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The Impact of Dual Credit on Student Success: A Mixed Methods Study at a Texas University

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**THE IMPACT OF DUAL CREDIT ON STUDENT SUCCESS: A MIXED
METHODS STUDY AT A TEXAS UNIVERSITY**

By

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Presented to the Faculty of the Graduate School of

Stephen F. Austin State University

In Partial Fulfillment

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STEPHEN F. AUSTIN STATE UNIVERSITY
(May 2024)

**THE IMPACT OF POSTSECONDARY DUAL CREDIT ON COLLEGE
SUCCESS: A MIXED METHODS STUDY AT A TEXAS UNIVERSITY**

By

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DEDICATION

I want to dedicate the dissertation to my family. Without you, I would not have achieved this dream. To my partner in life, Stephen, and our daughter, Allyster, your support helped me achieve my goals. Behind every strong woman is an even stronger man who helps catch her when she falls. Stephen, you always tell me how you admire my ambition and determination. Throughout my doctoral journey, you were always willing to step in when I asked you to so that I could complete my assignments, research, and writing. I appreciate your support. Allyster, my mini-me, you have supported me in more ways than you can imagine by being my cheerleader. Thank you for always making me smile and telling me you are proud of me. You are indeed my sunshine, and I am the luckiest person in the world to have you as a daughter. To my brother, Jeremy, you do not know how much your words of wisdom, support, and encouragement have helped me on this journey. From late-night texts to phone calls, when I wanted to talk, you listened and always inspired me to open my mind to different perspectives. For that, I am sincerely thankful. Lastly, to others in my family and friend circle, I do not know how I could have reached this point without your support. I thank you all for never giving up on me. I love you all.

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ABSTRACT

In 2015, the number of students enrolled in dual credit coursework in United States (U.S.) schools had reached over 1.4 million, a 68% increase over the previous few years (Field, 2021). By this year, 88% of U.S. high schools offered dual credit programs, and 34% of students enrolled in dual credit coursework, indicating a steady growth in dual credit programming (Rhine, 2022). Furthermore, 27% of public high school students in Texas earned credit for dual credit coursework (Villarreal, 2017). Despite significant growth in dual credit coursework offerings, limited knowledge of the effectiveness of these programs in preparing students for post-secondary success remains limited (Struhl & Vargas, 2012). This mixed methods study explored the relationships between various components of dual credit programs and the experiences of first-time undergraduate students. Specifically, the study explored the relationships between the setting and modality of dual credit coursework, student demographic factors, and the number of dual credit transfer hours and first-year undergraduate grade point average (GPA). A qualitative follow-up explored student perceptions regarding the influence of dual credit coursework on their choice of institution and major, as well as their adaptability to the college experience.

The results of a multiple regression indicated that there were no statistically significant relationships between the number of transfer hours, the modality of dual credit coursework, or the setting of dual credit coursework and students' first-year

undergraduate GPAs. Furthermore, these results did not indicate statistically significant differences in the mean GPAs of students based on student demographic factors, including gender, race, and first-generation college student status. A thematic analysis of a virtual focus group interview transcript using inductive coding revealed several themes related to students' perspectives on the influence of dual credit course enrollment on their college experience. Among these themes were academic preparation, academic support and guidance, burnout, non-academic support and guidance, access, affordability, academic and career choices, and college transition.

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CHAPTER I

Introduction

Dual enrollment is one of many terms used to describe education programs that simultaneously provide students with the opportunity to earn college and high school credit (Rhine, 2022). In Texas, dual enrollment, or dual credit, is defined as “a system under which an eligible high school student enrolls in college course(s) and receives credit for the course(s) from both the college and high school” (Texas Higher Education Coordinating Board, 2018, p. 1). The Texas Education Agency (n.d.) noted that the primary purposes of dual credit courses are to provide students with first-hand experience with college-level coursework, offer a smooth transition into college, and help families save money on college tuition. Rhine (2022) argued that dual credit programs not only provide students the ability to improve educational outcomes through cost savings but also offer students the opportunity to establish a college identity before arriving on a college campus.

Over the past 70 years, the popularity of dual credit coursework in schools across the United States (U.S.) has increased eightfold (An, 2013). Dual credit enrollment in Texas increased from 42,000 in the early part of the 2000s to 150,000 in 2017 (Troutman et al., 2018). Moreover, Decker (2023) noted that in the fall semester of 2021, 92% of students enrolled in a Texas community college were part of a dual credit program. Although the U.S. and Texas have seen a rise in dual credit enrollment, there is

little research on the influence of dual credit coursework on students' academic and nonacademic success once they matriculate into college. For evaluative purposes, considerable emphasis should be placed on persistence, academic progress, and degree completion since dual credit programs offer students the option to obtain a degree faster by meeting educational outcomes at a faster pace. The National Center for Education Statistics (2020) noted that, on average, undergraduate students took 6 years to complete a degree; however, according to Allen (2018), students who took dual credit courses typically graduate within 4.3 years. This represents nearly two years faster for degree completion of dual credit students.

According to the National Student Clearinghouse Research Center (2022), the persistence rate is measured by the percentage of students who returned to the institution after their first year. Persistence rates may increase for students who reach attainable milestones after their first year. Alsup and Depenhart (2023) suggested that when students' interests and needs were associated with university satisfaction, there might be greater persistence toward degree completion. Satisfactory persistence could lead to an increase in academic progress. Academic progress can be measured by course completion and students' GPA to degree attainment. Degree completion is derived from the term momentum points or "measurable educational attainments that are empirically correlated with completion of a milestone" known as "measurable educational achievements that included other conventional terminal completions... and intermediate outcomes, such as completion of developmental education or adult basic skills requirements" (Mullin, 2012,

p. 131). Lin et al. (2020) pointed out that degree completion could be achieved through the options provided to students through coursework, curriculum, personal aspirations, and academic performance.

Hofmann (2012) noted that the primary theme of the 2003 United States Department of Education (ED) one-day summit on school transformation was the need to address the transition from high school to college or the workforce. The author noted that dual credit programs could strengthen institutional readiness by providing access to college experiences, offering high-achieving students a smoother transition into college, and supporting at-risk students who might not otherwise have access to higher education. Considering dual credit programs have gained support from educational reformers, parents, teachers, and students, there is a need to further explore how these programs influence college access, persistence rates, and degree completion rates, as there has not been sufficient research in these areas. Insight into these areas could help shape the future of effective and efficient dual credit programming, which could prove beneficial to a diverse population of students.

Dual credit programs and policies, which aid in academic milestone achievement or completion agendas, could prove vital for degree attainment for some students (Ison, 2022). Various national organizations have created completion agendas that examine a student's progress into and through community college (White et al., 2022). Organizations with proposed completion agendas include the National Governors Association (NGA) and the National Conference of State Legislatures (NCSL), as well as

advocacy groups, such as Complete College America (CCA), Lumina Foundation, and Gates Foundation (Lichtenberger et al., 2014). Moreover, the implementation of college preparation and completion agendas at the district level may gain federal support from TRIO programs that focus on college preparation for traditionally marginalized student populations. The federal TRIO programs, which is not an acronym but a name given by the federal government, are a set of eight federal outreach programs designed to support progression through the academic pipeline toward postbaccalaureate programs for students from disadvantaged backgrounds, such as low-socioeconomic, first-generation, and those with disabilities to progress through the academic pipeline from middle school to postbaccalaureate programs (United States Department of Education, 2023). Low-socioeconomic families are defined as individuals from households with less access to financial, educational, social, and health resources than those of higher economic status (National Cancer Institute, n.d.). A first-generation student is defined as a student who is the first member of their family to attend an institution of higher education (Educational Data Center, 2017).

In middle and high schools, TRIO programs such as Upward Bound and Gear Up provide students with tutoring, mentoring, and skill-building that support a college-going culture (Allen et al., 2020). The primary purpose of Upward Bound is to provide low-socioeconomic and first-generation students with pre-college support through academic instruction (United States Department of Education, 2023). Additionally, Upward Bound supports enrollment and degree completion for high school students from low-income

families, where neither parent held a bachelor's degree, by encouraging participation in activities that support math, science, reading, language arts, and foreign languages (United States Department of Education, 2023). Gear Up is another grant-funded program aimed at assisting students at high-poverty middle and high schools with college readiness (United States Department of Education, 2023).

With such support for traditionally marginalized populations, school administrators turned toward dual credit programs as a tool to help increase degree completion among minority students, yet students of color continued to face challenges in their pursuit of postsecondary education (Tobolowsky & Allen, 2016). One of the challenges minority students typically face is a lack of available resources to support their education. Xu et al. (2021) explained that minority students may have less access to resources at home compared to their White peers, creating economic challenges in educational choices and outcomes. Further, minority students could be located in areas where dual credit programs are unavailable, creating a greater divide in higher education attainment for students due to their race or ethnicity (Miller et al., 2018). Additionally, Xu et al. (2021) noted that the costs associated with dual education, such as tuition and fees, created challenges for minority students from lower-income families because often, the schools that serve these students had less access to partnerships and other resources that might ease these burdens. White students are more likely to attend high schools that partner with community colleges that offer low or no-cost tuition and fee waivers, which leaves minority students at a disadvantage (Miller et al., 2018).

Dual credit enrollment has continued to increase year over year, but unlike other large-scale programs, universal regulations have ceased to exist. Each state has the authority to determine the guidelines and provisions for dual credit programs within their state. Olwell (2021) noted that currently, 47 states and the nation's capital hold statutory provisions regarding dual credit programs. The first state to pass dual credit coursework policies was California during the mid-1970s, but three states, New York, New Hampshire, and Alaska, have yet to adopt a formal dual credit coursework policy (Miller et al., 2017). Sometimes individual districts are left to decide how to structure programs because there are no regulations at the federal or state levels. For instance, school districts may not regulate the maximum number of dual credit hours a student can take during high school, leaving students to decide the subject and number of dual credit hours they want to take during high school. This lack of oversight can be counterproductive to the primary goals of dual credit programming. For example, Troutman et al. (2018) explained that a University of Texas System (UTS) school admitted students as first-time freshmen, though the students had 60 hours of dual credit transfer hours. This defeats the goal of dual credit programming to faster degree completion.

In addition to policy guidelines, funding structures may differ from state to state. Miller et al. (2017) contended that funding for dual credit has included local property taxes, state budgets, student tuition, and financial aid, and decisions are left up to states to determine how to administer funding for programs. Miller et al. (2017) pointed out that some states set aside formula funding to administer dual credit programs at high school

and college campuses, which could result in concerns about the inefficient use of public resources.

As students transition from high school to college, some factors enhance their skills while others provide notable obstacles (Hu & Hagedorn, 2015). Thorne et al. (2022) highlighted six structures that support equity and remove obstacles in dual credit coursework programs, including (1) statewide engagement support for underrepresented minorities, (2) ensured credit transferability, (3) affordability, (4) accessibility, (5) collaboration between high school and college instructors, and (6) student support. However, effective and efficient collaboration between high schools and colleges is necessary to maximize the benefits of dual credit programming and support more representation in postsecondary institutions among students of color, low-socioeconomic, and first-generation students (Thorne et al., 2022).

Exploring the influence of dual credit coursework on academic and social skills could provide a greater understanding of how students integrate into the higher education setting from both academic and social perspectives. This study focused on the influence of dual credit programs on first-year undergraduates at a regional comprehensive university in East Texas. Participants were considered first-time undergraduate students who completed dual credit coursework from their current or previous institutions. A first-time undergraduate is defined as a student with no prior postsecondary educational experience. An exception includes students who enrolled in college for the first time during the summer term prior to starting college or entered college with advanced

standing (college credit prior to high school graduation) (NCES, n.d.-a). Exploring these concepts in detail can provide greater insight for all levels of schooling and policymakers and potentially lead to more effective and efficient structures for dual credit programs that can benefit all students.

Background

Dual credit programs have continued to expand through the years, providing more high school students with access to college credit; however, concerns exist regarding access, especially for traditionally underserved students. Weissman (2020) reported that, as late as 2015, only 9% of Black and 17% of Latinx students participated in dual credit coursework in high school. For students with low-socioeconomic backgrounds, dual credit may provide the only viable option for college education attainment. Thorne et al. (2022) noted that dual credit programs often experienced low enrollment of underrepresented student groups due to financial barriers because they were unable to pay fees associated with courses, and in many instances, schools may be unwilling or unable to support students with these fees.

Research has shown that when students from low-socioeconomic backgrounds enrolled in dual credit programs, they had higher degree attainment rates than their peers from higher socioeconomic backgrounds (Partridge et al., 2021). While students from low-socioeconomic backgrounds may experience a higher level of degree attainment when they are introduced to college early, concerns exist about students' ability to navigate the landscape of higher education. Taylor (2015) argued that students from low-

socioeconomic backgrounds often lack financial risk knowledge, which placed them in physical or emotional harm due to the absence of social preparedness prior to matriculation into college.

Although many first-generation students who enrolled in dual credit were successful in high school, they often lack college-level reading skills and need college experience for development (Dixon & Slate, 2014). Giani et al. (2023) pointed out that first-generation students had lower self-efficacy and college expectations. First-generation students may also have difficulty understanding how colleges can provide guidance in their educational experience. Moreover, first-generation students often lack awareness of the resources available on-campus due to their absence of higher education experience (Nelson & Waltz, 2019).

When dual credit students experience challenges with the college transition, they also encounter setbacks academically due to their lack of emotional maturity (Zimmermann, 2012). Dual credit programs often require students to go beyond their comfort zones and mature faster (Lile et al., 2018). Students who enroll in dual credit programs may miss opportunities during high school due to the commitment level required for college-level coursework. Hornbeck and Malin (2019) argued that enrollment in dual credit coursework often causes students to miss social, cultural, and age-appropriate experiences.

University advisors and high school counselors may have difficulty relating to the concerns students face. Miller et al. (2018) note that one-half of high school counselors

and one-third of college advisors had to consistently remind students of the repercussions of their actions related to dual credit courses. The authors pointed out that in some instances, counselors and advisors had constantly reminded students of the registration process and the consequences of not submitting paperwork on time.

Most states require similar qualifications for high school dual credit instructors, which include a master's degree and 15 hours in a specified subject area (Thorne et al., 2022). Dual credit instructors at school districts are required to hold a certification in addition to a master's degree to fulfill the guidelines of the school district and college (Duncheon & Relles, 2020). Although there are no set criteria, 87% of colleges required high school instructors to meet a minimum qualification to teach college-level coursework (Tobolowsky & Allen, 2016). According to (Song et al., 2021), dual credit instructors required the same credentials as faculty standardization in rigor among high schools.

Differences in rigor may lead to retention concerns among qualified instructors. According to Thorne et al. (2022), the rigor in dual credit coursework varied based on course offerings, which led to variations in the classes taught by interested faculty members. Some high schools may have difficulty securing qualified teachers for dual credit courses. Zinth (2014) pointed out that rural school districts have difficulty recruiting and retaining teachers with advanced qualifications to teach dual credit coursework due to their campus location. When restrictions are placed on teacher qualifications, special populations may be disadvantaged because a district is focused on

students who are considered college-bound (Thorne et al., 2022). When faculty are not interested in teaching dual credit courses, universities may face challenges in providing students with a more immersive college experience. As a result, rigor concerns may exist in dual credit coursework and can lead to variations in dual credit experiences among students.

Statement of the Problem

Because of the growth of dual credit programs, the number of first-time college students matriculating into higher education institutions with college credit has increased over the years. While some students benefit from enrolling in dual credit coursework in high school, others may lack the adequate skills to successfully transition to college. College success is affected by academic mindset, such as social skills, academic performance, and learning strategies (Dyer et al., 2022).

Dual credit coursework taken in high school may not provide students with an adequate introduction to the college experience. McGowan Bucci and Simpson (2021) pointed out that school districts must be willing to hold students to the same standards as traditional colleges to provide an adequate higher education experience. When students do not have an accurate understanding of college expectations, they may lack the academic and social skills needed to prepare them for the transition into higher education.

Minority and low-socioeconomic students who enroll in dual credit programs may not experience the same opportunities compared to their peers. Minority and low-socioeconomic students experience fewer positive outcomes compared to White and

higher-income students (Stella Chavez, 2018). Moreover, the author noted that Black and Hispanic students who enrolled in dual credit programs experienced increased enrollment in community college but did not continue to degree completion.

One of the aims of dual credit programs is to provide individuals with an understanding of “what it was to be a college student” (An, 2015, p. 102). When students integrate into higher education, they may do so through a socialization process. An (2015) noted that students needed to understand how to assimilate into higher education because this helped with the anticipatory socialization process. As individuals navigate through the socialization process, they learn how to integrate into the new environment through exploration, joining, adaptation, and exiting prior organizational experiences (Fetherston, 2017). During the first phase of socialization, individuals may consider their prior experiences. An individual's prior experiences are determined by how they connect with the new organization during the first phase of the anticipatory socialization process (Fetherston, 2017). Moreover, the author noted the additional stages within the socialization process: encounter, the early state of integration within the organization; metamorphosis, establishment within the organization; and exit, the period prior to when an individual left their previous organization. Through socialization, individuals can learn how to adapt to their new surroundings, and students who do not understand how to transition into college can experience difficulty adapting to the higher education environment. To provide underserved students with increased college access and a

reduction in educational barriers, there is a need for more support in higher education (Taylor, 2015).

Between 2001 and 2021, dual credit enrollment increased from 29,000 to 171,000 and made up nearly 16% of the national average of community college enrollment among 18-year-olds in the United States (Decker, 2023). Texas school districts are required to offer at least 12 hours of college credit coursework through Advance Placement (AP), InterBacculerate (IB), or dual credit coursework (Radunzel et al., 2014). Requiring districts to offer access to college credit means students can access college-level coursework at an early age. When students take college courses as early as their freshman year, they can be unprepared for college and become discouraged from pursuing higher education because of bad grades or a challenging course (Mangan, 2018).

While students can benefit from dual credit programs, concerns around the lack of transparency in program design exists. The primary aims of dual credit programs are to provide students with the ability to earn college credit early, support college preparation, and encourage college degree completion (Jaschik, 2018). A report from the UTS indicated that students often felt a false sense of confidence, lacked opportunity for major exploration, and were restricted due to the shorter amount of time spent in college (Jaschik, 2018). This suggests that dual credit programs are not adequately preparing students for the college experience.

Purpose of the Study

This mixed methods study explored the relationship between the number of dual credit hours a student completes in high school and their academic success as a first-year undergraduate at a regional comprehensive university in East Texas. Furthermore, the study explored the relationships between the setting and the modality of dual credit courses and student success. The study also determined if there was a statistically significant difference in the academic success of dual credit students in their first year of undergraduate enrollment based on student demographic factors. Additionally, the study explored students' perceptions of the dual credit program factors that influence the academic success and non-academic success of first-year undergraduate students, including their adaptability to the college experience. Lastly, the study explored how the transferability of dual credit influenced students' choice of institution and major.

Theoretical Framework

According to Tinto (1993), university campuses are segways into society, created as a responsibility to assist students in college integration and student success may be influenced dramatically by the higher education environment. Tinto's theory identified two factors related to student retention: the ability to integrate into the college's culture and the student's ability to interact with others (Alsup & Depenhart, 2023). Tinto's student integration theory describes retention and students' individual characteristics as the phenomenon of persistence in higher education (Alsup & Depenhart, 2023). Tinto's theory contends that the contribution to a student's ability to persist in higher education

includes student characteristics, academic preparedness, socioeconomic status, financial stress, and institutional characteristics (Jagesic et al., 2022). The authors noted that academic engagement is likely to persist after a student has met the characteristics described in Tinto's theory.

The Conceptual Model of Student Success (CMSS) supports students' college choice and success based on four developmental stages (Turner et al., 2019). The authors identified the first developmental stage as college readiness, the second stage as college enrollment, the third stage as college achievement, and the final stage as post-college attainment. Turner et al. (2019) further argued that according to the CMSS model, student success was based on internal factors within the school, family, and social context of academic and non-academic and motivational processes.

Tinto's Student Integration Theory and the CMSS model describe dual credit students' social, academic, and non-academic transformation as they transitioned into college students (Turner et al., 2019). Tinto's theory examines students who have earned college credit before enrolling in higher education and how the experience has influenced integration into the college environment. Social and academic factors can play a key role in a student's ability to succeed in college. Alsup and Depenhardt (2023) stated that students' interactions, social and intellectual, in college could influence the decision of whether to drop out or continue school.

Gaps in the Literature

Dual credit programs have continued to expand through the years, yet equal access remains a concern (Liu & Xu, 2022). Hu and Chan (2021) pointed out that differences in dual credit programs have led to further disparities for marginalized populations, such as economically disadvantaged and racially minoritized students. An understanding of how the skills and knowledge obtained from experiences can influence future success is needed to provide equity in dual credit programs. Taylor (2015) argued that policymakers need to consider equity in dual credit programs and develop universal guidelines to provide marginalized populations the same opportunities as their affluent and White peers.

Students who enroll in dual credit coursework during high school may experience transferability and cost savings concerns. Berman (2019) noted that little evidence exists regarding how much students saved overall by completing dual credit courses or how dual credit is applied toward a college degree. Hu and Hagedorn (2015) pointed out that advisors and faculty needed to understand how credits transferred into the curriculum to support admissions processes. Recognizing how transferable courses apply toward a student's program may provide a better pathway to degree attainment.

Professional development for dual credit instructors could lead to better educational experiences for students through the utilization of a growth mindset (Giani et al., 2023). When instructors are provided with ongoing support, there may be a deeper understanding of college-level course expectations (Thorne et al., 2022). Strong

partnerships may also provide a deeper understanding of how policy changes influence dual credit, student success, and equity concerns. Collaboration has encouraged both local and state-level policymakers to ensure constraints in technology and training, availability of instructors, and student support are examined (Williams & Perry, 2020).

Research Questions

Eight questions were used to guide this explanatory sequential mixed methods study. The following research questions guided the quantitative portion of the research study:

1. Is there a statistically significant relationship between the number of dual credit hours a student transfers and students' first-year GPA at a regional comprehensive university in East Texas?
2. Is there a statistically significant relationship between the modality of dual credit courses and students' first-year GPA at a regional comprehensive university in East Texas?
3. Is there a statistically significant relationship between the setting of dual credit courses and students' first-year GPA at a regional comprehensive university in East Texas?
4. Is there a statistically significant relationship between student demographic factors and their first-year GPA at a regional comprehensive university in East Texas?

The following research questions guided the qualitative portion of this research study:

5. What are students' perceptions of how dual credit enrollment influenced their academic success as first-year students?
6. What are students' perceptions of how dual credit enrollment influenced their nonacademic success as first-year students?
7. How did the transferability of dual credit hours influence students' choice of institution or major?
8. How did dual credit enrollment influence the students' adaptability to the college experience?

Significance of the Study

Presently, there is little research on the effects of dual credit coursework on academic and non-academic student success after matriculation into college. Understanding how academic and non-academic factors have influenced student academic performance may help understand the effectiveness of dual credit programs (Giani et al., 2023). This study added to existing research by exploring relationships between dual credit program structures and first-year undergraduate GPAs, student demographic factors and first-year undergraduate GPAs, and lastly, students' perspectives of dual credit programs after matriculation into higher education. Examining the influence of dual credit programs could lead to a better understanding of students' abilities to succeed in higher education from academic and non-academic experiences. Results from this study may assist school leaders with making curriculum decisions regarding institutional partnerships, hiring dual credit instructors, determining course

modality and setting, and scheduling. Moreover, understanding equity and accessibility could help clarify the most effective structural components of dual credit programs, and raising awareness regarding the academic and non-academic aspects of dual credit coursework and how these factors influence student success can assist students, parents, and administrators in creating effective strategies and making informed decisions about educational goals. The results of this study may also assist institutions of higher education in curricular decisions and inform them on the implications of dual credit on college choices. Creating clear guidelines concerning transferability, accessibility, and program requirements may increase the awareness of dual credit coursework's influence on a student's college transition. Further, the results of this study may inform policymakers charged with developing dual credit policies regarding success after matriculation into higher education, the setting and modality of dual credit coursework, the cost and effectiveness of dual credit programs, and instructor credentialing for dual credit coursework.

Limitations, Delimitations, and Assumptions

Limitations

Overall, research studies on dual credit coursework face several limitations, and this study is no different. "Limitations are potential weaknesses or problems with the study identified by the researcher" (Creswell, 2015, p. 197). This study has a limited sample size that may not be representative of the broader population. This means results might not be generalizable to all students and student groups participating in dual credit

programs across different regions of the U.S. Furthermore, there is often a selection bias in dual credit programs, as these programs may attract students who are already academically motivated and have support systems in place. This makes it challenging to determine if the outcomes of the study are due to the dual credit coursework itself or pre-existing student characteristics. Following students over time to assess long-term outcomes of dual credit participation is challenging due to data tracking and privacy issues. This can limit the ability to understand the full impact of dual credit courses. Also, there is significant variability in dual credit program quality between schools, including the rigor of coursework and the qualifications of instructors. This variability makes it difficult to compare studies or aggregate findings across different settings. The cost of dual credit programs and access to resources can vary widely, affecting participation rates and outcomes. These economic and resource factors are not fully accounted for in this research study. Moreover, understanding how dual credit affects the traditional college experience is complex. For instance, entering college with many credits may allow students to graduate early but could also impact their social integration and participation in college life, aspects not easily quantified. Finally, state and institutional policies regarding dual credit can vary widely, influencing how programs are implemented and who can participate. These differences make it hard to draw broad conclusions about the efficacy and influence of dual credit coursework.

The limitations of the qualitative methodology used in this study should also be noted. According to Josselson and Lieblich (2003), some critics believe narrative inquiry

lacks sufficient theoretical foundation. Additionally, concerns regarding researcher bias have been noted, especially in relation to the observer's paradox—the effect that the presence of the researcher has on the data gathered (Kim, 2015). In conducting this study through the lens of narrative inquiry, a small cohort of participants was intentionally selected. This decision was guided by the aim of exploring the details and rich narratives of each participant. However, it is important to acknowledge, as Creswell (2015) pointed out, the constrained sample size inherently limits the applicability of the study's outcomes beyond the immediate context of the study sample. Furthermore, it is critical to understand that in narrative inquiry, the process of narrating and interpreting these stories is inherently filtered through the researcher-participant relationship. This dynamic introduces a layer of subjectivity, as the researcher's perceptions and biases inevitably influence the development and presentation of these narratives. Despite implementing measures aimed at mitigating this influence, it remains a fundamental characteristic of narrative inquiry that must be acknowledged. This subjectivity underscores the importance of reflexivity in the research process.

Nonetheless, the use of narrative inquiry as a methodology persists, finds its advocates, and is increasingly being applied within the field of educational leadership research. A key justification for employing narrative inquiry in this domain is its relevance and application in contemporary research endeavors. Aquino (2023) contended that narrative inquiry stands out as a flexible research approach, capable of investigating

educational phenomena through a thorough examination of both the form and substance of participants' experiences and narratives.

Delimitations

In this study, the researcher used an explanatory sequential mixed methods design where data was collected in two phases to explore the relationships between the structures of dual credit programs and students' first-year experiences at a regional comprehensive university in East Texas. The researcher first determined if relationships existed between the number of dual credit transfer hours, the modality of dual credit courses, the setting of dual credit coursework, or student demographic factors and first-year undergraduate GPAs at a regional comprehensive university in East Texas. Next, the researcher explored students' perceptions of the influence of dual credit program enrollment on their choice of college and major as well as their first-year college experience.

Assumptions

There were four assumptions associated with this study. The first assumption was that the initial data obtained from the regional comprehensive university in the East was true and accurate to the best of the university's knowledge. The second assumption was that the participants in the survey and virtual focus group were identified accurately as first-time undergraduate students who participated in dual credit coursework. The third assumption was that the data used in this study was accurately entered into Statistical

Package for the Social Sciences (SPSS) version 28. The fourth and final assumption was that the transcribed data used for the qualitative analysis was free of error.

Definitions of Key Terms

This section provides definitions of key terminology used in the study. The definitions provide further clarification to readers about the topic.

Advanced Placement (AP) – a national program that allows high school students to earn college credit through classes approved by the Texas Education Agency (TEA) and examinations administered by The College Board (Educational Data Center, 2017).

Affiliation Agreement – a document signed by a college and associated industry that provides an educational partnership (Educational Data Center, 2017).

Core Curriculum – a common undergraduate curriculum that introduces students to basic reading, writing, speaking, listening, critical thinking, and computer literacy skills. In Texas, the Core Curriculum consists of 42 to 48 hours of communication, mathematics, natural sciences, arts and humanities, and social and behavioral sciences (Educational Data Center, 2017).

Dual Credit Coursework (Also Dual Enrollment) – the system in which an eligible high school student enrolls in college level coursework and receives credit at both the college and high school (TEA, n.d.).

Dual Credit Teacher/Instructor – the person responsible for creating lessons, delivering instruction, assessing student progress, and providing feedback to students

enrolled in dual credit coursework. Dual credit instructors are most often secondary teachers or college/university professors (TEA, 2019).

First-generation College Student – a student who is the first member of their family to attend an institution of higher education (Educational Data Center, 2017).

First-time Undergraduate – a student with no prior postsecondary educational experience. An exception includes students who enrolled in college for the first time during the summer term prior to starting college or entered college with advanced standing (college credit prior to high school graduation) (NCES, n.d.).

Higher Education Institution – a public community college or university, medical or dental unit, as defined by the Texas Education Code (TEC) (§61.003) (Educational Data Center, 2017).

Instructional Mode (Course Modality) – the method of class content delivery: face-to-face, via the internet, or other electronic media (Educational Data Center, 2017).

Race/Ethnicity – a term used to describe a group of individuals belonging to a specific community (Educational Data Center, 2017).

Student Success – a student's ability to consistently obtain good grades and steadily progress toward graduation (EAB, 2019).

Texas Education Agency (TEA) – a governing body that provides leadership, guidance, and resources for K-12 schools to assist districts in meeting the educational needs of students (Texas Education Agency, 2020).

Texas Higher Education Coordinating Board (THECB) – a governing body that provides oversight of the policies and procedures for higher education institutions operating in Texas (Educational Data Center, 2017).

Texas Success Initiative (TSI) – a mandate requiring public higher education institutions to ensure students have met the academic standard needed to succeed in college (Educational Data Center, 2017).

Chapter Summary

When students and parents are not adequately informed about dual credit programs, this can lead to concerns with transferability, the ability to succeed in college, course rigor, and future career success. Currently, little research has been conducted on the effects dual credit coursework has on a student's level of success after matriculation into college. This study explored how these factors influenced students' success in college and additional opportunities for leadership to enhance dual credit programs to meet students' needs.

Differences in populations, program structure, and college expectations can influence students' ability to succeed in college. Factors such as students' ability to adapt to the campus climate, from an academic and non-academic perspective, may influence the transition into higher education. As enrollment in programs continues to rise, understanding policies, procedures, and how to provide access is a consideration for educators.

CHAPTER II

Review of the Literature

This chapter summarizes the related literature on how dual credit programs influence student success, academically and nonacademically, after matriculation into higher education. This chapter reviews relative literature by examining the following topics: the role of dual credit programs, the influence of dual credit on special populations, including first-generation, low-socioeconomic, and underrepresented groups, and the governance of dual credit programs. The chapter also discusses the challenges and benefits of dual credit programs.

The Role of Dual Credit Programs

Students may explore multiple options to earn college credit in high school. Dual credit, AP, and IB are a few options that provide students with the opportunity to earn college credit in high school. Furthermore, the terminology describing dual credit may have shifted over time. Tobolowsky and Allen (2016) noted that joint enrollment, dual enrollment, accelerated learning options, or credit-based transition were a few of the terms used to describe dual credit programs. Regardless of the terminology programs may use to describe dual credit, the goal is to allow students to earn college credit in high school.

Historically, dual credit programs were developed to provide gifted or intellectually accelerated children with an opportunity to gain college access in high

school (Olwell, 2021). Dual credit programs were previously recognized as an opportunity for only high-achieving students (Kim et al., 2006). However, the role of dual credit programs has shifted to serving all high school students, and the primary goal is to enable students to get a head start on their college education, potentially saving time and money by reducing the number of courses they need to take after high school graduation. Additionally, dual credit programs aim to ease the transition to college by exposing high school students to the academic rigor and expectations of college-level coursework (Olwell, 2021).

Historical Overview of Dual Credit Programs

As early as the 1940s, proposals introduced the reorganization of education around college-level coursework in elementary, middle/high school, and junior college (Olwell, 2021). The role of early initiatives has helped support students' progression into higher education. The 1947 President Commission for Higher Education for Democracy identified that the goal of early initiatives was to provide financial support to tenth through fourteenth graders who could not otherwise attend institutions of higher education (Olwell, 2021). According to the author, the programs received support yet were never implemented.

Dual credit programs have continued to expand through the years, shifting the focus to concerns with educational gaps. In the 1940s and 1950s, as dual credit programs continued to develop, key issues arose due to World War II: decreased college student enrollment, increased use of the Government Issue or General Issue (GI) Bill, also known

as the Servicemen's Readjustment Act of 1944, and everchanging demographics (Olwell, 2021). Special programs were created to assist with educational gaps left behind by service members. In 1955, the University of Connecticut Dual Enrollment Program was created to assist with the fulfillment of educational gaps left by men diverted into the national service (Olwell, 2021).

As dual credit programs continued to expand, the aim was to support the school curriculum. In the 1970s, programs were created to provide high school students with a challenging environment (Lichtenberger et al., 2014). Through the years, the goal of programs has shifted from high school to college support. During the 1970s and the 1980s, programs became more decentralized to provide challenged students with a smooth transition from high school to college (FitzGibbon, 2015).

During the 1980s, the focus of dual credit programs had shifted to policy development. By 1985, every state had implemented a dual credit program (Nelson & Waltz, 2019). The authors noted that the role of programs was to "promote rigorous academic pursuits and provide a variety of options for juniors and seniors in high school" by offering additional educational opportunities at a lower cost, funded by the state (Nelson & Waltz, 2019, p. 391). Duncheon and Relles (2020) discussed how the creation of dual credit programs helped strengthen the K-16 pipeline by improving partnerships between school districts and higher education institutions. Duncheon and Relles (2020) pointed out that the role of dual credit programs was to support collaboration by providing students with a seamless transition from K-12 to higher education.

Before the twentieth century, American students would take institutional coursework and tests to prove they met college-level standards for admissions (Olwell, 2021). As programs continued to develop, they were geared toward a younger population of students. Students enrolled in what we consider early college grew out of an effort to allow students younger than the traditional college age, 18-22, to complete college-level coursework (Olwell, 2021). Students who are provided with exposure to college coursework early may have the opportunity to gain college experience early.

Between 1990-2000, enrollment in dual credit programs increased by 40% (Kremer, 2022). By the 1990s, community colleges and high schools had focused on collaboration to provide support for career and technical courses to dual credit students. Zinth and Barnett (2018) pointed out that one of the primary purposes of dual credit enrollment was to promote post-secondary education and provide skill development that supported workforce readiness. The goal of workforce readiness has supported the idea that higher education coincides with the advent of human capital theory, which has focused on the idea that workers' ideas and skills have economic value in the United States. During the 2000s, enrollment in dual credit provided all students, not just affluent ones, with an opportunity to gain access to college (St. Amour, 2019).

Student Populations and Dual Credit Programs

The goal of dual credit research has been to consider how policies influence student populations. According to Olwell (2021), one overarching goal of dual credit policies has been to significantly influence first-generation and low-income students,

considering middle and upper-class students were historically projected to enter high school and graduate college. Research indicates that dual credit programs often provide low-socioeconomic students and students of color the opportunity to experience college (An, 2013; Troutman et al., 2018).

According to Olwell (2021), the overall effectiveness and success of early college and dual credit programs relied heavily on the college's commitment to diversity, academic success measures, and equity. Taylor (2015) explained two reasons why dual credit exists. The author noted that the first reason was that evidence suggested dual credit participation had a “warming-up effect,” meaning it provided students with aspirations to attend and complete college (Taylor, 2015, p. 356). The author also contended that dual credit reduces inequalities and provides more opportunities for learning in high school.

First-Generation Students and Dual Credit

When college students come from a household where neither of their parents completed a degree or certificate in higher education, they are identified as first-generation. Van der Zanden et al. (2018) noted similarities and differences between first-generation and non-first-generation students. Research indicated that when students from first-generation and non-first-generation households completed dual credit coursework, they achieved the same level of success (McGowan Bucci & Simpson, 2021). Although first-generation students have experienced the same amount of success in dual credit

coursework completion, little research exists regarding how successful students are in transitioning into higher education after graduation.

Van der Zanden et al. (2018) also noted that first-generation and non-first-generation students experienced similarities in their well-being before entering college. The authors discussed how first-generation students experienced less psychological well-being after their first year when compared to students who were not first-generation. First-generation students may be more likely to experience success when they are provided with the opportunity to build a self-image and interact with peers. Pendakur (2016) pointed out that first-generation students experienced success in college when they were engaged in social capital and built their identities.

For first-generation students, the inability to connect with on-campus resources, such as staff members, may lead to concerns when transitioning into higher education. First-generation students experienced challenges when staff did not understand their needs (Hooper & Harrington, 2022). Van der Zanden et al. (2018) pointed out that when a student's parents attended college, there was a greater feeling of adjustment and increased GPAs compared to those with no formal education. The author also noted that students from households who do not attend college, also known as first-generation students, often felt a lack of parental involvement due to their low economic level.

Socioeconomic Status and Dual Credit

According to Hu and Chan (2021), a student's sociodemographic characteristics, academic knowledge and skills, motivational attributes and beliefs, and exposure to

college norms were indicators of long-term success and career planning. Low-socioeconomic students' sense of self and relationships with others were influenced by their experiences, considering they left their previous world behind them (Pendakur, 2016). The author noted that although students had access to resources, this might not be enough to support the needs of low-socioeconomic students. Policies should be redesigned to better support low-socioeconomic students' transition to college, even though students gained basic skills and knowledge upon matriculation (Taylor, 2015).

Recommendations from teachers and counselors have raised concerns regarding educational gaps among racial and socioeconomic groups because students' interests, needs, and abilities are not considered (Hemelt & Swiderski, 2022). Students who do not receive adequate support may consider it a reflection of personal failure. Fink et al. (2017) pointed out that the most significant achievement gap existed between lower and higher-income students regarding degree obtainment, with 20% of lower-income students compared to 32% of higher-income students earning a bachelor's degree.

The creation of dual credit programs helped affluent White students overcome "senioritis," a term associated with students who lost motivation during their senior year of high school (Hooper & Harrington, 2022, p. 20). Middle-class families have supported their children in accessing careers that provide a stable income (Allen et al., 2020). When low-income families experience college early, they may have a greater chance of completing higher education. Taylor (2015) discussed the benefits of early experiences

with dual credit by pointing out that of the 85% of low-income students enrolled in college credit, 58% were dual credit, and 18% were non-dual credit.

To provide increased academic momentum and a holistic college experience beyond academic coursework, interventions were needed that supported students from low-socioeconomic status backgrounds with higher education preparation (Hu & Chan, 2021). Hu and Hagedorn (2015) noted that federally funded programs, such as TRIO, have provided short- and long-term college preparation to low-socioeconomic and other groups to offer students a competitive edge in higher education achievement. For students from low-socioeconomic families, higher graduation standards aligned with college expectations and have offered college readiness standards that lead to postsecondary degrees and certificates that have supported good jobs, better pay, and a more robust economy (Struhl & Vargas, 2012).

Underrepresented Populations and Dual Credit

Dual credit programs may provide better opportunities to underrepresented populations. Dual credit programs have provided students with college familiarity and assistance with the transition from high school to college (Weissman, 2020). Knowledge and skill obtainment may provide students with greater access to college. During policy development, it is essential to provide consideration to how underrepresented students, such as Black and Latinx, are affected (Hooper & Harrington, 2022).

The American Graduation Initiatives, established in 2009 by President Obama, worked to prioritize education by increasing the number of adults with college credentials

(Pretlow & Wathington, 2013). The goal of the American Graduation Initiative was to assist in rebuilding the economy (Palmadessa, 2017). Despite efforts to rebuild the economy through national initiatives, minority students may still face obstacles to accessing higher education. Some of the barriers minority students faced when accessing postsecondary education included concerns with institutional policies, structures of programs, and access to services (Johnson et al., 2021). The authors also noted that to provide educational access and equity in dual credit programs, there was a need to expand programs to marginalized populations.

Dual credit programs could provide underrepresented populations with greater access to a college education. Most students, especially economically disadvantaged and minority populations, have preferred dual credit programs to achieve college readiness because they do not require passing an AP test to receive credit (Rivera et al., 2019). Dual credit programs were a significant part of education for marginalized students because they provided a trajectory toward future career choices (Johnson et al., 2021). When underrepresented students gain college experiences in high school, they may be more likely to continue into college after high school.

THECB (2018) noted that enrollment in Texas dual credit programs consisted of 50% White, 28% Hispanic, and 5% African American. The lack of enrollment in dual credit programs among minority students may be related to concerns with educator bias. Field (2021) pointed out that counselors, 70% of whom are White, have typically made recommendations for dual credit enrollment, which resulted in unintentional bias. For

Latino students, the opinions of others may influence their desire to obtain a higher level of education. Allen et al. (2020) pointed out that peers and school officials have influenced the college process for Latino students. African American students may also face obstacles when seeking an education. High-achieving African American students faced challenges because race was emphasized more than academic progress (Brown, 2014).

Understanding the disparities that have influenced underrepresented groups, such as economic, demographic, and policy gaps, has led to better implementation of dual credit programs (Xu et al., 2021). The author pointed out three key points that affected policy implementation for dual credit programs. First, the authors stated that students in underrepresented groups were more likely to enroll in dual credit programs when educational resources influenced policies. Second, according to the authors, teachers were more likely to encourage programs when they received specialized training and incentives. Lastly, the authors stated that some magnet schools and programs that utilized tracking information could further expand educational gaps.

Governance of Dual Credit Programs

During the promotion of dual credit programs in education, consideration should be given to cost, policies, and practices (Lin et al., 2020). According to Miller et al. (2017), parents, administrators, and faculty regularly made three types of comments concerning the efficiency of dual credit coursework programs. The authors noted that the first comment was that students needed to complete prerequisites in high school before

attempting college-level coursework, which provided cost savings in the future.

According to the authors, the second concern was coursework transferability, which ensured that the coursework students completed applied to their degree plan. The authors described the last comment as the need for dual credit programs, such as AP courses, remedial education, and enhanced counseling, to provide students with additional benefits.

Rivera et al. (2019) pointed out three concepts that provided effective programs for educational policy: equity, excellence, and efficiency. According to the authors, the first concept, equity, focused on the achievement gap between low-socioeconomic and minority students that provided early college access. The authors discussed the second concept, excellence, as the establishment of relationships between high schools and postsecondary institutions that led to increased student performance in college. Last, the authors discussed the final concept, efficiency, as a tool that provided additional dual credit coursework opportunities to small or rural high school students through increased credentialing for teachers and varied course offerings (Rivera et al., 2019).

To provide more equity in college education, advocates have worked to promote education for early college students (Howley et al., 2013). Various states have begun the implementation of dual credit policies and legislation across the United States. In 1970, Minnesota became a pioneer in dual credit implementation when the state developed the first statewide dual credit education policy (Rivera et al., 2019). Other states have begun policy development that has supported dual credit programs. California became the first

state to implement dual credit legislation in the mid-1970s, after nearly 50 years of existence (Miller et al., 2017). In addition to policies, states continued to support programs aimed at providing college experience to high school students. In 1973, the state of New York developed the Syracuse University's Project Advance Syracra, a dual credit program created to provide college-level curricula experiences exclusively to high-achieving students (Tobolowsky & Allen, 2016).

Dual Credit Program Funding

Increasing college access and decreasing financial burdens have become a concern among local agencies and private organizations. Walk (2020) pointed out two initiatives that led the pathway toward college readiness: No Child Left Behind (NCLB) and the Every Student Succeeds Act (ESSA). The author noted that the first initiative, NCLB, was created to assist with the development of Common Core Standards (CCS). English et al. (2017) described the NCLB reform as an act that ensured students met the minimum mathematics, reading, and English language arts (ELA) standards by achieving a minimum score criterion. The second initiative, the ESSA, helped define the partnerships between educational entities and higher education institutions (Walk, 2020). ESSA assisted with setting broader goals that aligned with student success pathways (English et al., 2017). In addition to local agendas, such as NCLB, ESSA, and CCS, private organizations have also developed programs. Walk (2020) noted that the Bill and Melinda Gates Foundation, a private organization that assists low-socioeconomic

students with college access, joined initiatives that supported early college access and national school reform (Walk, 2020).

Dual credit programs can bridge K-12 and higher education, which may lead to a complex discussion topic. Hornbeck and Malin (2019) noted that discussions about dual credit program funding were challenging because taxpayers did not always provide permission for college expenses, such as tuition and books, to be included when voting occurred for the K-12 education topic. Funding provided for dual credit may extend beyond the cost of coursework. Some states may use funding to conduct additional research about dual credit. In Texas alone, taxpayers spent \$121.7 million on independent research on dual enrollment programs (Berman, 2019).

During the 2010s, state policies were implemented and revamped (Liu & Xu, 2022). The authors noted that some changes to policies regarding dual credit programs included mandating partnerships between high schools and colleges, prohibiting districts from limited dual education participation, and increasing the availability of high school equivalent college credit courses. Program funding may remain a concern, although partnerships have increased to support dual credit. NCES (2020) noted that the funding for dual enrollment programs comprised of 78% from the school district or state, 42% from the family or student, and 10% from another type of entity. Some states have lowered tuition rates for dual credit students to offset costs. In Kentucky, colleges kept tuition prices for dual credit at one-third of the rate of regular college courses (St. Amour, 2019).

Dual Credit Governance in Texas

The goal of policy development can be to support additional opportunities for students and increase enrollment in dual credit coursework in Texas. Miller et al. (2017) pointed out that the growth of dual credit coursework was to enhance further educational reform that focused on teaching, advising, assessment, and resource allocation that supported the goals of 60x30TX. Texas Higher Education Coordinating Board (THECB) (2015) defined 60x30TX as an initiative that sought to provide 60% of 25–34-year-olds with certificates or degrees by 2030.

Students who participated in dual credit Texas were required to obtain a passing score on the Texas Success Initiative Assessment (TSIA), receive approval from a district counselor, and meet coursework prerequisites (Berlinsky-Schine, 2019). The TSIA was created as a result of the Texas Success Initiative (TSI), a mandate by the Texas State Legislature that required all public institutions of higher education to assess college readiness for incoming students in the areas of English Language Arts Reading (ELAR) and mathematics (TEA, 2023). Walk (2020) pointed out that the accountability regime, a form of educational reform that combines standards and testing, has supported national initiatives such as NCLB to CCSS, which measured college and career readiness. NCLB has played a role in dual enrollment because it used standardized testing to promote college and career readiness (English et al., 2017). CSS is one initiative federal and state governments have supported to improve academic success, particularly among minority students (Nelson & Waltz, 2019).

Challenges of Dual Credit Programs

Over the past six decades, dual credit programs have gained nationwide support (Xu et al., 2021). As programs have expanded, there has been continued support for college enrollment and additional opportunities beyond secondary education, such as career support. While dual credit programs have benefits, concerns may exist regarding access and structure. Tobolowsky and Allen (2016) noted that there are concerns for dual credit programs, including teacher and student eligibility, institutional type, funding, content, and quality control. Students who successfully navigate dual credit experiences may find it more challenging to engage with faculty than high school teachers. Miller et al. (2018) discussed the importance of communication and how this was emotionally difficult for high school students who were required to interact with college professors.

Students' experiences with dual credit programs may influence their educational choices in the future. Consideration of the characteristics of students (high school performance, school resources, and first-generation status) was needed to determine the academic and social components needed to develop an effective program (Johnson et al., 2021). A lack of course offerings has caused barriers for students, which decreased motivation to attend college in the future (Thorne et al., 2022).

Challenges Related to Academic Factors

Though the THECB defined a student's college readiness as having a Scholastic Aptitude Test (SAT) score of 1070, emotional maturity and time-management skills are also considered success indicators of dual credit coursework (Mangan, 2018). The SAT is

a college admission test taken by most high school students with a total possible score ranging from 400 to 1600 (NCES, 2023). In some instances, dual credit programs were designed as more of a "future orientation" into the skills needed to succeed in college, such as understanding student support services like career counseling or gaining soft skills such as time management (Weissman, 2020, para. 16). Research has indicated a need to focus on the development of students' social skills in dual credit coursework programs rather than focusing solely on academics (Duncheon, 2020). Hu and Hagedorn (2015) noted that the high school to college transition required adjustment to a student's social and emotional preparation level. Factors such as a student's characteristics, academic preparedness, socioeconomic status, financial stress, and the institution's culture have contributed to a student's ability to remain engaged and complete college (Jagesic et al., 2022).

Students can enroll in college-level coursework in middle and high school at different stages, which may influence their future enrollment in dual credit coursework. Fink et al. (2017) pointed out that the age of enrollment in dual credit programs began early, with 3% of enrollment beginning at the age of 14, 7% at 15 years old, 26% at 16 years old, and 61% at the age of 17 as of Fall 2010. When students enroll in dual credit programs at an early age, they may choose to discontinue enrollment in later years. As students entered dual credit programs, Fink et al. (2017) pointed out that 17-year-olds were most likely to continue participating in dual credit courses, whereas students of

younger ages were not. The authors noted that during the first two semesters of initial enrollment, dual credit was about 42% and decreased to 28% after three or more terms.

Concerns have existed regarding student preparedness after completion of dual credit program enrollment. Garcia et al. (2020) pointed out that faculty were concerned with students' failure rate in dual credit programs. The authors noted that frustration occurred for everyone involved when unprepared students were in programs because of a lack of preparedness. Some academically prepared students may lack the skills needed to navigate college. A clear explanation of dual credit expectations must be conveyed to high school and college students (Mangan, 2018). Students who were prepared for college academically but lacked the skills needed to handle the stress and experience may not achieve their desired outcomes (Garcia et al., 2020).

The rigor of dual credit programs can vary, creating equity and accessibility concerns. In some instances, dual credit coursework was taught by a high school teacher credentialed to teach college-level coursework, while others might have been taught through higher education institutions in online or face-to-face formats (Thorne et al., 2022). Although dual credit courses provided significant cost savings, they were not designed the same as traditional courses, putting students at a disadvantage for success, which led to a decrease in four-year degree completion (Ferguson et al., 2015). Spencer and Maldonado (2021) noted that several factors have led to degree completion, yet research has indicated that academic rigor remained a struggle for students who sought timely graduation. Dual credit programs may provide students with some college skills

yet do not provide an immersive opportunity for college life. Degree completion was a concern for dual credit students when coursework was not rigorous, although they had a chance to gain college experience (Ferguson et al., 2015). According to research, an introduction to culture and social capital was needed to assist students with their transition into the college experience (Taylor, 2015).

Students who do not attend public institutions may experience difficulties transferring credits. Kilgore and Wagner (2017) noted that a fair number of students who earned credits through dual enrollment programs had difficulty transferring courses due to differences in institutional practices and policies. Students who attended private or out-of-state colleges experienced high tuition, resulting in fewer benefits from dual enrollment courses (Partridge et al., 2021). The number of transferable credit hours students obtain in a dual credit program may influence their educational experiences. A student's academic outcome varies based on the number of credit hours they are enrolled in (Tobolowsky & Allen, 2016). The author noted that, in some instances, students were limited when choosing a major due to the number of credit hours they completed. Students may need to change their educational goals to align with the number of credit hours they transfer into their institutions. Tobolowsky and Allen (2016) pointed out that students with too many dual credit courses have encountered negative experiences in college that affected their future career choices.

Challenges Related to Non-Academic Factors

Duncheon (2020) discussed three domains associated with organizational socialization. The author described the first domain as performance proficiency, which involved the ability to master the skills required to perform tasks. The author noted the second domain as people, which was the ability to form relationships within the organization. The author pointed out that the third and final domain was learning, which applied to the organization's rules, supporting goals, and values.

Students who are competitive in high school may not have a clear understanding of how to balance their academic and social lives. Students commented on the competitiveness of dual credit programs and the need to take as many classes as possible to save money (Troutman et al., 2018). While dual credit coursework can provide an opportunity to save money, students may not consider the impact on their well-being. Troutman et al. (2018) noted that students had difficulty balancing academic and mental/emotional well-being, which was important in the reduction of stress in college.

Kilgore and Wagner (2017) pointed out the importance of adequate communication to ensure course transferability, considering the time and money dual credit students have spent on coursework. When a student enrolls in a course that does not apply to their intended major, the result is the accrual of additional debt (Field, 2021). Knox (2022) noted that costs become a concern for institutions when students do not matriculate after graduation because the funding spent on dual credit coursework programs has caused colleges to break even on their investment.

Traditional students often enrolled in full-time course loads on university campuses compared to dual credit students who only take a class or two (Jagesic et al., 2022). Although dual credit can provide students with higher education experiences, they may lack the opportunity for an immersive experience within the campus culture when students do not attend face-to-face classes at the institution. Students who took courses in higher education might be at an elevated risk of emotional or physical harm if they were not prepared for the social environment of college (Partridge et al., 2021). Dual credit students may not feel comfortable interacting with other students, staff, or faculty in a higher education setting. A lack of belonging, especially among online students, has negatively affected a student's sense of community, resulting in fear of criticism and the inability to give honest feedback (Alsup & Depenhart, 2023).

Although students might have signs of academic preparedness, it is important to consider their self-confidence as an indication of their ability to smoothly transition into college (Hu & Chan, 2021). Although dual credit programs may allow participants to gain college experience in high school, not all students are ready to begin higher education early. For low-socioeconomic and students of color, both academic and emotional support was necessary to provide a positive climate for students who were not prepared for college-level coursework (Aspen Institute, 2021). Robinson (2022) discussed the importance of parents maintaining honesty with their children about their college readiness and ensuring they are ready to complete the college curriculum in high school; otherwise, it might backfire (Robinson, 2022).

Students from households that are not as familiar with college may be limited in college preparation. According to Xu et al. (2021), 42% of students who enrolled in dual credit programs came from households with parents who earned a bachelor's degree, while only 26% were from households where neither parent held a degree. Additionally, external influences may impact a student's decision to take college-level coursework. A student's experiences and influences might shape their college readiness for those enrolled in a dual education program without a significant role model (Lile et al., 2018). When students have negative campus experiences, it may influence future college enrollment. Students have expressed negative interactions with faculty members who taught dual credit coursework due to the faculty's preconceived idea of dual credit students (Tobolowsky & Allen, 2016).

Students who enrolled in dual credit coursework interacted with faculty and may be more likely to enroll in college based on their early experiences (Garcia et al., 2020). Although students may gain experience from engaging with faculty in dual credit courses, there are also concerns. Hornbeck and Malin (2019) discussed concerns regarding dual credit coursework that was taught online because students sometimes used it to bypass the high school curriculum. Ferguson et al. (2015) pointed out that faculty expressed concerns about students' lack of life experience and maturity in the classroom.

Cost. Early college or dual credit programs provided an efficient buying opportunity for students and their families because of the resources available to school districts, such as the ability to pay a lower sticker price for college-level coursework

(Olwell, 2021). There is an assumption that students who obtained dual credit needed fewer classes, leading to long-term cost savings (Roza, 2017). According to studies, there was a lack of research to support whether students have saved money and how credits were applied toward their college degrees (Berman, 2019). The accumulation of college credits in high school and the inability to transfer plays a slight financial advantage to students who obtained dual credit, resulting in little change to a student's borrowing behavior (Hu & Ortagus, 2022). In other situations, dual credit coursework may not apply to a student's ideal major, resulting in course transferability concerns. Not all states are required to accept dual credit coursework, and the states that accept coursework are not required to count the classes toward the students' intended major, which negated the purpose of saving time and money in dual credit coursework programs (Chamberlain & Said, 2022).

Dual credit programs can influence many factors that impact funding for the districts and higher education institutions. The economic influence of dual credit programs has varied based on the design of each program within the district or institution (Partridge et al., 2021). Hornbeck and Malin (2019) pointed out that some districts covered the cost of coursework completely while others relied on a mixture of funding from the state or parents. The percentage of funding supporting dual credit courses may vary depending on the school's demographic location. In rural areas, funding for dual credit programs consisted of 72% from the school, family, or students, a higher rate than average funding by district or state (NCES, 2020).

Instructors. Dual credit instructors may be required to meet standards set by the school district and higher education institutions. Credentialing might not be the same for K-12 and college instructors. In K-12, instructors were trained in education, while faculty in higher education specialized in a discipline area (McGowan Bucci & Simpson, 2021). In a traditional high school setting, instructors were preassigned to teach specific courses (Tobolowsky & Allen, 2016). An existing course instructor may be assigned to teach a dual credit course in school districts, provided they meet the requirements.

Professors teaching dual credit courses are often concerned with their identity. Dual credit instructors who identified as college professors commented that they "didn't become a professor to teach high school" (Mollet et al., 2020, p. 234). When professors are less supportive of dual credit coursework, there may be an influence on the rigor associated with coursework. Ferguson et al. (2015) noted that faculty were concerned with the need to differentiate the assignments offered to their students between dual credit and traditional courses. Additionally, when faculty were less supportive of dual credit courses, students may experience setbacks interacting with faculty.

Instructors may be required to undergo evaluations that differ between the school district and higher education institution to ensure they meet basic teaching standards set at the district and institution. Duncheon and Relles (2020) pointed out that in Texas, teachers were assessed and evaluated by the standards set forth by the Texas Education Agency (TEA). At higher education institutions, the evaluation process differed because it included evaluations from peer faculty members (Duncheon & Relles, 2020).

Benefits of Dual Credit Programs

According to An (2015), dual credit coursework enrollment in public high schools was 1.1 million in 2002-2003, doubling to two million by 2010-2011. As higher education institutions have continued to support dual credit programs, colleges have seen enrollment growth due to program expansion. Dual credit coursework has accounted for 16% of the overall higher education programs since 2019 (Knox, 2022).

As dual credit programs experienced a "paradigm shift," more opportunities became available to support underrepresented populations (Knox, 2022, para. 10). Participation in dual credit coursework was 151,669 in Fall 2017, a growth of 753% since Fall 2000 (THECB, 2018). Community colleges have often seen the highest amount of dual credit enrollment compared to other institutions, such as four-year universities. By Fall 2017, the number of students enrolled in two-year colleges was 726,699, with 19.4 to 40% of overall enrollment categorized as dual credit coursework (Texas Association of School Boards, 2022). Moreover, Miller et al. (2017) pointed out that in Texas, dual credit rose in alignment with the state's increase in diversity, resulting in more student opportunities.

Academic Influence of Dual Credit

Hu and Chan (2021) pointed out that dual education can positively influence a student's first-year GPA, retention, degree attainment, and time to complete their degree. Academic achievement has motivated educational development and student support by encouraging college aspirations, enrollment, retention, and persistence (Turner et al.,

2019). Early access to college-level coursework may allow students to obtain a head start in higher education. Dual credit coursework offered an opportunity for students to get ahead in college, saving time and money toward an education (Tobolowsky & Allen, 2016). In addition to early access to college, fewer students may need remedial coursework due to dual credit programs. Remediation in college, also known as remedial coursework in college, has decreased due to dual credit enrollment (McGowan Bucci & Simpson, 2021). In most cases, a dual-enrolled student was more likely to be college-ready than an individual who graduated from college and completed a developmental course (Hu & Chan, 2021).

Nonacademic Influence of Dual Credit

Recognizing the skills students need to develop early may provide a better understanding of what is needed to ensure success in dual credit programs. A student's characteristics and prior experience also influenced their ability to succeed in college (Lin et al., 2020). A survey conducted by Johnson et al. (2021) indicated that students who received support from high school and college felt a higher level of success in their dual credit coursework. Immersion into the campus culture may be essential to providing students with a better understanding of college life. Hu and Chan (2021) pointed out that students who enrolled in dual education courses offered on college campuses were more likely to gain better academic and social support. Establishing positive relationships on and off campus may be necessary for a student to succeed in college. Family support has assisted dual credit students with determining college plans and aspirations (Turner et al.,

2019). For students transitioning to higher education, socialization applied not only to academic demands and expectations but also to the recognition of values, attitudes, and the nuances reflected by faculty and peers on-campus (Duncheon, 2020).

The development of dual credit programs allowed students to earn credit simultaneously at the high school and college levels (Ferguson et al., 2015; Lile et al., 2018; Rivera et al., 2019; Walk, 2020). Chamberlain and Said (2022) described dual credit programs as an opportunity for students to gain access to higher education and receive college credit while saving time and money in high school. For colleges and universities, dual credit programs may support students entering educational institutions and promote partnerships with school districts.

Dual credit programs can lead to positive outcomes for higher education institutions. Colleges that have offered dual credit programs may generate future enrollment from students who want to continue earning dual credit or working toward their degree at that institution (Tobolowsky & Allen, 2016). The authors noted that future enrollment benefited the institution by increasing revenue and visibility within the community.

Skill Development. Colleges and universities may promote education as an opportunity to gain social interactions. Duncheon (2020) referred to socialization as the ability of an individual to adapt within their organization. Social interaction has allowed students to engage with individuals and advocate for themselves. In higher education, students build relationships with adult classmates by working in groups with other

college students, requiring a higher level of maturity and professionalism through diversity appreciation (Duncheon, 2020).

In America, college success is tied to academic skills such as reading, writing, mathematics, and science, which has supported individual success (Olwell, 2021). Students entering college can gain soft skills, the foundation of learning, and how to interact. Research indicated that non-academic or soft skills have provided an individual with success in a job and the ability to thrive in an organization's environment (Olwell, 2021). For students with dual credit, an assumption existed that it would provide them with the skills and credentials needed to enter a career track, enabling success in the workforce or college (FitzGibbon, 2015).

Support. College counseling, school climate, and parental support are all predictors of college readiness, motivation, and achievement, according to Turner et al. (2019). For students to fully integrate into higher education, it is important to understand the knowledge and skills that lead to success within their new environment (Duncheon, 2020). When students understand their expectations early, this may lead to the greatest opportunity for success. According to Thorne et al. (2022), when students were made clear of facilitating teachers, administrators, and high school expectations, they felt no expectations, and their grades were no different than students taking the same course on a college campus.

Dual credit programs provided students with better enrollment persistence and completion outcomes (TASB, 2022). Although primarily targeted at high-achieving

students, dual credit programs have been effective in helping students navigate postsecondary education (FitzGibbon, 2015). Programs can remain effective when key information is provided to stakeholders. Advising parents about dual enrollment programs assisted in meeting students' education and career goals more effectively (Hooper & Harrington, 2022).

Chapter Summary

This chapter included an overview of the research used to identify the relationship between dual credit and student success. The literature review also discussed the role of dual credit and how dual credit programs influence special populations, such as first-generation, low-socioeconomic status, and underrepresented groups. The literature review also examined the dual credit benefits, challenges, governance, and academic and non-academic factors.

Dual credit programs can provide students with the opportunity to earn college credit while enrolled in high school, which allows early exposure to higher education. These opportunities have enhanced the skills needed to support student success measures and degree obtainment after matriculation into higher education. Despite academic exposure, some students may not gain the soft skills needed to transition into higher education successfully. The long-term influence of dual credit coursework on a student's ability to achieve success in higher education has remained a concern due to the need to better understand the external and internal factors that influence the college transition from high school to college.

Course quality and rigor have remained a research topic due to the differences among college and high school instructors overseeing dual credit classes. Moreover, students' interactions with faculty, staff, and peers may influence dual credit students' decisions on where to attend college. Furthermore, an association may exist between a student's ability to successfully navigate college and their college readiness according to the CMSS model.

Understanding how policies and guidelines influence students may lead to better communication between school districts and higher education institutions. Students and parents should remain informed about course transferability to avoid losing time and limit costs associated with dual credit programs. To provide students with the most effective programs, understanding student populations and goals is key to student success measures.

CHAPTER III

Methodology

This chapter describes the research methods used in this mixed-methods study. The chapter also includes the researcher's positionality, the purpose of the study, the design of the study, and the rationale for choosing the research design. Moreover, the chapter discusses the population, sample, participants, research questions, research procedures, variables, instrumentation, and provisions of trustworthiness.

Researcher Positionality Statement

The researcher's positionality is described as the individual view and the position that was adopted over time about a research topic from a social and political perspective (Holmes, 2020). The researcher identifies as a White cisgender female in her early forties, with 20 years of educational experience in various positions in K-12 and higher education. Additionally, the researcher is a first-generation college student enrolled in a doctoral program. During the past 10 years, the researcher has worked in academic affairs, specifically academic advising, with the highest position being an academic advising director at the medium-sized rural university in East Texas where the research was conducted. Although the researcher works at the university where the research was conducted, she holds no supervisory position over the participants.

The researcher's familiarity with dual credit programs originated from experience in previous roles as a K-12 teacher and an academic advisor as well as her current

position as a director in higher education. The researcher did not take dual credit courses in high school or teach dual credit courses as an educator. Instead, the researcher holds a strong interest in the topic from daily interactions with students, some of whom were previous dual credit participants, and the passion for supporting student success.

Furthermore, interactions with students over the years have included conversations and advising sessions that included discussion about coursework transferability and major exploration, both positive and negative, as well as dual credit program experiences from students' perspectives.

The goal of this research study is to further explore the impact of dual credit on academic and nonacademic success from a student's perspective. Over the years, the researcher has interacted with students from various backgrounds who shared perspectives about dual credit programs. When students enter college, their perspectives regarding dual credit programs may change as they navigate through their first year of college and assimilate into the higher education climate. The researcher provided students the opportunity to share personal experiences and perspectives on dual credit programs, which could lead to a better understanding of how to improve dual credit programs in the future. Through open dialogue and transparency with participants, the researcher established trustworthiness with participants. Providing positionality created open disclosure to participants and readers (Holmes, 2020).

Furthermore, the research study utilized a pragmatic worldview lens to explore the answers to the questions associated with this research study. Creswell and Creswell

(2020) explained that pragmatic researchers "look to what and how to research based on the intended consequences they wanted to go with them" (p. 29). The authors also noted that quantitative and qualitative data provided a better understanding of the research problem in mixed methods research. The goal was not to focus on single or multiple realities but to discover how to accomplish what goals the achievement was based on (Lodico et al., 2010).

Purpose of the Study

This mixed methods study explored the relationship between the number of dual credit hours a student completes in high school and their academic success as a first-year undergraduate at a regional comprehensive university in East Texas. Furthermore, the study explored the relationships between the setting and the modality of dual credit courses and student success. The study also determined if there was a statistically significant difference in the academic success of dual credit students in their first year of undergraduate enrollment based on student demographic factors. Additionally, the study explored students' perceptions of the dual credit program factors that influence the academic success and non-academic success of first-year undergraduate students, including their adaptability to the college experience. Lastly, the study explored how the transferability of dual credit influenced their choice of institution and major.

Design of the Study

This study utilized an explanatory sequential mixed methods design where data was collected in two phases. An explanatory sequential mixed methods design is

described as a method where the researcher first conducts quantitative research, analyzes the results, and then utilizes qualitative data to further explain the results (Creswell & Creswell, 2020). Using an explanatory sequential mixed method design allowed the information from the qualitative portion of the study to further explain the quantitative data.

Quantitative Design

Research questions one through four used quantitative nonexperimental correlational design. A nonexperimental correlational design is used to determine whether a relationship exists between variables (Creswell & Creswell, 2020). A nonexperimental correlational design was the best method for this study because it supported survey research. Creswell and Creswell (2020) further noted that “survey research assisted in describing a population's trends, attitudes, or opinions” (pp. 30-31).

Using SPSS 28, a multiple regression was used to analyze questions one through four. Multiple regression is a statistical technique used to determine the relationship between multiple independent variables and a single dependent variable (Fein et al., 2022). Multiple regression was the most appropriate test because the quantitative portion of this study includes multiple independent variables and one dependent variable. For question one, the test determined if a statistically significant relationship existed between the number of dual credit hours students transferred into the university and students’ first-year undergraduate GPA at a regional comprehensive university in East Texas. For question two, the test determined whether there was a statistically significant relationship

between the modality of dual credit courses taken during high school and students' first-year undergraduate GPA at a regional comprehensive university in East Texas. For question three, the test determined whether a statistically significant relationship existed between the setting of dual credit coursework and students' first-year undergraduate GPA at a regional comprehensive university in East Texas. For question four, the test determined whether there was a statistically significant relationship between student demographic factors and students' first-year undergraduate GPA at a regional comprehensive university in East Texas.

Eight assumptions are associated with multiple regression. The first assumption is that the dependent variable is measured on a continuous scale (Laerd Statistics, 2020). The second assumption is that there are two or more independent variables, continuous or categorical (Fein et al., 2022). The third assumption is that there is an independence of observation which can be tested with a Durbin-Watson test (Laerd Statistics, 2020). According to Laerd Statistics (2020), a Durbin-Watson test detects the presence of autocorrelations between residuals from the multiple regression analysis. The fourth assumption is that there is a linear relationship between the dependent variable and each independent variable, which can be checked through the examination of scatterplots (Laerd Statistics, 2020). The fifth assumption for multiple regression is that the data shows homoscedasticity (Laerd Statistics, 2020). Laerd Statistics (2020) defines homoscedasticity as the presence of equality in variance along the line of best fit for all values of the predicted dependent variables. The sixth assumption is the absence of

multicollinearity (Laerd Statistics, 2020). Multicollinearity occurs when two or more independent variables are highly correlated with one another (Laerd Statistics, 2020). The seventh assumption is that there are no significant outliers, high leverage points, or highly influential points (Laerd Statistics, 2020). The eighth and final assumption is that the residuals are normally distributed, which can be checked by the examination of a histogram (Laerd Statistics, 2020).

Qualitative Design

Research questions five through eight used narrative inquiry to explore student perceptions of the influence of dual credit programs on college experiences through the utilization of a virtual focus group conducted via Zoom. A focus group is described as an interview or discussion that provides a researcher with a data collection method that allows participants to interact with one another (Blaikie & Priest, 2019). A semi-structured interview protocol (Appendix F) was used for the virtual focus group interview to guide questions that supported the research study. The questions explored student perceptions of dual credit enrollment and how experiences in dual credit programs impacted academic success and nonacademic success as a first-time undergraduate student at a regional comprehensive university in East Texas. Further, questions explored how the transferability of dual credit coursework influenced participants' choice of university or major and adaptability to college. Although questions were in a semi-structured interview format, there were opportunities to expand beyond the standard

protocol to gain a deeper understanding of their experiences and interpret events throughout their academic journey.

Confidentiality of Participants

Maintaining the confidentiality of research participants is a fundamental ethical obligation. It involves safeguarding participants' personal information, responses, and identities from unauthorized access or disclosure throughout and beyond the duration of the research project (Creswell & Creswell, 2020). Moreover, the authors noted that confidentiality ensures that sensitive information is handled with the utmost care and respect, fostering a trustful environment where participants feel safe to share honest and accurate information. This commitment to confidentiality not only protects individuals' privacy rights but also enhances the integrity and credibility of the research process.

Confidentiality protocols were rigorously upheld to ensure the anonymity of the participants involved in the study. Prior to the start of the virtual focus group, participants were instructed to provide a pseudonym or, alternatively, were offered pseudonym options by the researcher to safeguard their identities. Additionally, to further ensure anonymity, the video functionalities of participants' devices were deactivated during the focus group session, and they were instructed to replace their profile images with generic photographs. Following the conclusion of the virtual focus group, all corresponding Zoom files, including video, audio, and transcript data, were securely archived within a password-protected file on the researcher's laptop to uphold stringent security measures.

Variables

Creswell and Creswell (2020) described variables as "a characteristic or attribute of an individual or an organization that can be measured or observed, and that varies among people, or the organization being studied" (p. 93). The authors further delineate variables into dimensions such as gender, age, socioeconomic status, and specific attitudes or behaviors that can be quantified or assessed. In the context of this research, the framework includes both categorical and continuous independent variables, in addition to interval dependent variables, facilitating a comprehensive analysis of the factors at play.

For the quantitative portion of the study, the number of dual credit courses a student transfers is one independent variable and is treated as a continuous variable. Additionally, the modalities of the dual credit coursework and the student demographics are independent variables that are treated as categorical. As defined by Fein et al. (2022), categorical variables represent distinct categories. The three modal categories include face-to-face, online, and hybrid. The demographic factors examined are gender, race/ethnicity, and first-generation status. Gender is categorized into male, female, and non-binary. Race/ethnicity is categorized into African American/Black, Asian/Pacific Islander, Hispanic/Latino, Native American/American Indian, and White. The dependent variable, indicating student success, is based on GPA and is considered interval in nature. Spatz (2019) describes interval as the difference between two numerical values.

Regarding first-generation status, a binary classification is utilized, distinguishing between first-generation and non-first-generation students.

Population, Sample, and Participants

The target population for the study was first-time undergraduate students who completed dual credit coursework prior to entering college. The sample for the study consisted of 4,076 students at a regional comprehensive university in East Texas who were identified as first-time undergraduate students during any of the academic years between 2018-2021. Because of the researcher's role at the university, convenience sampling was used for this research study. Creswell and Creswell (2020) described convenience sampling as a selection process based on accessibility.

The researcher used stratified sampling to identify potential participants from the initial participant pool for a virtual focus group conducted via the Zoom platform. As defined by Creswell and Creswell (2020), stratified sampling leverages distinct characteristics of individuals to assemble a sample size that accurately mirrors the population's true proportions. Selection of participants for the focus group was contingent upon gender, first-generation status, and race/ethnicity, which were distinguished from responses obtained through an initial self-reported survey distributed via Qualtrics. Participants were divided into groups based on demographic factors. For gender, respondents were sorted into three categories: male, female, or non-binary. Next, those groups were sorted by first-generation and non-first-generation status. Lastly, the groups were sorted by race/ethnicity into African American/Black, Asian/Pacific Islander,

Hispanic/Latino, Native American/American Indian, and White. One or more participants were then selected from each of the stratified groups to ensure equitable representation in the focus group. The total size of the focus group was 10 participants.

Creswell and Creswell (2020) recommended that focus groups be no less than four and no more than 10 participants to allow each person to share insights and observations because large groups can be difficult to control. Ten individuals were sent email invitations to participate in a virtual focus group. If a participant declined the invitation or did not respond within one week, the researcher planned to select the next qualified participant in the same category based on the stratified sample until the researcher had secured 10 willing participants for the virtual focus group. This process was to ensure enough participants were selected to meet the recommended size of a focus group and to maintain diversity among focus group participants. The first 10 participants solicited agreed to participate in the focus group.

Once the final roster for the virtual focus group was established, the researcher sent emails to the 10 participants detailing instructions for creating a pseudonym in Zoom and instructions for focus group participation. In cases where a participant had not chosen a pseudonym before virtual focus group interview began, the researcher offered options for pseudonyms. The use of pseudonyms was a critical measure to preserve confidentiality among participants during the virtual focus group.

Research Questions

The following research questions guided the quantitative portion of the research study:

1. Is there a statistically significant relationship between the number of dual credit hours a student transfers and students' first-year GPA at a regional comprehensive university in East Texas?
2. Is there a statistically significant relationship between the modality of dual credit courses and students' first-year GPA at a regional comprehensive university in East Texas?
3. Is there a statistically significant relationship between the setting of dual credit courses and students' first-year GPA at a regional comprehensive university in East Texas?
4. Is there a statistically significant relationship between student demographic factors and their first-year GPA at a regional comprehensive university in East Texas?

The following research questions guided the qualitative portion of this research study:

5. What are students' perceptions of how dual credit enrollment influenced their academic success as first-year students?
6. What are students' perceptions of how dual credit enrollment influenced their nonacademic success as first-year students?

7. How did the transferability of dual credit hours influence students' choice of institution or major?
8. How did dual credit enrollment influence the students' adaptability to the college experience?

Procedures

After obtaining permission from the dissertation committee and the Stephen F. Austin State University Institutional Review Board (IRB), a request was submitted to the Office of General Counsel to obtain directory information for students who were identified as both first-time undergraduate students during any of the academic years 2018-2021 and having completed transfer credit prior to matriculation into college. The data set included students with various types of college credit, including the College-Level Examination Program (CLEP), College Board credit, and military credit. After receiving the data file from the Office of General Counsel, the list was analyzed, and individuals who transferred in dual credit coursework were identified as eligible participants. Those who had CLEP, College Board, or military credit were excluded from the participant list. Individuals with CLEP, College Board, or military credit only were removed because this research study focused on examining student success and perceptions from students who had completed dual credit coursework.

Once the eligible participants were identified, an email invitation to participate in the study was sent to those who met all qualifications for study participation. Each of the 4,076 students were sent an invitation to participate in the study. The email included a

Participant Consent Form (Appendix D), a description of the research study (Appendix I), and a link to complete the Qualtrics survey. The email explained participants' rights associated with the study, including the right to withdraw from the study at any point in time without penalty or repercussion from the researcher or the university. Furthermore, the email included an explanation that a participant's decision to withdraw from the study would not influence their enrollment at the university or any future participation in studies related to the university. Additionally, the email explained that participants who completed the survey were eligible to enter a drawing for one of five ten-dollar Amazon gift cards.

The survey remained open for three consecutive weeks, and each participant was emailed weekly reminders to complete the survey. The researcher sent a reminder email each week on Tuesday to remind participants to complete the survey. Each reminder email included an invitation to participate in the study, the survey close date, the participant consent form, general information about the study, information about the gift card incentive, and the researcher's contact information. The final email was sent on the last date the survey was open and included a "FINAL REMINDER" statement in the subject line to encourage a response.

After the survey closed, the results were downloaded from Qualtrics and entered into SPSS 28 for review and analysis. The email request generated a 3% response rate, with 113 students completing the survey. Several contributing factors may have led to a low response rate. These factors include the academic years of enrollment, resulting in

students who could have graduated before the survey was sent. Moreover, participants could have transferred to other institutions or been less likely to check their school email accounts for notifications.

From the respondent pool, the 10 eligible participants selected from the stratified sample were sent an email invitation to join the virtual focus group to discuss their experiences with dual credit programs and coursework. The email included information about the study, including a definition of the focus group, protocols, and information regarding the opportunity to win one of two fifty-dollar Amazon gift cards as an incentive for their willingness to participate in the virtual focus group. The request remained active for one week, and the researcher followed up with a reminder request every other day. The final reminder email was sent on the day before the focus group meeting and included a “FINAL REMINDER” statement in the subject line to encourage a response.

As participants confirmed their interest in joining the virtual focus group, an email with instructions, including how to rename themselves to their pseudonym in Zoom was distributed one day before the scheduled virtual focus group meeting. On the day of the virtual focus group, six out of the 10 participants joined the session. Participants were held in a waiting room and asked to rename themselves in Zoom with a pseudonym before the interview began. If a participant had not identified a pseudonym, the researcher provided optional pseudonyms to them through a private message and instructed them to rename themselves in Zoom. After all participants were renamed, everyone was moved into the main Zoom room to discuss their experiences with dual

credit programs. The researcher informed the participants that the session was confidential but would be recorded for transcribing purposes. Participants were notified of their option to opt-out at any time during the virtual focus group without penalty or repercussion from the researcher or the university. When the recording ended, the video and transcript was downloaded and saved into a secure file. The transcript was uploaded into *Dedoose* coding software for coding and thematic analysis.

Confidentiality was maintained for all participants. The information obtained from the Office of General Council was deidentified before the researcher was given access, and a coding system was developed to numerically identify participants and disconnect their names from their email addresses. Furthermore, pseudonyms were used in the virtual focus group to ensure participant anonymity. All data files used in this study were kept in a password-protected file to further ensure confidentiality.

Statistical Tests and Data Analysis

A multiple regression analysis was used to answer research questions one through four. According to Creswell and Creswell (2020), a multiple regression was the appropriate test because it examines the relationship between one dependent variable and two or more independent variables. It enables researchers to not only determine the magnitude and direction of these relationships but also to evaluate the extent to which multiple independent variables collectively predict the variance in the dependent variable. This analytical method is particularly valuable in research contexts where the effects of multiple factors on a single outcome are of interest because it enables researchers to

investigate the unique contribution of each predictor while accounting for the effects of other variables in the model (Creswell & Creswell, 2020).

To ensure the validity and reliability of a multiple regression analysis, it is critical to test and satisfy certain statistical assumptions. These assumptions, if violated, can lead to incorrect conclusions. A Durbin-Watson was used to test for independence of observations. Scatterplots were used to check for a linear relationship between the dependent variable each independent variable, homoscedacity, and outliers. Multicollinearity was assessed through variance inflation factor (VIF) values. Last, normality of residuals was checked by the examination of a histogram.

Following these preliminary checks, the analysis proceeded with a careful selection of predictor variables to include in the multiple regression model. Once the final set of predictor variables was determined, a stepwise regression procedure was implemented. This approach allowed for an iterative process where variables were added or removed based on their statistical significance and contribution to explaining variance in the dependent variable (Laerd Statistics, 2020). The inclusion criteria for each step involved assessing the change in R-squared value and ensuring it met a predetermined threshold for improvement in model fit.

To address research questions five through eight, a virtual focus group consisting of six participants who represented a diverse range of demographic backgrounds was held. This focus group was conducted using the Zoom platform and employed a semi-structured interview format. The discussion aimed to discover how these experiences

influenced their academic success, non-academic success, and their ability to adapt to college life as first-time undergraduate students at a regional comprehensive university located in East Texas. Additionally, the focus group sought to understand the impact of dual credit coursework transferability on the participants' choices of university or major. Although the interviews followed a semi-structured framework, there was flexibility for participants to provide more expansive insights that went beyond the predefined questions. This approach facilitated a richer exploration of the participants' lived experiences, perceptions, and interpretations related to their academic pathways.

Initially, the focus group's audio recordings were transcribed in Zoom to ensure that all verbal exchanges were captured accurately for analysis. The researcher thoroughly read the transcriptions to become familiar with the depth and breadth of the content discussed during the focus group, then employed an open-coding technique. Initial codes were generated by identifying and labeling significant phrases, sentences, or paragraphs that appeared to capture key thoughts or concepts relevant to the study's research questions. The initial codes were then reviewed and refined for clarity and consistency. Similar codes were grouped together, and redundant codes were eliminated or merged.

Potential themes were identified based on the refined codes. A theme represents a pattern or insight that emerges from the data and relates directly to the research questions (Creswell & Creswell, 2020). The identified themes were then reviewed in relation to the coded extracts and the entire dataset to ensure they accurately reflected the collected data.

Then, each theme was clearly defined and named to capture its essence concerning the research objectives.

Lastly, this mixed methods study used triangulation to examine data from multiple sources to determine how dual credit programs influence student success. According to Creswell and Creswell (2020), triangulation is defined as "different data sources examining evidence from the sources and using it to build a coherent justification of themes" (p. 274). Triangulation provided a complete picture of the topic and enhanced the credibility of findings because it is viewed from multiple methods (Lodico et al., 2010).

Provisions of Trustworthiness

Ensuring trustworthiness in a research study is essential to establish the credibility and reliability of the findings (Creswell & Creswell, 2020). Strategies used in this study to enhance credibility included prolonged engagement with the data and triangulation (using multiple data sources or methods). Further, transferability was enhanced by providing detailed descriptions of the research context, participants, and methodology. Finally, to ensure the dependability and confirmability of the study's findings, detailed records of the research process, including data collection, analysis, and decision-making processes, were maintained in a secure folder.

Chapter Summary

This mixed methods investigation used an explanatory sequential design, integrating quantitative and qualitative data collection techniques. The primary objective

was to explore the relationships between dual credit enrollment and student success as a first-year undergraduate. This study was conducted at a regional comprehensive university situated in East Texas.

Quantitative data spanning academic years from 2018-2021 were gathered to facilitate the analysis. Subsequently, the qualitative phase of the study involved conducting a virtual focus group session to explore students' perspectives of dual credit experiences. Triangulation was utilized to provide increased validity through a mixed methods approach.

This chapter included a discussion of essential aspects of the research, including the researcher's positionality, the study's overarching objectives, and the methodological framework. An in-depth analysis of the target population, the specifics of sample selection and participants involved, and the formulation of research inquiries were also included in the chapter. Furthermore, the chapter summarized detailed descriptions of data collection methods, research procedures, identified variables, and strategies employed to ensure the credibility and dependability of the study findings.

CHAPTER IV

Findings

This chapter includes the findings of this mixed methods study. The study explored relationships between dual credit program factors and first-year undergraduate student experiences at a regional comprehensive university in East Texas. Students' first-year GPAs were used to measure academic success. Key factors that influenced academic success included the number of dual credit hours transferred into their chosen university, coursework modality and setting, as well as student demographic factors. Data was gathered using two methods to answer the eight research questions. A multiple regression analysis was used to answer research questions one through four, while a narrative inquiry was used to answer research questions five through eight.

Quantitative Analysis

Descriptive Statistics

Grade Point Average is a numerical representation of a student's academic performance, typically calculated on a scale that ranges from 0.0 to 4.0 in the United States. A higher GPA reflects better academic performance, while a lower GPA indicates lesser success in coursework. Descriptive analyses of the data revealed that most participants had a first-year GPA above 3.00 while nearly a quarter of the participants had a first-year GPA below 3.00. Perhaps the most concerning is that 5% of participants had a GPA below 2.00. A GPA considered "at risk" can vary depending on the

institution, but commonly, a GPA below 2.00 is often seen as at risk in many high schools and colleges. This is because it falls below the standard C average and can jeopardize academic standing, eligibility for certain programs, and graduation. Table 1 presents the GPA ranges for participants in this study.

Table 1

First-time Undergraduate Student GPA

GPA Range	Respondents	
	%	<i>n</i>
0.00	0	0
0.01-1.99	5	6
2.00-2.99	17	19
3.00-3.99	47	53
4.00	16	18
Did not know	15	17

Note: *n* = 113. Student's actual GPAs were used in statistical testing.

Dual credit courses are taught in multiple modalities and settings. Many partnerships allow for dual credit courses to be taught on high school campuses while some students must take courses on a college campus. Moreover, students complete coursework in multiple modalities including face-to-face, online, and in a hybrid format. More than half (*n* = 62) of the participants took their dual credit courses in a face-to-face setting while less than one-quarter (*n* = 26) of participants took dual credit courses online. Furthermore, 74% (*n* = 84) of participants took dual credit courses on a high school campus, and very few (*n* = 2) took dual credit courses on a university campus. Table 2 presents the course modality and setting for survey respondents.

Table 2*First-time Undergraduate Student Modality and Setting of Dual Credit Coursework*

Program Delivery	Respondents	
	%	<i>n</i>
Modality		
Hybrid	22	25
Online	23	26
Face to face	55	62
Setting		
High school campus	74	84
Community college campus	24	27
University campus	2	2

Note: *n* = 113

The literature paints a clear picture that a major goal of dual credit programming is to provide opportunities to enhance college access and affordability for traditionally underserved populations; however, most participants in this study were White, female, non-first-generation students (*n* = 80), (*n* = 80), and (*n* = 73), respectively. With the exception of females, this enrollment is not representative of marginalized groups these programs are aimed at serving. Hispanic/Latino (*n* = 21) was the second largest ethnicity among respondents, and 8% (*n* = 9) of the respondents were African American students. Additionally, the vast majority (*n* = 73) of participants were non-first-generation students. These student demographics are not representative of the major aim of dual credit programs to provide college access to underserved populations. A breakdown of participant demographics is presented in Table 3.

Table 3*First-time Undergraduate Student Demographics*

Baseline Characteristic	Respondents	
	%	<i>n</i>
First-generation status		
Yes	35	40
No	65	73
Gender		
Male	20	23
Female	71	80
Non-binary	9	10
Race/Ethnicity		
African American/Black	8	9
Asian/Pacific Islander	3	3
Hispanic/Latino	19	21
Native American/American Indian	0	0
White	70	80

Note: *n* = 113

Multiple Regression Results

Multiple regression was used to determine if a statistically significant relationship existed between the number of dual credit hours transferred in, dual credit course modality, setting of dual credit courses, demographic factors (race, gender, first-generation status), and GPAs of first-year undergraduates who had taken dual credit courses prior to entering college. All assumptions for the multiple regression were met. There was linearity as assessed by a scatterplot inspection. There was also independence of residuals, as assessed by a Durbin-Watson statistic of 2.090. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. There was no evidence of multicollinearity, as

assessed by tolerance values greater than 0.1. There were no studentized deleted residuals greater than ± 3 standard deviations, no leverage values greater than 0.2, and values for Cook's distance above 1. The assumption of normality was met, as assessed by inspection of a histogram.

The multiple regression model did not predict GPA at a statistically significant level, $F(6, 96) = 0.655$, $p < .005$, adj. $R^2 = -.021$. Neither of the six variables added statistical significance to the prediction, $p < .05$. Regression coefficients and standard errors can be found in Table 4.

Table 4

Multiple Regression Results for RQs 1-4

Variable	Estimate	SE	95% CI		<i>p</i>
			LL	UL	
Modality	.113	.076	-.038	.264	.142
Setting	.144	.166	-.186	.474	.389
Number of transfer hours	.004	.004	-.004	.013	.342
Race	.018	.073	-.126	.163	.801
Gender	-.052	.104	.155	.155	.620
First-generation status	.031	.134	-.234	.297	.815

Note: significance level = $p < .05$

Qualitative Analysis

Participants

Participants for this virtual focus group consisted of six survey respondents in the quantitative phase of this study. These participants were selected using a stratified sampling method. By doing so, the study sought to enrich the qualitative data collection process, fostering a nuanced exploration of participants' experiences and viewpoints

regarding the phenomenon under investigation. The topics the researcher sought to explore related to the phenomenon included the number of dual credit hours students transferred to their higher education institution as first-time undergraduate students, the age at which students began taking dual credit coursework, the setting of dual credit during program enrollment in high school, dual credit coursework instructor credentials and experience, and the rationale for dual credit enrollment. For this study, courses taught through dual credit programs included credentialed teachers at the participants' high school campus who were employed by the school district and faculty employed through a higher education institution who taught dual credit coursework at the school. To ensure confidentiality and maintain anonymity, all participants used a pseudonym. No real names are used in this study.

NAW

“NAW” is a White, non-first-generation female who transferred 27 dual credit hours as a first-time undergraduate student. She began coursework at age 17 during her senior year of high school. “NAW” completed her dual credit coursework on her high school campus but was taught primarily online by higher education faculty. She viewed taking dual credit courses as an opportunity to complete core courses and focus on major courses when entering higher education.

Waffles

“Waffles” is a White, first-generation, non-binary student who transferred 62 dual credit hours as a first-time undergraduate student, the equivalent of an associate degree.

They began coursework at age 13 during their freshman year of high school. “Waffles” completed their dual credit coursework on their charter school campus, which was part of a community college, in a face-to-face setting taught by higher education faculty. Dual credit enrolment was a requirement to enroll in the charter school.

Twiggy

“Twiggy” is a Hispanic/Latino, first-generation female who transferred 18 dual credit hours as a first-time undergraduate student. She began coursework at age 15 during her sophomore year of high school. “Twiggy” completed her dual credit coursework on her high school campus. She also described her dual credit program as being partnered with both a community college and a four-year institution. The courses were delivered via Zoom by higher education faculty. “Twiggy” saw enrolling in dual credit as a way to graduate in the top percentile of her high school.

Jasperfishes

“Jasperfishes” is a Hispanic/Latino, first-generation male who transferred 52 dual credit hours as a first-time undergraduate student. He began coursework at age 14 during his freshman year of high school. “Jasperfishes” (male, Hispanic/Latino, first-generation student) completed his dual credit coursework on his high school campus through a hybrid format and at a community college. Dual credit enrollment was a requirement to maintain enrollment in his high school.

Jacob

“Jacob” is a White, first-generation, non-binary student who transferred 47 dual credit hours as a first-time undergraduate student. They began coursework at age 16 during their sophomore year of high school. “Jacob” completed their dual credit coursework in a hybrid setting, online and face-to-face, on their high school campus and at the local community college. They had not planned to attend college but enrolled in dual credit coursework on a recommendation from their teacher.

Tyler

“Tyler” is a White, first-generation male who transferred 18 dual credit hours as a first-time undergraduate student. He began coursework at age 16 during his junior year of high school. He completed his dual credit coursework in a face-to-face format on his high school campus and was taught by credentialed teachers. He did not provide a rationale for taking dual credit courses.

Focus Group Interview Results

Thematic analysis was conducted using an inductive coding method within the qualitative analysis software *Dedoose* to determine patterns and themes from the focus group transcripts. Several themes that emerged from the research included academic preparation, the need for support and guidance, burnout, accessibility, affordability, future academic and career choices, and college transition. Table 5 presents the codes and emergent themes from the qualitative analysis.

Table 5*Codes and Emergent Themes by Qualitative Research Questions*

Research Question	Codes	Emergent Theme
Students' perceptions of the dual credit factors that influenced their academic success as first-year students?	Lack of study habits	Academic preparation
	Unrealistic college experiences	
	Exposure to college systems	Academic support and guidance
	Lack of counselor support	
	Lack of support in navigating college	
Students' perceptions of the dual credit factors that influenced their nonacademic success as first-year students?	Quality of instruction not consistent	Burnout
	Lack of Rigor	
	Missed social interaction with peers	Non-academic support and guidance
	Higher level of maturity	
	Imposter syndrome	
Influence of transferability on students' choice of institution or major?	Lack of information provided to families of first-generation students	Access
	Pressure to become self-reliant	
	Sought family support	Affordability
	DC advertised for success	
	Lack of program guidelines	
Influence of dual credit on students' adaptability to the college experience?	Incentive for lower-income students	Academic and career choices
	Lack of understanding of long-term cost benefits	
	Low/no cost as an incentive	Burnout
	Early planning required	
	Lack of motivation	College transition
	Missed life experiences	
	Continued education	College transition
	High-pressure environment	

Academic Preparation

Participants indicated that they did not feel they were adequately prepared for college in terms of rigor, study habits, notetaking, and writing skills. The consensus

among focus group participants was that their dual credit courses were core academic courses, and they were not allowed to take courses outside the general curriculum.

Furthermore, some participants felt that dual credit programs did not provide them with a realistic expectation for the rigor of college-level courses. “Twiggy” (female, white, first-generation student) shared that she felt she had to teach herself “from ground zero,” and she “struggled academically” when she got to college. “Twiggy” (female, White, first-generation student) further described her experience with the lack of rigor in dual credit courses:

But then the disadvantage of that was the dual credit courses that I did take in high school weren't really true college courses. My dual credit courses did not prepare me for college like I said they were kind of just very basic. The study guides were the test things of that sort. We didn't take notes. you know, just the teacher is basically just reading the PowerPoint to us things of that sort.

“Waffles” (non-binary, White, first-generation student) added that “we didn’t have study habits. They told us to use planners but didn’t tell us how.” In terms of rigor and academic preparation, writing skills were an area in which most participants agreed their preparation fell short. “Twiggy” (female, White, first-generation student) shared that her dual credit courses were “pretty much not rigorous at all compared to normal college courses” and that she “wasn’t really taught how to write or anything of that sort.” She also discussed her struggles with writing once she got to college because students were expected to already know MLA format.

Another point that participants agreed upon is that the quality of the dual credit program was largely dependent on the quality of the instructor, more so than the modality or setting of the coursework. Participants pointed out that instructor quality varied greatly within their program; however, nothing emerged to indicate that instructor quality varied based on the setting of the coursework. “Jacob” (non-binary, White, first-generation student), who took courses both on a high school campus and at a community college, pointed out that the rigor of the course was specifically dependent upon the instructor rather than the setting:

It just depends on who, not if it was a professor or if it was a teacher, a high school teacher...depends on who the professor was and how serious, I guess of how willing they are to treat you like a college or a high school student.

Consequently, most participants indicated they were more prepared for the systems utilized in higher educational institutions or navigating the landscape of higher education than they were for the coursework. Many of the participants had taken online or virtual dual credit courses, which they felt had prepared them to navigate online learning management systems and virtual meeting platforms. Additionally, some students had taken all or some of their dual credit courses from university professors and felt they had at least some exposure to the structure of a college classroom through this experience.

Academic Support and Guidance

Many participants felt they needed more support and guidance from the counselors, who were typically charged with running the school’s dual credit program.

Some participants reported that school counselors were helpful only when enrolling in dual credit courses. Other participants perceived school counselors as lacking in availability as a support system beyond enrollment, and most felt they had to navigate the process themselves. “Waffles” (non-binary, White, first-generation student) added that the dual credit experience was “kind of sink or swim in a lot of ways; either you figure it out or you don’t.” Moreover, “NAW” (female, White, non-first-generation student) mentioned that college guidance was minimal. She described asking counselors for support and being given minimum guidance, stating “Yeah, they made us figure it all out on our own.” A majority of participants reported turning to their high school teachers when they did need support and guidance.

Some participants felt that their status as first-generation students contributed to their lack of support and guidance. They mentioned seeking the support of teachers because their parents did not know how to navigate higher education systems. Moreover, participants felt their parents were generally supportive but lacked the resources needed to be a source of information for financial aid and admissions. “Waffles” (non-binary, White, first-generation student) described the most basic type of support these families could provide:

I think that's just one of the problems with having a first-generation, family or, or like being a first-generation student and going into university. It's just that, like, no one really knows how to help you other than being like, you can do it.

“Twiggy” explained that, because of her first-generation status, she felt that she had to figure things out on her own.

I also am a first-gen student. And so, my mom didn't really know anything. She was also kind of. That's just the, you know, you got this. You're smart, go you can do it. And so, I was on top of things, cause I knew I had to be.

Burnout

Students in dual credit programs often deal with an increased workload compared to their peers in traditional high school settings. Participants discussed the rigorous nature of simultaneously balancing college-level courses and secondary education courses. This required more time for study, assignments, and preparation for exams, leading to long hours of work without sufficient rest. Participants described experiencing burnout when facing sustained stress and pressure from managing both high school and college-level coursework simultaneously. They discussed physical, emotional, and mental exhaustion, along with a decrease in performance and motivation. “Waffles” (non-binary, White, first-generation student) described the burnout as “extreme.” They further explained, “...all I know is gas. There's no brakes. There was no gap year.”

Moreover, the length of time participants had been enrolled in college-level coursework led to a degree of burnout, as “Waffles” (non-binary, White, first-generation student) described:

I've been doing this since eighth grade, and I'm so tired; I'm so ready to be done. I technically got my associate before my high school diploma. So, if you phrase it a

certain way, it sounds pretty cool but, for me, I've been doing college since I was 13 years old.

Participants discussed the high amount of stress they faced to stay in their chosen major after they completed dual credit courses. The idea of changing a major led to burnout “Waffles” (non-binary, White, first-generation student) explained “...because if you change at all, it's gonna, it's gonna make everything go so fast paced. And I feel like that contributed a lot to the burn out.”

Balancing the demands of high school and college courses, along with extracurricular activities, part-time jobs, and personal commitments, can be overwhelming. Effective time management becomes crucial, and failure to manage time efficiently can exacerbate factors leading to burnout. “Jasperfishes” (male, Hispanic/Latino, first-generation student) described the feeling as “like there burnout on burnout, on the missed life experiences.” Others emphasized feeling that they missed out on life experiences, noting there were “no parties” and “no social life” which contributed to the feelings of burnout.

Non-academic Support and Guidance

Participants enrolled in dual credit programs indicated a lack of non-academic support and guidance from, both, school and home. “Tyler,” a White, first-generation male, noted:

Thankfully, I was able to have my mom....we went through a lot of difficulties, you know. I guess the application process, because, you know. she didn't go to

college, so it was kind of a learning experience for both of us, but you know it was overall. It was very stressful.

Others emphasized how parents provided support in terms of words of encouragement or guidance in processes, “Jacob” (non-binary, White, first-generation student) pointed out, “...All I had was my mom. Say, go get them! That's she's like you want to do it. You got it.” For “NAW” (female, White, non-first-generation student), it was her dad who provided guidance for the college transition process:

my dad, he's he's worked in education since I was born, so whenever it came time for me to apply to colleges, he was the one who would take me to tour them and everything.

Furthermore, participants agreed that they had to become self-reliant. Most of the focus group discussed how there was a lack of information provided in terms of dual credit programs and their transition into higher education. “Waffles” (non-binary, White, first-generation student) discussed the concerns of being a first-generation student in terms of non-academic support and guidance:

I think that's just like one of the problems with having a first generation, family or like being a first-generation student and going into university. It's just that, like, no one really knows how to help you other than being like, you can do it.

As Martinez et al. (2018) pointed out, administrators should communicate clear guidelines between support staff, the school, and higher education partners to ensure students are provided with the resources needed to be successful in dual credit programs.

Regardless of first-generation status, participants all felt there were no clear guidelines regarding dual credit enrollment and the transition into college.

Access and Affordability

Much of the focus group discussion centered around program access and affordability. Regarding access, participants dual credit program admissions varied from freshman admissions to admission that was restricted to senior year. Furthermore, most participants agreed that dual credit programs were designed for students with specific GPAs rather than the general population of high school students. Some participants, however, indicated their programs were targeted to traditionally marginalized groups, such as low-income and first-generation students. The low cost of dual credit courses enhances accessibility of these courses for students from low-socioeconomic backgrounds. “Jacob’s” (non-binary, White, first-generation student) dual credit program “paid for the cost of tuition and the cost of materials.” “Waffles” (non-binary, White, first-generation student) noted that even if a student failed a course, they were allowed to retake it “at a greatly reduced rate.” Participants agreed they sometimes felt there was a lack of understanding of the long-term cost benefits if they did not follow through with their high school track or enroll in the college where they were taking dual credit courses.

Academic and Career Choices

The consensus among participants was that the ease of transferring dual credit coursework to different majors didn't play a big role in their choice of academic field. This study found that many dual credit programs only offer entry-level courses, limiting

options for students. Moreover, when choosing educational institutions, students often prioritized convenience above other factors. Their decision-making was influenced by several elements, including how easily credits could be transferred, if the institution was also the provider of their dual credit program, and any family connections to the institution.

Study participants also shared that the option to transfer dual credit coursework didn't significantly sway their decision on what major to pursue. These programs typically restrict enrollment to basic, foundational courses. The choice of where to study was mainly based on how convenient the location was for students. They considered various factors in their decision, such as credit transferability, the dual credit provider's identity, and family ties to the school.

Participants noted that being involved in dual credit programs played a role in their decision to further their education. For some, these programs made it easier to add more majors or minors, enriching their academic journey. Others mentioned that taking dual credit courses in high school sped up their educational path, pushing some towards graduate studies as a way to delay entering the job market. Discussions also touched on personal experiences with dual credit programs, showing varied impacts on students.

Some participants reflected on the downsides of participating in dual credit programs, expressing regret over missed social experiences and potential educational paths due to uncertainties about their future after college. “Waffles” (non-binary, White, first-generation student) discussed the impact on some students in their program:

I think they're a Stoner now, and that they're not like and most of my class, if they're in school, they're like in medical school, and if they're not, I've seen a few working at like quarter stores, or like trying to find their way. Now, I mean, they have an associate degree which is nice. But I think kind of like the big factor there would be like motivation or just distress tolerance.

College Transition

Participants shared concerns about adapting to college, attributing these difficulties to differences in dual credit coursework and instructors. They contended that high school teachers tended to be less demanding than university professors, and online dual credit courses often lacked structure due to the absence of direct teacher oversight. While some students felt that dual credit programs at their high schools were well-organized and prepared them for college, others believed the quality and rigor were lacking because these courses were not integrated into their main high school curriculum. “Jasperfishes” (male, Hispanic/Latino, first-generation student) described himself as “academically... pretty prepared” but went on to discuss the application of the skills obtained during dual credit:

Were those skills used effectively in my first year. No. They were used better after almost failing out but socially and like, in terms of real-life skills. I got like most of what I like most of my socialization from like or not socialization.

Transitioning to college also highlighted the need for greater maturity, especially for younger students enrolled in advanced courses. While some participants felt they missed

important social experiences by not interacting with peers outside the dual credit programs, “Jacob” described (non-binary, White, first-generation student): “The maturity level that you get between those years is just like insane to me, cause it was. It's just like one day you wake up, and you're like a new person.” They noted a sense of exclusivity within the dual credit community, describing it as a tight-knit group or *clique*. Those who skipped typical high school social activities, like sports, dances, or clubs, due to their early exposure to college environments expressed feeling pressured to mature more quickly.

Chapter Summary

This chapter included a summary of the quantitative and qualitative analysis of the research findings for the mixed-methods research study. A summary of the quantitative research findings and the qualitative codes and themes were included in the chapter. Furthermore, the qualitative analysis includes participant demographics and a summary of key information discussed from their perspective.

CHAPTER V

Conclusions, Implications, and Recommendations

This chapter provides a comprehensive overview of the mixed-methods research study, an introduction, key findings, discussion, and limitations. It also presents suggestions for future research and practical applications and concludes with final thoughts on the study's significance and impact. Lastly, the chapter includes a conclusion and summary.

Introduction

Dual credit programs allow students to earn college credit while enrolled in high school. The number of students enrolled in dual credit programs has increased through the years. Since 2010, the only age group that has increased significantly in college enrollment is students under the age of 18 (Knox, 2022). In Texas, dual credit is one of many programs that provide students with a pathway to college enrollment (Martinez et al., 2018). Students enrolling in dual credit programs may be more likely to pursue a college degree. Martinez et al. (2018) noted that these effects are strongest among first-generation and underrepresented groups participating in dual credit programs. Furthermore, a student's academic success may be linked to their ability to transition into college. According to Tinto's Student Integration Theory, students are likely to succeed in college when some clear guidelines and expectations provide academic and social support, including assessment, feedback, and engagement (Romano & Hesse, 2018).

Key Findings

The results of the quantitative portion of this study suggest that no statistically significant relationships exist between dual credit program structures and first-year undergraduate student success. Specifically, findings suggest that no statistically significant relationship exists between the number of dual credit hours a student transfers into a university, the modality of dual credit coursework, the setting of dual credit coursework, or demographic factors and first-year undergraduate GPA.

The themes associated with the qualitative portion of the study include academic preparation, academic support and guidance, burnout, non-academic support and guidance, access, affordability, academic and career choices, and college transition. The qualitative findings suggest that students' perceptions of dual credit programs influence academic success, non-academic success, and adaptability to the college experience. Moreover, the findings suggest that the transferability of dual credit hours did not influence students' choice of major or institution.

Discussion

The initial goal of dual credit programs was to provide special populations with college access (An, 2013; Troutman et al., 2018). Moreover, Olwell (2021) noted that dual credit programs were designed to influence enrollment among first-generation and low-income students. However, access and affordability of dual credit coursework can vary based on the structure of the program offered by the school district. Liu and Xu (2022) noted that policies mandate partnerships between school districts and colleges to

increase course availability, but the findings of this study suggest that there are limitations in terms of the types of courses available to students. Furthermore, Thorne et al. (2022) noted that these limitations in course offerings may create barriers for students, affecting their future college enrollment.

The majority of participants in this study completed their dual credit coursework face-to-face on their high school campus. Although the initial purpose of dual credit programming was to reduce barriers for low-income students, first-generation students, and students of color, the largest percentage of participants in this study were non-first-generation, White, females. Some of the participants in this study, however, did identify as a member of one or more special populations groups and reported that their districts encouraged higher dual credit enrollment among low-income and first-generation students. Xu et al. (2021) noted that these special groups are more likely to experience long-term success from dual credit enrollment; however, due to a lack of first-generation and minority respondents, the findings in this study are inconclusive in supporting these claims.

Dual credit programs are funded through tax revenue. Because tax revenue varies from year to year and in different locales, approval of dual credit programming and course availability can also vary (Hornbeck & Malin, 2019). The findings in this study supported the inconsistency in dual credit offerings as a result of differentiated funding. Participants who attended schools in more affluent areas tended to report more dual credit course offerings and program support. Students from lower income families sometimes

struggle to pay for a college education. Chamberlain and Said (2022) pointed out that students in dual credit programs could save time and money which could lead to an overall cost savings in the future. Furthermore, some students use cost as a motivator to obtain satisfactory grades in dual credit courses. However, Field (2021) pointed out how students who do not take courses that apply toward their major can accrue debt due to the need to spend additional time and money on their education. Participants in this study added that they were academically motivated because they were required to pay out-of-pocket costs at a higher rate when they failed a course.

Transition to College

While the primary purpose of dual credit coursework is to prepare high school students for college, participants in this study reported that the variations in the rigor of dual credit coursework varied by instructor and course setting. Dual credit course instructors can be dual credit-credentialed high school teachers or college faculty members. Further, dual credit courses are offered on, both, high school and college campuses and in face-to-face, hybrid, and virtual settings. Additionally, the findings in this study suggested that students who enrolled in dual credit programs were motivated by the desire to graduate in the top percentile of their class. Many participants explained that the only way to graduate as valedictorian or salutatorian was to excel in dual credit. Turner et al. (2019) discussed the importance of achievement as a motivator in dual credit programs. Moreover, this study's findings suggest that participants persisted into college despite the number of dual credit courses they enrolled in during high school. One

participant entered college having already earned an associate degree while another participant only earned 18 hours.

Miller et al. (2018) discussed the need for communication between college students and professors so that students have a clear understanding of their expectations. Although there was a strong desire to have better communication and a clear understanding of expectations, study participants did not indicate that this had a true impact on their ability to succeed in college. Additionally, Partridge et al. (2021) explained that students who are not prepared for the differences between high school and college are at risk for emotional or physical harm during or after the transition to college. Participants in this study, however, felt they did not experience emotional or physical setbacks transitioning into college.

Hooper and Harrington (2022) found that first-generation students felt there was a lack of support in understanding their needs as they transitioned to college. Furthermore, Field (2021) noted that most school counselors who made recommendations for dual credit programs were White, and many made recommendations for students based on unintentional bias. Most participants in this study felt they lacked support and understanding from their high school counselors. Weissman (2020) noted that dual credit programs provide students with familiarity and assistance when transitioning into higher education; however, most participants felt that dual credit programs did not provide them with the guidance and resources needed to succeed.

Additionally, students who transition into college feel they are required to maintain a higher level of maturity and know their intended path early on to be successful (Mangan, 2018). Most participants felt they were navigating the process on their own with little guidance or support, and their families were not informed on how to assist with the college experience.

College and Career

Student perceptions of the influence of dual credit programs on academic and non-academic factors suggest a variance in college preparation. Ferguson et al. (2015) found a lack of consistency in assignments between dual credit and traditional coursework. Many participants did not feel dual credit coursework provided them with the feeling of a future orientation to college courses because they did not gain essential note-taking and study habits. However, as students transition into college, dual credit participation may influence their academic success. Students enrolled in dual credit programs may be more likely to experience higher GPAs after their first year of college enrollment. Most study participants were likely to maintain a 3.00-3.99 GPA range after their first year of college. Further, Weissman (2020) noted that students gained soft skills in college through dual credit programs, but participants, despite variations in the number of dual credit hours taken, felt they were not adequately prepared for their transition into higher education.

FitzGibbon (2015) noted that most students who enrolled in dual credit programs and stayed on their career track achieved workforce and college success. The findings of

this study suggested many students were prepared academically, yet it came with a price. Burnout was a common theme among participants. They felt they missed out on life experiences because they did not learn how to socialize effectively. Moreover, participants felt they were prepared to navigate through the systems of higher education, such as technology and email, but lacked engagement with peers. Fink et al. (2017) noted, the younger a student's age of enrollment in dual credit programs, the less likely they were to continue to participate in the future. The burnout from continuous college enrollment from such a young age led to less of a desire for many participants to continue their college education.

Limitations

The study focused on a small sample size from a regional comprehensive university in East Texas. Furthermore, the results may not represent the general population of students taking dual credit coursework. Dual credit programs vary in design and structure, which could impact the rigor of coursework and the qualification of instructors. Students enrolled in dual credit programs could have varied levels of preparedness transitioning into higher education due to the lack of standardization in program design. The study was also conducted through the lens of narrative inquiry, which intentionally sought a small cohort of participants. Moreover, narrative inquiry aimed to explore participants' stories by examining their experiences and narratives.

Implications for Practice

The study could provide useful information for administrators who make hiring decisions, determine the cost and effectiveness of programs, and determine course delivery and scheduling. Administrators could consider how dual credit programs are structured in their district when hiring credentialed teachers and paraprofessionals who monitor online courses. Furthermore, administrators could also consider the costs associated with their dual credit programs. Cost structures could determine accessibility and resources for students in the district that support success. Furthermore, technology may assist administrators in making decisions about the structure of their dual credit programs by offering courses in alternative modalities that benefit the needs of students within their high school class schedule.

The study could also provide policymakers with a better understanding of the differences in structure among dual credit programs. Various program structures are discussed throughout the study, including high schools structured explicitly around dual credit and others that rely on a higher educational institution to serve as the provider. Policymakers can consider how different structures impact school districts, higher education institutions, and student success when making guidelines for dual credit programs by examining the needs of students through assessments.

School districts and higher educational institutions have the opportunity to collaborate to determine how dual credit programs could be adjusted to meet students' academic and social needs. Students enrolling in dual credit programs may not obtain the

skills needed to transition into college successfully. Providing students with additional college resources, such as tutoring centers and writing labs, may enhance their college readiness skills before arrival on college campuses.

Consideration of how dual credit students may benefit from special programs that assist with the college transition process may provide key information to students who do not feel college ready. When considering programs, emphasis may be placed more on the student's age and ability to socially transition into higher education rather than the number of credit hours completed in high school. Further examination of programs that provide students with support on various academic and non-academic levels could assist in more informed transferability regarding dual credit courses into higher education institutions.

Recommendations for Future Research

Future research opportunities into dual credit may include examining programs beyond regional levels. Furthermore, examining students' location in relation to accessibility may provide insight into greater opportunities for all students. Lastly, understanding the perspectives of dual credit coursework instructors could enhance the development of rigor within programs.

Dual credit programs vary in structure and design depending on the setting and type of sponsoring institution available to the school district. Exploration of programs at the state and national levels may provide an opportunity to create more streamlined processes that support more transparency for students, families, and educational entities.

Furthermore, understanding how each state supports dual credit programs could create an opportunity for institutions to support dual credit programs that support transferability across states. Furthermore, examining programs may provide students and parents with more information about dual credit programs to assist in making informed decisions regarding coursework and transferability.

Students' geographical location could limit their ability to access dual credit programs. Further exploration into how cost and SES are related may provide insight into the varying cost structure of programs. Students in rural and urban areas with limited resources may not have equitable resources, thus limiting their access to dual credit programs. Furthermore, examining the distance between school districts and servicing institutions may provide a greater understanding of why students choose to take courses in a specified modality.

The perspectives of instructors who teach dual credit coursework could provide insight from a different perspective on methods to enhance programs. Examining coursework rigor from an instructor's viewpoint may offer an opportunity to enhance programs for academic readiness. Enhanced academic readiness in dual credit coursework could lead to higher retention and degree completion in higher education.

Conclusion

The study added to existing research that examined the relationship between high school students' completion of dual credit coursework and their academic success after their first year of college. A dual credit program may allow students to gain college credit

and experience during high school. Students may adapt to college academically; however, their ability to navigate college after matriculation could be limited by their experiences based on their dual credit program structure. As Tinto (1993) noted in the Student Integration Theory, programs are the key to academic success and may be linked to students' ability to transition into college.

For administrators to develop more effective programs, understanding the structure of dual credit programs, including the modality and setting, and how they can best serve the needs of all student populations may be key to student success. Examining guidelines for dual credit programs could aid policymakers in developing policies that provide students with a greater understanding of course transferability that may lead to future cost benefits. Moreover, a comprehensive understanding of students' academic and social needs is a key factor in this process, and our responsibility is to ensure that these needs are met.

Future research may include exploring policies that provide more transparency to students, families, and educational entities to support better transferability of coursework. Furthermore, examining additional demographic factors may lead to a greater understanding of why some populations are more likely to participate in dual credit programs. This includes a great additional exploration into the location and modality of dual credit programs in comparison to available resources, such as staffing and accessibility. Moreover, understanding multiple perspectives from administrators and

instructors could provide insight into best practices to support the needs of both educational entities.

Chapter Summary

The chapter included an overview, an introduction, key findings, a discussion, and limitations of the study. Implications for practice and suggestions for future research opportunities for dual credit programs and student success were also discussed in the chapter. Lastly, the conclusion of the chapter provided an overview of the study.

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APPENDIX A

Dual Credit Survey

Section I: Dual Credit Participation

1. Did you participate in dual credit courses in high school?
 - ☐ Yes
 - ☐ No

Section II: Demographics

2. Please select the gender you most closely identify with.
 - ☐ Male
 - ☐ Female
 - ☐ Non-binary
3. What race/ethnicity do you most closely identify with?
 - ☐ African-American/Black
 - ☐ Asian/Pacific Islander
 - ☐ Hispanic/Latino
 - ☐ Native American/American Indian
 - ☐ White
4. Are you a first-generation college student?
 - ☐ Yes
 - ☐ No
5. What is your father's/guardian's highest level of education?
 - ☐ High school diploma
 - ☐ Associate degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Doctoral degree
 - ☐ Unknown
6. What is your mother's/guardian's highest level of education?
 - ☐ High school diploma

- Associate degree
- Bachelor's degree
- Master's degree
- Doctoral degree

Section III: Dual Credit Participation

7. During what grade did you first enroll in dual credit coursework?
 - 8th
 - 9th
 - 10th
 - 11th
 - 12th
8. What age did you begin taking dual credit coursework?
 - 12
 - 13
 - 14
 - 15
 - 16
 - 17
 - 18
 - 19
9. What types of courses did your dual credit program offer?
 - Core academic courses
 - Technology courses
 - Both
10. What modality did you complete most of your dual credit courses?
 - Hybrid: On-campus and online
 - Online: virtually through Zoom or online only
 - Face-to-face: classes taught in a classroom setting
11. In what setting did you complete your dual credit courses?
 - High school campus
 - Community college campus
 - University campus
12. Approximately how many hours per week did you spend studying for your dual credit courses?

- ☐ 0
- ☐ 1-3
- ☐ 4-6
- ☐ 7-9
- ☐ 10-12
- ☐ 13+

Section IV: First-Year Academic Information

13. What was your GPA after your first year of college at your current university?
- ☐ _____
14. How many dual credit hours did you transfer to your current university?
- ☐ _____
15. How many hours per week did you spend studying for courses during your first year of college?
- ☐ 0
 - ☐ 1-3
 - ☐ 4-6
 - ☐ 7-9
 - ☐ 10-12
 - ☐ 13+
16. Did your dual credit transferability impact your choice of where to attend college?
- ☐ Yes
 - ☐ No
17. Did your dual credit transferability impact your choice of major?
- ☐ Yes
 - ☐ No
18. Please enter your email address if you would like to be considered for the focus group and included in the gift card drawing.
- _____

APPENDIX B

Qualtrics Survey Email

Hello!

My name is Jennifer Goddard, and I am a doctoral candidate in the Educational Leadership Program at Stephen F. Austin State University. I am working under the supervision of my chair, Dr. Summer Pannell, and co-chair, Dr. Brian Uriegas. The role of my research is to observe whether taking dual credit coursework in high school impacts student success in college after their first year.

You are invited to participate in an online Qualtrics survey to gather data (academic and other experiences) of students who participated in dual coursework during high school and who attended a four-year institution for at least one academic year after graduation. This study was approved by the Stephen F. Austin State University Institutional Review Board (IRB) on January 30, 2024, and is valid for the 2024 academic year 2024.

The length of time expected to complete the survey is no more than 20 minutes. Responses from the survey will be analyzed to determine eligibility for a follow-up Zoom focus group.

To participate in the research study, you must meet the following criteria:

- Participated in dual credit courses during high school.
- Have transfer coursework that is defined as dual credit coursework.
- You were admitted to a four-year institution and enrolled in courses during one of the following academic years: 2018-2019, 2019-2020, or 2020-2021.

Participants who complete the survey will be offered the opportunity to win an incentive. As an incentive and token of appreciation, participants who complete the survey can enter a drawing for one of five \$10 Amazon gift cards. Providing your email address is voluntary and will only be used for the purpose of drawing and selecting individuals for the follow-up focus group.

If you agree to participate in the survey, please review the attached consent form and accept the acknowledgment located at the beginning of the survey.

Participation in this research study is voluntary, and all information will remain confidential. You may withdraw from the study at any time, and doing so will not

influence your enrollment at the university or any future participation in studies related to the university.

Follow this link to the Acknowledgment & Survey:

[\\${1://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:

[\\${1://SurveyURL}](#)

PDF consent form:

Survey Consent Form

If you have any questions, please do not hesitate to contact me directly at goddardjd@sfasu.edu.

Thank you,

Jennifer Goddard

Doctoral Candidate in the Educational Leadership Program

Stephen F. Austin State University

Nacogdoches, Tx 75962

936-468-1739

Follow the link to opt out of future emails:

[\\${1://OptOutLink?d=Click here to unsubscribe}](#)

APPENDIX C

Focus Group Email

Good evening!

Hello again, my name is Jennifer Goddard, and I am a doctoral student at SFA. The role of my research is to observe whether taking dual credit coursework in high school impacts student success after the first year of college.

You are invited to participate in the second phase of the research study, which will be conducted through an online Zoom focus group to gather the experiences of students who participated in dual credit coursework during high school and after their first year at a higher education institution. The time expected to complete the focus group is at most 90 minutes.

The focus group will be hosted via Zoom at a selected time accommodating the most responses. The final selection for the focus group will close on Monday, February 26th.

Consent form and study information:

Focus group consent form

Please accept the acknowledgment here:

Follow this link to the Survey:

`$_{l:}SurveyLink?d=Take the Survey}`

Or copy and paste the URL below into your internet browser:

`$_{l:}SurveyURL}`

Alternatively, you can email me a confirmation stating "I ACCEPT or I AGREE" to goddardjd@sfasu.edu.

To participate in the research study, you must meet the following criteria:

- Completion of the online Qualtrics survey.
- Participated in dual credit courses during high school.

- A first-time college admit taking courses at the university during one of the following academic years: 2018-2019, 2019-2020, or 2020-2021.

Researcher Information

My name is Jennifer Goddard, and I am a doctoral candidate in the Educational Leadership Program at Stephen F. Austin State University. I am working under the supervision of my chair, Dr. Summer Pannell, and co-chair, Dr. Brian Uriegas. The role of my research is to observe whether taking dual credit coursework in high school impacts student success after the first year of college.

This study was approved by the Stephen F. Austin State University Institutional Review Board (IRB) on January 30, 2024, and is valid for the 2024 the academic year 2024.

Purpose

The purpose of this study is to gather student perceptions of dual credit programs after matriculating into higher education.

Incentive

Participants who complete the focus group will be offered the opportunity to win an incentive. **As an incentive and token of appreciation, participants who complete the focus group can enter a drawing to win one of two \$50 Amazon gift cards.** The link to enter your email address for the drawing will be provided during the focus group.

If you agree to participate in the focus group, please accept the focus group acknowledgment located at the top of this email or email me consent with I ACCEPT or I AGREE. After your consent is received, more information about the study and instructions regarding creating a pseudonym, which will be used to maintain confidentiality throughout the focus group will be sent to you.

Participation in this research study is voluntary, and all information will remain confidential. You may withdraw from the study at any time, and doing so will not influence your enrollment at the university or any future participation in studies related to the university.

If you have any questions, please do not hesitate to contact me directly at goddardjd@sfasu.edu.

Thank you,

Jennifer Goddard, M.A.E.

Director of Advising

Stephen F. Austin State University

Mcgee Business Building, Suite 392

SFA Box 13077/1908 Raguet Street North

Nacogdoches, TX 75962

T 936.468.4654

goddardjd@sfasu.edu

Follow the link to opt out of future emails:

[Click here to unsubscribe](#)

APPENDIX D

Survey Consent Form

Stephen F. Austin State University
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

**THE IMPACT OF DUAL CREDIT ON STUDENT SUCCESS: A MIXED
METHODS STUDY AT A TEXAS UNIVERSITY**

The following information describes the research study in which you are being asked to participate. Please read the information carefully. At the end, you will be asked to sign if you agree to participate.

PURPOSE OF STUDY

You are being asked to participate in a research study. This mixed methods study aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

You are being asked to participate in this study because you identified as a first-time admit to the university with dual credit.

PROCEDURES

Participants will be selected to participate in an online Qualtrics survey.

- Self-reported responses will be collected through an online survey.
- Questions from the survey will ask participants about their experiences with dual credit programs during high school and their first year of college.
- The length of time you are expected to participate in the study is no more than 30 minutes to complete.
- Responses from the survey will be analyzed to determine eligibility for a Zoom focus group.

RISKS AND/OR DISCOMFORTS:

We do not anticipate you will experience any personal risk or discomfort from taking part

in this study. Participant's rights and the option to withdraw at any point in time from the study without penalty or repercussion from the researcher or the university.

BENEFITS:

The research will explore an opportunity for students to share their personal experiences and perspectives on dual credit programs, which may lead to a better understanding of how to improve dual credit programs in the future.

CONFIDENTIALITY

Participants will receive instructions through email with a link to participate in an online survey. All of the information obtained is self-reported by the participant, and email addresses are only required for participation in the incentive drawing. The researcher will maintain access to the data obtained from the survey. The information will be secured and saved in a secure, password-protected file with access to the researcher.

By signing this consent, you authorize the Investigators(s) and his/her/their staff to access your survey results as may be necessary for the purposes of this study.

COSTS:

There are no costs associated with your participation in this study.

COMPENSATION:

Participants who complete the survey will be offered the opportunity to win an incentive. As an incentive and token of appreciation, participants who complete the survey can enter a drawing for one of five ten-dollar Amazon gift cards.

RIGHT TO DECLINE OR WITHDRAW:

Your participation in this study is voluntary. You are free to refuse to participate in the study or withdraw your consent at any time during the study. The investigator reserves the right to remove you without your consent at such time that they feel it is in the best interest for you.

If you are an employee or student at SFASU, your desire not to participate in this study or request to withdraw will not adversely affect your status as an employee or grades.

CONTACT INFORMATION:

Dr. Summer Pannel 936-468-1150 will gladly answer any questions you may have concerning the purpose, procedures, and outcome of this project. If you have questions about your rights as a research subject, you may contact the Office of Research and Sponsored Programs (ORSP) at 936-468-6606 or the SFASU IRB at irb@sfasu.edu.

PARTICIPANT AGREEMENT:

I have read the information in this consent form and agree to participate in this study. I have had the chance to ask any questions I have about this study, and they have been answered for me. I am entitled to a copy of this form after it has been read and signed.

By clicking the link below, you are agreeing to participate in the mixed methods research study that aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

Acknowledgment and Survey Link (also located in email)

APPENDIX E

Focus Group Consent Form

Stephen F. Austin State University

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

THE IMPACT OF DUAL CREDIT ON STUDENT SUCCESS: A MIXED METHODS STUDY AT A TEXAS UNIVERSITY

The following information describes the research study in which you are being asked to participate. Please read the information carefully. At the end, you will be asked to sign if you agree to participate.

PURPOSE OF STUDY

You are being asked to participate in a research study. This mixed methods study aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

You are being asked to participate in this study because you identified as a first-time admit to the university with dual credit.

PROCEDURES

Selected participants will be invited to participate in a focus group through Zoom after completion of the online dual credit survey.

- Eligible participants will be invited to join the focus group conducted through Zoom on a specified date and time to discuss their dual credit program experiences.
- The researcher will inform the participants that the session will be recorded for transcribing purposes, and confidentiality will be maintained throughout the study.
- Participants will be asked questions about dual credit experiences based on an analysis of the survey results.

- After the focus group, the recording will be downloaded from the website and stored in a secured, password-protected file.
- The information will be deleted from the Zoom website after the results are downloaded and transcribed.
- The length of time you are expected to participate in the study is no more than 60-90 minutes to complete.

RISKS AND/OR DISCOMFORTS:

We do not anticipate you will experience any personal risk or discomfort from taking part in this study. Participant's rights and the option to withdraw at any point in time from the study without penalty or repercussion from the researcher or the university.

BENEFITS:

The research will explore an opportunity for students to share their personal experiences and perspectives on dual credit programs, which may lead to a better understanding of how to improve dual credit programs in the future.

CONFIDENTIALITY

Participants will receive instructions through email regarding how to create a pseudonym. If a pseudonym is not selected, the participant will be provided with a pseudonym or alias before joining the session. The researcher will maintain access to the data obtained from the focus group. The information will be secured and saved in a secure, password-protected file with access to the researcher.

By signing this consent, you authorize the Investigators(s) and his/her/their staff to access your survey results as may be necessary for the purposes of this study.

COSTS:

There are no costs associated with your participation in this study.

COMPENSATION:

Participants who participate in the focus group will be offered the opportunity to win an incentive. A notification will be sent to the participants with an invitation to participate in the survey with the opportunity to win one of two fifty-dollar Amazon gift cards as an incentive for their willingness to participate in the focus group.

RIGHT TO DECLINE OR WITHDRAW:

Your participation in this study is voluntary. You are free to refuse to participate in the study or withdraw your consent at any time during the study. The investigator reserves the right to remove you without your consent at such time that they feel it is in the best interest for you.

If you are an employee or student at SFASU, your desire not to participate in this study or request to withdraw will not adversely affect your status as an employee or grades.

CONTACT INFORMATION:

Dr. Summer Pannel 936-468-1150 will gladly answer any questions you may have concerning the purpose, procedures, and outcome of this project. If you have questions about your rights as a research subject, you may contact the Office of Research and Sponsored Programs (ORSP) at 936-468-6606 or the SFASU IRB at irb@sfasu.edu.

PARTICIPANT AGREEMENT:

I have read the information in this consent form and agree to participate in this study. I have had the chance to ask any questions I have about this study, and they have been answered for me. I am entitled to a copy of this form after it has been read and signed.

By clicking the acknowledgment link, you are agreeing to participate in the mixed methods research study that aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

APPENDIX F

Focus Group Protocol and Questions

Introduction

Participants will be held in a waiting room until everyone is renamed to a pseudonym.

After everyone is renamed, participants will be sent a message that the focus group will begin shortly. The participants will be moved to the main Zoom room, where the

recording will begin, and the Focus group will start. The researcher will provide a brief overview of the researcher, the purpose of the study, and the that the study is voluntary.

The researcher will reassure participants that they are welcome to withdraw from the study at any time without penalty or repercussion from the researcher or the university.

Participants will be reminded that the Zoom meeting is secure and a safe place to discuss information. The recording will be used for the purpose of transcribing only, and all identities will remain anonymous. Participants will be reminded that all names have been changed to pseudonyms for the purpose of the study.

Questions

1. How would you describe your experiences enrolling in dual credit programs during high school?
2. Can you provide more details about balancing dual credit and high school? What about extracurricular activities or jobs?

3. Can you explain more details about the setting and modality of your dual credit courses? Modality refers to how dual credit courses were offered, online, face-to-face, or hybrid, and settings refers to where courses were taken, at a high school campus, online, or at a college or university.
4. If you took dual credit courses at a high school or university setting, can you share your thoughts on your interactions at the university (with peers, professors, staff, etc.)?
5. At what age or grade did you decide to take dual credit courses? Why? What influenced your decision?
6. Were your dual credit courses taught by a teacher at your school or a faculty member from a university?
7. Did your dual credit courses influence what major or institution you chose? If so, can you explain?
8. Did your dual credit coursework prepare you for college from an academic and non-academic perspective?
9. How did your dual credit influence your first year of college from an academic and non-academic perspective?
10. How many dual credit hours did you earn in high school? Were there restrictions or recommendations on the number of dual credit hours you should take?
11. How would you compare the rigor in dual credit courses to traditional college courses?

12. Did you have access to an academic advisor, admissions specialist, counselor, or another individual who helped guide you through the dual credit process during high school?
13. What are some advantages and disadvantages you experienced from taking dual credit courses? How did these advantages and disadvantages shape your perspective of dual credit programs?
14. Did you have access to an academic advisor, admissions specialist, counselor, or another individual who helped you transition to higher education?

Follow-up Discussion

Participants will be offered an opportunity to discuss any additional experiences with dual credit programs and academic success with the researcher and the focus group.

Closing

The researcher will thank the participants for their time and remind them that their participation in the focus group is voluntary. The participants will be reminded that they can withdraw from the study at any time without penalty or repercussion from the researcher or the university. Participants will be reminded that they will be entered into a drawing for a gift card as a thank-you for their time. The recording will be stopped, and all participants will be excused from the focus group. The researcher will transcribe the information by downloading the recording.

APPENDIX G

Interview Script

Introduction

“I will now begin the recording.” *The recording starts.* “My name is Jennifer Goddard, and I am a doctoral candidate at Stephen F. Austin State University, working under the supervision of Dr. Summer Pannell and Dr. Brian Uriegas. Thank you for agreeing to participate in this research study today. The information you provide today and your identity are confidential. As a reminder, you, the participant, have the right to withdraw from the study at any time, and doing so will not influence your enrollment at the university or any future participation in studies related to the university. Do you agree to these terms and conditions?”

The researcher will continue after all participants agree to the response through chat or verbally.

If any individuals indicate they would like to discontinue their participation, they will be removed from the focus group.

“Does anyone have questions or concerns before we proceed?”

Focus Group

“We will now begin our focus group using a pre-determined set of questions; however, you are welcome to elaborate at any time and add additional information about your experiences. Please reach out to me directly through chat or raise your hand if you have any questions.”

The interview questions will be read to participants, allowing time for all individuals to contribute and elaborate if desired.

Closing Remarks

“At this time, that concludes my questions. Does anyone have additional experiences they would like to share?” *A pause will be given for anyone who would like to share experiences.*

“This concludes our focus group. As a reminder, please enter your email address into the chat for those who would like to opt into the gift card drawing. You can also send me an email if you prefer goddardjd@sfasu.edu. You are now free to go, and again, thank you for your participation in my research study. Feel free to reach out if you have any questions or concerns. I will now stop the recording.”

The researcher will stay for a few moments for anyone with concerns or questions about the study.

APPENDIX H

Email to General Counsel

General Counsel,

I am an employee and student at SFA working on my doctorate in educational leadership. My dissertation is looking at the impact of dual/AP/IB credit on student success and I am seeking individual student data to assist with my research. After speaking with several individuals on campus, I have learned SFA does not 'code' students taking dual credit, so I am changing my approach to the data slightly. Is it possible to request reports (with as much information as possible) that have at least the following:

- Incoming students for the academic years (a report for each year) 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021

In each report I need the following:

- A list of all incoming freshman for each academic year listed above. Within that list, I will need to know which students have transfer work and what that coursework is.
 - o For Students who have transfer work, I will need the grade and exact courses (subject/title), (type of credit would be helpful whether AP, Dual, or IB but I don't think SFA tracks this so just incoming first time freshman admits with credit and the courses with grades)
- I will need at least their Names, emails, and student ID numbers, Major and concentration, classification, Admission type (transfer, new freshmen, mature student, etc.), Decision, Enrollment status, degree obtained & their current status as of now (if possible), high school attended, incoming GPA, and Overall GPA as of now (when they left SFA or currently as a student attending SFA).

Thanks,

Jennifer Goddard, M.A.E. /Director of Advising
Nelson Rusche College of Business
Stephen F. Austin State University
McGee Business Building, Suite 392

SFA Box 13077 / 1908 Raguet Street North
Nacogdoches, TX 75962

APPENDIX I

Survey Information and Acknowledgment

Hello! My name is Jennifer Goddard, and I am a doctoral candidate in the Educational Leadership Program at Stephen F. Austin State University. I am working under the supervision of my chair, Dr. Summer Pannell, and co-chair, Dr. Brian Uriegas. You are invited to participate in an online Qualtrics survey to gather data (academic and other experiences) of students who participated in dual coursework during high school and who attended a four-year institution for at least one academic year after graduation.

Purpose of the Study

You are being asked to participate in a research study. This mixed methods study aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

Survey Information

You are invited to participate in an online Qualtrics survey to gather data about the experiences of students who participated in dual coursework during high school and after their first year at a higher education institution. The length of time you are expected to participate in the survey is no more than 20 minutes to complete.

Do you wish to participate in this research survey?

APPENDIX J

Focus Group Information and Acknowledgment

My name is Jennifer Goddard, and I am a doctoral candidate in the Educational Leadership Program at Stephen F. Austin State University. I am working under the supervision of my chair, Dr. Summer Pannell, and co-chair, Dr. Brian Uriegas.

Purpose of the Study

You are being asked to participate in a research study. This mixed methods study aims to determine if a relationship exists between the number of dual credit courses a student completes in high school and students' academic success during the first year of college at a regional comprehensive university in East Texas.

Participation

Participation in this research study is voluntary, and all information will remain confidential. You may withdraw from the study at any time, and doing so will not influence your enrollment at the university or any future participation in studies related to the university.

Focus Group Information

You are invited to participate in an online Zoom focus group to gather the experiences of students who participated in dual credit coursework during high school and after their first year at a higher education institution. The length of time expected to complete the focus group is no more than 90 minutes to complete.

Incentive

Participants who complete the focus group will be offered the opportunity to win an incentive. As an incentive and token of appreciation, participants who complete the focus group can enter a drawing to win one of two \$50 Amazon gift cards. The link to enter your email address for the drawing will be provided during the focus group.

APPENDIX K

IRB Approval

Good morning

Thank you very much for submitting a IRB application for the following study:

“The Impact of Dual Credit on Student Success: A Mixed Methods Study at a Texas University

The application was reviewed and approved until January 30, 2024 by the IRB.
AY 2024- 0107.

Please let me know if you have any questions.

Emmerentie

Emmerentie Oliphant, PhD

DSW Program Director

Buddy Zeagler Endowed Professor of Community-Based Research

Institutional Review Board (IRB) Chair

School of Social Work

Stephen F. Austin State University

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VITA

Jennifer D. Coker Goddard has worked in academic affairs in higher education for over twelve years. She joined Stephen F. Austin State University as an Academic Advisor in 2016 and became Director of Advising in 2023. She is also an adjunct professor teaching SFAS 1101-New-Lumberjack Experience. Before joining SFA, she worked as a program coordinator for the UT Health Science Center and Academic Advisor for Lamar University. She also taught art and yearbook at a public school district before returning to higher education. She graduated from the University of Texas at San Antonio with her Bachelor of Fine Arts in photography in 2008. In 2011, she graduated from Texas Tech with her master's in art education. In May 2024, she earned her Doctor of Education in Educational Leadership from Stephen F. Austin State University.

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This dissertation was typed by Jennifer D. Coker Goddard.