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FACTORS THAT IMPEDE THE ENROLLMENT OF BLACK STUDENTS
IN DUAL CREDIT PROGRAMS

by

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Dedication

This labor of love and perseverance is dedicated to my angelic parents, Leroy (2002) and JoAnn Brooks (2011), who are undoubtedly rejoicing in heaven at the thought of their baby girl earning such a prestigious degree as a first-generation college student.

I also dedicate this journey and body of work to my son, Jawann Josiah Martin, as a blueprint of hard work, dedication, drive, determination, perseverance, and faith. I hope you have learned valuable lessons that will shape how you approach your goals and how you deal with adversities that will come along the way. I love you with everything in me and I pray that this accomplishment is evidence that anything is possible and there are no limits on what you can and will accomplish.

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ABSTRACT

FACTORS THAT IMPEDE THE ENROLLMENT OF BLACK STUDENTS
IN DUAL CREDIT PROGRAMS

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The number of students enrolled in Dual Credit programs in the state of Texas continues to grow, however, there are disparities in Black student enrollment rates. The purpose of this study was to identify factors that impeded the enrollment of Black students in Dual Credit programs. This sequential mixed method study consisted of a quantitative survey that was administered to over 1000 Black students. In addition, nine Black students were individually interviewed to provide qualitative context. All survey participants were Black, high school graduates, 18 years or older, and currently enrolled in a Texas community college or university. The nine Black students interviewed were self-identified and indicated no participation in Dual Credit while in high school. According to the quantitative data, there were no significant findings between Black students who participated in Dual Credit and those who did not. The qualitative data captured the voices of Black students and identified factors that impeded the enrollment of Black students in Dual Credit.

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CHAPTER I: INTRODUCTION

The Black student experience with higher education (HE) has been complicated by systematic barriers that have limited access and support for degree completion (Allen et al., 2018). According to Pena (2000), finance, counselor and teacher assistance, social and cultural capital, as well as familial background served as potential barriers impacting the underrepresentation of Black students who were enrolled in college and completing a college degree. More staggering than the disproportioned enrollment of Black students compared to their peers, was the assertion that the enrollment of Black students collectively has only increased 4% since 1976 (Allen et al., 2018).

Throughout the decades, many programs and initiatives have attempted to substantially close the college access and completion disparities experienced by Black students. One such program, which serves as the focal point of this research, was the Dual Credit (DC) program that began in the early 1970s (Kim et al., 2004). The effectiveness of DC programs has been closely studied by critics and researchers to determine the benefits of student participation. Nelson and Waltz (2019) recognized DC programming as an operative tool in closing the achievement and access gaps for minority students; however, DC is a tool that has not been sufficiently used by Black students.

The Texas Higher Education Coordinating Board ([THECB], 2018) defined DC 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.” In the early 2000’s DC enrollment was estimated to be at 1.2 million nationwide and increased to more than two million by 2011 (National Center for Education Statistics [NCES], 2013). In 2017, it was reported that over 200,000 students were enrolled in DC programs across

the state of Texas (THECB, 2018). However, the enrollment trends paint a glaring picture of the gap in participation between Black students and their peers. In 2018, the Dual Credit Task Force reported that of the two-hundred thousand Texas students enrolled in DC programs, 34% of the students were White, 47% were Hispanic, and only 8% were Black (THECB, 2018). Given that Black students accounted for approximately 12% of the Texas high school population in 2017-2018, the statistics indicated that less than 3% of Black students were taking advantage of the DC program designed to enhance their chances for college success (Struhl & Vargas, 2012; TEA, 2018).

Despite the creation, access to college level coursework and credentials, and the many benefits of DC that will be addressed throughout this research, Black student enrollment remains the lowest compared to White and Hispanic students (Young et al., 2013). Identifying factors that impeded Black student enrollment to increase access and participation in DC programs to all students, especially underrepresented and Black students, was significant according to researchers (Pretlow & Washington, 2014).

The Research Problem

The lag in college completion and degree attainment for Black students was prevalent throughout the literature (Nelson & Waltz, 2019). It was understood that the attainment of a postsecondary education had become a necessity and underrepresented groups were persisting at lower rates (Knaggs et al., 2015). Dual Credit served as a premier college program to close the achievement and opportunity gaps for minority students, and to increase college access, participation, and degree attainment rates (Rivera et al., 2019).

Texas legislators committed to “approving and implementing programs that would allow students to not only pursue higher education but, also allow for a seamless transition between high school and college” (Mansell & Justice, 2014, p. 3). Dual Credit

represented the pinnacle of college preparatory programs “whose main goals are to increase underrepresented students’ college access and enrollment” (Knaggs et al., 2015, pg. 8). In 2005, Texas legislators passed a law that required all school districts in the state of Texas to offer a minimum of 12 hours of DC coursework to students by the year 2008 (THECB Texas P-16 Council, 2007). Yet, according to Mansell and Justice (2014), while DC programs were widely available for Texas high school students, many [Black students] have not taken advantage of the opportunity to enroll. Black students in Texas enrolled in almost 30% less DC courses than their peers (THECB, 2018). The DC enrollment disparity has had a profound effect on Black student college preparedness that has led to lower college persistence and graduation rates (Evenbek & Johnson, 2012).

There was significant evidence that participation in DC produced greater academic achievement gains for minority students than any other college preparatory program (Nelson & Waltz, 2019). Correspondingly, it was referenced that the likelihood of college degree attainment was increased for DC participants, and minority students specifically, were more likely to attain a bachelor’s degree if they participated in DC versus minority students who did not (Speroni, 2011; Young et al., 2013). However, despite the literature and support for DC programs, the enrollment statistics for Texas indicated a voluminous enrollment disparity for Black students. This study evaluated the enrollment trends of Black student participation and the factors that impeded Black student enrollment. A review of probable variables such as higher education exposure via adult interaction, college and career exposure, self-efficacy, parent education level, and Black student perceptions were explored as potential barriers for Black student participation in DC programs.

Significance of the Study

Dual Credit programs provided students with early access to college while in high school and eased the student transition to college for students who participated in dual credit (Haskell, 2016). Kilgore and Wagner (2017), examined positive implications (e.g., pathways to college degree, improved college access and success, affordability of college courses, and exposure to college course rigor) associated with students who enrolled in DC programs. Given the proven benefits of participation, the enrollment gap between Black students and their peers as beneficiaries was alarming.

According to Bethea (2016) the persistent social inequities in education that resulted in low numbers of underrepresented students who matriculated, persisted, and graduated from college need to be addressed. Paring the postsecondary challenges associated with Black student enrollment and the benefits of DC participation, this study identified factors that impeded the enrollment of Black students in DC programs that were necessary to bridge the apparent academic achievement and postsecondary gaps.

Research Purpose and Questions

The purpose of this study was to identify factors that impeded the enrollment of Black students participating in DC programs, and examined factors such as higher education exposure via adult interaction, college and career exposure, self-efficacy, parent education level, as well as Black student perception of DC and barriers impeding enrollment. The following questions provided guidance for the study:

Quantitative Research Questions

1. Is there a mean difference in Dual Credit enrollment for Black students who received higher education exposure via adult interaction while in high school, than Black students who did not enroll in Dual Credit?

2. How were Black students exposed to college and career information and or opportunities while in high school?
3. Is there a difference in self-efficacy for Black students who were enrolled in Dual Credit or not?
4. Is there an association between mother's education and whether the student took Dual Credit?
5. Is there an association between father's education and whether the student took Dual Credit?

Qualitative Research Question

6. What are Black student perceptions of Dual Credit programs and the potential barriers that impede enrollment while in high school?

The study included Black students enrolled in two community colleges located within a major metropolitan area of Texas. Due to the impact of COVID-19, the study was extended to any Black students who met the criteria of a high school graduates, 18 years and older, and currently enrolled in a community college or university, to increase participation. Quantitative data were acquired through a Student Interest Survey to answer research questions one through five. Black students who indicated they did not participate in DC were asked to volunteer to participate in qualitative individual interviews to answer research question six.

Definition of Key Terms

Dual Credit/Dual Enrollment: “The Texas Higher Education Coordinating Board (THECB) defines Dual Credit (DC) 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” (THECB Topic Overviews, 2018).

College Readiness: “the level of preparation a student must attain in English Language

Arts and mathematics courses to enroll and succeed, without remediation, in an entry-level general education course for credit in the same content area for a baccalaureate degree or associate degree” (Texas Education Agency [TEA] HB3, 2018).

Dual Enrollment Eligibility: “A high school student is eligible to enroll in academic dual credit courses if the student meets the college’s regular prerequisite requirements designated for that course and:

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

5. The student achieves a composite score of 23 on the PLAN with a 19 or higher in mathematics and/or English, or a mathematics score of 431 and/or an English score of 435 on the ACT-Aspire relevant to the course to be attempted.
6. Enrollment in courses in Level I certificates require only that students meet the regular college prerequisite requirements designated for that course. Enrollment in Level II certificates and Associate of Applied Science degrees require meeting the same eligibility requirements outlined above for academic dual credit courses” (THECB Topic Overviews, 2018).

First Generation: both parents or guardians have high school education or less and did not begin postsecondary degrees (Inkelas et al., 2007). First generation can also be defined as students whose parents have not completed a bachelor’s degree (Tate et al., 2015).

Early College High School (ECHS): defined by the Texas Administrative Code as the “institution or entity designated by the Texas Education Agency as an Early College High School in accordance with §102.1091 of this title (relating to ECHS), that provides the outreach, curricula, and student learning and support Programs that enable the participating student to combine high school courses and college-level courses during grade levels 9 through 12 and to earn a high school diploma and earn up to 60 semester credit hours toward an associate or baccalaureate degree by the fifth anniversary of the student's first day of high school” (TEA, Title 19, Part 1, Chapter 4, Subchapter G, Rule 4.153).

Academic Achievement Gap: describes the academic disparities between groups of students based on measures related to “grades, standardized test scores, course selections, dropout rates, and college-completion rates” (Mason et al., 2019, p. 20). It is noted that

academic achievement gap is most often used when describing the gaps between African American and Hispanic students (Mason et al., 2019).

Summary

The literature supported and validated the significant postsecondary benefits associated with participation in DC programs. It was recommended that Black students take advantage of DC opportunities and benefit from the program at the same rate of their peers (Nelson & Waltz, 2019). The quantitative and qualitative findings of this research added to the recommendations to balance the scales of equity and access to DC programs, and postsecondary success for Black students.

CHAPTER II: LITERATURE REVIEW

Dual Credit (DC) programs were viewed as effective tools used to close the educational achievement and opportunity gaps present for low-income and minority students (Nelson & Waltz, 2019). Dual Credit has been in existence since the 1970s and participation have continued to grow (Kim et al., 2004). In Texas, students began taking DC college classes while in high school in the early 1990s, but the state did not begin tracking DC enrollment until fall of 1999 (Giani et al., 2014). Dual Credit became increasingly popular in Texas with the inception of an aggressive campaign to increase the number of Texans participating in higher education known as Closing the Gap in 2002 (Mansell & Justice, 2014). The primary purpose of Closing the Gap was to increase college enrollment numbers to improve the Texas economy (Mansell & Justice, 2014). Due to this initiative, the state experienced a rapid expansion in DC offerings and enrollment (Giani et al., 2014).

Literary research on DC has become prevalent and has addressed enrollment trends, benefits of participation, rigor, impact on postsecondary access, and the academic success associated with DC program participation. Although researchers supported DC participation, the rate of Black student participation remained underrepresented. According to Young et al., (2013), the lack of Black student enrollment should be priority for future research studies such as this one.

In an attempt to thoroughly understand the substantial impacts DC programs could provide Black students, the literature reviewed the Black student postsecondary experience, the history and benefits of DC in Texas and nationally, and an introduction to Early College High Schools (ECHS). The review concluded with an examination of literature that addressed the inference of self-efficacy, and the support systems (i.e., high

school counselors, teachers, and family) associated with Black student participation in Dual Credit.

Black Student Postsecondary Experience

According to Freeman (1997), a vital commodity for upward societal mobility for Blacks was higher education; however, access to postsecondary education for Black students has been complicated by systematic barriers that resulted in prohibitive and restricted access (Shuford & Flowers, 2016). Bethea (2016) noted the disparities and stratification within the educational systems have created unequal access to college knowledge. As noted by Pena (2000), Black students were underrepresented in both undergraduate and bachelor's degree attainment. Kim and Nunez (2013) confirmed the college enrollment rates of Black students continued to lag compared to their peers. The findings were reinforced by The National Center for Education Statistics (NCES) data which indicated a steady decline in Black student postsecondary enrollment between 2010 and 2019 (NCES, 2021).

Additional barriers that attributed to the lag included connections, access, racism, and classism (Knaggs et al., 2015). There were immense concerns regarding Black student participation in higher education as postsecondary opportunities continued to be unequal for Black students (Freeman, 1997; Taylor, 2015). Knaggs et al., (2015), offered that DC programs were a favorable solution to closing the higher education gaps.

In a study conducted by The Education Trust as recorded by Nichols and Oliver (2019), public institutions in 41 states answered six questions to examine the trends of representation at various postsecondary institutions for Black undergraduates. Six questions were included in the study (The Education Trust, 2019, p.3):

1. How does the enrollment of Black undergraduates at public community and technical colleges in each state compared to the state's share of residents who were Black?
2. How does the enrollment of Black undergraduates at public four-year postsecondary institutions in each state compared to the state's share of residents who were Black?
3. Do Black and White students have equal access to selective public four-year institutions in each state?
4. How does the share of associate degree completers who are Black at public postsecondary institutions in each state compare to the state's share of residents who are Black?
5. How does the share of bachelor's degree completers who were Black at public postsecondary institutions in each state compared to the state's share of residents who were Black?
6. Are Black and White graduates awarded a similar share of bachelor degrees from public institutions in their state?

According to the executive summary provided, the findings reported the enrollment rates of Black students at the community and technical colleges were not reflective of the Black population for all 41 states (The Education Trust, 2019). In addition, Black students were underrepresented at the four-year public institutions in 37 of the 41 states. The findings presented in this study indicated that the Black student postsecondary experience remained a legitimate concern. As stated by Bethea (2016), the social inequalities that persisted and resulted in lower numbers of students of color matriculating, persisting, and graduating from college, must be addressed.

Culture Capital

In addition to the systematic barriers faced by Black students, the literature contributed lower academic achievement among Black students to environmental and cultural differences (Tsoi-A & Bryant, 2015). Pierre Bourdieu (1986) created cultural capital theory and defined it as cultural signals that can enable or limit access and is associated with family or social positioning. According to Marcucci (2020), cultural capital is “what you know” (p. 149). As identified by O’Shea (2016), “students do not necessarily lack knowledge but rather that the knowledge or culture capital that they hold may not be valued within the higher education environment” which functions as another systematic barrier (p. 63). Researchers, Robinson and Roksa (2016) suggested that cultural capital has not been equally distributed to assist Black students with navigating the college-going process and that the “dominant culture capital is rewarded by schools” (Martinez-Cosio & Iannacone, 2007, p. 354). There were advantages for the dominant culture over those who lack cultural capital (Robinson & Roksa, 2016). It is noted in the literature that cultural capital is considered as a form of “symbolic power” (Košutić, 2017, p.153) and knowledge is power. However, students who were less privileged lack the cultural capital that usually originates within the home and thus were not afforded the same power as their peers (Košutić, 2017).

For the purposes of this study, the researcher defined cultural capital as “a comprehensive understanding of college preparation” (Bethea, 2016, p.10). According to Robinson and Roksa (2016), the inequities of cultural capital have been discussed in prior research studies, and the lack of information compounded with inaccurate information given to socioeconomically disadvantage students was a potential barrier to college access. In the study conducted by Košutić (2017) in Croatia, the research and findings were significant and applicable to this research topic. The researcher hypothesized that

(Košutić, 2017, p.156):

1. The possession of culture capital is positively related to students' achievement; and
2. Students with greater possessions of cultural capital are more likely to continue education at an university than students who had lower levels of cultural capital.

The study was administered via a survey to high school seniors. The dependent variables included student achievement and the likelihood of students continuing education at the university or a professional institution of higher education. The independent variables included the type of secondary school the student attended, the cultural capital, education level of the parents, and the transferability of cultural capital. The findings of the study partially or fully confirmed both hypotheses. In summary, students with affluent culture capital experienced educational achievement and aspired to pursue postsecondary opportunities (Košutić, 2017).

Košutić (2017) also documented that schools and families had a significant role in student cultural capital development and affirmed the notion that schools awarded students with higher levels of cultural capital, which created barriers for students who had lower levels of cultural capital (Marcucci, 2020). Cultural capital was essential in helping students and parents navigate the college process because students who develop cultural capital were better equipped with an understanding of the college admission process (Robinson & Roska, 2016). In addition, student comprehension of college credits had a significant impact on pursuing postsecondary opportunities such as Dual Credit. Culture capital development included the support of family and the school. The roles of counselors and family engagement were addressed in the literature reviewed due to their influence in support of increasing cultural capital for Black students.

Dual Credit History and Benefits

Dual Credit continued to surface throughout the literature as a program to assist with closing the achievement and college access opportunity gaps for minority students and offered an opportunity to balance the scale of equity (Nelson & Waltz, 2019; Rivera et al., 2019). According to Ganzert (2012), DC programs “are a vital resource for creating a successful bridge from secondary to postsecondary work for students” (p. 6). Almost 2 million students in the United States have participated in DC courses while in high school (Cowan & Goldhaber, 2015). Dual Credit was considered an inexpensive way for students to enroll in college courses to earn college credit while in high school and it provided a platform for high schools and colleges to join forces to work together to create paths to college access and completion for students across the nation (An, 2013; Ndiaye & Wolfe, 2016).

College access programs, such as DC, provided high school students early exposure to higher education through affordable terms and reduced time to degree completion once at the post-secondary level (Ozmun, 2013). Participation in DC allowed high school students to learn beyond the standard high school curriculum and increased student motivation to complete a postsecondary degree (Olszewski-Kubilius, 1998; Pretlow & Wathington, 2014). According to Kilgore and Wagner (2017), K12 and Higher Education constituents agreed that the most significant benefits of DC programs included improved access to college, affordability, and access to academic rigor.

In agreement with Kilgore and Wagner (2017), Karp and Hughes (2008) identified three main benefits of DC (i.e., (a) to ease the college transition process, (b) motivate students to take more rigorous coursework while in high school, and (c) to increase college retention rates). Evidence from a study conducted by Taylor (2015) supported the claim that high school student participation in DC had a meaningful effect

on college enrollment and completion. Taylor (2015) investigated differences in DC policies and their influence on college access and completion. The study reviewed over 15,000 students who participated in DC programs during their junior and senior years of high school. Twenty-six independent variables were included and two dependent variables (i.e., college enrollment and degree completion). The findings for this study affirmed that students who participated in DC “outperformed their peers who did not participate in DC” (Taylor, 2015, p. 370). The results indicated 91% of the sampled group enrolled in college and 52% completed college compared to 63% of the non-DC students who enrolled in college, and the 29% who completed college.

Dual Credit in Texas

In the early 1990s, Texas students began taking college classes. By 2015, more than 130 thousand students participated in DC and the number has continued to grow (An, 2015; Giani et al., 2014). Texas had 79 community colleges, 29 universities and over 1600 high schools that provided DC education to students (American Institutes for Research [AIR], 2018).

In 2005, Texas legislators passed a law requiring all school districts to offer a minimum of twelve hours of dual credit course work to students (THECB Texas P-16 Council, 2017), but many students still do not take advantage of participation in DC programs. According to TEA (2018), in 2017 there were over 680,000 Black students enrolled in high schools across Texas. As stated in the 2018 AIR report, over 200,000 students were enrolled in DC in Texas, and Black students only made up 7% of the enrollment. This implied that less than 3% of the Black students enrolled in high schools across the state took advantage of the DC opportunities.

Young et al., (2013), conducted a study of over 160,000 DC Texas students at a community college for a 6-year period. The purpose of the study was to determine if

there were differences between dual credit enrollment based on gender, ethnicity, and gender within an ethnicity. The researchers indicated that Black students had the lowest DC enrollment percentage rate. In addition, it was determined that there were no differences presented between Black men and women in the percent of DC enrollment participation (Young et al., 2013).

According to Pretlow and Wathington (2014), White and female students remained the dominant participants in DC courses. The authors focused on how policy changes influenced access to DC programs and was guided by questions related to the enrollment rates of students after a statewide policy change to help increase participation among minorities. The policy required that all high schools be required to inform all students about DC opportunities and the policy allowed for freshmen and sophomores to take DC courses. The results indicated that participation did increase but not evenly between student subgroups due to “Black and Hispanic seniors [who] were still significantly underrepresented” (Pretlow & Wathington, 2014, p. 47). Despite the efforts of the policy, the gap in participation between ethnicity groups did not significantly decrease, and Black students continued to be significantly less likely to take DC compared to white students (Giani et al., 2014; Pretlow & Wathington, 2014).

Researchers have investigated and confirmed the positive outcomes for minority students who participated in DC versus those who do not participate (Nelson & Waltz, 2019). Giani et al., (2014) investigated “the impact of dual credit on postsecondary access, first-to-second year persistence, and eventual college attainment”, and the authors noted that there was a positive impact for students who participated in DC programs (p.214). However, unequal access to DC across socioeconomic divides and underserved students continued to be relevant throughout the literature (An, 2013). According to Nelson and Waltz (2019), DC programs assisted in improving the trajectory of

marginalized students through participation, but nonetheless, Black student enrollment has continued to trail behind the enrollment rate of White students.

College Access

Postsecondary access was defined by Giani et al., (2014) as enrollment in any vocational/technical college, community college, public university, or private university within one year of high school graduation. The researchers established that DC participation rates significantly increased postsecondary access, made college access more equitable, and increased the probability of attaining any postsecondary and bachelor's degree (An, 2013; Giani et al., 2014; Hoffman et al., 2009). Taylor (2015) offered that participation in DC programs for undeserved students had a positive psychological and motivational impact that promoted college access “for students who, had they not participated in DC, might not have attended college” (p. 356). However, despite the positive association between DC participation and college access, Black students remained underrepresented in DC enrollment (Tsoi-A & Bryant, 2015). Researchers Rivera et al., (2019) affirmed that DC opportunities should be inclusive and accessible to underrepresented students. However, according to the study conducted by the researchers, which focused on analyzing policies related to DC participation to understand the distribution of access to the program, the authors determined DC was not equitably distributed and that students with higher socio-economic backgrounds continued to be most likely to participate in Dual Credit.

College Readiness

College readiness was a major educational focus for high school students, and according to the literature, Black students “are far less likely to be ready for college” (Tsoi-A & Bryant, 2015, p. 1). In a study on the condition of college and career readiness for African American students conducted by ACT and the United Negro College Fund

(2014), it was found that compared to any other racial or ethnic group, Black graduates were far less prepared for college-level coursework at the time of high school graduation.

Majority of all DC classes required enrolled students to meet college readiness standards. College readiness referred to a student being academically prepared for postsecondary education, as measured through standardized test scores (An & Taylor, 2015). The state of Texas, through the THECB division of College Readiness established and identified cut scores required for participation in college level course work for all college students. With few exceptions, students who participated in DC programs were college ready and met the state mandated score requirements on the assessment exam. The exceptions included Technical DC programs, and courses that did not require a reading, writing or math prerequisite (THECB, 2018). Examples of these courses were introduction to college or Foreign Language courses. Dual Credit was unique in that students could participate with a PSAT or STAAR waiver, which served as the third exception to the rule (THECB, 2018). Waivers did not indicate college readiness but did allow the student to enroll in the college course. Once the student successfully completed the course, the college course served as the college readiness indicator.

In the study led by Grubb et al., (2017), the researchers aimed to “assess the impact of dual enrollment participation on remediation and completion for traditional first time, full-time freshmen” at a community college (Grubb et al., 2017, p. 1). The primary question was whether participation in DC decreased the need for remediation and increased time to degree completion. The study included over 1200 community college students enrolled as first time in college for full time during the fall semester after graduating from high school. For the study, college readiness was defined as “the level of academic preparation a student needs to enter community college – without remediation – and to complete college in a timely manner” (Grub et al., 2017, p. 83). Variables

considered in the study included gender, minority status, academic performance, college readiness, financial aid needs, socioeconomic status, and parent's highest level of education (Grubb et al., 2017). The authors revealed that DC participants were less likely to require remediation and more likely to complete a postsecondary degree in a timely manner (Grubb et al., 2017). According to Grubb et.al. (2017), "the outcomes of dual [credit] participants were superior to those of non-participants" (p.89).

The literature validated a major benefit of participation in DC was the lower rate of college remediation for students (Krueger, 2006). Kilgore and Wagner (2017) reviewed the college preparedness of students in DC and notated a benefit of DC was the reduction of enrollment into remedial coursework for students that participated. The college readiness benefit of DC participation was significant to the Black student population. Preston (2017) reported a 70% enrollment rate in at least one developmental course for Black students enrolled in two-year institutions. For Black students enrolled in four-year institutions, Preston (2017) reported that "Black students [were] almost twice as likely to enroll" in developmental coursework than all students combined (p. 13). Black student enrollment in DC could have a significant impact their college readiness.

Academic Success and Retention

Dual Credit participation increased the probability of attaining a postsecondary degree (An, 2013). In a Texas statewide study conducted, DC participants were close to two times more likely to finish a postsecondary degree in three years (Struhl & Vargas, 2012). Students who participated in DC, were more likely to attain a college degree than students who did not participate (An, 2013). In an American Institutes Research (AIR, 2018) report, students who chose to embark on their college journey while in high school were more likely to be retained and to graduate; have higher first, second-, and third-year grade point averages in college, and to graduate with fewer excessive semester credit. For

Black students who participated in DC programs they were reported to have higher graduation rates and success during their first year of college (Nelson & Waltz, 2019).

In a study conducted by Ganzert (2012), the findings indicated an increase in the graduation rates and first year of college experience for non-White students who were participants in the DC program. The study was conducted using a causal-comparative research design that compared two different DC programs. Over 15,000 students were researched and comprised of 79% who did not participate in DC and 21% who participated in one of the DC programs were compared. Of the 21% that participated in DC, 3% were part of the non-white population (Ganzert, 2012). The yielded results reported the 3% of non-white students that participated in DC, had higher GPAs and graduation success than those that had not participated in DC.

As noted by Tsoi-A and Bryant (2015), Black student success, retention, and completion rates were dismal compared to their peers. However, as discovered by Ganzert (2012) Black students who participated in DC, experienced increased success rates. In agreement, Nelson and Waltz (2019) affirmed that Black students who participated in DC programs had a significant increase in success and retention.

Financial Implications

A substantial barrier to higher education for Black students was attributed to financial limitations. Increased tuition, along with non-tuition fees associated with college enrollment resulted in more student loans for Black students than White students (Davidson et al., 2020). In a qualitative inquiry study to identify ways to increase Black student participation in higher education, the findings revealed that a primary reason for lower enrollment in higher education was related to the lack of money to attend college (Freeman, 1997). During the qualitative study, Freeman (1997) facilitated focus groups in five cities heavily populated by Blacks. The 16 focus groups consisted of 70 Black

students in Grade 10, Grade 11 and Grade 12. The author selected one question to steer the focus group discussion: “will you help me to better understand why there seems to be a lack of interest among African American high-school graduates regarding participation in higher education” (Freeman, 1997, p. 534). There were several significant findings, however, for the purposes of the immediate discussion, economic barriers served as one of the two broad categories of findings.

One of the major benefits of participation, aside from early access to college, were the financial savings for families. As reported by Hoffman et al., (2009), most DC programs were offered free or at a discounted tuition rate. Families who would not otherwise be able to afford college were able to save due to DC participation. Dual Credit programs provided cost defrayment for minority students and served as a major benefit and reason for participation (Nelson & Waltz, 2019). However, despite Texas legislators’ attempts to make DC programming equitable with initiatives (i.e., funding waivers), Black students continued to have lower participation rates (Rivera et al., 2019). According to Kim and Nunez (2013), a family’s financial situation, access to financial capital, and feelings about how they will pay for college, “deeply condition[s] the college-choice process” (p. 86). The DC program offered students an opportunity to minimize the financial implications associated with college degree attainment and served as an agent to combat the financial barrier of education faced by minority students.

Early College High Schools (ECHS)

Postsecondary educational opportunities in the United States have been historically unequal for different groups of students (Taylor, 2015). States have worked to create policies in support of equity and access for DC participation, and in opposition, some states have continued to retain access for high achieving students only (Rivera et al., 2019). Texas was a state that created equity initiatives to address the lower

participation rates of Black students and other minorities (Rivera et al., 2019). Early College High Schools (ECHS) were created to “serve historically underserved populations, first generation college students and students at risk of dropping out of high school” (Lauen et al., 2017, p. 526). For students who historically encountered postsecondary educational barriers, ECHSs were designed to minimize negative effects related to student transition from high school to college (Lauen et al., 2017). The ECHS concept began in 2002. Several funding resources (i.e., (a) Bill & Melinda Gates Foundation, (b) Carnegie Corporation, (c) the Kellogg Foundation, and (d) the Ford Foundation) supported the financial needs for ECHSs (Adams et al., 2020). The ECHS model included a network of academic and social supports for students that allowed them to “simultaneously earn a high school diploma and an associate degree or one to two years of credit toward a bachelor’s degree tuition free” (Hoffman et al., 2009, p. 47; Woodcock & Beal, 2013). Nationally, there were more than 240 schools serving more than 75,000 students in 28 states (Woodcock & Beal, 2013). Texas had 199 designated Early College High Schools (TEA, 2019). Under the authority of the Texas Education Code (TEC), the Texas Education Agency (TEA) developed a designation process requiring ECHSs to:

- Provide Dual Credit at no cost to students.
- Offer rigorous instruction and accelerated courses.
- Provide academic and social support services to help students succeed.
- Increase college readiness, and
- Reduce barriers to college access (TEA, 2019).

The TEA designation process ensured districts and colleges associated with ECHS campuses maintained the integrity of the model (TEA, 2019). The ECHS models were intentionally designed to support underserved students who otherwise would not attend

college (Taylor, 2015). Test scores, free or reduce-priced lunch status, and being Black or Hispanic were positive predictors for enrollment into an ECHS (Lauen et al., 2017). According to a longitudinal study on the impact of ECHSs by student racial background, it was found that Black students enrolled in ECHSs were 4% more likely to graduate high school than students who attended traditional comprehensive high schools (Lauen et al., 2017). The author examined the relationship between the secondary and postsecondary outcomes of students who attended ECHSs with disaggregated demographic data including gender, ethnicity, and lunch programs (Lauren et al., 2017). Lauren, et.al. (2017), concluded in their research that “ECHSs [were] a promising intervention” to increase postsecondary opportunities for students who [were] traditionally underrepresented (p. 543).

Black Student Self-Efficacy

Self-efficacy, as defined by Jagtap (2018) was a learned way of patterned thinking and was an intrinsic belief that one can accomplish what they set out to do (Ozmun, 2013). The origin of self-efficacy was traced to Bandura, and his work surrounding the social cognitive-learning theory (Wood et al., 2015). According to Bandura (1997), students with high self-efficacy “participate more readily, work harder, persist longer, and have fewer adverse emotional reactions when they encounter difficulties than do those who doubt their capabilities” (Zimmerman, 2000, p.86).

In academia, self-efficacy was used to indicate student confidence in their academic abilities (Wood et al., 2015). Ozmun (2013) conducted a study to identify the level of self-efficacy students reported prior to enrolling into DC courses. The study explored the relationship between academic success and the perception students had about their own level of college self-efficacy (Ozmun, 2013). The author hypothesized that students who enrolled in DC would have higher levels of self-efficacy (Ozmun,

2013). The researcher administered a 67-question survey to 114 juniors and seniors in Southeast Texas. Over 80% were White and approximately 5% were Black. The results suggested that while students felt academically motivated, they did not report high levels of college and academic self-efficacy as precursors to enrollment into the DC program (Ozman, 2013). In addition, the students who were enrolled in DC as part of the research study, confirmed that “they did not possess high levels of such self-efficacy prior to [their enrollment] in Dual Credit” (Ozman, 2013, p. 69).

Academic self-efficacy referred to a student’s belief about their abilities to meet the demands of the academic environment (Fife et al., 2011). The current research study evaluated the General Self-Efficacy of students as opposed to college and academic self-efficacy. However, as noted in the subsequent chapters, the findings were aligned.

High School Counselor and Teacher Influences

For low-income families and urban communities, school staff served as significant support for college access opportunities for students (Carey, 2016). According to the literature, guidance counselors and teachers significantly affected the enrollment of Black students into public higher education (Davidson et al., 2020). Black students who did not have strong relationships with their teachers and guidance counselors were less likely to be encouraged to pursue postsecondary education due to minimal college planning guidance (Davidson et al., 2020). Adjacent to the influence of family, teachers and guidance counselors were cited as strong influencers on a student’s decision to attend or not to attend college (Freeman, 1997). Earlier bodies of research eluded to the belief that counselors served as gatekeepers by ushering students with higher socioeconomical backgrounds into college courses, while Black students were steered into lower-level courses instead (Moore et al., 2010; Robinson & Roksa, 2016). Tsoi-A and Bryant (2015), corroborated this notion and affirmed that counselors were hesitant about the

ability of Black students to succeed in college level courses and counselors would guide students towards less rigorous courses and postsecondary programs such as Dual Credit.

Robinson and Roksa (2016) mentioned in their research, a study conducted by Cicourel and Kitsuse (1963) that “found that counselors differentially encouraged students’ aspirations, and selectively distributed college information based on their assessment of the students’ social class” (p.848). Although the research by Cicourel and Kitsuse is older and dated, it provided historical context to the mindset with which counselors have approached postsecondary conversations with Black students who fall into the low socioeconomical category. In their study, Robinson and Roksa (2016) explored:

“(a) To what extent does seeing a counselor for college information increase the likelihood of applying to college net of other sources of information? (b) To what extent does seeing a counselor have differential benefits across schools with different levels of college-going culture?; and (c) To what extent do the benefits of seeing a counselor vary by social class background, overall and across schools with different levels of college-going culture?” (p.851).

Robinson and Roksa (2016) conducted a longitudinal study following a cohort of students in Grade 10 through their senior year. Students who applied to college served as the dependent variable for the study. Independent variables included: (a) father education, (b) mother education, (c) family income, (d) father occupational prestige score, and (e) mother occupational prestige score (Robinson & Roksa, 2016). A final independent variable included student visits to the counselor and considered how early on and how consistently. There were several findings associated with the study however, the most applicable to this research highlighted the significance of students who met with counselors. Students equally benefited from early and consistent counselor visits

(Robinson & Roksa, 2016). The research also included the importance of counselors to remedy the inequalities of college access information (Robinson & Roksa, 2016). As institutional agents of support for students, counselors had the obligation to provide marginalized students with information, resources, and postsecondary opportunities (Robinson & Roksa, 2016).

In alignment with the research of Robinson and Roksa, Tsoi-A and Bryant (2015) suggested that if students felt their counselor had low expectations or did not believe they could be successful, the student was less likely to seek additional information about postsecondary opportunities. The relationship between the counselor and student was significant in identifying factors that impeded the enrollment of Black students in Dual Credit. Similarly, teachers had a significant role in student success and the college and career exposure that students received. According to Davidson et al., (2020):

“Teachers are critical points of support for these [Black] students. If relationships between students and teachers are not influential, these teachers are less likely to inspire or support these [Black] students toward higher education goals” (p. 61).

Peterson et.al. (2016), defined teacher achievement expectations as beliefs teachers had about their students' academic capabilities. Peterson et.al. (2016) stated that the teacher's perception of the student was heavily influenced by the students' prior academic achievements, ethnicity, socioeconomic status, gender and if any learning disabilities were present. The authors stated that the perception of the teacher influenced how they delivered their lessons and the capacity to which they provided the student with postsecondary guidance. According to Peterson, et.al. (2016), students could recognize if their teacher had high or low expectations for them based on how they felt treated via their interactions. The authors of the literature reviewed indicated that students learned

about college admissions processes and postsecondary opportunities through relationships with teachers and counselors while in high school.

Family Engagement

Family backgrounds and parental educational attainment served as benchmarks for Black students and had a profound impact on their postsecondary aspirations (Davidson et al., 2020). Parental educational attainment served as a barrier or a conduit to Black student college aspirations (Freeman, 1997; Kim & Nunez, 2013). Research used parental education as a determinant of how much access a student has to college information (Kim & Nunez, 2013). Parental involvement was a central factor that influenced a student's education plan, their access to college information, their college preparation process, and student successful enrollment into college (Kim & Nunez, 2013). According to Carey (2106), the initial exposure to college occurred in the home. Carey (2016) expressed "the importance of parental and family influence in stimulating initial collegiate aspirations in their children" (p.722).

Family engagement was reiterated throughout the literature, and parents who were engaged in their students' educational journey, had students that were more likely to attend college (Robinson & Roksa, 2016; Carey, 2016). According to Davidson et.al. (2020), students looked to their parents as benchmarks for education. In 2020, Davidson et.al. conducted a single case study with two focus groups. Group one included 6 Black students (e.g., three males and three females), a college recruiter, and a high school counselor. Group two included 6 White students (e.g., three males and three females), a college recruiter, and a high school counselor. Both groups were asked a series of questions related the effects of ACT requirements, their support system, and regarding financial aid. The two groups were both asked how their families perceived college participation. According to the responses recorded, both groups felt that their families

were supportive and found higher education to be important, however, the authors noted that White students reported having help from their families, while the Black students reported having to navigate the process without family support (Davidson et al., 2020). The results of their study supported the vast amount of literature that suggested “students whose parents possess[ed] a college degree [were] more likely to enroll in higher education” opportunities (Davidson et al., 2020, p. 65).

Summary of Findings

The literature reviewed supported claims that participation in DC programs had a meaningful effect on college access, enrollment, and completion (Taylor, 2015). The researchers encouraged participation in DC programs and provided evidence of its positive impacts on college access and academic success at the postsecondary level. However, throughout the literature there lied a common thread that Black student enrollment in DC was the lowest of all the ethnical groups (Young et al., 2013). The authors offered that the lack of Black student enrollment in DC programs should be a major research priority (Young et al., 2013). The literature reviewed and the purpose of this study were aligned and validated one another.

Theoretical Framework

The theoretical frameworks selected to structurally support this research were Critical Race Theory (CRT) and Validation Theory (VT). Critical Race Theory focused on the inequitable access to education experienced among minorities, and for the purpose of this study, Black students (Zorn, 2018). Validation Theory contextualized “the issues and backgrounds of low-income, first-generation students” and their exposure and experiences with postsecondary education (Linares & Muñoz, 2011, p.12).

Critical Race Theory (CRT) was used to explain academic achievement gaps between Black students and their peers. According to CRT, the prevalence of racism

should be acknowledged to correct the issue, and avoidance of race concerns meant “systematically underserving students of color” (Zorn, 2018, p.204). The premise of CRT is race as a historical and contemporary system of oppression constituted by cultural understandings and institutionalized structures that reflect and perpetuate racial inequality (Bonnilla-Silva, 2003). Critical Race Theory in education focused on the ways through which school policies and practices served to regulate the cultural expressions of Black students (Dixson & Anderson, 2018). The literature presented five dominant CRT themes as a framework for this research. The first CRT theme was the intercentricity of race and racism with other forms of subordination (Carey, 2106). This theme was directly linked to the relationship between counselors, teachers, and Black students; and the influence associated with the Black student college knowledge and exposure. The second theme was the challenge to dominant ideologies (Carey, 2016). Perceptions and commonalities within the literature suggested White higher socioeconomic status students dominated academic success, and that Black students and those from lower socioeconomic status continued to lag in academic success. The dominant ideologies must be challenged to affect change in the narratives and to create space, opportunity, and equitable support for Black students. The commitment to social justice was the third CRT theme (Carey, 2016), and is supported by literature that reiterates the need for equitable postsecondary opportunities for Black students as presented in the literature review. The fourth theme was related to the centrality of experiential knowledge which can be associated to cultural capital and family engagement (Carey, 2016). The last theme was the incorporation of transdisciplinary - interdisciplinary approaches (Carey, 2016). This theme linked the use of all resources necessary to ensure that Black students have adequate exposure, access, knowledge, support, and guidance as they transition from secondary to postsecondary

education. The CRT framework provided a foundation for researching factors that impeded Black student enrollment in Dual Credit.

According to Linares and Muñoz (2011), validation theory was related to the “proactive affirmation of students by in-and out-of-class agents” (p.12). Validation theory validated student creativity, knowledge, and worthiness to be part of the college community; and “fosters personal development and social adjustment” (Linares & Muñoz, 2011, p. 19). Validation theory was introduced by Laura Rendon in 1994. The creation of the theory took place by conducting focus group interviews that included a diverse group of 132 first-year college student volunteers, attending a variety of institutions of higher education (Linares & Muñoz, 2011). The questions asked to develop the theory focused on “how students made decisions to attend college, their expectations for and the reality of college, significant people and events in their transition, selected characteristics of the transition, and the general effects of college on students” (Rendón, 1994, p. 7). The Validation theory that derived “is an enabling, confirming, and supportive process initiated by in-and-out of class agents that foster academic and interpersonal development” (Rendón, 1994, p.44). Validation theory was birth to study the influence outside class support had on learning and retention (Linares & Muñoz, 2011). The theory focused on the college experience but was selected for this study because the principles of the theory were applicable to the targeted population of students selected.

Validation theory was based on six foundational principles explained in relation to the study. The first principle required the onus of initial contact to be on the institutional personnel and not the student (Linares & Muñoz, 2011). The Student Interest Survey given for this research study asked questions related to higher education exposure via adult interaction to demonstrate the need for adults to be present and engaged

initiators as major influencers for Black students. The second principle focused on the need for students to receive validation as they matriculate through the college process (Linares & Muñoz, 2011). As students embarked on their educational journey, receiving words of encouragement and validation from their counselors, teachers, and parents as identified by the literature reviewed for this research, were essential. The engagement of these major influencers was imperative for student success and feelings of self-worth (Linares & Muñoz, 2011). The third principle of validation theory was the development of the student's confidence through involvement. This principle was not as applicable to this research study, but nonetheless valid in supporting student success at the collegiate level and could be connected to the cultural capital literature reviewed. The need for validation in and outside of the classroom was the fourth principle of validation (Linares & Muñoz, 2011). This was a significant principle as it reiterated the support students received from counselors, teachers, and parents to attain academic success. The fifth principle depicted validation as a developmental process that happened throughout the course of the student's academic career. This reiterates the need for students to receive validation and support throughout the transition and arrival to the postsecondary success is significant. Lastly, the sixth principle related to the importance of students receiving validation immediately and most importantly the first year of enrollment (Linares & Muñoz, 2011). This principle was associated to self-efficacy and the support students need throughout their enrollment and participation in the DC program. The principles of support that the validation theory provided were paralleled with the support Black students need to develop cultural capital, establish supportive relationships with counselors, build self-efficacy, and to garner parent engagement which all served as factors that could impede the enrollment of Black students in DC programs.

Conclusion

Each study reviewed along with the literature, validated that participation in DC programs yielded positive outcomes related to postsecondary access and completion. However, the gains available through DC participation remain consistently lower for low income and minority student groups (Haskell, 2016). The literature reviewed for this study was related to college access and completion rates of Black students, the history and benefits of DC, the concept of Early College High Schools (ECHS), the impact of self-efficacy, and support systems associated with Black student participation in DC programs. Throughout the literature reviewed, the need to investigate the disproportionate enrollment of Black students in postsecondary opportunities remained a consistent recommendation. According to Young et al., (2013) information on ethnicity and gender DC enrollment in Texas is severally lacking. The author stated while previous studies emphasized student enrollment into DC, minimal attention was paid to the ethnic membership of the students (Young et al., 2013). The authors endorsed the need to research factors that impeded the low enrollment of Black students in DC programs.

Dual Credit served as a gateway to higher education for many underserved students who would traditionally not have access to postsecondary education (Cohen & Brawer, 2003). The DC program also assisted with providing the necessary knowledge and preparation needed for success in postsecondary education, however based on the enrollment data, Black students were not taking advantage of DC at the rate of their peers and were at a greater disadvantage due to their lack of participation.

CHAPTER III: METHODOLOGY

The purpose of this study was to identify and explore reasons that impeded Black student participation in DC programs, by examining factors such as higher education exposure via adult interaction, college and career exposure, self-efficacy, parent education level, and Black student perceptions of Dual Credit. Perceived barriers that impeded Black student enrollment in DC were also ascertained. Black students have the lowest enrollment rates in DC programs across the state of Texas (THECB, 2019). Through this mixed method explanatory sequential design, a quantitative survey was administered to capture the responses from Black students currently enrolled in a community college or university in Texas. Students were asked to further participate in a qualitative interview to provide additional context regarding their survey answers. This chapter provided an overview of the research problem and methodology. Theoretical constructs, research purpose, and questions were explained. In addition, student population and sampling processes were explained, along with instrumentation included, data collection procedures, both quantitative and qualitative. Lastly, the chapter included information regarding the validity, privacy, ethical considerations, and limitations associated with the research design.

Overview of the Research Problem

Despite the growth of DC enrollment throughout the state of Texas, Black students were underrepresented in the enrollment numbers (Tsoi-A & Bryant, 2015). Although there were numerous research studies related to DC programs and participation, there were few studies that evaluated the ethnicity of students who were enrolled in DC programs (Young et al., 2013). Information on ethnicity and gender enrollment in Texas was severely lacking (Young et al., 2013). Therefore, the gap in the literature provided a

keen opportunity to explore the lack of Black student enrollment in DC programs (Young et al., 2013). This study contributed to the body of literature and research by studying factors that impeded the enrollment of Black students in DC programs while in high school.

Operationalization of Theoretical Constructs

The quantitative variables associated with this study included: (a) Black student enrollment, (b) higher education via adult interaction (c) college and career exposure, (d) self-efficacy, and (e) parental level of education. The Student Interest Inventory was used to operationalize the quantitative variables (Pekel, 2012). The operationalization for each variable is provided below.

The first construct focused on high education exposure via adult interaction. For this study, adult interaction was defined as “the frequency and the character of interaction that students have with adults about college-level course taking and related subjects (Pekel, 2012, p.12). The Student Interest Inventory was used to operationalize the level of engagement students had with various adults included counselors, teachers, and their parents. The influence of the adult interaction was analyzed to determine its impact on the student’s decision to participate in DC while in high school, or not. The survey questions specific to this construct were outlined in the appendix (see Appendix C). The second construct, college and career exposure were operationalized using the Student Interest Inventory questions identified as signals from higher education and course registration process. The researcher ascertained what information students received about college, career opportunities and college access programs such as DC when registering for courses throughout their high school career.

The ten question General Self-Efficacy (GSE) scale was embedded into the Student Interest Inventory to operationalize the third construct of self-efficacy. The GSE

“aim[ed] at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations” (Scholz et al., 2002, p. 243). The original GSE consisted of 20 questions; however, the abbreviated version was developed in 1981 and was selected for this research study (Scholz et al., 2002). Data collected from the GSE scale was used to determine if self-efficacy had any impact on Black student enrollment into DC programs while in high school. The Student Interest Survey included two questions that were used to operationalize the fourth construct, which determined if the education level of the parent had any influence on Black student enrollment into DC programs while in high school.

Research Purpose and Questions

The purpose of the study was to identify factors that impeded the enrollment of Black students in Dual Credit programs by examining factors such as higher education exposure via adult interaction, college and career exposure, self-efficacy, and parent education level. The research also focused on Black students’ perceptions of DC and their perceived barriers. The following questions were investigated:

Quantitative Research Questions

1. Is there a mean difference in Dual Credit enrollment for Black students who received higher education exposure via adult interaction while in high school, than Black students who did not enroll in Dual Credit?
2. How were Black students exposed to college and career information and or opportunities while in high school?
3. Is there a difference in self-efficacy for Black students who were enrolled in Dual Credit or not?
4. Is there an association between mother’s education and whether the student took Dual Credit?

5. Is there an association between father's education and whether the student took Dual Credit?

Qualitative Research Question

6. What are Black student perceptions of Dual Credit programs and the potential barriers that impede enrollment while in high school?

Research Design

The selected design for this research was an explanatory sequential mixed method design. This design model began with the collection of quantitative data obtained through a Student Interest Survey (Pekel, 2012), followed by a series of individual student interviews to supplement the findings of the quantitative data collected. The first part of the mixed method design consisted of the administration of the Student Interest Survey to high school graduated, 18 years and older, Black students currently attending two specific community colleges in the state of Texas. Each student received the Student Interest Survey via the email addresses provided by the community college. Due to the impact of COVID-19 on the response rate, the Student Interest Survey was further extended via social media to garner responses from Black students who graduated from high school, were 18 years and older, and currently attending the community college or university.

The second phase of the mixed method design were the qualitative semi-structured individual interviews. Upon the completion of the quantitative Student Interest Survey, students who had not participated in DC while in high school were prompted to indicate their willingness to participate in individual interviews to provide additional context regarding the quantitative data collected. A total of nine students were interviewed.

Population and Sample

The target population for this study were Black students who attend community colleges and who did or did not participate in Dual Credit programs while in high school. The original sample consisted of approximately 1,000 Black students who were high school graduates, ages 18 and older, and currently enrolled at two Texas community colleges. Community College A had an approximate Black student population of 12 % (College website, 2019), while Community college B had an approximate 20 % Black student population (College website, 2019). However, due to the low response rates of the selected sample group due to COVID-19, less than 20, the survey was extended via social media to capture responses from any Black student that met the criteria of being a high school graduate, 18 and older, and currently enrolled in a community college or university. After extending the survey, a total of 89 surveys were collected with 51 completing the survey at 100%. Of the 51 students, a few details emerged: 39 identified as female, nine as male, a 3 declined to indicate their gender. Thirty-six of the participants indicated that they did not take DC while in high school and 14 confirmed participation in DC while in high school. Four of the respondents were from community college A and 15 were from community college B, the remaining respondents attended various Texas public community colleges or universities. The demographics were depicted in Table 3.1.

Table 3.1

Black students Who Participated in the Study by Gender and Dual Credit Participation by percent and number (n)

Gender	College A (N)	College B (N)	Other (N)	Dual Credit (N)	No Dual Credit (N)
Male	22% (2)	33% (3)	44% (4)	28% (4)	14% (5)
Female	5% (2)	31% (12)	64% (25)	71% (10)	78% (28)
Undisclosed	0	0	100% (3)	0	8% (3)

Participant Selection

Participants for the qualitative portion of this study were self-identified. The quantitative survey ended with a text box to allow survey participants that did not participate in DC to indicate their willingness to participate in an individual interview. Students were asked to provide their contact information including their name, email address and/or telephone number, along with their preferred method of contact. The researcher contacted the students to schedule the individual interview utilizing the preferred method of contact indicated. Students who indicated a willingness to participate in the individual interview process were contacted within a 48-hour timeframe of submission to minimize attrition. The researcher anticipated recruiting a minimum of ten students to be interviewed, and successfully completed nine interviews consisting of six Black females and three Black males that did not participate in DC while in high school. All volunteer interviewees were part of the broader pool of participants.

Instrumentation

The instrument used for this study was a pre-existing Student Interest Survey adapted from the developmental evaluation design of Ramp-Up to Readiness™ that was conducted by researchers at the University of Minnesota’s Center for Applied Research

and Educational Improvement (Pekel, 2012). Pekel (2012) created survey questions that focused on college-level courses and related factors. According to Pekel (2012), three questions were calculated to identify the statistical significance of differences in responses of two student subgroups. CAREI was contacted to gain formal permission to use the intended instrument and verbal authorization to utilize the survey was received summer 2019. No additional information regarding the reliability of this instrument was acquired.

The Student Interest Survey identified for this research evaluated how each category of questions influenced student participation in DC programs. The following represent the ten categories according to Pekel (2012) as referenced in Appendix C:

1. Access: The degree to which the students have access to college-level classes
2. Economic Incentives: The degree to which students understand the economic and other benefits of college and/or the potential financial benefits of taking a college-level course in high school.
3. Signals from Higher Education: The degree to which students receive, understand, and act upon signals about college admissions and success.
4. The Course Registration Process: the way the school provides students with information about college-level courses.
5. College-Going Orientation: The degree to which students are inherently oriented toward attending and completing college.
6. Effort: The amount, type, and duration of effort that students put into succeeding in school

7. Academic Readiness: The degree to which students believe that they possess the knowledge and skills to succeed in a college-level course.
8. Interaction with Adults: The frequency and the character of interaction that students have with adults about college-level course taking and related subjects.
9. Interaction with Peers: The frequency and character of interaction that students have with peers about college-level course taking and related subjects.
10. Outside Commitments: The frequency and intensity of students' commitments to extracurricular activities, jobs, and other activities outside school.

The survey questions were categorized using these factors, and some questions were categorized using multiple factors (Pekel, 2012). All the factors related to the research topic, however, the survey questions related to signals from higher education, college going and course registration, and interaction with adults, were used to answer the research questions identified for this study.

Data Collection Procedures

To gain Institutional Review Board (IRB) approval prior to the research process, the researcher submitted documentation to two Institutional Effectiveness Research offices at identified community colleges. After IRB approval letters were received from the community colleges, copies of the letters along with the Application for Investigation Involving Human Subjects were submitted to the Committee for the Protection of Human Subjects (CPHS) at the University of Houston Clear Lake for formal approval. Approval was received Fall 2019. After receiving CPHS approval, the researcher requested, through the Office of Institutional Research and Effectiveness, the email addresses for all

Black students designated in their system as high school graduates, ages 18 and older, and currently enrolled. During Fall 2020, a CPHS extension was filed for an additional year, and approval was granted.

Approximately 1,000 email addresses were received from the two community colleges. In November 2020, each student received a mass email directly from the Qualtrics platform to participate in the Student Interest Survey. Through trial and error, the researcher became aware that some email domains delivered the Qualtrics email to junk mail and as a result the blind copy Outlook feature was used to ensure receipt of the survey. The email included an introduction of the researcher, the research topic, and the Student Interest link. Due to the impact of COVID-19 on the response rate, the Student Interest Survey was further extended via social media to garner responses from Black students who graduated from high school, were 18 years and older, and currently attending the community college or university.

The Student Interest Survey was comprised of twenty-two questions and should have taken students less than 30 minutes to complete (Pekel, 2012). Student participants who utilized the link reviewed (a) an introductory letter introducing the researcher, (b) the purpose of the research, (c) the number of questions on the survey and (d) the estimated time needed to complete the survey (see Appendix A). The letter also confirmed the confidentiality of the surveyor identity. Student participants were asked to answer each survey question and to indicate if they would be interested in participating in an individual interview if they had not participated in DC while in high school. If agreeable, the surveyor contacted the student to schedule the interview.

The quantitative survey was administered through the Qualtrics platform. Responses were collected within the Qualtrics database and accessible to the researcher

utilizing unique sign-in credentials. The acquired data were synthesized utilizing the Qualtrics database and through transference into SPSS where the data were analyzed.

Interviews were considered the second major method of collecting data and were used (a) to measure attitudes, (b) allow for follow up questions, (c) interpret validity, and (d) explore and confirm research (Johnson & Turner, 2003). Patton (1990) introduced variations of interviews including informal conversational interviews, the interview guide approach, and the standardized open-ended interviewing model. A semi-structured interview pairing, standardized open-ended interview questions with the informal conversation model, was used for this study. The researcher scheduled interviews to collect qualitative data. The interviews were scheduled at the convenience of the self-identified participant. In fall 2020, during the time of data collection, the COVID-19 pandemic was widespread and impeded the facilitation of in person interviews. Instead, all interviews were conducted via a virtual platform known as Zoom. Consent forms were formatted for electronic signature and emailed to each interviewee prior to their scheduled interview, and all forms were electronically received via email by the researcher prior to the interview. The researcher gained permission in advanced to record each interview before transcription. Each interviewed participant indicated on the survey that they did not take DC courses while in high school and they were willing to be interviewed to share more about their decision. The interview began with the researcher reviewing the signed consent form to determine if there were any lingering questions (see Appendix B). Each interview lasted approximately 10 to 15 minutes and was recorded with the researcher cellular device and Zoom with the informed consent of each participant. The following semi-structured questions were included in the interview:

1. Can you share with me what you know about Dual Credit?

2. How did you learn what you knew of Dual Credit? Were you intrigued to learn more? Did you seek out any additional information?
3. Traditionally, college courses taken through the Dual Credit program are offered at a minimal fee and/or free, were you aware of this benefit of participation? If no, would knowing this information affected your decision to participate?
4. Another benefit of Dual Credit is that you are taking courses that you would traditionally take once you enroll in college. How does knowing this affect your view of Dual Credit and your decision not to participate?
5. Who or what would have been the most influential in getting you to enroll in Dual Credit college courses while in high school, and why?
6. What do you think is the best way to inform high school students about Dual Credit?
7. Can you talk to me about your family's (i.e., parents/siblings) college experiences and expectations for you? Were they aware of the Dual Credit program? What is the best way to inform parents?
8. Knowing more about Dual Credit now, do you wish you would have taken Dual Credit college level courses while in high school, and why?
9. What would you identify as the main reason you chose not to take Dual Credit courses while in high school? And what do you think are the main barriers impeding the enrollment of Black students into DC programs?

The researcher was intentional to use active listening skills and took minimal notes during the actual interview. Instead, the interviews were transcribed and reviewed audibly using constant comparison to allow the researcher to identify themes related to the perceptions and factors the interviewees reported as reasons for not participating in

DC while in high school. All transcribed interviews were emailed to the interview participants for member checking, confirming that the data collected was accurate and representative of their communicated experience.

Data Analysis

Quantitative

The quantitative data were analyzed using SPSS. A variety of tests were used to analyze the research questions. To determine if there is a mean difference in DC enrollment for Black students who received higher education exposure via adult interaction while in high school, than Black students who did not enroll in DC, an independent samples *t*-test was conducted. To ascertain how Black students were exposed to college and career information and or opportunities while in high school, frequencies and percentages were used to analyze the data. To determine if there was a difference in self-efficacy for Black students who were enrolled in DC or not, a two-tailed *t*-test was used. A Chi Square test was used to establish if there was an association between mother's education and if the student took DC and if there was an association between father's education and if the student took Dual Credit.

The independent variables were the Black student participants that participate in DC and those that did not participate. The dependent variables measured were based on the questions and answers from the survey and included: (a) higher education exposure via adult interaction (b) college and career exposure, (c) self-efficacy, and (d) parental level of education higher.

Qualitative

Qualitative data were used to humanize the quantitative data collected, through thematic coding to the experiences and perspectives of participants. Nine student volunteers were interviewed. Three Black males and seven Black female students, all 18

years or older, who were currently attending a Texas community college or public university. The nine volunteers were from the extended pool of participants and attended various community colleges and public universities in Texas. The interviews were facilitated using nine semi-structured questions (see Appendix D). Each interview was transcribed and emailed back to the student for member checking. Member checking is a validation process by which the interviewee receives a copy of the transcript to check for accuracy and to ensure that their experience was captured accurately (Birt et al., 2016). All nine students responded affirmatively that their responses had been recorded accurately. The transcripts were then manually analyzed by the researcher due to the small dataset. This process included an initial review of each transcript to become familiar with the data. The second review of the transcripts allowed the researcher to begin the coding process. The coding process allows the researcher to interactively label the themes and similar data (Walker & Myrick, 2006). There were two coding processes available to the researcher: a priori codes, which represent codes considered by the researcher prior to the review of the data (Elliot, 2018), and secondly, emergent codes. Emergent codes were codes that surface in review of the data (Elliot, 2018). After the initial review of the data, there were a priori codes that the researcher kept in consideration, however, to remain as objective as possible, the researcher focused on emergent coding to allow valid data. The codes represent various “words, phrases, sentences, or whole paragraphs” (Basit, 2003, p. 144). Once coded, the key words and phrases identified were categorized to create the themes used to answer the research questions. The identified themes were then assigned a color. During a third review of the transcript, the transcript was color coded by the themes to be easily referenced when reporting the findings. Once all transcripts were coded., the researcher was able to proceed with the findings for chapter four.

Qualitative Validity

If completed properly, constant comparison verifies itself through the work (Walker & Myrick, 2006). Maxwell (1992) shares three categories of validity for qualitative research: (a) descriptive validity; (b) interpretive validity; and (c) theoretical validity. Descriptive validity referred to the accuracy and carefulness of data collected by the researcher. Secondly, the researcher has the responsibility to share the views of the participants from their points of view, which was interpretive validity. Lastly, theoretical validity which referred to the ability of the data to be used to develop a theoretical explanation. According to Johnson and Turner (2003), strategies to improve validity include member checking, use of a reflexive journal, and triangulation. Member checking required the researcher to verify with the participants that their statements and accounts have been accurately recorded (Johnson & Turner, 2003).

For this study, at the conclusion of the interview notes were taken and responses were reviewed to ensure accuracy. In addition, the completed transcript of the interview was emailed to each participant to confirm that the interview was accurately transcribed and reflected their experience as it had been shared. Each participant completed the review of their transcript and emailed it back to the researcher with their approval. Triangulation was used to connect the theoretical concept with the quantitative and qualitative data. The two data collection points were the Student Interest quantitative survey and individual qualitative interviews with open-ended, semi-structured questions.

Privacy and Ethical Considerations

Approval to conduct research was received via the University of Houston-Clear Lake committee for the Protection of Human Subjects (CPHS) after receiving IRB approval from the two identified community colleges. As part of the administration of the survey, a cover letter was attached explaining the survey and ensuring the confidentiality

of all participants. The participant's decision to continue with the survey after review of the cover letter served as official participant consent. Students who indicated interest in being interviewed, received consent forms to be signed and submitted electronically prior to the Zoom interview. The Zoom platform used was part of the researcher's university account and therefore protected under the students' electronic protections afforded by the institution. Interviewees' identities were concealed, and pseudonyms have been assigned to relay the findings. Throughout the research, every effort was made to safeguard all information and identities of student participants. All results have been stored in two places, a computer device and the password protected university account. Lastly, throughout the study, the researcher remained as objective as possible during the interview process and when reporting the finding by utilizing active listening skills, avoiding the urge answer questions for students. The researcher also asked the participants open-ended questions to authentically capture student voice and student experiences. At the completion of the research, all data files will be safely stored for a period of three years and then destroyed.

Summary

The goal of this study was to identify factors that impede the enrolment of Black students in DC programs. To achieve this goal, the researcher will seek to gain data via participants attending two community colleges and university feeder campus in the Gulf Coast area of Texas. Black students enrolled in academic programs will be contacted to participate in a student survey that will lend to quantitative data. The researcher will then interview self-identified students who did not participate in Dual Credit while in high school. The data gathered both quantitatively and qualitatively will provide a better understanding as to why Black students have the lowest Dual Credit enrollment (Young et al., 2013).

CHAPTER IV:

RESULTS

Factors that impeded the enrollment of Black students in DC programs were examined during this study. Quantitative data were collected via a survey instrument to help identify potential factors to include higher education exposure via adult interaction, college and career exposure, self-efficacy, and the parental level of education. The Student Interest Survey used was a pre-existing survey adapted from the Ramp-Up to Readiness™ survey design conducted by researchers at the University of Minnesota's Center for Applied Research and Educational Improvement (Pekel, 2012). To measure self-efficacy, the ten question General Self-Efficacy scale was embedded within the Student Interest Survey.

In addition to the Student Interest Survey, semi-structured, open ended questions were used to facilitate one-on-one qualitative interviews. The qualitative data provided context through the lens of students who did not participate in DC while in high school, to ascertain their perception of DC and factors that impeded their enrollment. This chapter will provide a review of the participant demographics, results related to the quantitative survey that answered research questions one through five, and qualitative interview results in response to research question six. In conclusion, the chapter will provide a collective summary of all findings and results related to the research topic.

Research Question One

Quantitative research question one, *is there was a mean difference in Dual Credit enrollment for Black students who received higher education exposure via adult interaction while in high school, than Black students who did not enroll in Dual Credit*, was answered by conducting an independent samples *t* test. The dependent variables were the responses to the questions regarding higher education exposure via adult interaction

(see Appendix C). The independent variable was the student’s enrollment in DC or not. The independent *t*-test results suggested that there were no significant differences $t(50) = 1.5, p=.14$, Cohen’s $d=.47$ in DC enrollment between Black students who were enrolled in DC based on higher education exposure via adult interaction while in high school, than those who did not enrolled in DC. Although there were no statistical differences, it is apparent that descriptively, the Black students who had higher levels of adult exposure while in high school, did enroll in DC courses as notated in table 4.1.

Table 4.1

Adult Interaction Total Mean Comparison

Did you take one or more dual credit courses for college credit?	Mean	Standard Deviation	N
Yes	3.97	.898	14
No	3.48	1.09	38

Research Question Two

The second quantitative research question, *how were Black students exposed to college and career information and or opportunities while in high school*, was analyzed by using frequencies and percentages. Participants completed the Student Interest Survey, and were allowed to check all that apply, which did not yield to 100% response rates. In addition, data were converted using SPSS to capture responses to the Student Interest Survey questions that were answered, and to discard those questions that did not have survey answers. Thus, the percentages were calculated based on the total survey participants, 89, and not the 51 participants who completed the survey. Regarding exposure to institutions of higher education, over 50% of the Black survey participants

were exposed to an institution of higher education, as depicted in Table 4.2. In addition, as illustrated in Table 4.3, over 50% of the Black students surveyed agreed that any student could enroll in honors or DC courses at their high school and felt like they were expected to go to college, as depicted in Table 4.4. Less than 50% of the Black students surveyed received college and career information from high school staff in the categories identified in Table 4.5.

Table 4.2

Survey Responses of Black student Exposure to Institutions of Higher Education

Response	Percent	N
Four-Year College or University	33.3%	29
Community College	21.8%	19
Not Sure of Information Type	11.5%	10

Table 4.3

Percentages of Black Students Who Felt Any Student Could Take an Honors Course or Dual Credit Course

Courses Availability	Percent Agree	Percent Disagree
Honors/Dual Credit	66.7%	33.3%

Table 4.4

Percentages of Black Students Who Felt Expected to Go to College

Response	Percent Agree	Percent Disagree
Felt Expected to Go to College	66.7%	33.3%

Table 4.5

Percentages of Black Students Who Received College and Career Information from High School Staff

	Percentage (N)
College Information	(N)
Choosing dual credit courses	20.2% (18)
Requirements to get into college	36.0% (32)
Scholarship and Financial Aid	31.5% (28)
Careers	30.3% (27)
Requirements to succeed in college	20.2% (18)

Research Question Three

To discern if there was a difference in self-efficacy between Black students who were enrolled in DC and those who were not, an independent samples *t*-test was conducted. The dependent variables were associated with the responses given to the ten self-efficacy questions. The independent variable was if the student was enrolled in DC or not. The results concluded that there were no significant differences $t(47) = .99, p =$

.33, Cohen's $d = .32$. Table 4 represents the descriptive differences found, which represented the Black students who reported higher levels of self-efficacy and took DC while in high school. The 10 General Self-Efficacy questions were referenced in the appendix (see Appendix E).

Table 4.6

Survey Responses to General Self-Efficacy for Black students Who Were Enrolled in Dual Credit and Those Who Were Not

Responses	Mean	Standard Deviation	N
Yes	3.32	.465	13
No	3.18	.435	36

Research Question Four

Research question four focused on the association between the Black student's mother's education and whether the student enrolled in DC while high school, or not. Quantitative data were collected by asking the student if their mother earned a post-secondary degree. A chi-square test of independence was conducted to answer the question, and it was determined that there was no association between the mother's postsecondary level of education and the student's enrollment into DC while in high school, $X^2 (1, N=48) = .52, p = .47$. The association is presented the Figure 4.1.

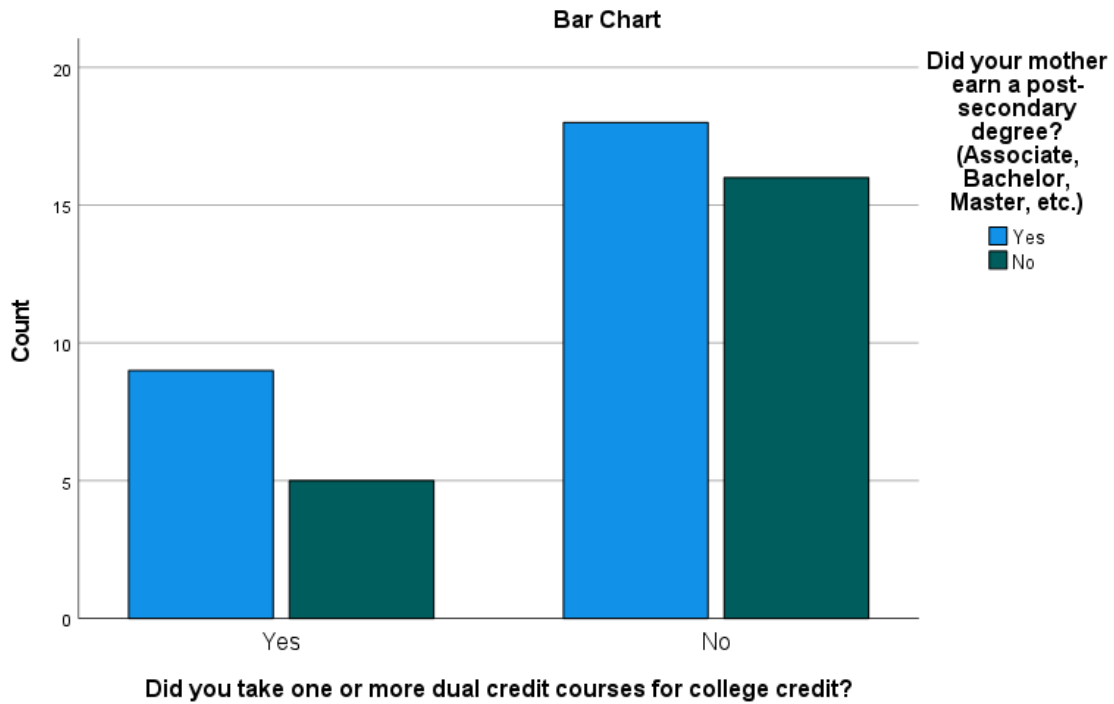


Figure 4.1. Black students who took dual credit and Mother’s level of education

Research Question Five

Likewise, research question five focused on the association between the Black student’s father’s education and whether the student enrolled in DC while in high school. Quantitative data were collected by asking the student if their father earned a post-secondary degree. To answer this question, a chi-square test of independence was conducted, and it was found that there was no association between the father’s post-secondary level of education and the student’s enrollment into DC while in high school, $X^2(1, N=48) = .18, p = .67$. The association was depicted in Figure 4.2.

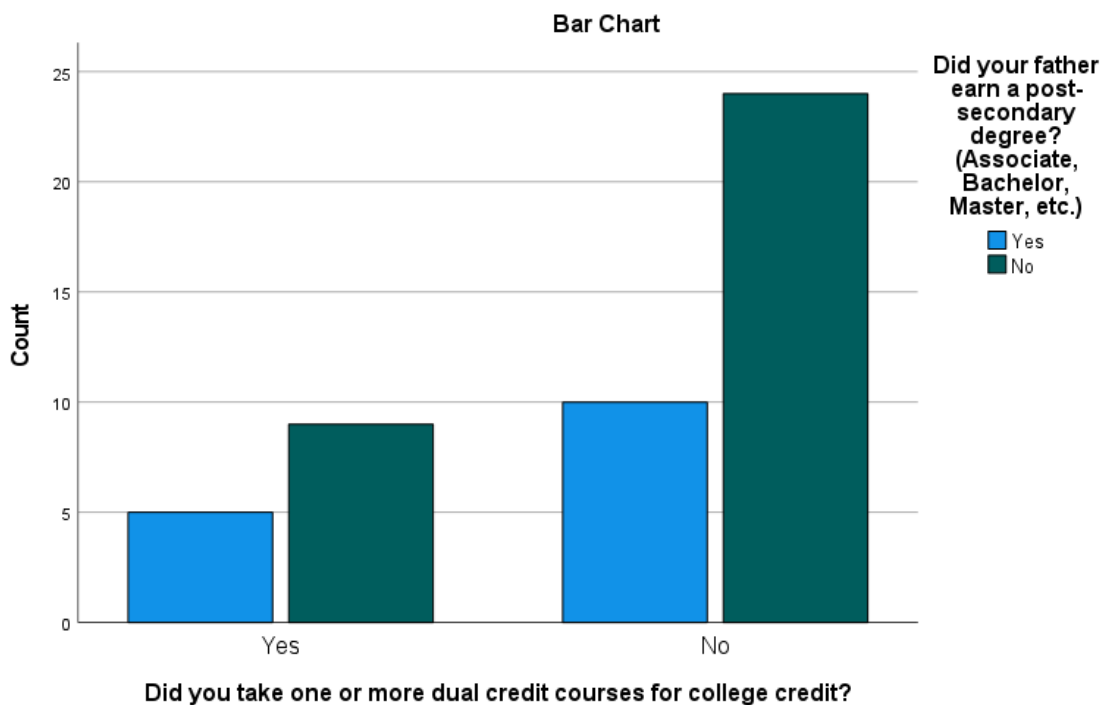


Figure 4.2 Black students who took dual credit and Father’s level of education

Research Question Six

Research question six was qualitative in nature and was answered using data collected from nine self-identified interview participants. All participants were Black, 18 or older, and currently enrolled in a community college or university. Of the nine participants, six were female and three were male. The interviewees confirmed that they did not participate in DC while in high school prior to being interviewed. Responses to the semi-structured questions were reviewed and coded into four thematic categories, and two subcategories to address the perceptions and barriers surrounding dual credit: (a) misinformation, with subcategories related to (a1) financial implications, and (a2) advanced placement versus dual credit, (b) adult interaction-counselors, (c) family engagement, and (d) barriers. For reporting purposes, students were assigned code names; the female students were coded as Female Student 1-6, denoted as FS1, FS2, FS3, FS4, FS5 and FS6; and the male students were coded as Male Student 1-3, denoted as MS1,

MS2, and MS3. This schematic was selected by the researcher to help highlight the differences between the female and male responses and their experiences. The following sections will explore the responses from the student interviews by theme.

Misinformation

According to Mansell and Justice (2014), while opportunities were readily available for Texas high school students to enroll in DC, many still do not take advantage of the opportunity. A major theme identified throughout the interviews was the misinformation students received about DC, the financial benefits associated with participation in DC, and not receiving clarity on the differences between DC and Advanced Placement (AP). Each student interviewed acknowledged a familiarity with DC but ultimately chose not to participate because of misinformation received.

The students interviewed provided similar responses when asked what they knew about DC. Male Student 2 (MS2) recalled that what he knew about DC was “that [the] classes roll with you into college”. He understood that they were college level courses but had no additional information. Female Student 1 (FS1) shared that she knew DC were college classes taken in high school “basically like [to] be ahead or have already college credits going into college”. Similarly, FS3 confirmed that she understood DC to be “for high school students that wanted to take college semester classes”. Female Student 5 (FS5) provided the following response:

What I know about dual credit is its college credit and you take it in high school to be able to either not take the class in college ‘cause you already have taken in high school and it’s through junior colleges.

All nine of the students interviewed were aware of DC; however, what varied was how they acquired and were exposed to the information they knew about the DC program. Female Student 1(FS1), said she knew “basically through word of mouth” and

that it was “not advertised as much like through teachers...just like word of mouth through students.” Female Student 5 (FS5) affirmed that she learned about DC through her high school counselor when she first arrived to high school, but it was general information only. Male Student 2 (MS2) learned about DC by way of friends, stating, “I had some friends that did dual credit classes in high school”. Of the nine students interviewed, only three acknowledged learning about DC through a counselor or teacher. The remaining six students recounted learning about DC through friends and through their own research after learning that friends were taking DC. When asked by the researcher if the students did anything additional to learn more about Dual Credit, the general consensus was “no”. Female Student 1 (FS1) stated that she chose not to seek additional information “because I was in high school” and she felt like she did not “want to take college classes right now.... I really don’t want to stress myself with it.” Female Student 5 (FS5) responded along the same lines as sharing, “I thought it would be interesting to try, but I just felt like it would be hard for me ‘cause I was in high school so I just thought it was a college class, why would I take it in high school.” It is worth noting the response made by MS1, stating that he did try to learn more once he learned about DC, but states that he “went to my counselor to ask more about it, but she thought that it wasn’t really a good idea for me”. When asked if he questioned why the counselor felt as though DC was not for him, he responded “she didn’t tell me why”. Choosing not to seek more information, to ask additional questions, or to discount the opportunity because they were in high school and not thinking about college at that time, was a pattern observed by the researcher amongst the nine students interviewed and is associated with having misinformation about the DC program and the benefits associated.

Students shared many suggestions for ways to inform high school students about DC courses in an effort to minimize misinformation and to maximize coherent

understandings about the DC program and benefits of participation. Six of the nine students interviewed reiterated the critical role the counselor plays in ensuring students were accurately informed about DC programs. Female Student 2 (FS2) lead the charge sharing throughout her interview the importance and influence “communication with counselors” (FS2), has on the student’s decision to participate in DC. Male Student 1 (MS1) firmly stated that “students really feel like they [can] trust counselors” and suggested that the best way to get information to students about DC is through the counselors. Other suggestions included presenting the information early on to students and not waiting until their junior and senior year to begin discussing college credit. Female Student 4 (FS4) expounded on her response, suggesting that DC information be introduced to students earlier:

Present to them [parents] early so they could have time to think about it. And you know, depending on how you start off high school, if it’s hard for you, of course dual credit will be hard for you, hard for you as well, you know, so you probably don’t want to just jump into it right then. I feel like being informed about dual credit could be your foundation.”

Female Student 1 (FS1) offered that she wished there were more workshops. She shared in her interview response:

We didn’t have no meetings for like dual credit classes or college credit classes, college in general, like we didn’t really have meetings like related to that. I feel like the school/counselors should have like a workshop or like just a certain time in the day, or at least like...uh...like how they put time for like a pep-rally or something, I feel they should put time in the day for students to like all go to the gym or like all go to the auditorium and have like a presentation of like what dual credit is, how it benefits you, stuff like that.

Other ways to inform students about DC included using social media platforms, automated phone calls, emails, and three of the nine students interviewed suggested the idea of having former Black DC students speak to them directly about their experience and the impact DC had on their future. According to the three students, having a tangible example of DC success would have piqued their interest. Male Student 1 (MS1) affirmed sharing that having “Black students who are in college go back to the high schools and say, hey you really need to be in this program” would have made him pay more attention and asked more questions. Male Student 2 (MS2) gave the same suggestion, stating that having former students “telling [current students] that down the road you’re not gonna want to be in college for so long and you can already be in college” would have made him pay more attention. The response of FS4 provides a parallel summation of this point of view expressing, “I would have to say probably somebody who was in college or someone who has done dual credit before or was doing dual credit, that makes sense at the time”.

Misinformation is a significant factor impeding the enrollment of Black students into DC programs. However, the students interviewed provided significant ways to increase student interest and the desire to learn more about DC that should be implemented ensure accurate and detailed information is provided. Aligned with the misinformation about the DC program in general, the interviewed students indicated that they were misinformed about the financial benefits associated with the program as well.

Financial Implications

One of the benefits of taking college courses through the DC program is that the courses are traditionally offered at a minimal fee, or sometimes free. The interviewees were asked if they were aware of this benefit and if knowing about this benefit would have influenced or impacted their decision to participate in the DC program while in high

school. The majority of the responses indicated that if they had been aware of the benefits, they would have paid more attention to the opportunity, however, there were students who indicated that knowing of this benefit would not have changed their decision at the time. Male Student 2 (MS2) responded that he was aware of the financial benefits of DC but “never thought about it in high school”. He shared that it was not a concern of priority while he was in high school and he did not consider the financial benefit at the time. Female Student 1(FS1) stated that she learned that the program was free after the deadline but wish she had known:

I probably would have like took a chance at it versus like me taking it and I was to fail the class and I would have felt like I kind of wasted my parent's money versus if it's being free and I would have felt like well at least I got a shot at it and got a taste of college.

Female Student 5(FS5) suggested that the best way to inform students about DC and the financial benefits associated, is to “first come out front saying that it’s free” and that “there’s you know, you don’t really have to pay for anything.” This recommendation speaks directly to the students who felt like FS2 who stated that she “wasn't’ even aware of the cost” and “if I would have known that from the very beginning, I most definitely would have taken dual credit.” Male Student 3(MS3) also stated that he wasn’t aware of the financial benefits of participation and learning that he could have taken DC at a minimal fee or for free made him feel “like I missed an opportunity to be able to, you know, have some hours already.” One student, MS1, shared that he was told that DC was “really expensive ‘cause the books and everything like that” and FS6 suggested that she was aware of the minimal fee but was not offered DC for free because she didn’t qualify for assistance. Female Student 6(FS6) continued to say that she still would not have participated in DC because AP was cheaper in the long run for her. The researcher found

this statement to be interesting after learning that FS6 did not earn college credit for her AP courses, thus ultimately not saving any money. For MS2, he always knew that he would go to college on an athletic scholarship and never considered the financial benefits associated with participation. However, he learned once he entered college that the scholarship did not cover his full tuition and that he would be responsible for paying partial tuition. He recounts that taking DC while in high school would have helped him save money on the classes he had to pay for out-of-pocket.

According to the students interviewed, the lack of knowledge and misinformation regarding the financial benefits of DC participation served as an impeding factor. Based on these findings, it can be predicted that if students and parents initially understood the financial implications of DC participation, there might be an increase in student interest and student participation. Regarding the students who were interviewed, saving money was important to them, and in hindsight, they wished they had gained a clear understanding of how participation in the DC program would have saved money as they transitioned to the community college and or university. Likewise, the students expressed frustration with the misinformation received regarding the differences between Advanced Placement (AP) and Dual Credit.

Advanced Placement (AP) versus Dual Credit

Participation in DC assured college credit if the course was successfully passed. Whereas, students who participated in AP were required to take an end of course exam in which the score on the exam determined if college credit will be awarded. Advanced Placement (AP) exam scores range from one to five and students must earn a three or higher to receive college credit (College Board, 2020). Of the nine Black students interviewed, eight mentioned AP during the interview process. Seven of the eight

affirmed taking AP while in high school, with only one receiving college credit for the AP exam taken.

While both programs offered students an opportunity to earn college credit, there were key differences between the two programs that should be outlined to assist with framing the perspective, experiences, and opinions shared by the interviewees. According to a publication found on the website of a community college, the differences between AP and DC were as such:

Advanced Placement (AP)	Dual Credit (DC)
No entrance exam	Students must take a Texas state issued entrance exam
Students must earn at least a 3 on the AP Exam (some may require a 4 or 5). Check with your high school counselor and desired university for more specific information.	Students must earn at least a C grade to ensure transferability. Check with your high school Advisor and/or university advisor for more specific information.
Classes are taught by high school instructors who are certified to teach AP courses.	Classes are taught by college professors or high school instructors who are credentialed by SACSCOC to teach college level classes
AP classes have more impact on your high school GPA than traditional high school classes (most districts award higher GPA for AP than DC).	College classes have more impact on your high school GPA than traditional high school classes

Figure 4.3. Differences between Advanced Placement and Dual Credit

Female Student 3 (FS3) reported taking two AP classes and earning no college credit. The same statements were received from FS4, FS5, MS1, and MS2, who each took one AP course as well, and earned no college credit. Female Student 6 (FS6) reported taking four or five AP courses, but only taking two AP exams and not earning college credit for either. According to FS6, she would have chosen AP over DC because the only teacher that taught DC had a bad reputation which impeded her enrollment into DC. She stated, “if we were given better...another staff director for the class, like if it wasn’t just one teacher, I probably would have enrolled but the reviews about the only dual credit teacher weren’t good so”. However, despite feeling that way, FS6 still acknowledged that she regretted not taking DC stating, “I regret not taking um dual credit English in replacement for Freshman Comp, so I wish I had [taken] it”.

Female Student 1 (FS1) did not take AP or DC but shared that she felt like students who took AP did so because “they [counselors] really pushed AP classes”. As stated in her interview, FS1 shared that “they shoved AP down our throats – take that, take that, take that”. Female Student 1 (FS1) continued to share that “even my college roommate, she was like I really wish I would’ve took dual credit versus AP because AP didn’t do nothing for you once you get to college versus dual credit”. According to FS2, she took mostly AP courses but only earned college credit for one course. She stated in her interview:

AP was mentioned to me, so it was just one of those things where I, if I had another option, dual credit would have been the best option, but AP was just what you know that was pushed forward and I was like ok I’ll take AP ‘cause of the way they you know, marketed it to me; counselors were like ok, well if you take this AP class it will help with the GPA.

Female Student 5 (FS5) stated in her interview that “Ap courses were offered and dual credit courses were offered whenever I was in high school, everybody amped up the AP courses versus dual credit, so that’s why I look more into AP courses instead of dual credit until I got into college and I just changed my whole perspective of dual credit.”

Female Student 5 (FS5) stated that she did not earn college credit for her AP course because “the exam was actually really extremely hard, and unlike dual where you don’t have to take the exam at the end.” Correspondingly, Female Student 2 (FS2) recalled her experience with AP and shared the following during her interview:

If a counselor would have sat me down and be like, okay well you’re on a good path but how about we drop AP. Stop focusing on AP ‘cause you’re stressing out about AP, and I did a lot of AP and you know obviously it was good for the GPA increase, but taking those classes and not getting the college credit was like, ok, well it was like a bargain and I really didn’t wish...I didn’t spend so much time stressing on that, and wish the counselor would have been like, okay how about we drop AP for right now and we focus on dual credit, that probably would have been best for me.

For the nine students interviewed for this study, AP was not the most advantageous route, acknowledging that only one of the nine earned college credit through the AP program. Having a clearer understanding of DC, the benefits and having the opportunity to take one class may have made the difference between these students graduating with college credit versus graduating without college credit as the majority of them did. Female Student 4 summarized this point of view, sharing:

I wish I would’ve had like a mentor or somebody to explain like this is probably the right thing to do versus AP courses, ‘cause if I would have known about dual

credit whenever I was in high school, I most definitely would have went that route”.

Miscommunication about DC, in general, and in addition to the financial benefits, and the differences between AP and DC emerged as barriers related to the role, position, and support of counselors. The Black students interviewed shared the significance of counselors’ expectations and influence on their decision not to participate in DC while in high school. This is indicative to the second emergent themed identified as adult interaction, specific to counselors.

Adult Interactions – Counselor

The quantitative analysis conducted indicated no significant mean difference between the enrollment of Black students who received adult interaction versus those that did not. Adult interaction for the purpose of this research was defined as the frequency and the character of interaction that students have with adults – counselors and or teachers, about college-level course taking and related subjects (Pekel, 2012). A quantitative question asked as part of the Student Interest Survey (i.e., What is the most important reason why you did not take a dual credit course for college credit?) and the results from that data support the qualitative results shared. Of the thirty-three students who answered, 33% ($n=12$) selected “no one encouraged me”. Thus, as part of the qualitative research, the researcher sought to learn more about who the interviewees identified as being most influential in persuading students to enroll in DC college courses while in high school. Six of the nine interview participants referenced a counselor or teacher, one Black male student referenced friends as being the most influential and two students mentioned their parents served as an influence. Male Student 1 (MS1) specifically stated “like if my English teacher or like my math teacher would tell me that like they felt I would do better in a dual credit, like math or English, then I probably

would've taken it, but no one told me that so". Female Student 3 (FS3) stated in her interview:

I really wanted to participate in the dual credit of course, but my counselor at the time wasn't really open with the whole situation, so I thought, well it was just left for me. I had no one to, you know, talk to or no one with experience?

According to MS3, students need to "bug [the] counselors, because if you don't bug them, [counselors] will not tell you...you have to reach out to them". Female Student 5 (FS5) shared that her counselor did inform her about DC but did not provide details and did not fully explain the benefits of participation. Furthermore, FS5 communicated that she did ask for more information about DC but, didn't "feel like it was explained, like deeply." According to FS5 the conversation between she and the counselor was shallow and "it was kind of like these are classes that you could take that will get you college credit, would you like to take it or not, but it wasn't really explained." Female Student 3 (F3) shared her perspective, stating:

My counselor wasn't elaborate on the dual credit program. She didn't really, well when I went in to make inquiries about it, I had no idea what it was, but then again, she wasn't helpful in telling me what this was for, so I just didn't pay attention to it anymore since she wasn't helpful.

According to majority of the students interviewed, the counselor served as one of the most influential in providing information and influencing student participation in Dual Credit. Male Student 2 (MS2) cited his friends as major influences and acknowledge that he had a friend who was enrolled but he "just didn't understand...I didn't get on with him, and I think I should have." Two students mentioned their parents as major influencers, which was the third emergent theme. Notably, although each

interviewee was exposed to an influencer, the absence of influence from the counselor had a negative effect on student enrollment into dual credit.

Family Engagement

The third emergent theme was associated with family interaction, influence, expectations, and educational exposure. As evident by the quantitative data, there was no statistical difference between parent educational attainment level and student enrollment, and the same can be noted through the qualitative results. However, it was discovered through the qualitative analysis, the students interviewed agreed that parents could have impacted their decision to participate in DC while in high school if they were properly informed. In chapter two, parental and family involvement was identified as being integral to student academic success and matriculation (Kim & Nunez, 2013). Of the nine students interviewed, only three affirmed that their parents were knowledgeable about the DC program (BF6, BM3, and BF1), and one student was unsure (MS1). The remaining five students did not provide a definitive response regarding their parent's knowledge of the program while they were in high school.

The interviewees were asked to share their family's college experience and expectations as it related to them attending college. Four of the nine students identified themselves as first-generation students; three of which were the very first to attend college, and one having parents that attended college but did not graduate. The remaining five students had one or more parent and siblings that attended and/or graduated from college. Female Student 5 (FS5) asserted that parent engagement is directly tied to Black student enrollment in DC while in high school. According to FS5, White and Hispanic parents "are more educated or get more involved". In FS5's case, her "mom didn't really get involved in parent meetings or anything like [that]...but I saw, you know, a lot of my white friends, their parents went to parent meetings; they were more informed on what

was going on...they knew more about it”. However, despite the lack of engagement of her parent, Female Student 5 (FS5) shared that a first-generation student, she was expected to attend college to set the standard for her siblings. Female Student 3 (FS3) shared a similar story, reporting that she was the first child in her family and her parents did not attend college and did not understand the system. After now being enrolled in college, and having a clear understanding, FS3 has informed her parents, her younger sister, and brother about the DC program and both siblings were currently enrolled in Dual Credit. For Female Student 4 (FS4), both her parents attended community college, but she was the first in her family to attend a university. In her interview, FS4 confirmed that despite their college exposure, they were not aware of DC and the benefits of participation.

Male Student 3 (MS3) presented a unique perspective during his interview. His older sister was a DC participant and graduated from high school with her associate degree through the program. Despite the firsthand witnessing of his sister’s accomplishment and the benefits of her participation in DC, MS3 chose not to participate in DC while in high school. According to Male Student 3 (MS3), he acknowledges that he “just wasn’t listening, just kind of wanted to do what I wanted to do, and I wish I would have listened”. Male Student 3 continued to reflect on his decision not to participate sharing that his sister is now in college reaping the benefits of her participation and “it makes a lot of sense why she was so hard about it and hard on me about it”. According to MS3, his sister and mother would have been his biggest influencers to take DC, but he was deterred he says after watching the stress his sister was under. He states:

You know, (sister name) was working and doing those dual credit classes and I mean she would come home crying stressed, every day and um, I didn’t, I wasn’t working but I was doing like you know, I was in choir; I was very involved in

high school activities and I didn't want to have the stress on me. I just looked so hard and stressful and draining. And she, I mean she made...the benefits now...seeing her now...I probably would have, you know, shed a couple of tears to be where she is now. I just seems so much easier to have, you know, especially with like parents...you live with your parents in high school, so you would have extra help; once you get to college you're away and by yourself, so you're like stressing alone. So, I would have rather you know, be able to stress with my parents than to stress along.

In one interview, the student revealed parent awareness did encourage their participation dual credit. The parent did not force the interviewee to enroll into the DC program. This was the case for FS6, who stated that her mother "knew about it, but ultimately, if I wasn't comfortable taking the classes, she didn't push it that hard on me."

For students with parents who were not aware of DC, the researcher questioned ways to best inform parents about DC opportunities. Male Student 1 (MS1) suggested that parents be placed in an auditorium like students "and explain everything, like they need to do that with the parents so they can go home talk to their kids about". One interviewee, FS5, suggested that information about DC be presented at Parent Teacher Association (PTA) meetings, or as suggested by FS1, by hosting "parent meetings and stuff like that." The literature and the voices of the interviews confirmed the necessity for parental engagement.

Barriers

For research question six, perceived barriers to DC enrollment from the perspective of the Black students were identified during student interviews. The interview participants provided reasons specific to their decision not to participate in DC while in

high school and shared perceived barriers that impede Black student enrollment from their frame of reference and voice.

Male Student 2 (MS2) responded that his main reason for not participating in DC was because he did not “want a record blemish on [his] transcript”, and in retrospect, he felt like he “took the easy way and [he] did all regular classes.” For other students like FS5, the main reason for not taking DC was because the students “really [weren’t] informed very well”. This sentiment resounded the most amongst the students interviewed.

Female Student 1 (FS1) offered that a significant barrier that impedes DC enrollment relates to Black students not having people within their reach who were knowledgeable to help provide students with accurate information. Female Student 1 (FS1) stated, “the people around [Black students] aren’t as educated, so it’s like if the people around you aren’t educated, then how are [Black students] educated about [Dual Credit]?” An additional barrier identified by FS1, surfaced twice regarding the inequity of higher education encouragement for Black students. Female Student 1 (FS1) insinuated that Black students were not encouraged to attend college and as a result, the counselor does not mention DC as an option. In her interview, FS1 indicated that “well-rounded counselors [should be] pushing [Black students] not just to pass high school, but actually to go to college and to be ahead in college as well”. The idea of Black students not being encouraged to pursue higher education opportunities was mentioned by FS3, suggesting that “[counselors/schools] [aren’t] really passing out the necessary information that [Black students] need to succeed because it’s a Black school”. Unique to FS3 experience, was the location of the DC program. For FS3, students were required to provide their own transportation to the community college where the classes were hosted. Providing transportation became an additional barrier:

It [transportation] was definitely a concern because I was taking the school bus home and my mom works nine to seven or nine to five and my dad works overnight and he comes home during the weekend. So, by the time the college is open, my mom is still working and I had no means...you know we don't have really good bus transportation, so I have to wait for my mom to come back and take me to the community college, but when she comes back it's closed.

Two additional barriers mentioned by MS1 and MS3 were related to culture capital as discussed in the chapter two literature review. Male Student 1 (MS1) shared that a main barrier to enrollment for his decision not to enroll, was the isolation of being the only Black student in the course. According to MS1:

There wasn't enough black people in [the DC class]; I didn't see enough black people to like, be like, ok he's doing this, let me try it too. There was mainly like just Asians and Whites, and like...I don't want to be in a class with Asians and Whites to be honest with you and like that was a big factor.

Similarly, MS3 noted a main barrier to DC participation for him and Black students in general was the perception associated with being in advanced classes. Male Student 3 (MS3) stated:

...whenever you see, you know...like...it's kind of looked down upon, you know, as like being a nerd or not being able to fit in, or you know, not being popular. For me, being in high school, wanting to be in the wrong crowds instead of focusing on the future.

According to Witherspoon et al. (1997), Black students must consciously or unconsciously dissociate themselves from their peers to embrace the culture of success in school. The comments made by MS1 and MS3 were aligned with this belief. It is notable to the researcher that only the Black male students mentioned this as a barrier.

Significantly, students who participated in this research each indicated, in retrospect, their desire to have participated in DC while in high school. Male Student 3 (MS3) stated:

I wish I would have taken them because going into college out of high school that I went to was a big change. So, if I was able to, you know, get that experience, I probably would have, you know, did a little better than I did my first semester.”

Female Student 5 (FS5) revealed in her interview, “I do wish I would have taken dual credit because I feel like that would have given me more insight of what college classes could be like.” Three of the nine students specifically addressed how participation in DC while in high school would have prepared them for college. Female Student 5 (FS5) communicated:

I do wish I would have taken dual credit because I just feel like that would have given me more of an insight of what college classes could be like and I could have, you know, knocked out some of those classes already...I just feel like it would just give me more insight of what expectations could be in college class.

Similarly, Female Student 1 (FS1) shared:

Participating [in DC] would've gave me a better idea of how college courses are...it would have given me like a taste of college versus me just throwing myself in it...I kind of would have had like a grasp pf how a college course is run versus, you know, in high school.

She continued sharing that she wished she had taken DC to “graduate a year early or at least a semester earlier.” Female Student 1 also specifically mentioned the tuition benefits that she missed out on because she chose not to participate.

Female Student 3 (FS3) noted that her sister was currently in the 11th grade taking college courses and will graduate with an associate degree by the time she graduates and enroll in a university. She stated:

I would have loved that for myself too, but [I] graduated from high school, [and] I have to start the classes at community college where I would have finished if I had the idea of what dual credit was, but I didn't really have an idea.

Male Student 2 (MS2) shared in this frustration and communicated:

I didn't think about it...I didn't really think about it and ugh, I just didn't; I took the easy way, I guess you could say 'cause I did all regular classes...I could have put my mind towards getting some hours for college.

Female Student 2 (FS2) interview summarized the sentiments of most of the interviewees sharing:

If you go on my Twitter feed at the beginning of fall semester, I literally put out a PS, I was like, to all incoming freshman, please consider taking dual credit if you don't have it. You're still in high school, please take dual credit.

Based on the qualitative data, the barriers to their participation and perceived barriers for Black students were parallel to one another. The main reasons identified were related to miscommunication, cultural capital, and the absence of influence. In retrospect, the nine students interviewed each indicated regret for not asking more questions, seeking additional information, and for not participating in Dual Credit.

Summary of Findings

The goal of this research was to identify factors that impeded the enrollment of Black students in DC programs. The quantitative analysis of 89 Black students, 51 who completed the survey at 100%, revealed no statistical significance in adult interaction, self-efficacy, or parental level of education and the enrollment of Black students in DC.

However, the qualitative assessment of the nine students interviewed, provided invaluable contextual analysis needed to understand factors that impede enrollment, from the personal encounters of students who did not participate in DC while in high school. The students who were interviewed unanimously agreed that as currently enrolled college students, having more information about DC and the benefits, they each would have taken at least one or more DC courses while in high school.

Conclusion

This chapter served as a reflection of the quantitative and qualitative data collected and the analysis of both. The literature and qualitative data presented throughout this study strongly supported participation in the Dual Credit program. Based on the Student Interest Survey used to collect quantitative data, no statistical significances were identified, however the qualitative data offered themes that impeded the low enrollment rate of students such as misinformation, with subcategories related to financial implications, advanced placement versus dual credit, adult interaction-counselors, family engagement, and perceived barriers. The following chapter will offer a collective and final summary of the results from this study. Chapter five also provides implications and recommendations for future complimentary studies, that support the purpose of this research in identifying factors that impede the enrollment of Black students in Dual Credit programs while in high school.

It is observable through the responses, that the theoretical frameworks identified for this study, Critical Race Theory and Validation Theory, were supported by the perceptions of the students interviewed. The perception that Black students feel that they were not provided information and were not encouraged to enroll in college level coursework with the same sense of urgency and confidence as their peers, was echoed throughout the interviews. The barriers identified through the qualitative research serve as

the primary reason for this study and provide support for the implications reviewed in chapter five.

CHAPTER V: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to identify factors that impeded the enrollment of Black students in DC programs while in high school. Eighty-nine Black students, 18 and older, and currently enrolled in a community college or university, voluntarily participated in a Student Interest Survey to assist in collecting quantitative data to answer research questions one through five. Fifty-one of the students completed the survey at 100%. The acquired data were synthesized utilizing the Qualtrics database and through transference into SPSS. To answer research question six, nine Black students, 18 and older, currently enrolled in a community college or university, and did not participate in DC while in high school, were interviewed. The interviews were manually analyzed to identify reoccurring themes. Chapter five provides a summary of each research question, implications for practice, and recommendations for future research.

Research Design Limitations

The researcher did encounter limitations associated with this study. The low enrollment of Black students at the selected community colleges yielded the probability of lower response rates, which was the case. The minimal number of quantitative and qualitative participants restricts the ability to generalize this research. The researcher hoped to have more participation and voices to notably contribute to the literature concerning the enrollment of Black students into DC programs. However, due to the second substantial limitation that was not planned for nor fathomed, the participation rates were low. The impact of COVID-19 and the calamities associated with the virus including its impact (e.g., (a) job security, (b) shelter, (c) limited technology access, (d) virus fatigue, and (e) other consequences), undoubtedly impacted the survey and interview participation rates. The reliance of the information provided by the participant

to be honest and accurate was also a limitation. Surveys and interviews were based on personal perception and recollections which minimizes the generalization of the study and limited the ability to validate the individual responses. Lastly, the absence of voices from counselors, teachers and parents limited the impact of this research study. The perspective of those who the students identified as being most influential in their decision to participate or not to participate in DC may have yielded to a more comprehensive study.

Summary of Results

The first five research questions were quantitative, and the answers were collected through the administration of a Student Interest Survey in Qualtrics. Nine Black students, who did not participate in DC while in high schools, were interviewed to answer research question six. This section will summarize the results of each research question.

Research question one focused on the mean difference in dual credit enrollment for Black students who received higher education exposure via adult interaction while in high school, than Black students who did not enroll in Dual Credit. An independent *t*-test was conducted through SPSS to determine the mean difference. Based on the quantitative data, there were no mean differences, however, the qualitative data collected generated a different perspective. According to the nine students interviewed, adult interaction, specifically counselors, had a significant impact on their decision not to participate in DC while in high school. The qualitative results were aligned with the literature that affirms the significance guidance counselors play in guiding Black students to enroll into higher education (Davidson et al., 2020).

Research question two focused on how Black students were exposed to college and career information while in high school. The Student Interest Survey questions selected for this frequency data set allowed students to select multiple responses as

applicable. The Student Interest Survey questions were specifically related to student exposure to college and career concepts and information received about college via (a) visits to four-year institutions or community colleges, (b) if the student took DC or an honors course, (c) if the student was expected to attend college, and (d) the percentage of students that received college information while high school. The qualitative data collected conveyed the importance of college and career exposure as part of the student decision-making process for DC participation. Increasing college and career exposure for Black students increases the “comprehensive understanding of [the] college preparation” process and Black student culture capital (Bethea, 2016, p.10).

An independent sample *t*-test was used to analyze the 10 General Self-Efficacy questions that were embedded within the Student Interest Survey to answer the third research question. The quantitative findings contained no statistical difference. The semi-structured qualitative questions did not directly seek to exam the self-efficacy of the interview participants. However, of the nine students interviewed, there was no indication that self-efficacy served as a barrier to enrollment into DC while in high school and did not emerge as a theme. The research results were aligned with the literature presented in chapter two, reiterating that self-efficacy was not a precursor to enrollment into the DC program (Ozmun, 2013).

Research questions four and five sought to identify if there was an association between the mother’s and father’s education and whether the student participated in DC while in high school. Both questions were included in the Student Interest Survey and a chi-square test of independence was conducted to analyze the data collected. For research questions four and five, there were no associations found. The qualitative interview contained questions related to family expectations and educational dynamics, however, there were no significant associations that could be drawn based on the responses

received by the nine interviewees. The nine students interviewed did not participate in DC no matter the parent's level of education and or educational expectations. This is contrary to the research that implied that the parent's level of education is indicative of student college enrollment (Davidson et al., 2020).

The qualitative research began with question six. Nine individual interviews were conducted using semi-structured questions to provide context to the quantitative survey results. The themes that emerged were (a) misinformation which included subthemes (i.e., (a1) financial implications and (a2) Advanced Placement versus Dual Credit, (b) adult-interaction with counselors, (c) family engagement, and (d) barriers that impeded enrollment of Black students.

Misinformation

The perception that the nine Black students interviewed had about DC was based on misinformation received about the program. The students interviewed conveyed that the information they received about DC was minimal and lacked details. The Black students interviewed shared what they knew about the DC program, how they learned what they knew, and provided suggested ways to improve how DC information is received. Two subthemes related to miscommunication were financial implications and Advanced Placement versus Dual Credit. According to the Black students interviewed, if the financial benefits associated with DC participation had been explained initially and thoroughly, the students would have been more willing to seek additional information about DC and would have enrolled. Nelson and Waltz (2019) confirmed that DC programs provide cost defrayment for minority students and was a significant benefit of participation. Related to the miscommunication students received about AP versus DC, the Black students interviewed had more favorable views of DC but shared they felt guided into AP by their counselors.

Adult Interaction – Counselors

The nine Black students interviewed explicitly confirmed the importance and influence counselors have on students' decisions to enroll in programs such as DC while in high school. The findings were aligned with the literature that affirmed the role of the counselor in providing “valuable information, institutional resources, and opportunities regarding college to students” (Robinson & Roksa, 2016, p.848). Three of the Black students interviewed, alluded to Black students not receiving information at the magnitude of their peers. According to Bryant (2015), students are less likely to seek out information regarding college if they believe their counselor does not expect them to attend college. This sentiment was expressed by a five of the Black students interviewed, and specifically by MS1 who shared that his counselor told him DC was not a good idea for him but did not offer an explanation and he did not seek one.

Family Engagement

Researchers Kim and Nunez (2013) suggested that parental involvement was significant in influencing the educational plans, access, and college preparation of a student. According to the qualitative data, the findings confirmed that parent engagement was significant. Yull and Wilson (2018) asserted that parent engagement was a key component in the educational success of students. According to Bryant (2015), the parent level of education served as an indication of student academic aspirations. However, contrary to the literature, the quantitative and qualitative data from this research study suggested that the parent's level of education was not a significant factor associated with participation in dual credit. Four of the nine Black students interviewed were first-generation students and six of the nine indicated that their parents did not know about the DC program while they were in high school. The three sets of parents that were aware, did not force participation and left the decision up to the student. At least two of the

students interviewed contended that parents who were more engaged in the high school process with their students had more information about various opportunities such as DC, versus parents that were disengaged and oblivious to the possibilities associated with the DC program. This research highlighted the importance of parents reading emails, attending parent meetings, and learning how to support their students. The Black students interviewed provided suggestions specifically to help increase parental engagement which emerged as a significant factor that impeded the enrollment of Black students in DC programs.

Barriers

Two interview questions were asked to help identify barriers that each participant faced as well as perceived barriers for Black student enrollment into DC while in high school. A main barrier that continued to emerge throughout the results was the miscommunication of the counselor and Black students not being informed of the details and benefits of DC participation. In addition, the qualitative data revealed a belief that Black students were not encouraged to participate in DC because they were never expected to attend college. This belief was affirmed by Bryant (2015), who reported that counselors were hesitant about the ability of Black students to succeed in college level courses and guided students towards less rigorous courses and postsecondary programs such as DC. Lastly, two of the Black male students suggested a barrier included the idea of not being “cool”, or not wanting to be the only Black person in the classroom. This identified barrier was associated with the literature that emphasized the impact of culture capital as a consideration for Black student participation. Each of the barriers were found to be significant factors that impeded the enrollment into DC for the Black students interviewed. The barriers identified by the interviewees were aligned with the factors reviewed throughout the literature review.

Connection to the Theoretical Frameworks

There were no significant findings associated with the quantitative research however, there were qualitative research findings directly aligned with the theoretical frameworks identified for this study. Critical Race Theory (CRT) challenges race-neutrality and “expose[d] how majoritarian structures have historically shaped and framed educational access and opportunity for historically underrepresented populations” (Ledesma & Calderón, 2015, p.214). The two qualitative themes representative of CRT were misinformation and the barriers described by the Black students interviewed. According to the interviewees, the perception existed that counselors provided misinformation about DC, the benefits of participation, the financial implications, as well as misinformation about DC and Advanced Placement. The misinformation can be linked to racism and the inequities historically found within educational policies and procedures that perpetuate the “persistence of disparate educational opportunities for historically marginalized communities” (Ledesma & Calderón, 2015, p.214). The barriers discussed by the interview participants included misinformation, lack of information, lack of encouragement to enroll in postsecondary opportunities (i.e., DC), and the perception that postsecondary information was inequitably disbursed. The barriers were representative of CRT in practice. Quantitative research questions one and two were associated with CRT, as they focused on the possible inequities associated with college access information that could be attributed to systemic barriers.

Parental engagement and adult interaction with counselors were the qualitative findings connected to Validation Theory (VT). According to Linares & Muñoz (2011), VT is a framework “staff can employ to work with students in a way that gives them agency, affirmation, self-worth, and liberation from past invalidation” (p.17). Validation Theory mainly focused on the validation of staff (i.e. counselors); however, the principles

are applicable to the validation also needed and gained through parents that are engaged. The Black students interviewed confirmed the importance and influence that counselors have on their academic success as well as the impact associated with parents that are engaged and aware of postsecondary opportunities, such as Dual Credit. Validation Theory asserted that low-income and first-generation students need validation in and outside of the class, provided by teachers, counselors, and family (Linares & Muñoz, 2011). In addition, quantitative questions three and four are comparable to VT, as the questions focused on the self-efficacy of the student and the parent level of education as measures of validation and influence for DC participation.

Implications for Practice

Despite the apparent limitation of having only nine qualitative voices during the COVID-19 pandemic, the profundity of the data collected, combined with the literature provided important implications for practice. One key implication for practice is the need to increase the lines and brevity of communication between counselors, Black students, and their parents. The qualitative data collected indicates the need for Black students to learn early and in detailed, what DC is and the benefits associated. The Black students interviewed also confirmed the need for their parents to be informed as well. Counselors must adhere to the call to increase communication with Black students and their families.

The interviewees offered specific ways to increase counselor communication with Black students and their parents. According to the data collected, counselors should facilitate presentations that include Black students currently enrolled in college that earned college credit while in high school through the DC program. The interviewees suggested that receiving firsthand testimonials from students closer to their age would help capture their attention and pique their interest. Other suggestions included phone calls directly to the homes of students, increased use of social media, and providing more

detailed information, specifically about the cost savings associated with the DC program, to parents. The interview participants affirmed that if parents were informed about the financial benefits of the program initially, it would help to pique interest instantly. In addition, offering incentives could serve as a practical implication to help increase Black parent engagement.

Professional development is an effective tool that can be used to help counselors provide better academic support to students (Barksdale et al., 2021). It was never implicitly stated in this study that the counselors were not well informed about the DC program, but it was mentioned throughout the interviews that the information provided by the counselors was vague and minimal. Anecdotally, the researcher wondered if the underlying issue is the lack of knowledge and understanding that counselors have about DC and the benefits of the program. The findings of this research suggest that Black students rely on the information provided by the counselor. Counselors who are not knowledgeable about DC cannot provide Black students with accurate information to positively influence enrollment. Providing professional development to ensure that counselors have clear understandings about DC and the associated benefits is significant to the discussion of Black student enrollment in DC programs.

Addressing cultural capital is also an important implication for practice. As part of this study, only two students spoke about not wanting to be the only Black student or the idea of not fitting in or not being cool, however, there are some generalizations that can be made. The two students who made these comments were the Black male students. This research focused on Black students regardless of gender, however, according to the literature, Black male students are the most underserved population at every level of education and specifically in higher education (Adams et al., 2020). Challenging the cultural capital of Black male students and equipping counselors with tools to increase

their cultural capital, could have a significant influence on enrollment in DC for Black males. As addressed in the literature review, participation in DC increases the probability of college degree attainment (An, 2013). Understanding the benefit of degree attainment, encouraging Black male students to participate in DC could yield to significant increases in Black male postsecondary attainment and completion.

The research findings also offer statewide and district implications for consideration. Two students spoke about the grade point average associated with AP in their interviews, and all nine interviewees, introduced their exposure and experience with AP without prompting. The researcher is aware that many districts across the state do not assign the same grade point average to DC as AP, which was denoted by some of the responses of the students interviewed. Understanding that both programs offer students an opportunity to earn college credit, it would behoove the state and districts to review the incentives associated with AP that are not extended to students enrolling into the DC program, to make enrollment more equitable. Likewise, it is also important that counselors take the time to explain the differences between Advanced Placement and Dual Credit explicitly. Counselors should provide the pros and cons associated with each program as it relates to the student's educational plan and future goals to allow students to make decisions having all the facts.

Recommendations for Future Research

This study focused on the factors that impede the enrollment of Black students in DC programs while in high school. To avoid having to garner parent consent, it was decided to focus on high school graduates, 18 years and older, currently enrolled in a community college or university. After completing this research, the following recommendations were offered for future research related to this topic.

The first recommendation was to survey and interview Black students currently enrolled in high school and not enrolled in Dual Credit. This research could be more impactful if it were in real time and students were able to learn more about the DC program through the research studied and could benefit from the research by enrolling. A second recommendation was to include interviews and perceptions from the high school counselor's purview. The students interviewed emphasized the influence counselors had on the information they received about DC and their decision to participate in DC or not. It would be worthwhile to incorporate the counselor's voice to understand their perception of DC, the extent of their knowledge of DC, and to offer an opportunity to respond to the perceptions Black students have about their interactions with counselors.

A greater exploration into the role cultural capital plays in Black students enrolling into DC programs was also recommended for future research. This study briefly included the implication that cultural capital has on Black students enrolling into DC, however, a study that solely focuses on this construct would assist with identifying ways to address this specific issue as it relates to Black students enrolling into DC programs. It would also be valuable to research cultural capital, specific to Black male students and their lack of DC participation.

It was also recommended that the Academic Self-Efficacy of Black students be studied versus General Self-Efficacy, as explored through the quantitative survey associated with this study. The researcher was left to wonder if the results from the Academic Self-Efficacy scale would render any statistical mean differences between students who enrolled in DC and students who did not enroll. Combining the constructs of Academic Self-Efficacy and cultural capital would produce a research study that could have significant implications related to the enrollment of Black students in DC while in high school.

Lastly, adding research regarding systemic barriers associated with counselor advisement into Advanced Placement versus Dual Credit, specifically for Black students, was recommended for future research. This study revealed that all nine of the students were encouraged to take AP courses but not DC and none of the participants earned college credit. Understanding potential systemic barriers, may offer more context to the factors that impede the enrollment of Black students in DC programs.

Conclusion

This study sought to identify factors that impeded the enrollment of Black students in DC programs while in high school. Through a mix method explanatory sequential research design, Black high school graduates, ages 18 and older, and currently enrolled in a community college or university, participated in a quantitative Student Interest Survey, and semi-structured interviews for students who did not participate in DC while in high school. Student participation in both the quantitative and qualitative data collection process was voluntary. The quantitative results yielded no significant findings however, the qualitative results were substantial. Students identified misinformation, with subthemes on cost and AP versus DC as an impeding factor, along with adult interactions with counselors and family engagement as the additional impeding factors. The students also provided their perception of the impeding barriers that they faced and what they considered as general barriers faced by Black students that impeded enrollment.

The literature review provided in chapter two was aligned with the findings of this research study. The literature reviewed began with an exploration of the Black college experience, Black student expectations, and culture capitol. The history of DC was explored next, along with the benefits that included the financial savings, college access, college readiness, and academic success and retention. The nine Black students interviewed confirmed, as community college and university students, the regret of not

being recipients of DC benefits as reviewed through the literature review. In addition, there was a clear alignment between the literature and the findings of this research regarding the influence counselors had on Black student DC participation. Lastly, the significance of family engagement was highlighted in chapter two and validated by the qualitative data collected.

The researcher did not capture any statistical differences between students enrolled in DC and students who were not as anticipated. However, the voices of the students captured through the qualitative interview process were invaluable and made this research study worthwhile. The nine Black students interviewed provided detailed reflections of their experiences and specific suggestions to counter the factors that impeded the enrollment of Black students in DC programs while in high school. This research study sought to identify factors that impeded the enrollment of Black students in DC programs while in high school, and to add to the literature that addressed the enrollment disparities between Black students and their peers in Texas DC programs.

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APPENDIX A:
SURVEY COVER LETTER

Fall 2020

Dear College Student:

Greetings! You are being solicited to complete a *Student Interest Survey*. The purpose of this survey is to determine factors that impede the enrollment rates of Black students in dual credit programs. The data obtained from this study will help to identify factors impacting low participation and potentially provide suggestions to help increase the enrollment of Black students in Dual Credit programs.

Please try to answer all the questions. Filling out the attached survey is entirely voluntary but answering each response will make the survey most useful. It will take approximately 30 minutes to complete the survey. Your responses will be kept completely confidential. At the conclusion of the survey, students willing to participate in an individual interview will have an opportunity to self-identify. Students will be conducted within 48 hours. Students who agree to participate in the individual interviews, will be assigned a pseudonym to maintain anonymity. No obvious undue risks will be endured, and you may stop your participation at any time. Survey participants will not benefit directly from participation in this study.

Your cooperation is greatly appreciated and your willingness to participate in this study is implied if you proceed with completing the survey. Your completion of the *Student Interest Survey* is not only appreciated, but invaluable.

If you have any questions, please feel free to contact me – Akilah Martin. Thank you!

With Sincere Gratitude,

Akilah A. Martin, M.Ed.
Doctoral Candidate
University of Houston – Clear Lake
Educational Leadership – Higher Education

APPENDIX B:

INTERVIEW INFORMED CONSENT

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may otherwise be entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Title: Factors that Impede the Enrollment of Black Students in Dual Credit Programs

Student Investigator(s): Akilah A. Martin

Faculty Sponsor Dr. Renée Lastrapes, COE

Purpose of the Study: The purpose of this study is to identify factors that impede the enrollment of Black students participating in Dual Credit programs, by researching factors such as higher education exposure via adult interaction, parent education level, self-efficacy, college, and career exposure, as well as Black student perception of DC.

Procedures: Each student will be emailed the Student Interest Survey at the email address provided by the community college or university for the purposes of this research. Upon completion of the quantitative survey, students will be prompted to indicate their willingness to participate in individual interviews that will provide further context regarding the quantitative data collected.

Expected Duration: Total anticipated survey participation is approximately 30 minutes. A question at the end of the survey will be used to solicit interview participants that may be 1hr in length.

Risks of Participation: No foreseeable risk

{Many of the studies performed by UHCL faculty or students do not involve physical risk, but rather the possibility of psychological and/or emotional risks from participation. The principles that apply to studies that involve psychological risk or mental stress are similar to those that involve physical risk. Participants should be informed of any foreseeable risks or discomforts and provided contact information of professional agencies (e.g., a crisis hot line) if any treatment is needed.}

Benefits to the Subject

There are no direct benefits received from your participation in this study, but your participation will help the investigator(s) to better understand why Black students are not participating in Dual Credit programs. Participants will have the opportunity to reflect on educational influences and their experience.

Confidentiality of Records

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. A pseudonym will be assigned for audio recording and reporting of the interview information in written format. Due to current conditions related to COVID-19, interviews may be facilitated utilizing a virtual platform such as, but not limited to, Zoom, Microsoft Teams, Google Hangouts, or via text and instant messaging. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Principal Investigator or Faculty Sponsor for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

Compensation

There is no financial compensation to be offered for participation in the study.

{For research involving more than minimal risk, an explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs and, if so, what they consist of, or where further information may be obtained.

Investigator's Right to Withdraw Participant

The investigator has the right to withdraw you from this study at any time.

Contact Information for Questions or Problems

The investigator has offered to answer all of your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Student Researcher, Akilah Martin by telephone at 832-418-1160 or by email at MartinA7171@UHCL.edu or amartin@alvincollege.edu. The Faculty Sponsor, Dr. R. LaStrapes may be contacted by telephone at 281-283-3566 or email at lastrapes@uhcl.edu.

Identifiable Private Information *(if applicable)*

Information collected as part of the research, even if identifiers are removed, will not be used, or distributed for future research studies.

Signatures

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study and to have the interview recorded under a pseudo name assigned. You are free to withdraw your consent at any time by contacting the Principle Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name:

Signature of Subject:

Date: _____

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title:

Signature of Person Obtaining Consent:

Date: _____

THE UNIVERSITY OF HOUSTON-CLEAR LAKE (UHCL) COMMITTEE FOR PROTECTION OF HUMAN SUBJECTS HAS REVIEWED AND APPROVED THIS PROJECT. ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UHCL COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (281.283.3015). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT UHCL ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.

APPENDIX C:

STUDENT INTEREST SURVEY

	Student Survey Question	Factors Analyzed Using Data from this Question
	Are you 18yrs of age or older as of August 2, 2019	N/A
	Indicate the Community College you attended after high school graduation.	N/A
	I identify as: Black/African American White Hispanic Asian American Indian or Alaska Native	
Strongly Disagree • Disagree • Somewhat Agree • Agree • Strong Agree		
1	At my high school, all students were expected to go to some type of college?	Interaction with Adults
2	I knew the subject areas and skills that I needed to work on to graduate from high school ready for success in college?	Signals from Higher Education
3	I knew which high school classes to take to get into the college I wanted?	Signals from Higher Education
4	I was willing to take hard classes even though I could get a lower grade?	Effort
5	During high school registration time, school staff assisted me in choosing classes that would help me reach my goals for education after high school?	The Course Registration Process
6	At my high school, any student could take an honors course or a course for college credit if they wanted to?	Access
7	An adult at my high school encouraged me to take Dual Credit courses.	Interaction with Adults
8	There was a school staff member who took a special interest in preparing me for college success.	Interaction with Adults
9	My high school teachers had high expectations of me.	Interaction with Adults

10	Succeeding in school depends more on how hard you work than on how naturally smart you are.	Effort
11	My friends show respect for others who work hard and do well.	Interaction with Peers
	Student Survey Question	Factors Analyzed Using Data from this Question
12	Students in my high school showed respect for others who worked hard and did well.	Interaction with Peers
13	If on a scale of 1-6, a 1 is the most academically disconnected student you know and a 6 is the most academically engaged student you know, what number are you?	Effort
How Often Did you: Never • Rarely • Sometime • Often • Almost Always • Always		
14	Discuss going to college with your family?	Interaction with Adults
15	Talk with adults at your high school about your plans for life after high school?	Interaction with Adults
16	Work hard in class and on assignments, even when you didn't like the class?	Effort
17	Ask for help when you don't understand something in class?	Effort
18	Give up TV, video games, or time with friends to study for a test or do an assignment for school?	Effort
19	Did you take one or more dual credit course for college credit: Yes No	Access
20	What is the MOST IMPORTANT reason why you took a dual credit course for college credit? a) Cost efficient b) To be challenged c) To prepare myself for college-level work d) Counselor/teacher e) My parents f) My friends g) Other	Economic Incentives Academic Readiness Signals from Higher Ed Interaction with Adults Interaction with Peers
21	What is the MOST IMPORTANT reason why you did not take a dual credit course for college credit?	Economic Incentives Academic Readiness Signals from Higher Ed

	<p>a) I did not need college credit</p> <p>b) The course would be too challenging</p> <p>c) I did not need to prepare myself for college-level work</p> <p>d) No one encouraged me</p> <p>e) I wanted to keep my GPA high</p> <p>f) My friends</p> <p>g) Wasn't cost efficient</p> <p>h) Other</p>	<p>Interaction with Adults</p> <p>Interaction with Peers</p>
	<p>Student Survey Question</p>	<p>Factors Analyzed</p> <p>Using Data from this Question</p>
22	<p>I took the following number of dual credit courses:</p> <p>0</p> <p>1</p> <p>2</p> <p>3 or more</p>	<p>Access</p>
23	<p>I received information from high school staff on (Mark all that apply)</p> <p>Choosing dual credit courses</p> <p>Requirements to get into college</p> <p>Requirements to succeed in college</p> <p>Scholarship and Financial Aid</p> <p>Careers</p>	<p>Interaction with Adults</p> <p>Signals from Higher Ed</p>
24	<p>I received the most advise about how to prepare for college from (Mark all that apply):</p> <p>High School Counselor</p> <p>College Counselor/Advisor</p> <p>College Dean</p> <p>High School Teacher</p> <p>High School Principal/Assistant Principal</p> <p>Family Members</p> <p>Classmates</p>	<p>Interaction with Adults</p>
25	<p>Which of the following did you visit to learn more about being a college student (Mark all that apply):</p> <p>Four-year college or university</p> <p>Community College</p> <p>Technical College</p> <p>I visited a college but I didn't know what kind it was</p> <p>I did not visit any college</p>	<p>Signals from Higher Ed</p>

26	<p>What are your plans after attending the community college?</p> <p>Attend a four-year college or university</p> <p>Get a job</p> <p>Enter the military</p> <p>Take a year off</p> <p>Unknown</p>	<p>College-going orientation (indirect measure)</p>
	<p>Student Survey Question</p>	<p>Factors Analyzed Using Data from this Question</p>
27	<p>What is the highest level of education you plan to complete?</p> <p>2-year community or technical college</p> <p>4-year college or university</p> <p>Graduate or professional school (medical or law, masters, doctorate, etc.)</p> <p>I don't know yet</p>	<p>College-going orientation (indirect measure)</p>
28	<p>Did one or both of your parents/guardians earn a college degree? (Associate, Bachelor, Master, etc.)</p> <p>Yes</p> <p>No</p>	<p>College-going orientation (indirect measure)</p>
29	<p>What is your classification?</p> <p>College Freshman</p> <p>College Sophomore</p> <p>College Upperclassman (Junior/Senior)</p>	
30	<p>I identify as:</p> <p>Male</p> <p>Female</p> <p>I prefer not to select</p>	
31	<p>If you did not take a dual credit course in high school, would you be willing to participate in an interview?</p> <p>Yes</p> <p>No</p>	

APPENDIX D:

INTERVIEW QUESTIONS

1. Can you share with me what you know about Dual Credit?
2. How did you learn what you knew of Dual Credit? Were you intrigued to learn more? Did you seek out any additional information?
3. Traditionally, college courses taken through the Dual Credit program are offered at a minimal fee and/or free, were you aware of this benefit of participation? If no, would knowing this information affected your decision to participate?
4. Another benefit of Dual Credit is that you are taking courses that you would traditionally take once you enroll in college. How does knowing this affect your view of Dual Credit and your decision not to participate?
5. Who or what would have been the most influential in getting you to enroll in Dual Credit college courses while in high school, and why?
6. What do you think is the best way to inform high school students about Dual Credit?
7. Can you talk to me about your family's (i.e., parents/siblings) college experiences and expectations for you? Were they aware of the Dual Credit program? What is the best way to inform parents?
8. Knowing more about Dual Credit now, do you wish you would have taken Dual Credit college level courses while in high school, and why?

9. What would you identify as the main reason you chose not to take Dual Credit courses while in high school? And what do you think are the main barriers impeding the enrollment of Black students into DC programs?

APPENDIX E:
GENERAL SELF-EFFICACY SCALE

1. I can always manage to solve difficult problems if I try hard.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping skills.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*(3), 242.