

**Dual Credit Courses and Legislation: Does Public Policy Align with Academic Outcomes?****Randall Bowden, PhD** (corresponding author)

Professor & Department Head

Department of Educational Leadership & Technology

College of Education

Tarleton State University

Email: rbowden@tarleton.edu

United State of America

Michelle Klmitchek, EdD

Industrial Independent School District

Superintendent

167 Fifth Street

PO Box 369, Vanderbilt, TX 77991

Email: mklmitchek@industrialisd.org

United State of America

ABSTRACT

The opportunity to earn college credit while in high school is an attractive option for high school students to start a college career. The process is referred to as dual credit courses. In 2015 Texas law from House Bill 505 allows for high school freshmen and sophomores to take college courses to increase certificate and degree completion, thus meeting the goals of the Texas higher education masterplan. The purpose of the study was to examine how student characteristics among 9th, 10th, 11th, and 12th-grade high school students relate to academic success in a dual credit environment. However, results showed a lack of participation grounded in the foundation of House Bill 505. Results of statistical and policy analyses show the law falls short of its intended outcomes and may have adverse effects.

Keywords: public policy, dual credit, student success, college credit, high school**Introduction**

The opportunity to earn college credit while in high school is an attractive option for Texas high school students to jumpstart a college career. The process is referred to as dual credit courses. While dual credit began as a local educational option close to 50 years ago, it has evolved into a major educational component for high schools nationwide (Kim, Kirby, & Bragg, 2004). But in the state of Texas, USA, the stakes are high. According to the state's higher education strategic plan, 60x30TX strives for 60% of 25 to 34-year-old Texas residents to obtain a college degree or certificate by the year 2030 (Texas Higher Education Strategic Plan, 2015). The plan "is essential to the future prosperity of Texas" (p. v) for an educated, skilled workforce. Furthermore, it provides an indicator as to the economic health of the state and its relation to global competitiveness.

Background

To put things in perspective, Texas, as a state, ranks among the world's largest national economies. Its gross domestic product (GDP) was over \$17 trillion in 2017, making it nearly a quarter of the world's global economy. Texas has a \$1.6 trillion economy, which is larger than Russia (Stebbins & Suneson, 17 April 2019). According to the Census Bureau,

Texas has 30 million residents, covering 261,231 square miles, with 83% having a high school diploma and 29% with a bachelor's degree (Texas Quick Facts, n.d.). Thus, 60x30TX is important to Texas because "when ranked as a country, places ahead of Australia, Korea, and Spain. With changes in technology and like how we work, Texas can only keep this level of economic prosperity by having a more educated workforce" (Why 60x30TX, n.d.).

To help achieve the goals of the Plan the Texas Legislature passed House Bill 505 (2015). Signed into law, HB 505 significantly reduced the required minimum high school grade level to enroll in dual credit courses in Texas. A previous statute required students to be entering the 11th or 12th grade before dual credit eligibility. Beginning with the fall 2015 semester, students entering high school as freshmen and sophomores (9th & 10th grades) are eligible to take dual credit courses.

To increase the number of college students, the Texas Legislature essentially continues to push the age of first time college-going. Giani, Alexander, and Reyes (2014) pointed to a lack of significant studies, which take into account numerous policy changes enacted by state legislators as evidence to support dual credit not providing the success opportunities for



which a program was originally designed. It remains to be seen if this will impact first-time dual credit students' academic success.

Age effect can be a critical factor. Typical first-time freshmen attending college immediately after high school graduation are 18 or 19 years of age. A high school freshman is typically 14 years of age and a high school sophomore is 15. According to Chagas and Fernandae (2011), higher education institutions struggle to find ways to retain students after an unsuccessful first semester, especially if students are under the age of 21 years. Amro, Mundy, and Kupczynski (2015) found evidence supporting the theory that age plays a significant factor in first-time college student success.

Purpose of the Study

The downward expansion of dual credit coursework to include high school freshmen and sophomores poses obstacles. While Texas colleges are mandated by House Bill 505 (2015) to provide dual credit coursework to younger students, public Texas high schools have the flexibility to decide which dual credit course offerings will be provided. However, there is limited evidence to support college-level success for high school freshmen and sophomores. For districts across the state, the impact of this decision could result in a negative effect on students in their high school careers (Tobolowsky & Allen, 2016).

The call by the Texas Higher Education Coordinating Board (2016) for increased student enrolment in postsecondary educational institutions by the Closing the Gaps (Texas' previous strategic plan) initiative fell short of the original goal. As 60x30TX was implemented, legislators supported the plan with the passage of House Bill 505. In hopes of gaining an even larger dual credit population, House Bill 505 lifted previous restrictions by allowing high school freshmen and sophomores to enroll in dual credit courses and remove all restrictions limiting the number of credit hours a dual credit student can take while in high school. While there is evidence that supports the student in 11th and 12th grades, typically ages 16 and 17, do well in dual credit courses, there is no such evidence to support the inclusion of students in 9th and 10th grades, typically ages 14 and 15.

The purpose of the study was to examine how student characteristics among 9th, 10th, 11th, and 12th-grade high school students relate to academic success in the first attempt in a dual credit environment. However, the foundation of the problem assesses the effectiveness of House Bill 505 allowing 14 and 15-year-old high school students to take college-level courses in an attempt to promote an educated, skilled workforce by 2030. Students pursuing degrees and certificates are to possess marketable skills for an educated workforce. "For Texas to solve problems and address public concerns now and in the future, it must have a large workforce with the skills and knowledge to push the state forward" (Texas Higher

Education Strategic Plan, 2015, p. vi). The overarching question is, how effective is House Bill 505?

Theoretical Framework

The legislative change in dual credit will create a scenario in which a student's first college semester could be completed at the age of 14 or 15 years old while attending a local high school. According to Astin's Theory of Student Persistence (1993), this semester is crucial to the academic future of students. The framework for Astin's theory includes three elements: inputs; environments; and outcomes. Input can refer to high school courses, career choice, reasons for attending college, religious preference, parental occupation, parental income, parental education level, race, ethnicity, age, gender, and marital status. Environmental can include institutional characteristics, peer group characteristics, socioeconomic status, academic preparation, faculty characteristics, curriculum, major of study, place of residence, and student involvement. The outcome is characteristics, knowledge, attitudes, beliefs, and values that exist after a student has graduated.

Research Questions

There are two major variables for the study. First, student characteristics are the independent variable. It refers to the year in high school (freshman, sophomore, junior, or senior), gender, and high school size. The second is the dependent variable, academic success. Academic success is passing scores in English, mathematics, and history dual credit courses.

1. To what extent does the student characteristic of year in high school relate to success in passing a dual credit course on students' first attempt?
2. To what extent does the student characteristic of gender relate to success in passing a dual credit course on students' first attempt?
3. To what extent does the student characteristic of high school size relate to success in passing a dual credit course on students' first attempt?
4. Are student characteristics proportionate to grades among dual credit student's first attempt in an English course according to student characteristics?
5. Are student characteristics proportionate to grades among dual credit student's first attempt in a mathematics course according to student characteristics?
6. Are student characteristics proportionate to grades among dual credit student's first attempt in a history course according to student characteristics?

Public high schools have the flexibility to decide whether they allow high school freshmen and sophomores to participate in dual credit course offerings (Texas Administrative Code 19, Chapter 74, Subchapter C, Section 25). Often, high schools offer basic core coursework, such as English, history, and college algebra. As students and parents begin to



understand the benefits of dual credit, their demand for additional course inventory in dual credit curriculum increases, too (An, 2013). HB 505 is another step in public policy to promote early college participation.

Methodology

The study used data collected from a south Texas community college. It serves high schools of varying sizes located in seven south Texas counties. The data consisted of students enrolled in public high schools. According to the Texas Higher Education Coordinating Board college admissions standards, collection of projected high school graduation date (used in determining the year in high school at the time of enrollment), gender, and high school attended (used for determining high school size), are standard data collected for all students upon admission to a Texas community college. Age is not considered since House Bill 505 pertains to the year in high school. Additionally, age does not necessarily correlate to the year in high school. The participants were classified as high school freshmen, sophomores, juniors, or seniors and freshmen could be as young as 14 years old. Although age is not a variable, it does raise concern: Are high school freshmen and sophomores academically prepared for college courses?

A series of chi-square tests were used to examine the relationship between the year in high school, gender, school size, and students' pass/fail of courses. For research questions, one through three, a chi-square of independence was used. This test was used to understand whether the year in high school, gender, and school size were related to students' performance in the courses as pass/fail.

For research questions, four through six, a chi-square of proportion was used. Since House Bill 505 is tied to 60x30TX, the indication is that the state legislature would expect to track student progress and academic success. This could give insight into the success of the law and at what year in high school, gender, and high school size, as well as certain courses. There were 826 cases from 2015 through 2017. However, when the data were submitted from the community college, there were only 10 cases involving freshman and sophomores. This prompted a modified methodology.

Modified Methodology

Modifications were made to the study. First, the community college was contacted to inquire about additional data from freshmen and sophomore's participation in dual credit courses. There were no data. Second, research questions four through six were revised and logistic regression was used to predict juniors' and seniors' academic success in dual credit courses. Third, the lack of adequate participation data for freshmen and sophomores prompted an inquiry to the Texas Higher Education Coordinating Board regarding the acquisition of state-wide data. Year in high school data for dual credit students is not gathered on a state-wide basis. The state does not track whether HB 505, allowing freshmen and

sophomore high school students to take college courses, is effective or not. With the lack of state, data conclusions were drawn from a public policy discussion. The discussion was framed in Fowler's 6-stage model (2013): (a) Issue Definition; (b) Agenda Setting; (c) Policy Formulation; (d) Policy Adoption; (e) Implementation; and (f) Evaluation.

Results

Where statistical analyses could be completed, results are mixed regarding the relationship between student characteristics of year in high school, gender, and school size and student success in the first attempt in a dual credit course of either English, history, or mathematics. Furthermore, this inquiry revealed the state does not collect year in high school data on high school dual credit students. The state's data on dual credit students only require minimal coding, indicating only if a student is a dual credit student or not. The year in high school is a data point not collected at the state level. This information should raise concerns for state legislators. Moreover, the lack of a state-wide systematic data collection process to provide in-depth, effective analysis raises concerns. Texas legislators will, at some point, need to reconsider this decision to make continued improvements to the dual credit program in Texas.

Statistical Results

Research question one examined year in high school related to success in passing a dual credit course on students' first attempt. There was statistical significance among student's year in high school for passing a dual credit course in English: $X^2(1, 341) = 9.438, p < .01$. Seniors were more likely to pass a dual credit English course but the effect size was small .153. There was no statistical significance among students' year in high school for passing a dual credit course in history: $X^2(1, 341) = 2.645, p = .151$. There was a small effect size, .088. There was no statistical significance among students' year in high school for passing a dual credit course in mathematics: $X^2(1, 341) = 4.266, p = .100$. There was a small effect size, .247.

Research question two addressed gender related to success in passing a dual credit course on students' first attempt. There was no statistical significance among students' gender for passing a dual credit course in English: $X^2(1, 405) = 2.382, p = .140$. There was a small effect size, .077. There was no statistical significance among students' gender for passing a dual credit course in history: $X^2(1, 405) = 1.369, p = .242$. There was a small effect size, .063. There was no statistical significance among students' gender for passing a dual credit course in mathematics: $X^2(1, 405) = 1.543, p = .546$. There was a small effect size, .148.

Research question three examined student characteristic of high school size relate to success in passing a dual credit course on students' first attempt. There were too few cases in high school sizes 1A and 2A for analyses.



Therefore, categories were recoded: 1A, 2A, and 3A = school size small; 4A and 5A = school size large. There was no statistical significance among school size for students for passing a dual credit course in English: $X^2(1, 405) = 1.373, p = .277$. There was a small effect size, .241. There was statistical significance among school size for students passing a dual credit course in history. Small school size and large school size were independent of each other in passing or failing a history course: $X^2(1, 341) = 13.256, p < .001$. Students at larger schools were more likely to pass history than those at smaller schools. The effect size was small, .197. There was no statistical significance among school size for students passing a dual credit course in mathematics: $X^2(1, 70) = 2.007, p = .169$. There was a small effect size of .169.

Results of Revised Research Questions 4-6

Data were not available for freshmen and sophomores, therefore a different statistical analysis was used. Even though the state of Texas mandated that schools provide dual credit courses for high school freshmen, sophomores, juniors, and seniors, the state did not require agencies to collect data. Consequently, the research questions were revised to centre on the general question: “How do student characteristics predict high school students’ success in dual credit English, history, and mathematics courses?” To analyze the data for the question logistic regression was used for analysis.

Research question four looked at student characteristics prediction of high school students’ success in dual credit English courses. The omnibus test of model coefficients showed the overall model performed well: $X^2(3, 405) = 11.035, p < .05$. However, the Hosmer and Lemeshow test does not confirm the adequacy of the model: $X^2(4, 405) = 9.733, p < .05$. Additionally, the model only explains approximately 3% to 9% of student success: -2 Log likelihood = 136.239, Cox and Snell R-Square = .027, and Nagelkerke R-Square = .088. The current pass rate 95.6% and the predicted pass rate remained the same, 95.6%. Overall, student characteristics serve as predictors for student success in English dual credit classes: Wald $X^2(1, 405) = 161.903, p < .001$. Year in High School for English can predict success as it stands alone, whereas, gender and school size do not. Additionally, the B values for statistically significant predictors show the direction and likelihood of academic success. The higher the number and the positive direction indicate the greater the proportion of students in those categories the more likely they are not to be successful. Moreover, the Exp(B) value indicates the odds of being successful. Those students in the year in the high school category are likely to be successful. The higher the value (greater than 1) the likely they are to be successful. Taken in conjunction with the chi-square analysis, seniors are more likely to be successful than juniors.

Table 1
Student characteristics as predictors of student success (N = 405).

| Characteristic | B | df | Wald X^2 | p | SE | Exp (B) |
|----------------|-------|----|------------|------|------|---------|
| Yr. in School | 1.439 | 1 | 8.322 | .004 | .499 | 4.215 |
| Gender | -.710 | 1 | 2.060 | .151 | .495 | .491 |
| Size of School | .580 | 1 | 1.297 | .255 | .509 | 1.786 |
| Constant | 1.981 | 1 | 11.631 | .001 | .581 | 7.251 |

General Conclusions

The study was guided by Alexander Astin’s Theory of Student Involvement, which is an umbrella theory covering student persistence. Astin (1993) identified a conceptual framework for examining student outcomes, the I-E-O Model. This model explains three elements: (a) Inputs; (b) Environments; and (c) Outcomes.

Inputs

Specific inputs for this study, gender, year in school, and school size showed student characteristics can assist educators in understanding opportunities for academic success in first-time dual credit courses. The results showed interaction that all three inputs played a significant role in the success of a student’s first attempt in a dual credit mathematics course. While this study examined three inputs, it is important to realize there are so many more inputs with the potential to be impactful on first time dual credit course attempts. Traditional

inputs result in small impacts, suggesting broader definitions to be examined (Parker et al., 2004). As public policy drives curricular issues more and more (e.g., H.B. 505), the inputs are expanding. Inputs, such as the year in high school, high school diploma completion progress, course sequence, and dual credit availability become increasingly important for student success. With high school freshmen and sophomores eligible for college courses, it raises other concerns, such as cognitive ability and maturity. While the cognitive abilities of students in different high school classifications can be similar, the maturity levels can have large variances. Maturity levels of high school freshmen and sophomores may not be at a level of collegiate discussion. Parker et al. (2004) argued the potential for developmental change emotionally in students in the duration from grades 9 to 12 as significant enough to provide large impacts on school attendance, school involvement, and



completing school work which, in turn, affect academic performance.

While the broad goal of 60x30TX is to increase these numbers, it will be difficult for student enrolment to increase as colleges continue to offer primarily the same dual credit courses each semester. It is easy for a student to enroll in foundational English, history, and mathematics dual credit courses. It is more difficult to take anything outside these basic courses due to a lack of course offerings for dual credit students. A recent study of dual credit courses in high schools offering minimal basic courses is creating a limiting effect on student's progression through college and maybe creating a stopgap barrier once students complete the initial basics and have no other options (Taylor, 2015). Colleges and high schools have yet to master the logistics of offering dual credit courses that fall outside of these basic core courses. Schools have not been able to configure high school schedules to meet the college schedules that include time for a lengthy lab class. If dual credit options are truly going to continue to expand for high school students, high schools and colleges will need to be willing to adjust their schedules in such a way that truly encourages student participation in all classes.

Environment

Evaluating environmental issues can be difficult as each variable can independently be significant or a combination of them can be reflected in outcome measures. For this study, environmental issues including, but not limited to, course structure, faculty credentials, course delivery, tuition, and approval to enroll by high school administrators. According to Astin (1993), environmental issues hold a certain degree of interpretive difficulties as perceptions due to personal preferences for different variables exist.

Environmental measures, according to Astin (1993), are different aspects of a student's college experience that can impact both cognitive and emotional outcomes. The Theory of Student Involvement categorizes over 160 environmental measures into six general categories: (a) characteristics of institutions; (b) curriculum; (c) faculty; (d) peer groups; (e) residence, major, and financial aid; and (e) student involvement. While Astin asserted educational administrators have the most control over environmental measures, the challenge in the dual credit program in Texas is in the inability to provide a similar structure in high schools across the state.

House Bill 505 is not concerned with structure, therefore schools, colleges, and universities can determine the locale, setting, and classroom assignment. While these environmental issues may relate to student success, there is no standardized approach. Thus, courses could be held on a high school campus or college campus, or other approved locations. The concern is not where courses are held, but that they are available.

As outlined in the results, a student's year in high school is an input characteristic that is impactful in a student's first attempt in a dual credit English course. Likewise, school size and year in school are input characteristics affecting the success in a student's first attempt in a dual credit history course. School size, specifically, was an important factor for success in dual credit history courses. Lavy, Silva, and Weinhardt (2012) found larger peer groups, especially those identified as academically advanced were more likely to have a positive interaction, both emotionally and academically. While school size is input, the peer group is an environmental measure directly affected by that input. It is important to remember environmental measures for high school students, while they still fall into the same six general categories (Astin, 1993), will have noticeable differences from those of their full-time college student peers.

Dual credit students are, for the most part, not physically located on the college campus, proving it quite difficult to become involved in college student activities. According to Bergen-Cico and Viscomi (2011), the experience of being physically located on a college campus, having opportunities to engage in meaningful events, and building substantial social networks are richly beneficial in students' academic success. Often, students are never even required to physically step foot on a college campus, making it easy to not only take courses from anywhere, but it is possible to be enrolled in multiple colleges at the same time to take as many courses as desired. By contrast, how high schools operate remains largely unchanged over the past 15 years. Students arrive at school early in the morning and remain throughout the day. The differences in the characteristics of college campuses and schools are vast, yet there seems to be no meaningful effort to merge the two styles. Supporting different institutional characteristics is not conducive to an optimum learning environment. Student learning styles, active or reflective, go hand in hand with the learning environment that is established. Zhan, Xu, and Ye (2011) found that face-to-face and on-line course environments each contribute differently to each style, thus creating different challenges to produce the optimal learning environment.

Outcomes

Outcome measures include a student's characteristics after taking a dual credit course. This could be measured in the students' willingness to take additional dual credit courses after completion of their first course. As noted in the results, a student's first attempt in a dual credit mathematics course is reliant on the interaction of all three inputs examined in this study. It is conceivable to question whether students will be successful in subsequent mathematics courses as the dynamics of inputs are subject to change. The same also holds for subsequent dual credit English courses in which year in high school is likely to change. Outcome measures, attitudes, and



values, for students, are likely to change based on their previous experiences in dual credit courses. This raises even greater concern for freshmen and sophomores. Pascarella and Terenzini (2016) wrote that grades are the number one indicator of college success. How well high school freshmen and sophomores perform in dual credit courses may speak to how they will view college as a whole. Whereas HB 505 includes freshmen and sophomores in dual credit courses for college and the grade has the potential to serve as a motivator or discouragement for future college attendance. The lack of data collected by the state, then, not only limits the insights of the performance of the bill but suggests it constrains opportunities to predict college participation and success. Moreover, grades are only one aspect of student outcomes.

Outcome measures are classified as either psychological or behavioral and categorized as affective or cognitive (Astin, 1993). House Bill 505 is solely cognitive-based, meaning the outcome measure is a pass or fail only standard. The bill falls short in requiring the state to collect data on the effectiveness of this policy by not mandating more effective outcome measures that would provide more substantive information regarding the effectiveness of the policy.

House Bill 505 mandates that schools provide opportunities for freshmen and sophomores to take dual credit courses but does not require state agencies to collect data. With the lack of data, the phenomenon needs further exploration. This can be done by framing the issue through the lens of public policy. "Public policy is the dynamic and value-laden process through which a political system handles a public problem" (Fowler, 2013, p. 5). As a matter of public policy, HB 505 was examined with Fowler's 6-stage model (2013): (a) Issue Definition; (b) Agenda Setting; (c) Policy Formulation; (d) Policy Adoption; (e) Implementation; and (f) Evaluation.

Public Policy

With a review of individual policy stages for House Bill 505, it becomes apparent Texas legislators were not concerned about how the bill performed, but with how high school freshmen and sophomores contribute to the success of 60x30TX. Even so, the information shows the extent to where freshmen and sophomores were involved in dual credit courses state-wide. Whatever the case, the lack of data collection for the evaluation stage negates any opportunity to evaluate either the downfall or success of the dual credit program.

Issue Definition

As Fowler (2013) asserted, issue definition is the process that transforms a problem into an issue which the government can address. In terms of House Bill 505, the problem was the shortfall of college enrolment during the final report of Closing the Gaps (2015). While the bill provides an opportunity to begin taking dual credit courses much earlier in high school and lifts restrictions limiting the number of dual

credit courses, the results of this study point to an unrealistic vision put forth. High school freshmen and sophomores neither have the flexibility in their schedules nor a solid academically high school foundation to consider enrolling in college-level courses. Furthermore, freshmen and sophomores typically have less flexibility in their schedules, creating very few options for obtaining course credit should a student fail a dual credit course. It appears high school freshmen and sophomores are not enrolling in dual credit courses at the rate which the policymakers had intended or hoped to question the validity of the underlying issue definition of House Bill 505.

Agenda Setting

Policy agendas are comprised of issues under serious discussion that has the attention of policymakers. Because Closing the Gaps (2015) was a 15-year initiative that fell short of its checkpoint goals along the way, increasing college enrolment has been an issue for state policymakers for almost two decades. Fowler (2013) described triggering events that can occur which likely move issues to policy agendas. Often these events remain on the agenda for years, as in the case of the 15-year Closing the Gaps initiative, which was a triggering event. The agenda of House Bill 505 seems to point at providing an avenue for the long-term college attainment initiative, 60x30TX. House Bill 505 seeks to allow as many students as possible to enroll in college-level courses to raise the overall enrolment headcount.

Policy Formulation

Policy formation consists of developing policy language, which outlines specific details. This is the process in which rules guiding policy are defined (Fowler, 2013). Policy formation is a conservative process, meaning it is designed to be lengthy and difficult to ensure commitment on the part of lawmakers and allow ample time for revisions. One of the shortfalls of the policy is that the bill and rulemaking agency (Texas Higher Education Coordinating Board), did not include key reporting provisions. Although the bill aimed at increasing college participation according to 60x30TX, there were no formalized recording mechanisms in place. Data collection and analyses, results, reporting, information distribution, and accountability standards are not available. Although the bill is tied to the higher education master plan, its formulation did not account for how to assess participation or completion rates.

Policy Adoption

Fowler (2013) stated that legislators working with government officials, lobbyists, and professional organizations are three major ways in which policy moves from formulation to adoption. Both the House and Senate adopted House Bill 505 without a single opposition vote. The governor signed the bill and House Bill 505 became effective as law immediately. Since there was no funding tied to the implementation of House Bill 505, it was not an obstacle for this bill (2015). The bill was never sent back to the committee, giving the



impression that all lawmakers gave their approval. The only revision made to House Bill 505 was in the proposed amendment which broadens the scope of House Bill 505 by expanding the program to include high school freshmen and sophomores and was subsequently added to the final bill.

Implementation

House Bill 505 was implemented primarily through the Texas Higher Education Coordinating Board. Since the bill relates to high school students taking college-level courses, the Texas Education Agency must work collaboratively with the Texas Higher Education Coordinating Board to ensure seamless implementation. The Texas Education Agency was not required to make any procedural or operational changes. Texas public schools governed by the Texas Education Agency are independent of the Texas Higher Education Coordinating Board, therefore, making the communication regarding House Bill 505 to high schools and eligible students slow, and in some cases, non-existent.

The implementation of House Bill 505 appears to be a quantitative process, meaning it is concerned with the number of students enrolling in dual credit courses and the number of dual credit courses taken. Fowler (2013) argued quantitative implementations at the state or federal level run the risk of being modified at the local level to fit local needs. Even though quantitative implementation at the state level, such as House Bill 505, is difficult to implement without a certain amount of local influence, it is possible with clear directives and guidelines. House Bill 505 does not provide any assistance for implementation, thus leaving local school districts and colleges and universities with experimenting with many different models to find what is most effective.

Evaluation

Policy evaluation can take on many forms. There are policy advocates who would argue policy development is a process that provides equity to those affected. They believe the mechanics of collecting ex post facto data are not only unnecessary but also can be misleading (Moore, 1995). By all appearances, Texas legislators, along with the Texas Higher Education Coordinating Board, may have the belief that House Bill 505 provided a degree of equity by allowing all high school students, no matter their classification, to enroll in dual credit coursework. The faulty logic in the decision not to acquire ex post facto data is that it cannot provide opportunities to examine successes and failures and offer revisions that may lead to beneficial improvements.

Policy success does not rest solely on the successful passage of a bill. Policy success rests on the ability to evaluate its effectiveness and the opportunities to revisit revisions (McConnell, 2010). Texas educators, both higher education and K-12 would find insight from an ex post facto analysis of House Bill 505. Such an analysis could help map a student's high school and college graduation plans. In a time when

Texas legislators are holding school officials to a high standard of success (Booher-Jennings, 2013), it would be prudent to approach high-stakes dual credit coursework as an opportunity for improvement rather than taking a chance on risking failure due to the lack of meaningful evaluations.

Whereas the potential for more college-educated Texas citizens may be eligible for the workforce, the bill falls short of whether they are prepared for the workforce. Though the metrics of 60x30TX may be achieved, the actual contribution to the workforce may not, at least initially. With the lack of data, the state may find it difficult both to justify how HB 505 contributes to the higher education master plan, 60x30TX, and how it has contributed to a prepared workforce.

Pragmatic Concerns

Community colleges struggle with student attrition at the beginning of a student's enrolment in college. Hatch and Garcia (2017) found students are at high risk within the first semester of college to drop a college course. The high attrition rate for students who have full access to college advisors is also problematic. Dual credit students without full access to college advisors may be at an even higher risk of attrition. College advisors already struggle to understand how to manage to advise resources without adding the demands of additional students all of which are located at varying high schools with no real systematic plan in place for advising.

Dual credit students have a different set of hurdles to jump than other students to progress toward college graduation on time. Dual credit courses are primarily coring subject courses including English, history, and mathematics. Many college certificates consist only of 15 or 30 college credit hours that do not include many if any, other subject matter that leads to a certificate or degree. By enrolling in the only dual credit courses available to high school students, students are jeopardizing their ability to change their course of study and continue on a path toward on-time college graduation. A student's early selection of a college major is one of the strongest contributing factors to on-time graduation (Yu & Fu, 2017).

Socialization skills are developed early in college and the college setting provides for contextualization of situations allowing students to learn appropriate cues and expected behaviors in professional and social settings (Chen & Yao, 2015). Students enrolled in dual credit courses may lose the opportunity to fully socialize with peers of their age and struggle to interact with older students. Even if college socialization issues are resolved, there is concern about maturity and developmental interaction.

Whereas previous to HB 505, only high school juniors and seniors were allowed to take dual credit college courses, the bill allows for freshmen and sophomores. This study began to look at the academic success rate of freshmen, sophomores, juniors, and seniors based on the provisions of HB 505.



However, data were neither available in the data set nor by the state. This indicated a shortcoming in the policy process. The state mandates the eligibility of high school freshmen, sophomores, juniors, and seniors, but does not require data to be collected or reported. The concern is advanced because HB 505 is tied to the state's higher education master plan, 60x30TX, to increase college graduates with a college certificate or degree.

Summary

The state of Texas wants a more educated workforce, both in terms of degrees/certificates and numbers. This is evident according to House Bill 505, 60x30TX, and the linking of the two. However, the outcome of a more educated workforce is difficult to assess given the current lack of direction by state officials. If Texas is going to be successful, its approach to the policy must be better developed.

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