statewide student-level data on dual credit course taking come from TEA's PEIMS database and THECB's Coordinating Board Management (CBM) database. Both agencies have developed data systems that meet their own priorities, and unfortunately, data collection specifications associated with each system limit the data available on students' dual credit course-taking patterns and outcomes. TEA through PEIMS currently collects student course completion data (Record 415). For each course taken by a public school student, a record provides the course code (number/title selected from a standardized list), an indicator for dual credit participation, and indicators for course performance (pass/fail, grades). The PEIMS course completion record, however, does not include the number or title of the college course taken for dual credit, the number of credit hours earned, the name of the IHE attended, whether college courses were taken on a college or high school campus, or who taught the courses. The current PEIMS data-submission schedule also does not include data on dual credit courses taken by students during the summer.

THECB collects student dual credit enrollment information each semester (fall, spring, and summer). The student enrollment record (CBM001) includes the Semester Credit Hours (SCH) of students enrolled in dual credit courses, which is defined as the number of dual credit hours "attempted" in which the student receives both high school and college credit. Currently, THECB does not collect student-level information on the content of the course(s) taken, number of courses taken, number of credits earned, or the course outcome (grade earned).

Common student identification numbers allow matching of PEIMS and CBM data, but researchers studying dual credit course-taking patterns have reported data inconsistencies, including dual credit students who are identified in PEIMS but not in the CBM database, and students who are in the CBM database but not included in PEIMS. With THECB data, it is difficult to know whether a high school student takes a college course for dual credit or college credit only. Students who take courses for dual credit during summer appear in THECB data but are generally not entered in PEIMS.

In sum, the lack of quality data limits current research evidence on Texas dual credit coursework and improvements are needed. Beginning in summer 2011, THECB will collect student-level records (CBM00S) each semester (fall, spring, summer) for each college course taken. Records will identify course content (number), high school status, and dual credit or college-credit only status. Likewise, given the increasing prevalence of courses taken for dual credit, TEA may need to add indicators to PEIMS 415 course completion records, and data collection should be expanded to include summer courses no later than the 2011-2012 school year.

Quality and Consistency of Academic Dual Credit Courses

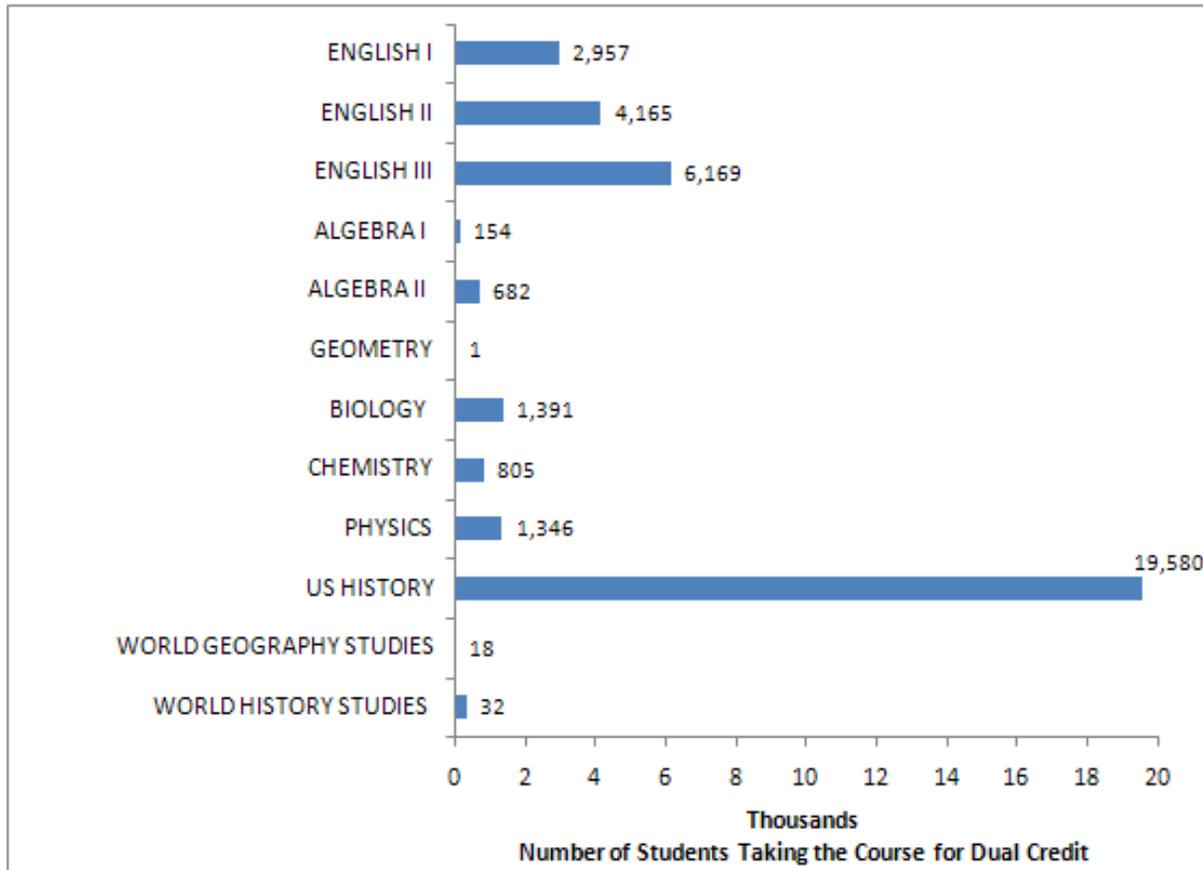
Decisions about student exemption from EOC assessments must consider the degree to which dual credit courses prepare students for subsequent and more advanced coursework (course quality) and the extent to which the academic content and rigor of college courses taken for dual high school and college credit are similar from student to student (course consistency). As explained by Hoffman, Vargas, and Santos:

The goal must be to ensure that students who participate in dual enrollment programs are doing true college-level rather than “college-lite” work, and that they will earn transferable college credit as a result (2008, p. 27).

Many Texas students are currently substituting a dual credit course for one of the 12 courses for which EOC assessments are being developed (hereafter referred to as EOC assessment courses). For example, some students are meeting their graduation requirement by taking a college course in biology for dual credit instead of a traditional high school course in biology for high school credit only. In order for a dual credit course to substitute for a required course at the high school level, the college course must “provide academic instruction beyond, or in greater depth, than” the TEKS for that high school course (19 TAC, §74.25(b)). School districts are responsible for ensuring that dual credit courses address the corresponding TEKS requirements; however, there is no oversight to make certain that TAC rules are being upheld.

The shift from TAKS to EOC assessments will have a greater impact on students taking foundation EOC assessment courses for dual credit than on students taking other types of courses for dual credit. PEIMS course completion data for the 2009-2010 school year indicate that 29% of academic dual credit enrollments were for courses for which EOC assessments will be developed. Figure 2 shows the number of students taking each of the 12 EOC assessment courses for dual credit during the 2009-2010 school year. As the figure illustrates, there was substantial variation in the number of students taking each of the foundation courses. Nearly 20,000 Texas students took U.S. History for dual credit. The next most frequently taken course was English III, which was taken for dual credit by 6,169 students. The EOC assessment courses least likely to be taken for dual credit were geometry and world geography. Only 18 Texas students satisfied their world geography requirement with a dual credit course in 2009-2010, and only one student satisfied the geometry requirement with a dual credit course. Of the four foundational content areas, English language arts courses (English I, II, and III) were the most consistently taken courses for dual credit. Mathematics courses were the least likely of the four foundation areas to be taken for dual credit, followed by science courses.

Figure 2. The Number of Students in 2009-2010 Taking Academic Courses for Dual Credit that Will Require EOC Assessments Beginning in 2011-2012.



Source. Analysis of PEIMS course completion data for the 2009-2010 school year by State of Texas Education Research Center at Texas A&M University.

It is unclear from these data why students would be taking English I, English II, and Algebra I for dual credit, or what college courses would be equivalent. The content of these courses is generally regarded as below college level, and students typically take the courses in Grades 9 and 10 rather than in Grades 11 and 12. If TAC rules are followed, students taking such courses for dual credit should be advanced academically or enrolled in Early College High Schools. Grades 9-10 students taking dual credit courses for foundation subjects, such as Algebra I or Biology, should demonstrate the prerequisite skills to ensure success in college-level courses that build on that prerequisite knowledge.

Given data reporting limitations described previously, course completion statistics provide a rough estimate of the number of students who might be affected by EOC requirements (more than 38,000 in 2009-2010). Neither of the existing data systems (PEIMS or CBM) collected information that reveals the linkages between the high school course for which a student received dual credit and the college course in which a student enrolled (i.e., a course “crosswalk”). Currently, the only source of information on course crosswalks is the partnership agreement between an IHE and a public school. TAC rules, however, do not require submission of agreements to either TEA or THECB.

In Texas, course crosswalks for dual credit have been developed for certain enhanced technical courses students take during high school and their equivalent college courses; however, course crosswalks have not been developed for academic coursework. The variety of content found in college courses with the same name and catalogue number across the state prevents the TEA from being able to ensure that a college course matches the TEKS for a high school course. Experts interviewed at THECB explained that the board is currently developing learning objectives for college courses that are often taken for dual credit. Those learning objectives, according to TEA, may serve as the foundation for a statewide academic course crosswalk. Additional studies are planned by the agencies to explore the ability to link high school courses with college courses across subject areas.

As part of a doctoral dissertation, Eklund (2009) conducted a qualitative analysis of academic dual credit crosswalks for foundation content areas included in partnership agreements submitted voluntarily by IHEs to THECB. A limited number of agreements included dual credit course crosswalks (12 of 71 institutions with dual credit programs that submitted documents). Dual credit crosswalks examined by the researcher differed across school districts and college service areas. For example, English III was consistently linked with World Literature I and II (ENGL 2332 and 2333 in the common college course numbering system). English IV was most commonly linked with English Composition I and II (ENGL 1301 and 1302); however, English IV was also linked to World Literature I and/or II (ENGL 2332, ENGL 2333), British Literature I and/or II (ENGL 2322, ENGL 2323), American Literature I (ENGL 2328), and Forms of Literature (ENGL 2341). For mathematics, Algebra II was linked consistently with College Algebra (MATH 1314). No college courses were identified as crosswalks for Algebra I, English I, or English II.

Most dual credit partners linked two college-level U.S. History courses, U.S. History I (American History until 1865) and U.S. History II (Post-Civil War American History) to the high school course. High schools appeared to have more difficulty determining crosswalks for science courses because college-level courses assume that students’ have completed prerequisite high school coursework. Consequently, high school science courses taken for dual credit were frequently reported with AP course codes. The most commonly reported link was AP Biology

with General Biology (BIOL 1406 and 1407). A concern expressed by the researcher was that AP course codes seemed to be used for high school dual credit courses, even if the course was not a College Board authorized AP course (Eklund, 2009). As a whole, findings suggest that it could be possible for school districts and colleges to reach agreements about academic course crosswalks and credit equivalencies for foundation courses requiring EOC assessments. Such agreement would be an important step in achieving more consistency in courses taken by high school students for dual credit.

Quality of Institutional Partnerships

Another limitation of dual credit programs is the uneven quality of institutional partnerships between school districts and IHEs. Texas public institutions of higher education, on request, are required to assist school districts in developing and implementing dual enrollment programs (TEC §28.009(a)). As explained previously, partnership responsibilities are defined in TAC rules. Despite that, research evidence shows that the quality of partnerships between school districts, schools, and postsecondary institutions varies significantly (Eklund, 2009; SRI International, 2010; State Auditor's Office, 2010).

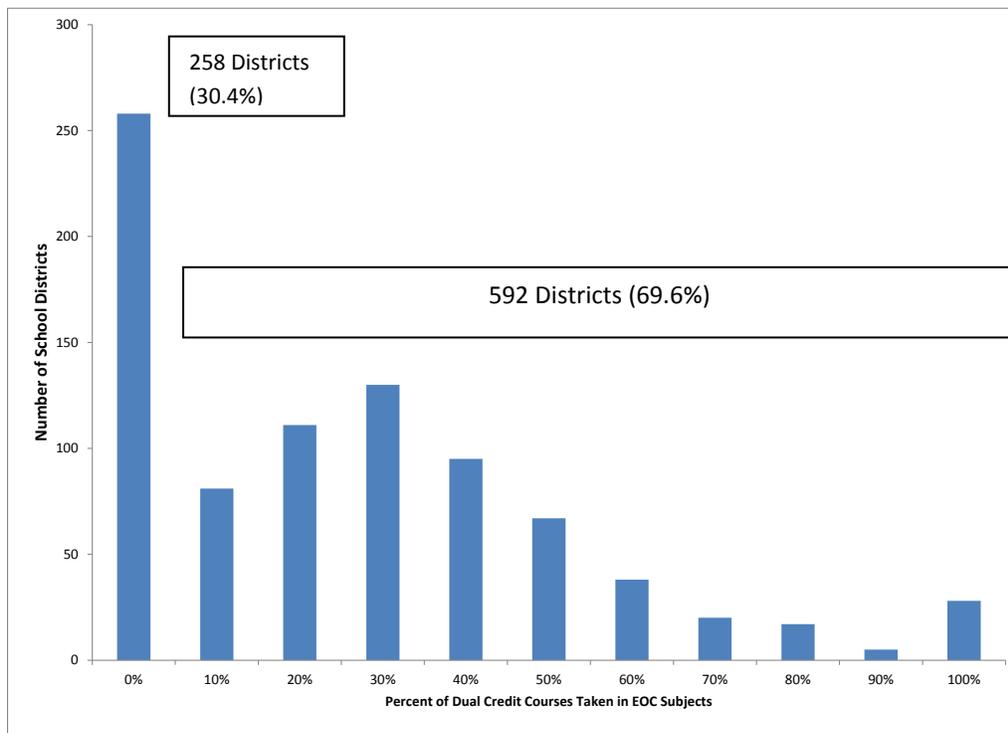
Findings from a recently released audit of dual credit programs at 12 selected community colleges and corresponding public school districts and high schools revealed the extent of compliance with state policies and procedures. Specifically, 67% of community colleges fully or substantially complied in ensuring students met eligibility requirements to enroll in dual credit courses and that teachers met requirements to teach dual credit courses. Although colleges are responsible for overseeing the instructional quality of dual enrollment courses (TAC §4.85(e)), auditors found that nearly all of the community colleges reviewed (83%) needed to improve their monitoring and evaluation of dual credit teachers and courses. In addition, most of the community colleges (67%) needed to improve their contract agreements with school districts to ensure that agreements included all of the elements required by TAC rules and that representatives of both the community college and school district had signed agreements prior to offering dual credit courses (State Auditor's Office, 2010).

Studies of dual enrollment programs underscore the importance of clearly defined partnerships between school districts and IHEs with roles and responsibilities specified (Hoffman & Vargas, 2010). The evaluation of Early College High Schools in Texas confirms that effective dual credit programs require strong relationships with postsecondary institutions and collaborative relationships are difficult to establish (SRI International, 2010). Certainly, Texas school districts and IHEs need more overt guidance in constructing effective partnerships.

Equitable Effects of Dual Credit Policies

Decisions about student exemption from EOC requirements must also consider the equitable effects of exemption policies. The shift from TAKS to EOC assessments will have a greater impact on districts where students are frequently taking foundation courses subject to EOC assessments for dual credit. Figure 3 illustrates how school districts might be affected by the implementation of EOC requirements, based on the percentages of academic courses taken for dual credit that hypothetically would have required students to complete EOC assessments in 2009-2010. About a third of 850 school districts (258 districts or 30.4%) had no students who took academic courses for dual credit during the 2009-2010 school year that in the future will require EOC assessments. Thus, these districts would have been largely unaffected by STAAR EOC requirements. Conversely, more than two-thirds of districts (592 districts or 69.6%) had students who took one or more foundation courses for dual credit that in the future will require EOC assessments. Therefore, based on 2009-2010 statistics, school districts could be affected to varying degrees by EOC assessment requirements depending on the curricular emphasis of their dual credit program.

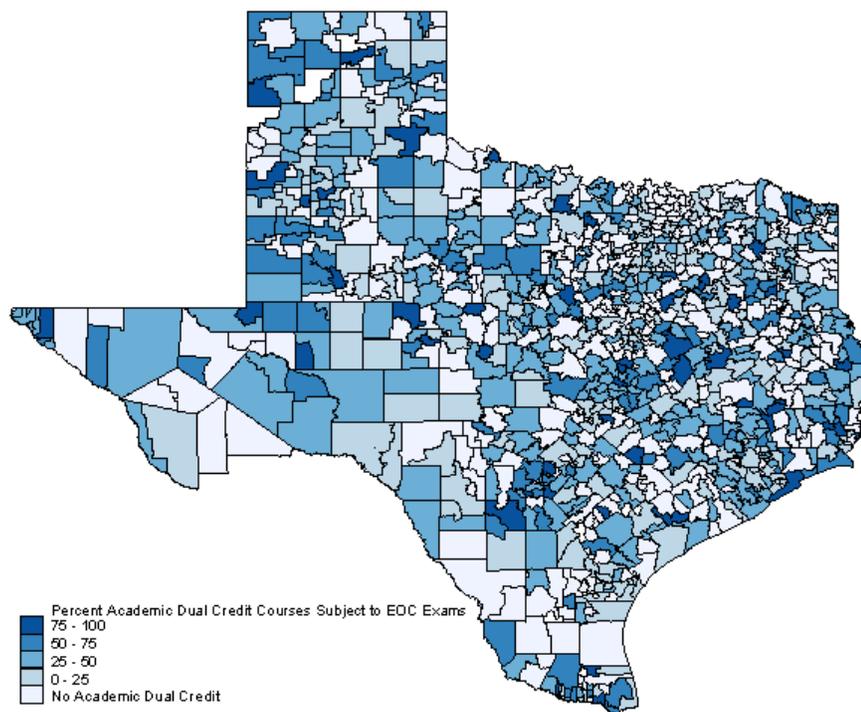
Figure 3. Percentages of Courses Taken for Dual Credit in 2009-2010 that Hypothetically Would Have Required Students to Complete EOC Assessments, by Estimated Number of School Districts Affected by EOC Requirements



Source. Analysis of PEIMS course completion data for the 2009-2010 school year by State of Texas Education Research Center at Texas A&M University.

Figure 4 provides a map of the information summarized in Figure 3. As the map illustrates, there are no obvious geographic patterns for the location of school districts based on the proportion of academic courses taken for dual credit that potentially would require EOC assessments. Rural school districts appear no more likely to have a large share of their students taking academic courses for dual credit, which will be subject to EOC requirements, than are urban districts. The relationship between STAAR EOC assessments and courses taken for dual credit appears to affect school districts and students in all areas of Texas. However, it is also likely that 2009-2010 data may not be representative of dual credit courses taken in the future when STAAR requirements for EOC assessments take effect.

Figure 4. The Percentage of Courses Taken for Dual Credit that Potentially Would Require EOC Assessments, by Texas Public School District, 2009-2010



Source. Analysis of PEIMS course completion data for 2009-2010 by State of Texas Education Research Center at Texas A&M University.

Evidence from other studies of Texas dual credit programs, however, raise concerns about students' equitable opportunities to earn dual credit in high school. State-level statistics show that students who benefit from dual credit programs are more likely to be female than male. Anglo and Asian students are overrepresented among students dually enrolled in high school and Texas public IHEs and Hispanic and African American students are underrepresented, although the proportion of Hispanic and African American students participating in Texas

college credit programs has increased steadily in recent years (O'Brien & Nelson, 2004). The *Research Study of Texas Dual Credit Programs and Courses*, which is currently underway, will provide additional information on equitable participation and costs.

Multiple Purposes for End-of-Course Assessments

The EOC assessments have been designed to accomplish several purposes. The following sections addressing EOC assessment issues pertinent to student eligibility, course grades, mastery of the TEKS, college readiness and academic intervention, the state's new accountability system, and the use of EOC assessments for research and program evaluation purposes. Interrelated purposes for students' scores from EOC assessments must be considered in determining the feasibility of allowing students to satisfy EOC requirements by successfully completing a course for dual credit.

Student Eligibility for Dual Credit Enrollment

THECB determines student eligibility to enroll in college courses for dual credit. The transition from TAKS to STAAR will necessitate changes in student eligibility requirements for enrollment in various types of dual credit courses because TAKS scores are currently one measure that can be used to determine eligibility for both academic and workforce education dual credit courses. With the discontinuation of TAKS tests, THECB must modify existing student eligibility rules or establish new rules for enrollment in college courses for dual credit. According to THECB experts interviewed, the board views the English III and Algebra II EOCs, which typically will be completed by students at higher grade levels, as the "college ready" measures that will substitute for TAKS tests. THECB is exploring options for TSI exams that will dovetail with EOC assessments and will target Grade 10 students rising into Grades 11 and 12. At lower grade levels, students will need to prove they are academically advanced to demonstrate college readiness, with the exception of Early College High School students.

The approach to student eligibility adopted by THECB has implications for the uses of EOC assessments, supplementary assessment costs, and early college access. If STAAR results for assessments administered in earlier grades (Grade 8 STAAR, English I, English II, and Algebra I EOCs), which will include an indicator of advanced-course readiness, are not incorporated into THECB criteria, student eligibility in Grades 9 and 10 will be based on supplemental assessments, including current TSI exams such as the PSAT/NMSQT and the PLAN, or other exams selected by THECB. Basing eligibility on supplemental assessments rather than STARR assessments, which are administered free of charge to students by the state, could create barriers to dual credit enrollment because students would have to take the additional step of completing a TSI assessment, and either schools or students would incur the extra costs associated with TSI supplemental assessments.

Alternatively, THECB could draw from TEA studies of the predictive capacity of EOC assessments to develop dual credit eligibility standards based on STAAR assessments. As such, student eligibility could be based on scores from one or more EOC assessments. The most direct analogue to the current dual credit requirements would tie eligibility for dual credit to students' EOC assessment scores for Algebra I and English I. Given the typical sequence of high school courses, students take Algebra I and English I courses in Grade 9, so these EOC assessments could provide information about student dual credit eligibility one year earlier than the current policy, which bases eligibility on Grade 10 TAKS scores. Apprising students earlier in their academic careers about opportunities to take courses for dual credit could encourage more students to take advantage of dual credit coursework.

Use of End-of-Course Assessment Scores in Course Grades

The statute governing EOC assessments raises questions about grading criteria for dual credit courses. According to TEC §39.023, EOC assessments must be used by school districts to determine 15% of a student's grade for the course, whereas TAC rules for colleges require dual credit courses to be equivalent to the corresponding college-level courses in every respect, including the method and rigor of student evaluations. Based on interviews with experts at THECB and TEA, it appears there is no legal problem with having parallel grading schemes and the awarding of separate course grades for dual credit at high schools (based on state and local criteria) and at colleges (based on college instructors' assessments).

The parallel grading scheme could satisfy both TEC and TAC requirements. Colleges and universities could assign course grades for dual credit courses based on regular course requirements. The school districts could assign course grades incorporating scores from EOC assessments. As a result, a student could plausibly have an "A" on his college transcript and a "B" on his high school transcript, or an "A" on his high school transcript and a "B" on his college transcript for the same course. Although somewhat confusing, such a solution is feasible. There is no requirement that students in dual credit courses receive the same grade from their school district as from their IHE, and according to TEA experts interviewed, it is currently not unusual for students to receive a different grade for their high school and college course. Colleges typically award a letter grade (A, B, C, etc.), whereas high schools often want a numerical grade to include in grade-point average (GPA) calculations. The partnership agreement between the school district and IHE could address the grading issue.

Experts at THECB indicate that logistical issues faced in administering EOC assessments to students taking dual credit courses may be a greater problem, especially if the course is taught on the college campus. Respondents believe partnership agreements between school districts and IHEs would need to specify the logistics associated with EOC test administration and

security. On the other hand, given that all high school campuses will administer EOC assessments, experts at TEA do not anticipate logistical problems.

Dual Credit Course Alignment with TEKS and End-of-Course Assessments

Because the dual credit course is a college course, the IHE is responsible for the content. Academic courses offered for dual credit by public two-year associate degree granting institutions must be identified as college-level academic courses in the current edition of the *Lower-Division Academic Course Guide Manual*, and courses offered for dual credit by public universities must be in the approved undergraduate inventory of the university. However, because the high school is also awarding credit, the public school district must ensure that the dual credit course offers advanced academic instruction that goes beyond, or in greater depth than, the TEKS so that students master TEKS for the corresponding course. If through a review of the college course syllabus or some other means, the district determines that the college course does not align with the TEKS, it may work with the IHE to enhance the course and/or may provide supplemental instruction for students.

EOC assessments map to the high school course curriculum. College courses map to each faculty member's course curriculum, materials, and instruction based on the description of academic courses in course guides or inventories. The course evaluation maps to the instructor's course content. Texas high school students who take academic foundation courses subject to EOC assessments for high school credit only will spend the year studying material aligned with the TEKS. If the dual credit course meets TAC requirements for TEKS content standards, a student who has qualified for and experienced college-level work should perform well on high school EOC assessments. Conversely, dual credit students could be at a competitive disadvantage on the EOC assessment if TEKS objectives are not covered. In that case, taking the dual credit course instead of the regular high school course could increase the risk of scoring poorly on the EOC assessment, thereby lowering a student's course grade, GPA, and class rank. The Top 10 Percent rule, which automatically admits students in the top 10% of their high school class to state universities, makes Texas high school students particularly sensitive to policies that affect GPA, so the possibility of a lower grade on the high school transcript could discourage dual credit enrollments. Conversely, the possibility of exemption from EOC assessments could provide additional encouragement for students to enroll in dual credit courses. Such incentives could lead high school students who are not yet socially or emotionally prepared for college expectations to enroll in a college course for dual credit and potentially experience failure.

Academic Readiness, Growth, and Intervention

The state's new STAAR assessment program has also been designed to assess and promote college readiness. Students' scores from the STAAR assessments will provide valuable

information for schools about students' readiness for advanced high school courses and college-level courses, as well as their growth across years within each of the foundation content areas. This diagnostic information can be used to target instructional interventions that keep students on track for successful participation in postsecondary coursework. This valuable resource would be lost if students are exempt from EOC assessments and diagnostic information could be compromised if EOC assessments are administered with no consequences attached.

Accountability System Ratings

Assessment indicators for the new state accountability system will be based on STAAR tests in Grades 3-8 and STAAR high school EOC assessments in English language arts, mathematics, science, and social studies. Indicators will include the percentage of students meeting either the satisfactory performance standard or college-ready performance standard. Accordingly, decisions to exempt students from EOC assessments would have to be addressed in the design of district and high school accountability ratings under the future accountability system.

Research and Evaluation Studies

A distinct advantage of studying public school issues in Texas has been access to data from the state's data management system and comprehensive assessment program. Studies conducted both internally by TEA and externally by other organizations have drawn from those data sources to provide information that benefits Texas students and schools through the facilitation of data-driven decisions at local, regional, and state levels. When TAKS tests are discontinued, EOC assessments will become the main student-level measure of high school students' academic achievement available for use in research studies and program evaluations. The exemption of certain groups of high school students from EOC assessments would diminish the capacity to generalize findings from research studies to the Texas student population as a whole or to subgroups of the state's population.

Dual Enrollment and Increased Access to College

In Texas, dual high school and college enrollment has been a key strategy for increasing the academic readiness of all secondary students for success in higher education, careers, and life beyond high school. Traditionally, higher achieving students in the state have benefited the most from dual credit programs, but recent policy initiatives have aimed to enroll a wider range of students in dual credit courses, especially those from low-income and minority groups who attend college at disproportionately lower rates. Many believe the opportunity to take college-level courses during high school exposes students to the expectations and culture of college and increases the likelihood that students will pursue, persist, and succeed in postsecondary education (Hoffman & Vargas, 2010; Hoffman, Vargas, & Santos, 2008).

Some educators and policymakers are concerned that EOC requirements could discourage students from taking foundation courses subject to EOC assessments for dual credit because they might be concerned that the college course would not prepare them adequately for the EOC exam. More capable students might be less likely to be deterred by the prospect of an EOC assessment. If EOC assessment requirements do discourage dual credit enrollments, it could undermine the state's goals for closing the gaps that exist among racial/ethnic groups in higher education participation.¹⁹ However, EOC assessments for foundation subjects could also help to ensure that students traditionally underrepresented in higher education are adequately prepared to enroll and succeed, without remediation, in college-level courses. Using EOC assessment results for earlier interventions that keep Texas students on track for advanced coursework and entry-level general education college courses could yield substantial benefits for the state both educationally and economically.

Benefits and Outcomes of Dual Credit Courses

Decisions about dual credit courses should be informed by empirical evidence regarding the outcomes of dual credit coursework and its benefits for students. Advocates note potential benefits for high school students and their families, such as free or low-cost college credit, the opportunity to reduce the time and costs after high school to earn a college degree, and earlier entrance into the workforce (Hoffman & Vargas, 2010; Hoffman, Vargas, & Santos, 2008). Research evidence on the effectiveness of dual credit programs has been promising. Studies indicate that high school students who take college courses, compared to non-course taking students, are more likely to graduate from high school, enroll in college, transfer from community college to four-year colleges, and to stay in college. Dual enrollment students also frequently earn higher grade-point averages and graduate sooner from college (Hoffman, Vargas, & Santos, 2008; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; O'Brien & Nelson, 2004). Many of these studies, however, investigated dual enrollment programs in other states with different program policies and student populations, so results may not entirely generalize to the Texas population of students taking courses for dual credit.

Research has also been limited by the general inability to infer directional causation. That is, it is known that students who take dual credit courses also graduate from high school at very high rates, but we do not know that dual credit courses *cause* those higher graduation rates (Karp et al., 2007). It is just as plausible to argue that students who take dual credit courses are highly motivated and have already decided to go to college, and they pursue college credits to enhance their applications or to lower educational costs.

¹⁹ *Closing the Gaps: The Texas Higher Education Plan*. Available at <http://www.theccb.state.tx.us/reports/PDF/0379.PDF?CFID=12293722&CFTOKEN=78880865>

Nationally, research has also been limited by the lack of integrated, longitudinal data that follows individual students from high school through college and provides information about dual credit participation, high school graduation, and college attendance. Such data are currently available in Texas, and given the growth in dual credit enrollment, a longitudinal study of dual credit course outcomes is critically important. The planned data collection improvements by THECB will provide a rich source of data for conducting a study of Texas students' dual credit course-taking patterns (e.g., college course titles, average course load) and outcomes (e.g., college credits accrued, grades earned, credits applied toward degrees). Students' scores from EOC assessments provide another important data source for examining the state's dual credit program.

Recommendations

This report has synthesized evidence from multiple sources to begin answering the question posed by the 81st Texas Legislature about the feasibility of allowing students to be exempt from an EOC assessment based on successful completion of an academic course for dual credit through an IHE. Based on findings presented in the previous report sections, two recommendations for future policy and action are offered.

Recommendation 1

In examining policies associated with decisions about EOC assessments, this study has identified a number of issues concerning the state's dual credit programs that need attention. TEA and THECB should work collaboratively with representatives from colleges and universities, school districts, and legislators to address limitations in the state's dual credit programs including, but not limited to, the following actions:

- *Improve the collection and reporting of dual credit course data.* Accurate and expanded reporting of data documenting students' participation in courses for dual credit requires an integrated data system that links public education and higher education, and Texas has implemented such a system. However, if important questions about dual credit programs are to be answered, improvements are needed in the kinds of indicators that are entered into the systems. THECB's plan to begin collecting student-level course data in spring 2011 along with TEA's plan for expanded longitudinal data collection, which will include summer course records, should yield more comprehensive and accurate data on courses taken by high school students for dual credit. With new and improved data collection procedures underway, TEA and THECB should now concentrate on the alignment of dual credit indicators across the two data management systems. Equally important, TEA and THECB should provide better guidance for their constituencies to help them understand the meaning of terminology associated with dual enrollment

programs, so that data entered into the systems reflect the state’s operational definitions of terminology (e.g., How do you distinguish a dual credit course from a concurrent enrollment course?). These improvements should contribute substantially to studies of dual credit program quality. Going forward, the state should also require annual reports (developed jointly by TEA and THECB) that provide policymakers, educators, and the public with information on the status of dual enrollment including who participates, the nature of course taking, and outcomes.

- *Identify linkages between college courses and high school academic foundation courses, especially the courses that require EOC assessments.* The possibility of waiving EOC assessments becomes a question of how to ensure the quality, rigor, and consistency of courses taken for dual credit. Existing mechanisms rest largely on self-policing by school districts, colleges, and universities. High school principals and other designated school district officials are responsible for determining whether a dual credit course exceeds the TEKS for the corresponding EOC assessment course. They base their decisions on the course materials provided to them (mainly college syllabi and reading lists) and may have little experience in the specific subject matter of the course. More importantly, there is no oversight to ensure that high school principals are interpreting the rules consistently. Undoubtedly, some principals are approving courses for dual credit that other principals would not approve.

Colleges and universities are responsible for ensuring that dual credit courses are equivalent to regular college courses in all meaningful respects. Dual credit faculty, like non-dual credit faculty, may have considerable discretion over course content and rigor. There are procedures in place to provide institutional oversight when a course is first approved, but routine updates to the syllabus are not subject to oversight in many IHEs. As the state audit of community colleges revealed, very few of the colleges are fulfilling their obligation for overseeing the instructional quality of dual enrollment courses. Course monitoring certainly needs to be improved, but TEA and THECB should also work together to assess the feasibility of creating course “crosswalks” or other academic course equivalency lists. This would be an important first step toward improving the consistency of students’ dual credit course experiences.

- *Improve the specificity and effectiveness of institutional agreements between higher education institutions and school districts for dual credit programs.* Texas school districts and IHEs need more overt guidance in constructing effective institutional agreements and partnerships. This guidance might include the provision of informational manuals and exemplar institutional agreements to help partner institutions address the nine required elements. Research studies of the Early College High School model and TEA’s

experience managing implementation of model schools have identified principles that characterize effective secondary and postsecondary partnerships (Hoffman, Vargas, & Santos, 2008; Texas Early College High School model design, Appendix B). These research-based design principles are applicable to other dual credit programs in the state. Especially relevant to students' success in dual credit courses and their informed choices about programs of study are partnership agreements that clearly specify responsibilities for student academic and social supports, and agreements that identify dual credit course pathways leading to career certificates or general education courses that apply to degrees at two-year institutions or are transferrable to four-year institutions. TEA and THECB should also collect and review representative samples of institutional agreements in order to monitor the quality of partnership agreements developed and to offer general recommendations to school districts and IHEs for improvement.

- *Provide greater monitoring and oversight of dual credit courses.* As noted previously, although colleges are responsible for overseeing the instructional quality of dual enrollment courses, many community colleges need to improve their monitoring and evaluation of dual credit teachers and courses. THECB should provide oversight for improved course monitoring at both community colleges and universities. As dual credit programs continue to expand, additional audits or studies of programs will be needed to monitor compliance with TAC rules and regulations.
- *Enhance communication among education sectors.* TEA and THECB should work collaboratively to create informational resources with consolidated information from the public education and higher education perspectives that will improve communication among education sectors and increase understanding of dual credit program requirements and best practices. A dual enrollment website should be created so that informational resources can be housed in one location. In addition to a comprehensive description of the state's dual enrollment program, links should be provided to specific information useful to public school educators, higher education personnel, students, and parents. The state's Early College High School program website (<http://www.txechs.com>) provides an example of how explicit information on dual enrollment can be crafted for stakeholders to enhance their understanding of how to blend college and high school coursework.
- *Improve student and parent understanding of dual credit opportunities and limitations.* TEA and THECB should develop mechanisms to improve the quality of information provided for students and families on dual credit course opportunities and potential risks. As the dual enrollment program includes more students who come from families

that may not have college experiences, more informational resources and academic counseling will be required. Mechanisms could include the website described previously, as well as brochures with facts students and families need to know, and counseling initiatives such as the recently announced Texas College Advising Corps.

Recommendation 2

The Texas Legislature has asked TEA and THECB to study the feasibility of allowing students to satisfy EOC requirements by successfully completing a dual credit course through an IHE. Because such a study requires data that are not currently available, it is not possible to provide a definitive answer to the policy question posed by the legislature. Consequently, TEA and THECB should jointly develop a research plan to gather evidence to evaluate the feasibility of substituting successful completion of a course for dual credit for satisfactory performance on certain STAAR EOC assessments. Among other research inquiries, the study should address the Legislative Budget Board Staff recommendation calling for THECB to analyze the “instructional impacts on student outcomes for dual credit courses taken on high school campuses and on community college campuses” (2011, p. 471).

The study should incorporate data on dual credit coursework from new and expanded data sources, including THECB’s student-level course records, TEA’s expanded longitudinal data including summer course records, and scores from administrations of EOC assessments.

References

- Eklund, J. A. (2009). Exploring dual credit data alignment, student populations, and coursework patterns in Texas using a P-16 framework (Doctoral dissertation, University of Texas at Austin, 2009). Retrieved January 4, 2011, from <http://repositories.lib.utexas.edu/bitstream/handle/2152/6869/eklundj05642.pdf?sequence=2>
- Hoffman, N. & Vargas, J. (2010, September). *A policymakers' guide to early college designs supporting a strategy for achieving college readiness for all*. Boston, MA: Jobs for the Future.
- Hoffman, N., Vargas, J., & Santos, J. (2008, May). *On ramp to college: A state policymaker's guide to dual enrollment*. Boston, MA: Jobs for the Future.
- Karp, M. M., Calcagno, J. C., Hughes, K. L., Jeong, D. W., & Bailey, T. R. (2007). *The postsecondary achievement of participants in dual enrollment: An analysis of student outcomes in two states*. St Paul, MN: National Research Center for Career and Technical Education.
- Legislative Budget Board Staff (2011, January). Monitor outcomes and limit course offerings to ensure dual credit course quality. In *Texas state government effectiveness and efficiency, selected issues and recommendations* (pp. 471-475). Austin, TX: Author.
- O'Brien, D. M. & Nelson, T. D. (2004). *Strengthening college preparation and access through concurrent enrollment in high school and community college*. Dallas, TX: The University of Texas at Dallas.
- SRI International (2010, November). *Evaluation of the Texas High School Project, Second comprehensive annual report*. Menlo Park, CA: Author.
- State Auditor's Office (2010, September). *An audit report on dual credit programs at selected public school districts and higher education institutions* (Report No. 11-006). Austin, TX: Author.
- Texas Education Agency (2010). *House Bill 3 transition plan, A report to the 82nd Legislature from the Texas Education Agency*. Austin, TX: Author. Retrieved January 7, 2011, from <http://www.tea.state.tx/studentassessment/hb3plan/>
- Texas Higher Education Coordinating Board (2010). *Lower-division academic course guide manual*. Austin, TX: Author.
- Texas Higher Education Coordinating Board (n.d.). *Closing the gaps: The Texas higher education plan*. Austin, TX: Author.

Appendix A: Texas Policies Promoting College Credit Programs

Over the past several sessions, the Texas Legislature has enacted policies that have set college readiness expectations, offered districts flexibility to expand their college readiness capabilities, and provided districts financial support for college readiness. Policymakers have also authorized programs and policies that promote opportunities for high school students to earn college credits. The following key legislation addresses those policy strategies.

1993 – 73rd Texas Legislature

- *SB 654* establishes the *Advanced Placement Incentives Program* allowing a school to receive a \$3,000 equipment grant for an Advanced Placement (AP) course and \$100 for each student who scores three or better on the AP exam.

1995 – 74th Texas Legislature

- *SB 1* expands the *Advanced Placement Incentives Program* authorizing districts to receive up to \$100 per student for satisfactory scores on AP and/or International Baccalaureate (IB) exams, as well as other kinds of awards for teachers and schools.
- *SB 1* sets goals and mandates a state plan for *career and technology education*.
- *SB 1* allows courses for *joint high school and junior college credit* and authorizes the commissioner to implement mechanisms to avoid duplication of state funding.

2003 – 78th Texas Legislature

- *HB 415* allows both high schools and colleges to receive *funding for teaching dual credit*. This policy supports the role of both high schools and colleges in providing dual credit opportunities to students while serving as an incentive to build dual credit relationships.
- *SB 976* establishes the *Middle College Education Pilot* to enable students who are at risk of dropping out of school or who wish to accelerate high school completion to take combination high school and college-level courses during Grades 11 and 12 in order to complete high school with a high school diploma and a college Associate degree.

2005 – 79th Texas Legislature

- *SB 1146 (2005)* amends earlier legislation creating the Middle College Education Pilot (*SB 976*) by establishing the *Early College High School (ECHS) program*, an innovative school model targeting at-risk students who would not otherwise consider attending college and students who wish to accelerate. This model provides these students with an opportunity to take courses, beginning at Grade 9, which allow them to receive high school and college credit simultaneously in order to earn a diploma and an Associate degree or up to 60 college credit hours toward a Baccalaureate degree by the time they graduate from high school.
- *Executive Order RP53 (2005)* calls for the creation of *Texas Science, Technology, Engineering, and Mathematics (T-STEM) Academies* throughout the state that will prepare secondary school students to enroll in college in STEM fields.
- *HB 1 (3rd Called Special Session, 2005)* establishes the *College Credit Program* requiring all districts by the 2008-2009 school year to offer students an opportunity to earn a minimum of 12

college credit hours through AP, IB, dual credit, and advanced technical credit courses, including locally articulated courses.

- *HB 1 (3rd Called Special Session, 2005)* calls for development of *College and Career Readiness Standards* designed to specify what students must know and be able to do to succeed in entry-level college courses.
- *HB 1 (3rd Called Special Session, 2005)* requires students to complete a “four-by-four” curriculum, consisting of four years each of English, mathematics, science, and social studies, in order to graduate under the Recommended or Advanced high school programs. HB 1 also calls for the State Board of Education to *incorporate the College Readiness Standards into the Texas Essential Knowledge and Skills (TEKS)*.
- *HB 1 (3rd Called Special Session, 2005)* establishes the *High School Allotment*, which provides each district an allotment based on \$275 per student in Grades 9-12 to support initiatives in Grades 6-12, to administer a college readiness program that provides academic support for underachieving students for entrance into an institution of higher education and provides opportunities for all students to take academically rigorous coursework.

2007 – 80th Texas Legislature

- *SB 1031* replaces the Texas Assessment of Knowledge and Skills (TAKS) tests in Grades 9-12 with *end-of-course (EOC) assessments* in core subjects, which are required to include a measure of students’ college readiness.
- *HB 1137* allows *individuals up to age 26 to attend public schools*, thereby enabling districts to continue serving students at risk of not graduating and to re-engage students who have dropped out. This policy has been employed by districts to recover students who have dropped out and assist them to prepare for college by earning a GED, passing one of the Texas State Initiative’s college entrance tests, and completing a core college course.
- *SB 1788* establishes the *Texas Virtual School Network* that provides online high school and dual credit courses for students.

2009 – 81th Texas Legislature

- General Appropriations Act (GAA), Article III, Rider 42(j), “Student Success Initiative” provides funds for the *College Preparation Assessments Program*, established in 2007 (SB 1031), by authorizing the state to pay for nationally recognized college readiness assessments for students in Grade 8 to diagnose academic strengths and deficiencies before entering high school, for students in Grade 10 to determine readiness for college and the workplace, and for students in Grades 11 and 12 to take a college entrance exam for admission to college.
- *HB 3* calls for the Texas Education Agency (TEA) and Texas Higher Education Coordinating Board (THECB) to establish *college readiness performance standards* for Algebra II and English III EOC assessments that indicate a student is prepared to succeed, without remediation, in entry-level college courses.
- *HB 3646* provides a per-pupil allotment of \$400 to a district providing a high school or dual credit course through the *Texas Virtual Student Network* and \$80 to a district whose students are enrolled in the course. These per-pupil allotments are provided only for students successfully completing the virtual school network course.

Appendix B: Overview of Early College High Schools in Texas

Description

Early College High Schools (ECHSs) are small, innovative high schools that allow students least likely to attend college, an opportunity to earn a high school diploma and two years of college credit at no cost to the student. Located on or in close proximity to a college campus, ECHSs ease the transition from high school to college by blending the high school and college. As defined by the 79th Texas Legislature (Senate Bill 1146, 2005), ECHSs are for students who are at risk of dropping out of high school or who wish to accelerate completion of the high school program. The target population includes first-generation college-goers, low-income students, students of color, and English language learners.

ECHSs are purposefully designed to provide students with a personalized, blended, and supportive program that introduces college-level skills and course work beginning in Grade 9 and gives students an opportunity to earn either an Associate's degree or up to 60 college credit hours in addition to a high school diploma. Students accrue college hours through some mix of dual credit, Advanced Placement, and International Baccalaureate classes. At the same time, students are provided with support structures, including counseling, mentoring, and tutoring, designed to help them succeed. The overall goal of ECHSs is to create a seamless transition between high school and college by compressing the timeline for and increasing opportunities to obtain a college degree (Texas Early College High School website, <http://www.txechs.com/>).

Currently, Texas has 49 ECHSs, including 5 schools with hybrid T-STEM (Texas Science, Technology, Engineering and Mathematics) and ECHS programs. These schools serve about 10,000 students (Texas Education Agency [TEA] program records, November 2010). TEA and private funders have invested approximately \$19.8 million in grants to establish these schools (TEA, September 2010).

Early College High School Model Design

Each ECHS must serve students in Grades 9-12 and may also serve students in Grades 6, 7, and 8. The ECHS must be small, serving no more than 100 students per grade level in Grades 9-12 and between 40 and 60 students per grade level in lower grades. An ECHS requires a school district to partner with an institution of higher education (IHE) to design a school that transforms the traditional curriculum sequence and instructional approach to allow for a closer alignment between high school and college. By working in close partnership, districts and IHEs can serve students in a more personalized and efficient manner to promote higher levels of student success. Working in close partnership requires and creates the following essential design features:

- *Shared vision and understanding of roles and responsibilities*, including expectations for students and parents, and Memorandum of Understanding (MOU) between education partners;
- *A culture of learning and support*, including a focus on rigorous instruction and accelerated coursework; a college-going culture that provides high school students with access to college facilities and services; student support systems including tutoring, counseling, and mentoring; and collaborative teaching and professional development; and
- *A focus on outcomes*, including increased high school graduation and retention for students at risk of not graduating, reduced barriers to college access for first-generation college-goers, and increased attainment of postsecondary education and training. Information from <http://www.txechs.com/> and Early College High School, Cycle 4 Grant application at <http://burleson.tea.state.tx.us/GrantOpportunities/forms/GrantProgramSearch.aspx>

Differences between Early College High Schools and Dual Credit Programs

ECHSs are different from other dual credit programs in whom they serve and how they serve that population. A typical dual credit program offers between 12 and 30 hours of college credit for students at a regular high school, usually students in Grades 11-12 who have demonstrated readiness for college-level work. In contrast, ECHSs are small high schools, often located on a college campus and focused on a population of students who are traditionally lost in transition between high school and college. ECHSs approved by TEA can apply for and receive an exemption from dual credit restrictions through the Texas Higher Education Coordinating Board (THECB) allowing students to begin college courses based on their performance, possibly as early as Grade 9. ECHSs are required by state statute to offer students opportunities to earn 60 semester credit hours at no cost to students, whereas traditional high schools may cover part or all of the cost for tuition, fees, textbooks, and transportation for students in dual credit courses. As a result, students in regular dual credit programs may pay full, part, or none of the costs for a dual credit course. The state and private entities also provide substantial and explicit supports for ECHSs, as described in the section to follow. In contrast, traditional public school districts and high schools have modest state-level supports for their dual credit programs.

Early College High School Designation

In order to operate as a TEA-approved ECHS, a public school district and its partnering IHE must seek and receive Early College High School Designation from the TEA (Texas Education Code §29.908(b) and Texas Administrative Code (TAC) §102.1091). In order to receive the ECHS designation, a school must be designed and implemented using Early College High School Design Elements. The intent of this designation process is to ensure that public school districts and their partnering IHEs maintain the integrity of the model, which has been researched and designed to target, enroll, and serve students who may not otherwise consider attending college (TEA, Application for Early College High School Designation, 2010).

Schools that receive the ECHS Designation will receive a number of benefits including, recognition as an approved ECHS; eligibility for exemption from dual credit restrictions; and eligibility for state programs designed by the Texas Legislature, TEA and THECB to target ECHSs. Examples of state programs include: (a) Optional Flexible School Day, a flexible method of attendance accounting that allows flexibility in the number of hours and days each week a student attends; (b) special events (ECHS Convenings) hosted by TEA and THECB for ECHS administrators and principals to provide input on policies and procedures that impact ECHSs; (c) membership in the ECHS Network convened periodically by TEA, THECB, Communities Foundation of Texas (CFT)/Texas High School Project (THSP) for principals, teachers, and students in ECHSs to network and share best practices through conferences and technical assistance sessions; and (d) access to professional development and technical assistance from Site Design Coaches with experience facilitating the design and implementation of ECHSs, and opportunities to attend high-quality, on-site professional development and training provided by nationally-recognized technical assistance providers such as Jobs for the Future and the CFT/THSP (see <http://www.txechs.com/>).

Additional Information

Additional information about Texas ECHSs is available on TEA's website at http://www.tea.state.tx.us/index2.aspx?id=4464&menu_id=814 and the Texas Early College High School website at <http://www.txechs.com/>



1701 N. Congress Avenue
Austin, Texas 78701-1494

GE11 705 04
January 2011