EXPLORING THE RELATIONSHIP BETWEEN DUAL CREDIT EXPERIENCE AND SELF-

EFFICACY: THE PERSPECTIVE OF FIRST-GENERATION COLLEGE STUDENTS

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ABSTRACT

Dual credit options allow high school students to enter college with college credits earned, as well as gain lived experience of the role expectations, academic rigor, and time it takes to complete college-level work. While past studies have identified benefits of dual credit for first-generation college students in particular, few have investigated the nature of that relationship. This qualitative study examined the relationship between first-generation students' dual credit experiences and academic self-efficacy. Interviews were conducted with three first-generation college students in fall 2019. Findings indicate first-generation students who engage in a rigorous dual credit experience that results in mastery experience are more prepared for the academic expectations of college, master the role of a student, and perceive an increase in academic self-efficacy. This experience may provide first-generation students with knowledge and transition skills for college that their continuing generation peers find elsewhere. Implications and recommendations for future research are discussed.

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CHAPTER 1. INTRODUCTION

Students whose parents did not complete a college degree are less likely to pursue and persist in higher education than their peers whose parents are college educated. A report using data from a cohort of high school graduates from 2002 found that first-generation college students were less likely to pursue higher education, more likely to withdraw due to lack of affordability, and were overall 22% less likely to obtain their degree within eight years of graduating high school than their peers who had at least one parent with a bachelor's degree (Redford & Mulvaney Hoyer, 2017).

As national leaders and education professionals look to find ways to increase access to higher education and minimize financial barriers for students, specifically low socioeconomic status (SES) and first-generation students, some have looked to K-12 and postsecondary education partnerships, hoping to better prepare high school students for the rigors of college and to provide access to underrepresented students to encourage them to pursue and persist in education after high school.

According to Pretlow and Wathington (2013), dual enrollment options allow high school students to enroll in college-level coursework during their junior and/or senior year for credit that can satisfy both high school and college degree requirements. While dual credit was originally created as a way to challenge more advanced high school students during their junior and senior years, during the 2000s many states began conducting research to examine ways to better utilize dual enrollment programs while looking to expand options to underserved student populations as well.

When pursuing higher education, first-generation college students cite challenges including cost, lack of academic preparation, family support/expectations, and lack of

understanding resources available to them (Collier & Morgan, 2008; Ishitani, 2006; McCarron & Inkelas, 2006; Saenz, Hurtado, Barrera, Wolf & Yeung, 2007). Research has shown that first-generation college students who participate in dual enrollment programs are more likely to pursue and attain a postsecondary degree than their first-generation peers who did not participate in the program. However, their continuing-generation peers with college-educated parents have been found to be just as likely to pursue and attain a postsecondary degree regardless of whether they participated in a dual credit enrollment program. These findings indicate that low SES students and specifically first-generation college students benefit more from dual enrollment options than their continuing-generation peers (An, 2013).

All of this information leads to the question, what makes first-generation college students who participate in dual enrollment programs more likely to persist and attain a college degree than their first-generation peers who do not participate in dual enrollment programs? Are these students more academically prepared than their peers as a result of their dual credit experience? Do they have (or develop) a higher level of self-efficacy as a result of those experiences? While many researchers agree that students who complete dual credit coursework in high school are more likely to pursue, persist, and complete a bachelor's degree in a timely manner (Allen, 2010; Allen & Dadgar, 2012; Ganzert, 2014; Lichtenberger, Witt, Blankenberger, & Franklin, 2014), few studies differentiate student success rates between first or continuing-generation students. When studies do reference gaps in achievement, they tend to focus on socioeconomic status (SES) and minority student populations (Lichtenberger et al., 2014; Pretlow & Wathington, 2013; Welsh, Brake & Choi, 2005). These research findings have led me to investigate achievement gaps and barriers facing first-generation college students, and the ways dual enrollment opportunities may impact that population.

Statement of the Problem

First-generation students are less likely to pursue, persist, and complete higher education than their continuing-generation peers (An, 2013; Ishitani, 2006; Redford & Mulvaney Hoyer, 2017). In 2012, the NCES reported that only 20% of first-generation college students had earned a bachelor's degree ten years after their sophomore year of high school, compared to 42% of their continuing-generation peers (Redford & Mulvaney Hoyer, 2017). Additionally, first-generation students report lower levels of self-efficacy during their first year of college, and a lower likelihood of persistence than their continuing-generation peers (Ishitani, 2006; Ramos-Sanchez & Nicols, 2007).

Dual credit enrollment opportunities for high school students have consistently shown positive impacts on pursuance, persistence, and completion rates of students in post-secondary education. These programs have shown positive impacts on students' perception of the college experience by clarifying role expectations, reducing ambiguity and anxiety about the experience, and providing motivation to pursue higher education. Researchers have also concluded that the benefits of these opportunities may be greater for first-generation and low SES students than continuing-generation students (An, 2013; Lile, Ottusch, Jones & Richards, 2018; Taylor, 2015).

An (2013) found that first-generation college students who take dual credit courses are more likely to attain a college degree than their first-generation peers who did not. This research indicates a relationship between dual credit experience and the success rates of first-generation students. Why are these students more likely to pursue and persist in higher education after having participated in dual credit opportunities? Are they more academically prepared? Do these students have (or develop) higher levels of self-efficacy as a result of their lived experiences through dual credit? It is important to understand the relationship between a first-generation

college student's dual credit experience and potential impacts to their levels of self-efficacy as a college students to broaden the scope of research available relating to dual credit and its impacts on the success of first-generation college students to close the 22% gap on degree attainment for first-generation students.

Purpose of Study

The purpose of this study was to investigate the relationship between first-generation college students, dual credit enrollment options, and the potential connection dual credit opportunities may have with self-efficacy in first-generation college students. This was done through interviews with first-generation college students at a four-year public university located in the suburban Midwest United States. Participants had completedsix or more dual college credits while in high school and persisted to their junior year at the institution. In this study, I sought to answer the following questions:

1. How did completing dual credit courses in high school impact first-generation students' decision to pursue and persist as a college student?

2. What impact do first-generation students perceive their dual credit experience to have had on their self-efficacy as a student?

Additional questions used in the research process sought to get a sense of each student's background, motivation for taking dual credit coursework, and influencers or motivation for pursuing higher education.

Rationale for Study

Dual credit options allow high school students to enter college with college credits earned, as well as gain a lived experience of the role expectations, academic rigor, and time that it takes to complete college-level work. Research indicates a relationship between college

experience and increased levels of self-efficacy. A student with higher self-efficacy after their first semester of college is more likely to persist, and may have a higher GPA. Additionally, a student's generational status, socioeconomic status (SES), and perceived parental support can also impact their self-efficacy (Baier, Markman & Pernice-Duca, 2016; Gore, 2006; Merritt & Buboltz, 2015; Wright, Jenkins-Guarnieri, & Murdock, 2012). Current studies related to self-efficacy have not evaluated the relationship between dual credit enrollment and students' self-efficacy entering college and how it may impact their likelihood to persist, particularly if they are a first-generation college student.

Current research indicates that self-efficacy measured after a student has gained a semester of college experience is the best indicator of their likelihood to persist (Baier et al., 2016; Gore, 2006; Wright et al., 2012). When considering the research that shows students who complete dual credit courses have higher GPAs and are more likely to persist (Giani, Alexander, & Reyes, 2014; Lichtenberger et al., 2014), research on academic self-efficacy opens the door to evaluate if a student entering college with previously earned college credit may have a higher level of self-efficacy than their similar non-dual enrolled peers based on their college experience gained prior to entering college. Additionally, knowing that first-generation students are already less likely to persist than their continuing-generation peers, the research on self-efficacy shows that first-generation students who complete college credit while in high school may benefit from a higher level of self-efficacy going into college than their first-generation peers who did not participate in a dual enrollment program.

Although dual credit opportunities have the potential to benefit many students, these programs are currently disproportionately expensive in some states and are not available to all students that would benefit from the programs as enrollment can be cost prohibitive. It is

important to understand the relationship between first-generation dual credit students' lived experiences and perceived impacts to their self-efficacy as a college student as a result of those experiences. Understanding this relationship would better inform our knowledge of the influence dual credit participation has on the self-efficacy and persistence of first-generation college students. Knowing this information would provide further research to help influence dual credit program design in states where offering is currently inequitable, or where legislatures are looking to broaden offerings to reach underrepresented student populations. This study aims to bring a voice to the first-generation college students who participated in dual credit programs, and evaluate whether their persistence is a result of their dual credit experience, an increased level of self-efficacy as a result of dual credit, or other factors as determined by the interviews and analysis of data.

Definition of Terms

Before proceeding, it is critical to define the key terms that will be used in this study, including dual credit, first-generation, and continuing-generation, to clarify the key areas of focus that frame the literature review and methods for this study.

Dual Credit

Dual credit enrollment options allow high school students to enroll in college-level coursework during their junior and/or senior year for credit that can satisfy both high school and college degree requirements (Pretlow & Wathington, 2013). These courses may be completed in a variety of settings, including in a college classroom, online, or in a student's high school, taught by a certified instructor.

First-Generation

First-generation college students are students pursuing higher education after high school whose parents do not have experience in a postsecondary setting and did not earn a bachelor's degree (Redford & Mulvaney Hoyer, 2017).

Continuing-Generation

Continuing-generation college students are students pursuing higher education after high school with at least one parent with postsecondary experience that resulted in earning a bachelor's degree (Redford & Mulvaney Hoyer, 2017).

Organization of Study

The next portion of this paper will review the existing literature on dual credit outcomes, first-generation dual credit and student outcomes, and the ties between student success and self-efficacy. Chapter 3 will describe the design of the research and methodology used to investigate this topic. Information includes the interviewee population and discussion surrounding the instruments and procedures used in the process of collecting and analyzing interview data. Chapter 4 includes an analysis of the data collected from interview results and a summary of key findings. In conclusion, chapter 5 focuses on a discussion of the research findings, implications of those results, and recommendations for future research.

CHAPTER 2. REVIEW OF RELATED LITERATURE

This review of literature aims to give the reader a better understanding of the background and current literature available related to dual enrollment and its impact on the self-efficacy of first-generation college students. This chapter will provide an overview of a) dual credit enrollment definitions and trends; b) dual credit enrollment outcomes relating to student pursuance, persistence and completion rates; c) first-generation college student definitions and dual credit outcomes; d) first-generation college student outcomes related to student pursuance, persistence and completion rates; e) first-generation student related factors; and f) known impacts self-efficacy in relation to the college student experience, dual credit, and first-generation college students.

Dual Credit Enrollment

Dual credit enrollment options allow high school students to enroll in college-level coursework during their junior and/or senior year for credit that can satisfy both high school and college degree requirements (Pretlow & Wathington, 2013). These courses may be completed in a variety of settings, including in a college classroom, online, or may be taught by a certified instructor in the student's high school. Research suggests that completing dual credit courses has a positive impact on college persistence and completion outcomes (Allen & Dadgar, 2012; Ganzert, 2014; Lichtenberger et al., 2014). However, these results may vary depending on the state, delivery method of courses, and number of courses completed.

While dual credit was originally created as an option to challenge more advanced high school students during their junior and senior years, during the 2000s many states began conducting research to examine ways to better utilize dual enrollment programs while looking to expand options to underserved student populations. Since that time, more program options have

been created to engage students in career and technical education and connect them to postsecondary options.

According to Allen (2010), while at least 40 states have formal education policies addressing dual enrollment, dual credit programs can be found in various forms in all 50 states. As of 2006, 42 states had legislation and/or Board policies related to dual credit enrollment. These policies covered items including who is eligible for the program, how credit is awarded, and who is responsible for financing the programs, among other things. Policies in at least 13 of the states issuing dual credit identify community colleges as the primary provider of the credit, and 17 states utilize the programs as a way to increase access for underserved student populations (Allen, 2010).

While each state's policy had distinct characteristics, they were all primarily designed to allow high school students to take college-level courses. Program structures typically vary by entrance criteria, financing, location, instructors, student mix, credit earning, and intensity. Other transitional programs for college credit include Advanced Placement (AP) and International Baccalaureate (IB) programs. These college preparatory options are managed by nationwide exams that align with college-level material and expectations. Students take these classes in a high school setting and material is considered more rigorous than a typical high school course. Final scores on the end of year exams give students the opportunity to test out of introductory-level postsecondary courses if they receive a satisfactory score on the test (Allen, 2010).

As dual credit programs have expanded, research has been conducted to investigate the impact these programs have on postsecondary outcomes, including pursuance, persistence, and completion of a bachelor's degree, as well as influences on collegiate GPA and timely graduation. In addition to postsecondary outcomes, research has also focused on how these

programs impact special populations of students, including first-generation college students, low socioeconomic status (SES) students, and students of color.

Impact on GPA and Timely Graduation

Completing dual credit courses in high school has been found to have a positive impact on participants' collegiate grade point averages (GPAs). Additionally, research indicates these students are graduating early or are more likely to complete their degree on time (Allen & Dadgar, 2012; Ganzert, 2014; McQuillan, 2007; Young, Joyner & Slate, 2013).

Young et al. (2013) examined the GPAs of a sample of 15,636 students who were enrolled at a Texas community college from 2006-2008. Using an independent sample *t*-test, researchers found that students who completed dual credit courses while in high school had higher collegiate GPAs than their nondual enrolled peers.

Students who participated in the dual credit enrollment program at St. Scholastica in northern Minnesota from 1999-2006 also had higher college graduation rates overall and higher college GPAs than their peers who did not participate in the program (McQuillan, 2007). An independent sample *t*-test was conducted on 1,939 students, 222 of which had enrolled in college credits while in high school. McQuillan's (2007) results showed that the dual credit students had higher GPAs than their peers and were often graduating in less than four years, likely due to the college credits they were bringing in from high school.

Allen and Dadgar (2012) also found evidence of dual credit enrollment impacting GPA and persistence. The researchers conducted a study of The City University of New York's (CUNY) dual enrollment program. The researchers used existing administrative data to investigate the impact dual credit had on the number of credits a student earned their first semester of college, their first semester GPA, and whether the student persisted to their second

year of college. They looked at a sample of 22,962 students who entered one of seventeen CUNY colleges in the fall of 2009 and had graduated from a New York City public high school within 15 months of enrolling.

Allen and Dadgar (2012) aimed to control for demographic and achievement gaps by utilizing a quasi-experimental difference in differences analysis. The initial results (which included all demographic and achievement controls) showed that taking one or more college courses while in high school was associated with earning at least one more credit their first semester of college, and earning an average of .16 higher GPA than non-participating peers. The initial results also indicated that dual credit participants were 5% more likely to persist to their sophomore year at the CUNY institution in which they were enrolled. However, in order to account for unobserved differences, researchers also used the difference in differences approach to compare eligible students who participated in the dual credit program with students who were ineligible, instead of just those who were eligible to participate. When doing so, they were unable to find a positive correlation with retention (Allen & Dadgar, 2012).

Ganzert (2014) found that students who completed dual credit courses graduated college at higher rates, and tended to have higher overall GPAs. The researcher tracked a cohort of 15,527 students who graduated high school in the spring or summer of 2003 in North Carolina and enrolled in a community college in the state that same year. The sample of students was tracked through 2008 to determine their graduation and overall success rates. Of the 15,527 students, 79% did not have any college credit coming into college, while 7% had completed one or more dual enrollment courses, and the remaining 14% had completed at least one or more Huskin's courses. Huskin's courses, while for college credit, are more focused on vocational studies. Overall, the study showed that those with dual enrollment coursework graduated at a rate

of 33.7%, which was 5.4% higher than those with Huskin's courses and more than 11.2% higher than those with neither coursework coming into college. The study also found that those with dual enrollment courses tended to have higher overall collegiate GPAs than the Huskin's and non-enrolled students (Ganzert, 2014).

Findings in Ganzert's (2014) study align with others that show a positive correlation between students with dual enrollment experience and higher collegiate GPAs (Allen & Dadgar, 2012; Young et al., 2013). Not only did his research find that students in dual enrollment coursework maintained higher GPAs during their first year of college, but also that they graduated at significantly higher rates than those without college prep coursework. Based on the results of his study, in which students exposed to dual credit options statistically outperformed their peers, Ganzert (2014) concluded those students were better able to transition from high school to college due to better understanding the workload and expectations associated with college prior to being a full-time college student because of their dual credit experience.

Likelihood to Pursue, Persist, and Complete Higher Education

In addition to its influence on postsecondary GPAs and graduation rates, completing dual credit courses in high school has also been shown to have a positive impact on the general pursuance of postsecondary education (Lichtenberger et al., 2014). Lichtenberger et al. (2014) studied a cohort of 72,484 Illinois students enrolled in high school from 2000 – 2003 who participated in dual enrollment programs, following their postsecondary experiences for seven years after high school graduation, until the spring of 2010. The researchers used the Illinois students' ACT scores and college enrollment and degree completion information from the National Student Clearinghouse (NSC). This database covered close to 3,330 postsecondary

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enrollment options, or 92 percent of possible institutions the high school students may have enrolled in after graduation.

Lichtenberger et al. (2014) found that of those students who took dual enrollment courses in high school, 34% of dual credit students enrolled at a four-year college the fall after graduating, 24% of students began courses at a community college the fall after graduating, and 13.5% of dual credit participants delayed their postsecondary enrollment after high school, but eventually did attend. Had the researchers not included data over a 7-year period post-graduation, they may have missed the data including students who delayed enrollment but eventually pursued postsecondary enrollment.

When examining the data that led to these results, researchers worked to get a representative sample that controlled factors that may have increased or decreased a student's likelihood to enroll in postsecondary education. They looked at descriptive information of the students using three statistical approaches, binary logit, multinomial logit, and multinomial probit models. The results showed that participating in a dual enrollment program had a significantly positive impact on a student's likelihood of enrolling at a two-year institution post-graduation. Additionally, dually enrolled students were significantly more likely to enroll at a four-year college upon graduation versus those who had not participated in dual enrollment programs. While Lichtenberger et al.'s (2014) results showed the likelihood of students enrolling and factors that impacted how or when they enrolled, they did not track persistence or completion rates.

When pursuing dual credit enrollment, the type of courses students choose impact their likelihood to pursue higher education after high school. Completing core versus non-core courses has been linked to a higher likelihood of pursuing higher education. Their likelihood of pursuing

postsecondary education has also been shown to increase as the number of college credits they take increases (Giani et al., 2014; JoHyun, 2014). Using a statewide, longitudinal, student-level database including P-12 and postsecondary data for Texas schools, Giani et al. (2014) examined a cohort of 382,236 Texas high school students enrolled during the 2000-2001 school year, measuring their access, persistence, and completion rates. The final sample cohort included students who graduated high school on time in 2004 in the same school district they began in, and who did not repeat or skip grades during the time frame. Using propensity score matching to control for biases, the researchers found that passing at least one dual credit course had a positive impact on a student's pursuing, persisting, and completing a college degree. Further analysis showed that the benefit of enrolling in dual credit courses increases as students complete more courses.

The Texas study (Giani et al., 2014) also concluded that dual credit and advanced courses in core subject areas indicated a significant increase in the likelihood of positive postsecondary outcomes related to pursuance, persistence, and completion. Dual credit math courses tended to have the largest impact on postsecondary outcomes, which was consistent with findings in other studies as well (Allen, 2010). The researchers found that students completing dual credit courses in core general education areas including math, social studies, languages, and science while also completing career and technical education (CTE) courses increased the likelihood of pursuing higher education, persisting, and ultimately completing a degree program. However, they were less likely to enroll having only completed CTE, not including dual credit courses (Giani et al., 2014).

Not all studies have found that dual credit enrollment impacts persistence and completion of college degrees. In 2014, JoHyun conducted a study aimed at solving college transition issues

and examined the relationship between CTE and dual credit courses and their effects on participants' college outcomes. JoHyun (2014) used data from the Community College and Beyond Database (CC&B). While the original data included 4,700 student records, analysis was conducted on graduating class cohorts from both Florida (*n*=339) and Oregon (*n*=273), specifically looking at dual credit and CTE enrollment data and how it was associated with college readiness, retention, and performance (JoHyun, 2014).

Using paired *t*-test and correlation analysis, JoHyun (2014) found that completing dual credit courses tended to make students from both states more college ready in core courses, specifically mathematics, but found insignificant or negative correlations between completion of dual credit and total college-level credit hours earned. When specifically looking at the Oregon and Florida cohorts, results showed that while the dual credit courses better prepared students for postsecondary education than CTE courses, they did not make them more likely to persist or complete their postsecondary education than nondual enrolled peers (JoHyun, 2014).

Dual Enrollment Impacts on First-Generation College Students

First-generation college students are students pursuing higher education after high school whose parents do not have experience in a postsecondary setting and did not earn a bachelor's degree (Redford & Mulvaney Hoyer, 2017). First-generation college students tend to have a lower SES than their peers whose parents are college educated, and are less likely to pursue higher education (An, 2013). While studies specifically investigating first-generation dual credit outcomes are limited, more dual credit studies include impacts on low SES student populations as part of their findings. Because low SES students have been found to be disproportionately first-generation students, these populations do overlap, although they may not be explicitly identified in the studies concerning low SES students (An, 2013; Ishitani, 2006; Redford &

Mulvaney Hoyer, 2017). Because of this correlation, results from studies regarding low SES dual credit student participants will be shared, in addition to studies that focused explicitly on first-generation students.

Low SES and first-generation college students have indicated feeling underprepared for college (Lile et al., 2018). As we look at the lasting postsecondary impact of dual credit coursework for its participants, many studies indicate the positive influence these programs have on first-generation college students and those from low-socioeconomic backgrounds (An, 2013; Lile et al., 2018; Taylor, 2015).

Impact on Pursuance, Persistence, and Completion

First-generation college students who complete dual credit courses are more likely to complete a bachelor's degree than their peers who did not participate in dual enrollment programs (An, 2013). An's (2013) research on the influence of dual credit enrollment and its impact on low SES students further indicates that dual enrollment programs may benefit this student population. The researcher used data from the National Education Longitudinal Study of 1988, specifically looking at the fourth follow-up survey for that data and limiting the sample to those respondents who attended a postsecondary institution. The sample size included 8,800 students who participated in dual credit enrollment or other high school programs (traditional or AP), aiming to investigate the impact of taking dual credit courses and their influence on college degree attainment. An's (2013) results showed that participation in dual credit enrollment increased a student's probability of earning a bachelor's degree by 7%. The research also found that first-generation college students tend to benefit more from dual credit enrollment than their continuing-generation peers. The number of first-generation college students attaining any

postsecondary degree increased by 8% if they completed dual credit courses while in high school (An, 2013).

An's research indicated that first-generation college students were more likely to pursue and attain a postsecondary degree if they participated in dual enrollment than their first-generation peers who did not participate in the program. However, their continuing-generation peers with college-educated parents were just as likely to pursue and attain a postsecondary degree regardless of whether they participated in a dual credit enrollment program. These findings indicate that low SES students and specifically first-generation college students benefit more from dual enrollment options than their continuing-generation peers (An, 2013).

An (2013) also found evidence that the number of college credits earned while in high school makes a difference in degree attainment outcomes. His research findings indicated that students who earned six or more college credits while in high school were 12% more likely to attain a bachelor's degree than their non-participating peers.

Low SES students who participated in dual credit enrollment programs are also more likely to pursue and complete college degrees than their peers who do not participate in dual credit programs (Taylor, 2015). Taylor used data from the Illinois Educational Research Council (IERC) that included all 115,677 public high school students who took the ACT in 2002 during their junior year and followed them using National Student Clearinghouse data through 2010. The researcher used propensity score matching to examine students who participated in dual credit during their senior year of high school, specifically taking dual credit courses at the high school, to limit the sample to 5,315 students.

Overall, Taylor's (2015) results showed that 91% of dual-credit participants pursued higher education after high school, and 52% completed degrees, compared to the 63% of non-

participants who pursued college where 29% graduated with degrees. Of the low SES students who participated in dual credit enrollment during Taylor's study, 85% of these students enrolled in postsecondary education and 34% completed degrees. Of those low SES students who did not participate in dual credit programs, 58% pursued higher education and only 18% completed degrees. This made low-income students 30% more likely to enroll and 16% more likely to complete than their low SES peers who did not participate in dual enrollment. While Taylor's results showed that dual credit programs supported all students who enrolled, the results of low SES students support the notion that dual credit enrollment programs specifically support low SES populations. (Taylor, 2015). While the low SES student population is not directly representative of first-generation students, low SES students are disproportionately represented in the first-generation student population (An, 2013; Ishitani, 2006; Redford & Mulvaney Hoyer, 2017).

Impact on College Preparation and Expectations

While multiple studies have demonstrated that first-generation and low SES students benefit from dual credit enrollment programs, it is important to examine why these populations specifically benefit. Lile et al. (2018) conducted a mixed-methods study on the dual enrollment experiences of students enrolled in 10 high schools in the northwest United States. The researchers aimed to explore the experiences of students earning credit through a variety of delivery methods, including on college campuses or in their high school classrooms. The focus group sample included 15 students while the survey sample included 101 students.

Through their survey and conversations with students, Lile et al. (2018) found that the dual credit experience gave students a structured introduction to the college experience, influencing their understanding of the college system, expectations for course preparation, and

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relieved some of the ambiguity and anxiety surrounding the unknowns associated with the college experience.

Specifically, students indicated that they learned what skills were required to be successful in college, gained a sense of clarity surrounding career goals, and began to self-identify as a college student as they felt more prepared for that environment. Students also indicated feeling more comfortable with the expectations of the college student role. They indicated the impact college had on social roles and their roles within family. First-generation college students specifically indicated a desire to attain higher degrees than their parents had (Lile et al., 2018).

Taking a more qualitative approach to examining the effects of the dual credit enrollment experience, Lile et al. (2018) suggested in their findings that the dual credit experience may provide low SES and/or first-generation college students with knowledge and transition skills for college that their higher SES or continuing generation peers may find elsewhere.

These studies introduce the unique profile of first-generation college students and low SES students and how they are impacted by the dual credit experience. This student population tends to be lower in SES, less likely to pursue or persist in higher education, and tends to be underrepresented in dual credit programs, though they seem to benefit more from those programs than their continuing-generation peers (An, 2013; Ishitani, 2006; Redford & Mulvaney Hoyer, 2017). While research specific to dual credit enrollment and this population of students is limited, many studies have looked specifically at the academic outcomes of first-generation students in higher education and factors that impact those outcomes, further showing the need for support and resources for these students.

First-Generation College Student Outcomes

To better understand the relationship between first-generation students and dual credit outcomes, it is important to further investigate their academic outcomes and what factors may support or inhibit them from completing college degrees.

According to data compiled by the National Center for Educational Statistics (NCES) in 2018, first-generation college students are less likely to earn a bachelor's degree than their continuing generation peers (Redford & Mulvaney Hoyer, 2017). NCES used data from a nationally representative cohort of high school sophomores from 2002 to show the patterns of first-generation and continuing generation college students. Additional findings showed that a larger percentage of first-generation college students came from low SES backgrounds. First-generation college students were also more likely to indicate not being able to afford going to school as a reason for leaving school without graduating. (Redford & Mulvaney Hoyer, 2017).

When pursuing higher education, first-generation college students cite challenges including cost, lack of academic preparation, family support/expectations, and lack of understanding resources available to them (Collier & Morgan, 2008; Ishitani, 2006; McCarron & Inkelas, 2006; Saenz et al., 2007).

Likelihood to Pursue, Persist, and Complete in Higher Education

First-generation students are less likely to persist or complete college degrees. Using national longitudinal data, Ishitani (2006) specifically investigated the persistence and graduation rates of first-generation college students at four-year institutions. Ishitani (2006) tracked a sample of 4,427 students initially enrolled from 1991 – 1994 at a public or private institution, and followed their academic journey through 2000. Ishitani (2006) found that first-generation students were less likely to persist than their continuing generation peers, being 1.3 times more

likely to leave their college or university. Factors influencing departure included family income, lower expectations of their education, lower high school class rank quintile, lower intensity of high school academics, being enrolled in a public over private institution, and being at a school with nonselective admission.

While first-generation students were at a higher risk of dropping out of college, pursuing college directly from high school and continuous enrollment supported completion rates of these students. Ishitani (2006) found that first-generation students faced the highest risk of dropout in their second year of college, being 8.5 times more likely to withdraw than those students whose parents graduated from college. Risk of dropout waned over time after a student's sophomore year. This indicated the sophomore year as pivotal in student persistence, with students persisting to their junior year having a higher likelihood of graduating. First-generation students who delayed attending college were also found to be 81% more likely to depart in their second year than those who matriculated right after high school (Ishitani, 2006).

When comparing students whose parents had completed varying levels of education (ranging from both parents attaining a college degree to neither), Ishitani (2006) found that first-generation college students were the least likely to graduate with a college degree. While the chances of graduation slightly improved if a parent had completed some college, they were overall 51% less likely to graduate in four years and 32% less likely to graduate in five years than those students who had both parents graduate from college.

Expectations vs. Reality

While many first-generation students aspire to attain college degrees, they are overall less likely to attain the degrees to which they originally aspire. McCarron and Inkelas (2006) examined a racially and ethnically diverse sample of 1,879 first-generation college students

using student survey information from the National Educational Longitudinal Study from 1988-2000. The results showed that of the total sample, 40.2% of first-generation students had aspired to attain a bachelor's degree in their 10th grade year of high school, but only 29.5% had reached that goal eight years after graduating from high school. The results showed that 62.1% of first-generation students had not met their original aspirations by 2000. The results also indicated that while parental involvement had a positive impact on future aspirations of students, the perception of importance of good grades was the main predictor of future success.

Based on the data findings in the survey, researchers concluded that while first-generation students have the desire to pursue higher education, they lack support once they are in the college environment, and may not be receiving clear messages about the demands and expectations of college while at the high school level (McCarron & Inkelas, 2006). The results of this study further show the value of dual credit enrollment options while in the high school setting, and necessity to look at the experiences of first-generation students once enrolled in higher education.

First-Generation College Student Experiences

Research shows that first-generation students are less likely to pursue, persist, and complete college degrees (Ishitani, 2006; McCarron & Inkelas 2006; Redford & Mulvaney Hoyer, 2017). When looking at postsecondary outcomes, many researchers have also looked at the experiences of first-generation students in higher education to dig deeper into the factors that impact their pursuance, persistence, and completion in higher education. Findings have included role mastery, support systems, motivation, and other factors that impact degree attainment.

Role Mastery

First-generation students often struggle with mastering the role of being a college student. Collier and Morgan (2008) conducted a qualitative study at a university in Oregon to investigate the difference in perceptions of priorities and expectations in a college classroom. Focus groups were conducted with both faculty (*n*=15) and students (*n*=63), the students being separated into two sets: first-generation students and those who had at least one parent who had graduated college. Interviews with first-generation students revealed that those students may be less likely to understand academic expectations and policies. These students reported issues with time management, having difficulty finding time for work outside of class or not budgeting their time appropriately. Students also reported feeling that they did not have resources or people outside the university they could ask for help.

The researchers concluded that first-generation students may suffer from a cumulative disadvantage. They argued that students who come from backgrounds that lack experience in higher education may not perform as well as those students whose parents were college educated because they lack the background knowledge to naturally master the role successfully (Collier & Morgan, 2008).

Motivation to Pursue Higher Education

Some first-generation college students cite intrinsic motivation, parental support, and influencers within their high school as reasons they chose to pursue higher education (Irlbeck, Adams, Akers, Burris & Jones, 2014). Irlbeck et al. (2014) interviewed nine first-generation college students in agriculture related programs at Texas Tech University (TTU) to determine the needs of that student population as well as what factors motivated them to enroll and stay connected to campus. During the qualitative case study, researchers found that parental support,

intrinsic motivation, and encouragement from high school teachers influenced students'

decisions to attend college and to be successful once there.

Most of the students interviewed indicated their parents or family members as large

influencers on their pursuance of higher education. Several also noted that a high school

instructor teaching the subject area they were interested in had an impact on their decision to

attend college. One student noted feeling comfortable with their teacher because they had

experienced higher education and the student saw the instructor as a successful product of what

could be achieved if a student earned a college degree. Additionally, some students noted self-

motivation as their reason for pursuing a degree. One student mentioned needing to be self-

sufficient in adolescence, and being determined to provide for themselves in the future – seeing a

college education as a means to success (Irlbeck et al., 2014).

Once integrated into the college environment, participants in Irlbeck et al.'s (2014) study

mentioned that while their parents supported their academics and were proud, they lacked the

lived experience and did not always understand what the students were going through in success

or failure and were unable to help them navigate those obstacles. A few students mentioned that

while parents were emotionally supportive, they were unable to help the students financially.

Students mentioned having to work to support themselves, and others were supporting their

parents financially while attending school. Overall, the students remained determined to succeed,

citing a better future for themselves as a main reason for attending TTU.

When evaluating the lived experiences of both dual credit participants and first-

generation college students, those interviewed reference the impact their dual credit experiences

had on their confidence levels and belief in their abilities to be successful in the college

environment (Lile et al., 2018). First-generation students who participate in dual credit

enrollment programs are more likely to pursue, persist and complete higher education (An, 2013; Lile et al., 2018). Correlations between dual credit experience and confidence, as well as qualitative research involving first-generation student experiences may tie dual credit experiences to self-efficacy and motivation in first-generation college students.

Self-Efficacy of First-Generation College Students

Bandura (1977) defined self-efficacy as an individual's belief in their capacity to execute the behaviors necessary to attain specific levels of performance. Further, the idea of self-efficacy manifests as a person's confidence level in their ability to exert control over their own motivation, behavior, and social environment. Bandura (1997) described four sources of efficacy beliefs, including mastery experiences, vicarious experiences, verbal persuasion, and emotional and physiological states. Mastery experiences is described as success through mastering tasks or controlling an environment, leading to reinforcing one's belief in themselves. Vicarious experiences relate to observing the behaviors of those around us. When we watch our role models succeed, it may reinforce the belief that we too can master roles and succeed as well. Verbal persuasion is the concept that someone an individual views as influential (e.g. parents, mentors, peers, in the case of this study) can reinforce or strengthen an individual's belief that they are capable of succeeding. Finally, the concept of emotional and physiological states reference the idea that the mental and emotional state of an individual influences how they may evaluate their own self-efficacy. For example, someone in a state of depression may find himself or herself in a lower level of self-confidence, whereas positive emotion may elevate an individual's confidence in their abilities (Bandura, 1997).

When studying self-efficacy in relation to academic performance and student persistence, Schunk (1991) asserted that academic self-efficacy is displayed as a student's self-confidence in

their abilities to perform academic tasks at a given level. While a variety of research exists regarding academic self-efficacy, the variables studied range from the impact academic self-efficacy has on a student's life purpose or career aspirations, to their intent to persist in higher education. Some studies assess correlations with socioeconomic or first-generation status, but small sample sizes have made it difficult to draw significant conclusions based on those parameters. Studies typically focus on one specific institution, and sample sizes tend to be small. Despite the limitation this presents, many studies have found positive correlations with high academic self-efficacy, collegiate GPAs, and an intent to persist. The relationship varies depending on when the self-efficacy was measured, the types of self-efficacy measured, and the tools used to measure self-efficacy (Baier et al., 2016; Gore, 2006; Merritt & Buboltz, 2015; Wright et al., 2012).

Impact on GPA and Intent to Persist

Gore (2006) conducted two incremental validity studies at separate institutions, hoping to evaluate the relationship between academic self-efficacy and college outcomes beyond students' standardized test scores. In his first study, he used the college self-efficacy inventory (CSEI) to survey 629 first-year students enrolled in a freshman transition course at a large public university in the Midwest. The instrument was used within the first two weeks of the semester and again at the end of the fall semester. The CSEI is a survey consistently used with proven validity to evaluate academic self-efficacy in studies and consists of 20 items used to assess an individual's belief in their ability to successfully complete academic-related tasks in a college setting. Items surveyed range from confidence in having conversations with instructors to interacting with peers to the ability to write papers (Gore, 2006).

In his research, Gore (2006) intended to utilize the CSEI, an academic self-confidence survey (ASC), and ACT scores to determine if a student's academic self-efficacy had an impact on their GPAs. While the CSEI scores collected at the beginning of the first semester failed to correlate with a GPA variance, the CSEI scores taken at the end of a student's first semester were found to be significant predictors for GPA for their first three semesters of college. The end of semester CSEI scores correlated with an additional 10% variance in GPA during a student's first and second semesters, and an additional 4% in their third semester. When considering the CSEI, ASC, and ACT scores, Gore found that a student's academic self-efficacy at the end of that first semester had the most significant impact on a participant's college GPA. Gore's second study evaluated a more extensive sample of institutions (n=25) using only the ASC survey at the beginning of the students' first semester. After evaluating the data from 7,956 incoming first year students, he found significant but small correlations between students with high ACT scores and academic self-confidence and their first semester GPAs. As a result, Gore concluded that a student's academic self-efficacy when entering college is a weak predictor of future academic performance (Gore, 2006). He found a stronger relationship between academic self-efficacy, persistence and performance when those items were measured during a student's second or third semester of college.

In his conclusion, Gore (2006) argued that a student's belief in their academic abilities may be related to the extent to which they have experience within academics. Because the CSEI measures an individual's confidence in their ability to perform academic tasks and related activities, their scores may change as they gain college experience.

Similarly, a study investigating the connection between college self-efficacy and persistence in first year students found positive correlations between a student's self-efficacy at

the end of their first semester of college and student persistence. Wright et al. (2012) studied a cohort of 401 students enrolled in a first-year seminar course at a medium size public four-year institution in the Rocky Mountain region. Of the participants, 41% (165) identified as first-generation students. Students took the CSEI survey in the first and last week of their fall semester course. Binary logistic regression models were used to evaluate potential correlations between persistence, academic success, and a student's college self-efficacy. While the researchers did not find positive correlations between the initial CSEI survey results and persistence, similar to findings of Gore (2006), the end of semester survey results showed that increased levels of college self-efficacy at the end of their first semester were associated with significantly higher odds of persisting to their second semester after controlling for relevant variables. The researchers found that a student's odds of being academically successful increased as their CSEI score increased. They also investigated potential impacts on first-generation college students in relation to self-efficacy scores and college GPA, but they found no significant differences between first-generation and continuing-generation students (Wright et al., 2012).

When studying a sample of 239 first-time freshman students at a Midwestern public university, Baier et al. (2016) found similar results to Gore (2006) and Wright et al. (2012) regarding students' self-efficacy and intent to persist. The researchers recruited participants at their college orientation and administered online CSEI surveys at the beginning end of the students' first semester of college. While the population was not studied in detail, 32% of participants identified as first-generation students.

When examining the results, standardized regression coefficients showed that a student's college self-efficacy and mentorship perceptions significantly impacted their intent to persist in the beginning and at the end of their first semester. However, in the end of semester CSEI the

standardized regression coefficients for self-efficacy decreased and increased for the importance of mentorships. While the researchers utilized first semester GPA in evaluating correlations with intent to persist, they did not track the relationship between GPA and self-efficacy for this study. Another limitation included Baier et al. (2016) having a small sample size. While the researchers tracked students' intent to persist, they did not follow up to track actual persistence as was done in studies conducted by Gore (2006) and Wright et al. (2012).

Impact on First-Generation and Low Socioeconomic Status Students

While research shows that low-SES and first-generation students are less likely to pursue, persist, and complete in higher education (An, 2013; Ishitani, 2006; Redford & Mulvaney Hoyer, 2017), there is a small amount of research investigating the relationship between these special populations, their level of self-efficacy, and how that may impact their success in higher education. Merritt and Buboltz (2015) surveyed a sample of 298 undergraduate students enrolled in an introductory psychology course at a southern university, investigating the impact of SES and parental involvement on student's level of academic self-efficacy. Researchers used the Multidimensional Scales of Perceived Self-Efficacy (MSPE) which was developed by Bandura to assess self-efficacy, and the Perceptions of Parental and Teacher Involvement Scale (PPTIS), which assesses the parental and teacher support a student perceives they are receiving, for their research.

In their evaluation of the data, Merritt and Buboltz (2015) used a correlation analysis to determine the potential relations between variables including self-efficacy, familial SES, parental involvement, and college generational status. Their results indicated that increased levels of all variables had a positive impact on a student's levels of self-efficacy. Specifically, the results showed that as a student's familial SES increased, so did their self-efficacy, although the effect

of that increase was small to medium. The researchers also found a significant, positive relationship between having a parent who attended college and increased levels of self-efficacy. The researchers concluded that when students saw their parents model academic success through increased family income (SES), or college experience, it increased their self-efficacy. Additionally, Merritt and Buboltz (2015) concluded that these continuing-generation students have the benefit of having models for college success that they can learn positive academic habits or behaviors from, likely increasing their academic self-efficacy.

Although Merritt and Buboltz's (2015) research findings indicated higher levels of self-efficacy in continuing-generation and/or high-SES students, the results also indicated that students with supportive parents are more likely to have a higher sense of self-efficacy. When mediating between all variables, the researchers found that students who perceive their family members to be supportive and interested in their academic goals have a higher likelihood of high self-efficacy, regardless of their SES. They concluded that although high SES students may have higher levels of access, support, and modeling of academic behaviors, students' levels of self-efficacy may be mediated based on how active their parental support may be.

When considering the existing research on academic self-efficacy and intent or likelihood of persistence, the results show that self-efficacy measured after a student has gained a semester of college experience is the best indicator of their likelihood to persist. When considering the research that shows students who complete dual credit courses have higher GPAs and are more likely to persist (Giani et al., 2014; Lichtenberger et al., 2014), research on academic self-efficacy opens the door to evaluate if a student entering college with previously earned college credit may have a higher level of self-efficacy than their similar non-dual enrolled peers based on their college experience gained prior to entering college. Additionally, knowing that first-

generation students are already less likely to persist than their continuing-generation peers, the research on self-efficacy shows that first-generation students who complete college credit while in high school may benefit from a higher level of self-efficacy going into college than their first-generation peers who did not participate in a dual enrollment program.

First-Generation and Continuing-Generation Self-Efficacy

Continuing generation students often outperform their first-generation college student peers academically, and in some cases report higher levels of self-efficacy in the college setting (Vuong, Brown-Welty & Tracz, 2010). Vuong et al. (2010) investigated a sample of 1,291 second year students at five selected California State campuses who took the CSEI.

Through their study, Vuong et al. (2010) found that continuing generation students reported higher GPAs than their first-generation college peers, and reported a higher likelihood of completing the current semester and persisting to their junior year at the institution. However, the CSEI results found no differences in self-efficacy between the first-generation and continuing generation students. One limitation of this study was that the GPA of students was self-reported.

Ramos-Sanchez and Nicols (2007) also conducted research on self-efficacy using the CSEI tool. The researchers surveyed 192 entering freshmen at a private university on the west coast of the United States. Of the sample, 33.3% of respondents were first-generation college students. This study aimed to investigate whether self-efficacy mediated the relationship between a student's generational status (first or continuing-generation) and their GPA and college adjustment.

While the findings did not find that self-efficacy mediated the relationship between a student's generational status and their GPA and college adjustment, continuing-generation students reported significantly higher levels of self-efficacy at the start and end of the first year.

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In their results, Ramos-Sanchez and Nicols (2007) concluded that regardless of confidence level in first and continuing-generation students, first-generation students still underperformed compared to continuing generation students.

The researchers also concluded that because continuing-generation students may not have faced the same level of obstacles or challenges as first-generation students, they view themselves as more capable and hold a higher level of self-confidence going into college than their first-generation peers. Research on self-efficacy and first-generation students is limited. While limitations of this study include a small sample size at a private university, the results of Ramos-Sanchez and Nicols (2007) demonstrated that in this instance, first-generation students had a lower level of self-efficacy and had a lower likelihood of persisting as a result.

Research shows that first-generation students have reported lower levels of self-efficacy, which has been linked to intent to persist in higher education. Additionally, dual credit enrollment has been linked to positive academic outcomes as wells as a higher likelihood of pursuance, persistence, and completion in higher education (Allen & Dadgar, 2012; Ganzert, 2014; Lichtenberger et al., 2014). First-generation college students have reported challenges including lower likelihood of pursuance, persistence and completion, as well as understanding expectations, role mastery, and other barriers in higher education (Allen & Dadgar, 2012; Collier & Morgan, 2008; Ganzert, 2014; Ishitani, 2006; Lichtenberger et al., 2014). As we explore these two concepts, more research is needed to investigate the potential relationship between the dual credit experience of first-generation college students, and the impact that experience has on a student's levels of self-efficacy.

Summary

Chapter 2 provided an overview of literature as it relates to dual credit enrollment outcomes, first-generation college students, and concepts and research related to self-efficacy. Chapter 3 will describe the design of the research and methodology used to investigate this topic.

CHAPTER 3. METHODOLOGY

To gain an understanding of a student's lived experience as a dual credit student and how it has impacted their pursuance, persistence, and self-efficacy as a student is a complex question. Researching this topic requires a human and qualitative approach. The purpose of this study was to investigate the impact of dual credit on first-generation student college pursuance and persistence, and how the experiences impacted first-generation student self-efficacy and motivation related to college-going. This study sought to answer the following questions:

1. How did completing dual credit courses in high school impact first-generation students' decision to pursue and persist as a college student?

2. What impact do first-generation students perceive their dual credit experience to have had on their self-efficacy as a student?

Additional questions used in the research process sought to get a sense of each student's background, motivation for taking dual credit coursework, and influencers or motivation for pursuing higher education.

Research Design

For the purposes of this study, I employed a generic qualitative research design by interviewing my participants and analyzing the data using first and second cycle coding methods to gain a better understanding of their experiences related to my research questions (Patton, 2015). Participants had completed six or more dual college credits while in high school and persisted to their junior year at the institution, a four-year public university located in the suburban Midwest United States. Because I was unable to find research compelling a specific population for my study, I recruited students from any major program at the institution to participate. Initially, I partnered with academic advising staff at the institution who agreed to

reach out to students they advise who met my criteria. Unfortunately, this method did not lead to successful recruitment of participants. In an effort to reach more potential participants, the Dean of Students submitted a data request to the institution, acquiring the information for 97 undergraduate juniors (based on high school graduation year) who self-identified as first-generation college students when applying for financial aid, and had transferred in six or more college credits. The Dean of Students then sent an initial recruitment message on my behalf, including my contact information for outreach if they wished to participate. This was followed by a second modified recruitment message, offering a $10 university bookstore gift card for participation. Through these multiple modified efforts for outreach, I was able to conduct three semi-structured interviews with students in the first semester of their junior year at the institution. The purpose of these interviews was to gain a better understanding of the students' experience taking dual credit courses in high school in an effort to learn how or if they feel it impacted their decision to pursue and persist in college, as well as the impact the program may or may not have had on their self-efficacy as a student.

Participants

For my research, I interviewed three first-generation college students entering their junior year at a mid-sized four-year public land grant university located in the upper Midwest. Ishitani (2006) found that first-generation students faced the highest risk of dropout in their second year of college, being 8.5 times more likely to withdraw than their continuing-generation peers. Risk of dropout waned over time after a student's sophomore year. This indicated the sophomore year as pivotal in student persistence, with students persisting to their junior year having a higher likelihood of graduating. For this reason, I was interested in interviewing students who had

persisted to their junior year, as they have a higher likelihood of successfully completing their degree.

Participants were permanent residents of Midwestern states that offered dual credit and Advanced Placement (AP) courses. Each participant completed at least six college credits while enrolled in high school through a combination of dual credit and AP courses. Based on my review of literature, there is a correlation between students who complete six or more college credits and positive academic success results (An, 2013). Courses were completed through a variety of delivery methods, including online, in their high school, or on a college campus. A variety of state representation and delivery methods was preferred and may or may not impact the results of the study. Because each state has different policies on the cost and access to dual credit courses, the socioeconomic range of students from states who pay for these options may be more limited, as students in those states pay for some if not all of the costs associated for the college courses they take. Some states offer options where students do not incur costs for the college courses or materials used through dual credit options, which may widen the socioeconomic range of students earning credit in those states (Education Commission of the States, 2018). This study includes students who either paid for courses, received scholarships to take courses, or incurred no cost to take courses or AP exams.

Instrument

I utilized a semi-structured interview guide when meeting with my research participants to initiate conversations and elicit themes based on similar conversation topics with different participants. The nature of these questions related to each participant's lived experience as a dual credit student. Questions aimed to investigate how or if participating in a dual credit program impacted their decision to pursue and persist in higher education. Additionally, the questions

sought to answer whether or not the student felt their dual credit experience had an impact on their self-efficacy as a first-generation college student. The interview guide that was utilized during the research process can be found in Appendix A.

Data Collection and Analysis

My study was approved by the Institutional Review Board (IRB) in Fall 2019. To collect data for my study, I conducted semi-structured interviews using an interview guide with my participants in the campus library. The interviews ranged from 32 minutes to an hour in length and were recorded with the permission of the participant for research purposes. Interested participants established communication with me via my student email account, at which time I gave them an informed consent document regarding the research project and the details of their participation in the study. I did not have access to students' identifying information prior to them contacting me to express their willingness to participate in the study. I conducted each interview in person at a mutually agreed upon location, a study room in the campus library. During the informed consent process, I asked each student for permission to record their interview, which each student was comfortable with. The interviews were recorded using a voice memo application on my cell phone, as well as a hand-held voice recorder as a backup.

The interviews focused on the student's academic journey from high school until now, including questions about how they viewed themselves as college students, and their confidence level as a student. Questions also focused on how they handled academic challenges as students, taking an in-depth look at their dual credit experience, transition from high school to college, and how experiences with dual credit may or may not have differed from their experiences in college. I also included an analytic memo after each interview. Each student had a different perspective that directed the conversation and contributed to the research in varying capacities. After the

interviews were completed, I then transcribed one interview for the experience, and used a

reputable transcription service, Rev, to transcribe the remaining interviews. After Rev

transcribed the interviews, I then reviewed them for accuracy.

Once interviews were transcribed, responses were analyzed to look for themes in the

dialogue. As part of this process, I coded the data to gain a clearer understanding of each

participant's experience, capture their voice, and search for themes and differences in each

individual's perception of their journey with dual credit. My intent was to preserve their

perceived experience while attempting to remove personal bias when interpreting themes that

might emerge from the data. First cycle coding methods used included initial, versus, and values

coding.

Initial coding is meant to be an open-ended approach, breaking data down into parts to

better examine and digest the information presented (Saldaña, 2016). I found this coding method

to be a beneficial starting point to gain direction for future coding approaches. When reviewing

my initial coding results, I found contradictions and similarities in each participant's dual credit

and college experience. Competing ideas also emerged when students discussed the perceived

impact dual credit had on their academic skills, transitions, and self-efficacy. This led me to do a

round of versus coding. Saldaña (2016) suggested versus coding as an appropriate way to

identify themes when qualitative data suggests competing goals or conflicting statements/ideas in

data. While the round of versus coding did not produce as much data as the initial round of

coding, it showed similarities and differences students perceived between their high school, dual

credit, and college experiences. This included competing feelings on how it may or may not have

prepared them for college, what the experience was like, and perceived impacts dual credit may

or may not have had on their academic skills and self-efficacy. This coding method exposed the

values emerging from each participant's point of view, as they examined themselves as students and reflected on their individual educational journey. As a result, I did a final round of values coding on each transcript. Values coding can be described as the process of defining and applying codes that "reflect a participant's values, attitudes, and beliefs, representing his or her perspectives or worldview" (Saldaña, 2016, p.131). Saldaña (2016) goes on to share that while values coding may be appropriate to use in any qualitative study, it may be particularly useful when research subjects are exploring their own values or belief systems, personal identities, experiences or actions, among other things. Through values coding, I was able to get a sense of what each participant valued, how they felt about themselves or perceived their experiences, and got a sense of what they believed about themselves or their educational experiences.

Once I felt I had a clearer picture of each student's perspective using first cycle coding, I utilized code mapping to categorize findings from my first cycle coding methods in an effort to identify themes, relationships, and conflicting information in my data. Through this process, I categorized codes in ways they related to each participant's viewpoint in areas related to my research questions. Themes that emerged included, but were not limited to, perceived impact or lack thereof on a student's motivation, preparation for college, academic skills, self-efficacy, and their overall performance and persistence as a student. Ultimately, each of these coding methods contributed to interpreting the viewpoints of each participant in unique ways. Themes will be discussed in chapters 4 and 5 with the goal of summarizing my results, conclusion, and recommendations for future research.

Delimitations of Study

This study focused on the perspectives of three first-generation college students from Midwestern states who have taken at least six dual credits in high school and persisted to their

junior year of college. Because each state has different policies on the cost and access to dual credit courses, the socioeconomic range of students may be more limited, as one participant paid for some if not all costs associated with her courses (depending on type). However, the other two participants did not incur costs for the college courses, AP exams, or other course materials, which may widen the socioeconomic range of those students earning credit (Education Commission of the States, 2018). Despite the socioeconomic limitation this creates, the study begins to investigate the role dual credit enrollment plays in the success, self-efficacy, and motivation to persist of first-generation college students from a qualitative perspective.

Another limitation of this study was the sample size being limited to a small number of participants at one Midwest institution. Given the demographics of the institution, this may impact other demographic factors, such as race and age, on college pursuance, persistence, and completion.

Additionally, the participants of this study were limited to those students who have successfully persisted to their junior year at one, mid-sized, public research university. The likelihood of persisting may be impacted by the nature of the institution and its provided services and programs.

Summary

Chapter 3 described the design of the research and methodology used to investigate this topic. Next, chapter 4 will provide an analysis of the data collected from interview results and a summary of key findings.

CHAPTER 4. RESULTS

First-generation college students are less likely to pursue, persist, or complete college degrees, and report lower levels of self-efficacy than their continuing-generation peers (An, 2013; Ishitani, 2006; Ramos-Sanchez & Nicols, 2007; Redford & Mulvaney Hoyer, 2017). Dual credit enrollment opportunities for high school students have consistently shown positive impacts on pursuance, persistence, and completion rates of students in post-secondary education. Researchers have also concluded that the benefits of these opportunities may be greater for first-generation and low SES students than continuing-generation students (An, 2013; Lile et al., 2018; Taylor, 2015). The purpose of this study was to investigate the relationship between first-generation college students, dual credit enrollment options, and the potential connection dual credit opportunities may have with self-efficacy in first-generation college students. This qualitative study, guided by two research questions, sought to answer:

1. How did completing dual credit courses in high school impact first-generation students' decision to pursue and persist as a college student?

2. What impact do first-generation students perceive their dual credit experience to have had on their self-efficacy as a student?

Data was collected through three semi-structured interviews conducted with first-generation college students. Participants had earned six or more dual credits in high school and persisted to their junior year at the institution. Both research questions were answered using qualitative analysis through a variety of first and second cycle coding methods, including initial, versus and values coding, followed by code mapping. This chapter includes an overview of the population and participants involved in the qualitative study, as well as the results of the study.

Population and Participant Descriptions

Throughout this thesis, I refer to the student participants using the following pseudonyms: Whitney, Natalie, and Mark.

Whitney is a female student from a small suburban area in the upper Midwest. She is currently enrolled in a highly competitive STEM program. Her dual credit experience included college credits earned in her high school through both dual credit and AP course options. In addition to the courses she took at her high school, Whitney received a scholarship to live on campus and enroll in a summer dual credit course at a private Ivy League institution on the east coast. Whitney recalled taking at least eight different dual credit or AP courses, earning more than 15 credits while in high school. She chose classes that she knew would support her career interests, advance her general education requirements in college, or were more advanced versions of courses she needed to graduate from high school. Course subject areas included math, English, and a variety of science and social science courses. Specifically, Whitney recalled taking dual credit medical terminology and anatomy and physiology, AP calculus, English, psychology and biology. Whitney paid for her dual credit and AP courses she took through the high school, but earned a scholarship to take the dual credit course on campus at the Ivy League institution.

Natalie is a female student from a small city in a rural area in the upper Midwest. She is currently enrolled in a highly competitive program in health nutrition sciences. She earned nine dual credits in high school. Natalie focused on core courses from the advice of peers who indicated the courses would be needed in college. Courses she took included college algebra, public speaking, and psychology. Natalie resided in a state that covered all costs associated with dual credit courses, including the cost of tuition and textbooks for all students.

Mark is a male student from a suburban community bordering a large metro area in the upper Midwest. He is currently enrolled in a highly competitive STEM program. Mark took several AP courses and earned several dual credits in high school through multiple institutions. All courses were offered through the high school. Mark estimated he transferred in between 20 to 30 college credits. Most courses he took were either considered the next advanced course in his high school curriculum, or were classes he believed would be needed in college. Subject areas for these courses included psychology, wellness, and a large number of math and science courses including calculus, chemistry, and physics. Mark resided in a state that covered all costs associated with dual credit courses, including the cost of AP exams, tuition, and textbooks for all students.

Research Question One

My first research question sought to understand how completing dual credit courses in high school may or may not have impacted first-generation students' decision to pursue and persist as a college student. To help answer this question, I included questions in my interview guide aimed at understanding each participant's motivation for enrolling in dual credit courses and pursuing higher education. Each participant showed evidence of persistence by successfully completing their first two years of college and continuing to their junior year at the institution. Some participants highlighted dual credit courses they took in high school, experiential learning opportunities they have had in college, and career interests that have either changed or fueled their motivation to persist and complete degrees. All participants indicated intent to graduate and pursue a career in their field. When considering the impact dual credit may have had on each participant's pursuance of higher education, two themes emerged: intrinsic or extrinsic

motivation, and a level of self-efficacy that was earned, validated, or increased in some participants as a result of their dual credit experience.

Intrinsic and Extrinsic Motivation

Two participants, Natalie and Whitney, indicated an intrinsic motivation to attend college that led to enrolling in dual credit courses as preparation for pursuing higher education. Intrinsic motivation can be described as doing an activity or completing a goal for personal satisfaction, rather than external rewards or pressures (Ryan & Deci, 2000). Both participants talked about dual credit as an opportunity to experience college beforehand and get ahead in general education credits. When asked if she knew what her path would be after high school when enrolling in dual credit courses, Natalie shared that she did not know what she wanted to study as a degree at the time, but knew she wanted to go to college. She indicated that she saw dual credit as an opportunity to take some of her general education courses early and get the basics done ahead of time. Whitney also viewed dual credit as an important opportunity, stating:

> So I guess ever since I was a little kid I dreamed of college. Just because every book you read, and all of these crazy mentors and famous people had gone to college, and I knew that I wanted to be one of those people, right? I wanted to make something of this world. So when I got to high school and I saw these opportunities, I was like, this is my chance to get a jump start on college, I really want to do this, let's see how it works out and let's get an idea of what it's like. Because, I had never had anyone tell me what college was about.

Whitney emphasized being a first-generation college student in her interview, sharing that her dual credit experience helped her gain a sense of what college would be like. She said that while her parents did have advice for her regarding her education, she relied more on what

she learned through dual credit because her parents did not have that college experience. When asked about how she learned about college expectations prior to being in college, she shared, "All of it probably came from dual credit, because you know, neither of my parents had gone to college."

While the female participants focused on their intrinsic motivation to pursue higher education as a primary reason for earning dual credit, Mark did not share the same intrinsic motivation for attending college or pursuing dual credit options in his interview. He indicated that attending college felt like a natural progression due to being in advanced courses. He indicated that there was never a question as to what else he would have done, sharing:

> Just the next thing to do, I guess. I don't know. My parents were like, you're smart, you have to go to college. We didn't go to college, you got to go kind of thing. So I'm like, I guess I'll go. I don't think I was all that incredibly enthusiastic about applying to college. Truthfully….I think a lot more of the enthusiasm came when I finally got into college. But in high school, I mean it just was kind of where else would I go after this? Took college courses, go to college, pretty much.

Mark indicated that he took dual credit and AP courses based on advice from his advisors in following the natural academic course progression he was on in high school. When talking about his motivation for dual credit, he stated, "I mean it was just where I was naturally at. I don't know, I've just always been in the advanced courses and it would feel weird to have not been." While Mark did not indicate strong intrinsic motivation for taking dual credit or applying to college, he shared extrinsic motivation for credits earned through his dual credit and AP experience, indicating earning the credits were "what it was about" for him. Extrinsic motivation contrasts with the idea of intrinsic motivation, considering whether an activity or goal is

completed to attain a separable outcome other than internal satisfaction. Ryan and Deci (2000) describe a range of outcomes one may seek through extrinsic motivation, including rewards/punishments/compliance (external), seeking approval from self or others (somewhat external), self-endorsement of goals (somewhat internal), and integrated regulation (internal). When asked if his perception of himself as a student changed as a result of his experience, Mark reflected, "No. I mean I was just always, I'm one of the smart kids. Take the smart kid class. That's it. Would've just felt weird if I wasn't."

Mark also referenced extrinsic motivation he felt by proving himself to his teachers and peers (seeking approval from self or others). Specifically, he referenced points of pride through doing well compared to his peers and passing AP exams. When discussing why he enrolled in specific courses and what led to those decisions, Mark shared a distaste for his high school advisors, feeling as though they held him back from taking an AP course he felt he was capable of taking. At the advice of his advisor, he instead took dual credit Physics, but still decided to take the AP exam. When asked why, he shared:

> I definitely wanted to show up them (his peers). I did better than some of them as well. So, that felt really good….Pretty much all throughout high school that was my whole motive was, you think you're better than me, I'm going to prove you wrong, granted not better, but you don't think I'm as good as I am, I'm going to prove you wrong.

Mark referenced feelings of pride and a desire to prove himself to his advisors, teachers, and peers throughout his reflection on his high school and dual credit experience.

All three participants shared some degree of extrinsic motivation for taking dual credit courses regarding the appeal of earning college credits at no cost or a more affordable rate. When asked about her motivation for pursuing dual credit, Natalie referenced a best friend who

encouraged her to take the courses, indicating it was free and would help to "have some classes out of the way" freshman year. Whitney, the only participant who paid for her courses or AP exams, credited her parents for making it possible. She shared:

> I mean, I think it definitely helped that my parents were willing to help cover the cost so I didn't have to. I think if they weren't able to, it would have been a lot harder to. Because if you can't afford it, you're not going to take the class…. And they always wished for us to go to college too since they hadn't been able to, so when they heard that college credit was cheaper in high school, they were like, oh, for sure! So I think definitely the cost came into it a lot. But they were definitely happy for me, and they wanted me to excel too, because they never had that chance.

Despite unique individual experiences with motivation, all three participants referenced the benefits for dual credit in their desire to get ahead in college or to take general education courses they knew they would need. This reference indicated that the idea of pursuing higher education was either present prior to enrolling in dual credit courses, or became part of their plan as they enrolled in or completed the courses.

Self-Efficacy through Mastery Experience

My first research question did not specifically reference self-efficacy. However, it is important to address the role self-efficacy may or may not have played in each student's pursuance of higher education. While Natalie and Whitney both indicated varying levels of confidence going into their dual credit experience, both referenced feelings of established or increased confidence in their ability to do well in college after having taken dual credit or AP courses in high school. This indicated they each felt a sense of self-efficacy through mastery experience as a result of their dual credit experience (Bandura, 1997). When asked if she felt

dual credit impacted her perception of herself as a student and her academic abilities, Natalie shared, "So before I took [dual credit courses], I was unsure if I could handle those advanced classes. That's why I never took the AP anything and I never tried." Natalie went on to share that she felt her dual credit courses taught her how to study in a way that made her learn best, which benefited her and had a positive impact on her self-confidence coming into college. While Natalie did not acknowledge her dual credit experience as the reason she pursued higher education, she affirmed that her dual credit experience validated her ability to succeed and that she felt more confident going into college as a result of that experience.

Whitney noted that she had a high level of confidence and ease while in her high school classes, earning As without needing to study. However, she also noted feelings of doubt going into her dual credit experience as well. She shared that the experience taught her to not just memorize information, but actually apply it. When talking about her transition from high school to dual credit to college, Whitney used mathematical terms to explain how it felt:

> It's more of a slope. You're slowly going to college, so it's not just a shock… It's more like, oh so this is high school, you can do this. Okay this is [college in high school], you can do this. And then it's college, you can do this.

Whitney contrasts her experience with that of many of her classmates, who she said struggled with the transition from high school to college, stating:

> …they had high school and they're like, 'yeah I got this,' and then they had college, and they're like 'I don't got this.' Because you jump to such a higher level of expectations. So, I guess it was a nice smooth transition, where the expectations of me were gradually increased, instead of one and then a huge jump.

Whitney also credited her dual credit experience for sparking her current degree path, sharing, "I think, if I hadn't taken dual credit classes, for one, I wouldn't have been sparked to go down that [specific path in my major]." She went on to share, "It helped me develop the skills I needed, and I probably would have gone into a [different career path] without those dual credit classes, and learned later on that I wanted to do [my current major program]." Because of her dual credit experience, Whitney felt that she was better able to explore her career interests, gained a sense of viewpoint into college, and learned how to study.

Mark did not reference the same feelings of mastery experience as Natalie and Whitney. When discussing the impact his dual credit experience may have had on his academic abilities or level of confidence, Mark shared that he did not recall feeling more or less enabled by his dual credit experience. He referenced dual credit feeling like any other high school class, and that transitioning from high school to college didn't really phase him. When asked if his view of what a good student is, or his view of himself and his academic behaviors had changed from dual credit until now, Mark shared:

> How my behaviors have changed. I don't know. It's another thing. It's like high school was easy. So I guess, I don't know, I felt like back then I was like if this is a college course then I'm not going to have to try at all. I think there's a difference in mentality and yeah, I don't know. I felt like there was no struggle in any of my courses back in high school. Even the college ones like the AP exams. I don't think there was ever a point in time where I felt my grade was threatened.

Note how Mark specifically comments that he did not perceive his dual credit courses to be rigorous. He went on to note that he did not perceive a change in his confidence level as a result

of his dual credit experience, and found that he "still didn't have to try all that much going in to [his first year of] college."

When considering research question one, each participant shared varying levels of motivation for attending college and pursuing dual credit. Each participant addressed their intent to pursue higher education, whether prior to, or as a result of their dual credit experience. Finally, Natalie and Whitney both shared that their dual credit experience either influenced or affirmed their ability to be successful through mastery experience. In contrast, Mark perceived no change in his level of self-confidence or ability as a result of his experience. The impact of their experiences on their perceived self-efficacy is further explored in the next section.

Research Question Two

The second research question sought to find out what impact first-generation students perceived their dual credit experience to have had on their self-efficacy as a student. To help answer this, I included several questions in my interview guide aimed at understanding how each participant viewed themselves as students, how they have handled academic challenges, and how their self-confidence has or has not changed over time. During several different points in each interview, the participants shared perceptions that their dual credit experience and transition to college either affirmed, increased, or did not influence their self-efficacy as a student. Key findings as they related to dual credit and self-efficacy included students feeling more or less prepared for college, feeling that dual credit did or did not help them build academic skills and form beneficial relationships with faculty, mentors or peers, and increased levels of self-efficacy in some cases.

Preparedness for College

Whitney and Natalie both indicated at different points in their interviews that they felt more prepared for college as a result of their dual credit experience. However, experiences that led to feeling more prepared varied. Whitney specifically noted feeling more prepared for the level of rigor and knowledge required in college. Although she referenced being a strong and confident student going into her dual credit experience, she also talked about the feeling that her dual credit/AP experience was challenging. She shared that she often spent several hours at a time on homework and was jealous of peers who were not in dual credit, not having the same expectations. She also talked about the initial shock of what her dual credit and AP instructors expected of her and needing to adjust to those academic expectations. Finally, she shared that she felt more prepared for the expectations of college as a result of her experience, saying:

> I feel like coming into college…I was a little unsure, because I didn't know how it was going to be different from high school. I had a glimpse, right? But I didn't have an immersion…. I was a little unsure about scheduling and transitioning into college, and living on my own. But the actual coursework I wasn't concerned about. And just as I've gone on, I feel like I understand more of the expectations.

At the end of the interview, she made a point to credit her dual credit experience for preparing her for the academic experience of being a college student, stating:

> There's no way that [dual credit] can prepare you for the social life, and the club aspect, and the living on your own, but they can do a really great job preparing you for what the academics are expecting you to do.

In contrast to Whitney, Natalie indicated feeling a low level of confidence going into her dual credit experience. She shared that both her father and brother were in the military and had

always pushed her to not go to college and pursue the military instead. She indicated that her closest family member with any college experience was her cousin, so she didn't know what to expect going into the experience. She shared:

> I thought it was a good idea to take college classes in high school just to get a start and have an idea of what it's going to be like… I don't really have anyone [in my family with college experience]. I kind of observed what other students in my classes were doing, and seeing how much they were studying, or how they were doing things, and learning from my peers going along together…learning along the way.

When reflecting on her first experience in a dual credit class, Natalie shared that she had a "pretty low" level of confidence, saying, "That was the first time when all the smarter kids were together, and then just seeing how well they were doing and this is my first time taking a college class. Like, I'm not used to this." When thinking about that first college class in high school, Natalie shared:

> That was really intimidating to me. A lot of information, a lot of terms that I've never heard of, a lot of ideas and concepts that were foreign to me. I would go home and just study the book and read it.

Natalie said she prioritized her dual credit courses in high school, because she knew she was earning credits towards college. She said although the material was still difficult when she transitioned to college, not everyone in college had the dual credit experience she did. She indicated the transition was easier because of her dual credit classes, and she felt she benefited from having that prior experience. She also referenced feeling that her dual credit courses taught her how to study, sharing, "After completing the classes, I knew that I could do well in these

college classes and I felt more confident in being able to enroll into actual college and take on being a full time student."

Mark shared a different perspective of his preparedness for college in relation to his dual credit experience. When reflecting on his dual credit/AP experience, Mark said the same teachers taught the standard and advanced classes at his high school, sharing at one point that, "All my dual credits just felt like a high school course. Thirty kids sitting in a standard classroom, no lecture hall." He indicated one dual credit course required them to take tests through the university's online system, but all other classes had hand written tests in the classroom, stating, "It was just like any other class, just a different topic." One important thing to note was Mark's reflection that some of his dual credit courses allowed students to either take the class for high school or college credit. He noted "the only difference was either you have the [high school] GPA to get the credit or you didn't. Besides that, same exact material for people taking it as just a high school [class] and people taking it as college." When reflecting on whether he felt the dual credit classes were what he expected, he also struggled to recall, starting with, "Oh, I felt like…That was a while ago…" He went on to share:

> I mean I wouldn't be surprised if I thought that they were easy and that it was going to be super easy because I was one of the smart kids in my course …. But no, I mean I probably had a bit of pride going into it and this is cake. This is easy.

Mark noted that one of his dual credit instructors gave him and some classmates more difficult homework problems than his peers, reflecting, "I enjoyed it because they were intuitive but actually challenging problems and everything else felt super mundane." He said he and the group of classmates were typically given more challenging homework because his instructor acknowledged he typically earned As on all of his dual credit exams. When reflecting on the

experience, he stated, "I thoroughly enjoy that aspect of that. But no, I don't know, I guess for the most part it wasn't really ever a challenge…. I thought [my dual credit/AP courses] were way too easy in high school."

When discussing his transition from high school to college, Mark said the experience did not really phase him, sharing:

> I felt a lot of people got super stressed out about it and for me it didn't really phase me. I think it was kind of part of that whole, my self expectation, this is just the next step. So I was never really stressed out about it or phased all that much, it was just, now I'm here instead of there.

He shared that he had a lot of free time his first year of college and his courses felt too easy, noting, "I wish it was more rigorous to start off with because I think that would have driven me to try a little harder. I still didn't have to try all that much going into college." When considering whether he felt the experience prepared him for college, at the end of the interview Mark shared that he felt his high school was very relaxed and forgiving, noting:

> For those who intend to go to college, I do think that there should be higher standards because the two are not comparable, and I don't think I necessarily benefited from taking any college courses in high school besides the credits. The credits, that's what it was about. Got the credits, bye.

He shared that he studied minimally for his dual credit courses in high school, but has had to study more in college, saying, "I mean maybe it was just that the content was easier, but I do think besides the credits, there was no substantial gain from taking those [dual credit and AP] courses in high school."

Note that when reflecting on their dual credit experiences and its impact on college preparedness, each participant shared varying perspectives. While Whitney and Natalie referenced feeling more prepared for college and the confidence that emerged because of their rigorous dual credit experiences, Mark did not feel he benefited from his dual credit experience outside of earning credits for college due to a perceived lack of rigor in the courses.

Impact on Academic Self-Efficacy

As each participant reflected on college preparedness in relation to their dual credit experiences, conversations regarding academic skills were common. Through these conversations, another key finding emerged – the potential impact dual credit may or may not have on a student's confidence in their academic skills, or academic self-efficacy (Schunk, 1991).

During their interviews, Whitney and Natalie reflected on the challenge and rigor of their dual credit experiences. Both participants felt their dual credit classes helped them build academic skills including study habits, test taking strategies, and memorization strategies to apply to difficult concepts. They also shared that the experience had a positive influence on their time management skills and helped them build skills to better handle a heavy course workload in college. They each referenced learning the importance of asking questions and building mentor relationships with instructors and peers. Finally, both participants noted how the class structure and expectations of dual credit prepared them for the academic expectations of college.

When discussing her transition to college, Whitney noted that her dual credit experience gave her a viewpoint of college, so she better understood the difficulty and wasn't as shocked her first year. She shared, "A lot of students have that first few tests where…they struggle because they don't know how to study, but I didn't have that problem because dual credits kind of taught

me how to study effectively." Whitney said that while the structure of her dual credit and college classes were similar, there were key differences that helped her build academic skills for college. She shared:

> The pace was similar, the expectations were similar, but you did have [assistance] in dual credit, such that the teacher still would say, 'Hey, I didn't get this assignment from you, can you get it in?' Or be like, 'Here's your study guide.' In college…not a lot of teachers give you a study guide, and if you didn't get your assignment in you didn't get your assignment in. So it's nice to have that college level of work [in dual credit], with a little bit of [an assist].

Whitney also noticed a jump in testing expectations, feeling that her dual credit/AP exams were a lot more challenging than her high school work. She explained:

> It's one thing to learn a different type of concept, but it's another thing to be expected to apply that not just in thought, but in practice. Because, you know, high school, it was just like multiple choice and once in a while you show your work. And in [dual credit] it's just like we don't have a word bank, you've got to remember it, and we dock for spelling, and you have to memorize everything – for my anatomy especially, it was a huge jump.

She noted that the dual credit experience was very beneficial, explaining:

> [While in high school] I still had those nice fun classes that were easier, but I also had that higher expectation [in dual credit], where I could focus on just that one thing. Because in college you have six classes like that, as opposed to [dual credit in] high school where you might only have two.

Whitney also talked about how her dual credit experience taught her to manage her time and learn how to work best with her dual credit instructors outside of the classroom. She shared

that in a high school class, there was plenty of time to do homework and ask questions in class. In contrast, her dual credit/AP classes often taught bell to bell, so she would need to arrange time outside of the class to meet with the instructor and ask questions, similar to college. It was clear that she valued her relationship with dual credit/AP instructors, sharing:

> I was a lot closer to them than I was my high school teachers, because you start talking about topics that are more than just surface level. You don't just say, 'this is what happened in Shakespeare,' it's like, 'analyze what this particular moment means in Shakespeare,' and you spend a lot more in depth time and energy, and I think that really opens up good communication and good relations. I felt really close to [dual credit] professors, because they taught me all of this cool stuff.

She also highlighted the importance of peer and faculty relationships when reflecting on her first semester of college. She shared that when she first got to college, she would scour the internet for information when she had a question. She recalled a moment during her first semester when she overheard her classmates talking to each other for help, and she realized that was okay. She shared:

> As I've gone on, I've learned it's okay to talk to people…. It slowly transitioned from just talking to my peers, to them being like, ok, you can go to [the tutoring center], and going there, and then if they don't know, they're like, 'you should go talk to your professor,' and yeah, you can do that. I kind of knew that from dual credit, but sometimes it was hard to be like, this is the same as dual credit.

While she felt there were similarities between dual credit and college, Whitney noted differences as well. As she transitioned to college, Whitney remembered adjusting to instructors not taking attendance or having assigned seats, sometimes having you call them by first name,

and not having classes all day every day like her dual credit experience. She shared, "When you're in dual credit, you're just like, oh, this is the hardest it gets, right? But you forget you're in other high school classes too, so you come to college, and you don't meet every day." She noted that she also gained better time management skills as she transitioned to college. While Whitney indicated not needing a job in college due to earning extensive scholarships, she keeps busy by being involved in several student organizations in addition to her heavy course load. She said her time management skills gained in high school also helped her to adjust her homework schedule with everything that came up with being a college student. "You know, like cooking meals, and doing laundry," she said, "and all of the living at home things that you didn't expect to deal with."

During her interview, Natalie also focused on the rigor and heavy workload of her dual credit courses, citing time management skills and learning how she studies and learns best as two important academic skills she gained from the experience. Similar to Whitney, she mentioned spending several hours at a time studying for her dual credit courses while in high school, learning a lot of information at once, and referenced testing differences between high school and dual credit. While she said she often received study guides that gave direct questions for tests in high school, her dual credit courses focused more on implementing information she learned. "So, I came in kind of knowing how to study. You can't just memorize it, you have to know the processes and stuff like that. So, I think you're really benefited by that," she shared.

Natalie also discussed the importance of relationships. She took all three dual credit classes with a friend who she said encouraged her to take the classes and they often studied together. She also referenced the impact her experience had on relationships with teachers, sharing that when she did not understand difficult concepts or theories in her dual credit

psychology class, she forced herself to go in and talk with the teacher, which helped her connect with them and become more comfortable asking for help. She shared that in high school she did not want to talk to teachers or ask questions, but through her dual credit experience, realized the importance of faculty relationships and visiting her professors during office hours in college if she does not understand something.

Similar to Whitney, Natalie also mentioned the heavy workload of dual credit had a positive impact on preparing for the rigor of college, saying she "expected more" from assignments in college. She shared:

> I thought [the transition] was pretty easy because as a dual credit [student], I was taking six classes a day….I was taking four high school classes and then two college classes on top of working a job and I think I was pretty busy. And then coming to college and having all this free time, and I didn't have a job and the flexible schedules really helped to kind of manage my time.

She shared that in her current classes she prioritizes studying and regularly uses her time management skills gained in high school to balance studying, staying active, and maintaining her commitment to being an active member of the military. Overall, Natalie highlighted that her dual credit experience was helpful in building academic skills and study habits needed for college, sharing, "I felt like the class load in high school was kind of more or a lot more, but I'm not quite sure if that was just to kind of prepare us for college classes."

While Whitney and Natalie highlighted the rigor, study habits, relationship building and time management skills gained from their dual credit experiences, Mark had a different perspective, again emphasizing that his dual credit experience felt like he was enrolled in another high school course. Throughout the interview, Mark indicated a strong sense of self-confidence

in his academic abilities, noting that he didn't need to study in high school, had plenty of free time to manage his course load, and indicated his dual credit/AP courses felt no more rigorous than his high school classes. He shared that the only part of the experience that made him "jittery" were the AP exams, sharing:

I feel like [the AP] exam just held a lot more weight than the rest of the course. I preferred the AP ones. That's what it boils down to because I was like, that was the whole year, one exam. How do you do on that? What did you learn in the year?

When asked if he felt his dual credit experience prepared him for the academic expectations of college, Mark quickly said, "No. I think that it was still under high school rules for a lot of them. That doesn't translate." Mark referenced the need to have a job in high school while a lot of his friends had allowances, and between work and being a student athlete, he still had "all the time in the world" to do his homework. However, he also noted feeling that his high school teachers were too relaxed when it came to late work, sharing that he often turned homework in late in high school, feeling there were "minimal to no negative" effects to him or his grade as a result. He referenced a teacher who would have homework due periodically instead of daily, and Mark often would wait to do his assignments the day they were due. He shared:

I'd do two weeks of homework in one day and he would always be like, 'Hey, you're not going to do good on the AP exam if you keep doing your homework like this because there's no way that you're learning it.' And I was like, 'just you wait…'. And he was just like, 'oh college is going to be harder. You won't have late homework, you won't have this.' I felt like it was just the standard cookie cutter responses.

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When discussing the differences between his dual credit and college experience, Mark shared that the teaching and homework philosophies of his college professors vary. However, he specifically mentioned a difficult professor that he wished he had for every course because he has specific due dates and "You turn it in or you don't, you get the points or you get a zero. And I like that because you actually have to do the homework." He went on to say that he likes when professors have set in stone due dates that they stick to, because it forces him to plan out his time.

Mark also reflected on how his time management skills have evolved from feeling no time constraints as a dual credit student to feeling competing priorities as a college student. When discussing academic self-confidence, Mark referenced having competing priorities, sometimes struggling with time management, and how his academic priorities have shifted over time. At one point in the interview, he described his first year of college as "way too easy," sharing:

> I think that was very detrimental to me. I don't know. I just felt like I was only taking gen ed's and intro level courses and I got a better GPA in my first year of college than I ever had in high school, which I mean is good. I'm not saying that's bad at all, but I think my next year it showed that my study habits weren't quite there. Now, besides that, fast forward, I'm doing better this semester. I'm playing the catch up game.

Mark indicated that while he knows he's plenty capable of doing it, he has had difficulty managing his time with the need to have a job and devote his time elsewhere. He reflected, "I could definitely be a better student. I think time impacts that a lot." He discussed the need to work 25-27 hours a week, manage his commitment to a club on campus, relax and socialize with friends, and trying to find time for class in between. "So I think sometimes…I'm super motivated

for school and other times I just, starts to drag on and when I hit those walls it's very noticeable," he shared.

When reflecting on what he felt as the ease of his dual credit experience compared to the rigors of college, Mark referenced going from "no stress [in high school] to a lot of stress [in college]." He talked about the need to study for exams in college compared to not studying in high school, and feeling he would benefit from having a clearer timeline of when he should start studying for exams. He said that although he is "well aware of the impending doom of an exam," he doesn't get butterflies going into an exam because his mentality is, "If I know it, I'll get it and if I don't, I won't." When reflecting on his dual credit experience at the end of the interview, Mark said:

> There wasn't a difference in study habits for me. I actually studied in college, I don't think I ever studied in high school, not once. I mean I looked over the note sheet before an exam and that was about, 'I'm studying for high school.'

When discussing faculty relationships, Mark felt it was much easier to develop relationships with teachers in high school because many of them were his coaches as well and they had more interaction than he has with his college professors. He commented, "I feel like there's a lot of potential for there to be greater student professor interactions. But at the same time it's like how do you communicate when it's their office hours versus your schedule?" He shared that while he does not find it difficult to ask questions of his professors, he finds it more difficult to get to know them than he did with teachers in high school.

Note that when reflecting on their dual credit experiences, Whitney and Natalie shared validated and increased levels of academic self-efficacy as a result of their experiences. Both participants referenced increased confidence in their ability to study, take tests, manage their

time, and handle a heavy course load. They each also referenced beneficial peer and faculty relationship skills they developed as a result of their experiences. In contrast, Mark indicated a strong sense of confidence in his academic abilities in high school that he did not perceive to change as he entered college. In his interview he described feeling a lack of rigor in his dual credit courses, referencing his instructors were relaxed, he had plenty of time to do homework, and that the courses felt like another high school course. However, he also referenced the shift in college, feeling that his first year was very easy and he had no issues with time management, but noticed his study habits were not fully developed his second year of college as material got more challenging. He also referenced feeling a competing pull for his priorities as a junior and trying to balance that. Notice that while Mark indicated he often turned homework in late in high school, he also noted that he prefers faculty members who enforced strict due dates and deadlines in college.

Increased or Consistent Level of Self-Efficacy

The second research question specifically sought to find out if students perceived their dual credit experience to have an impact on their self-efficacy as a student. Natalie and Whitney both shared that they felt more prepared for college and had a higher level of self-confidence in their academic abilities and transition to college as a result of their dual credit experience. Both participants referenced feelings of self-confidence in themselves and their abilities that were either affirmed or strengthened because of the experience.

Natalie in particular noted a low level of self-efficacy prior to enrolling in dual credit courses. When asked why she chose to enroll in dual credit, she shared:

So my best friend actually was thinking about it. I was never going to. I didn't think that

college classes were for me in high school. I never took any of the upper level, like AP

classes, anything. I just took the regular math and sciences.

Natalie referenced the verbal persuasion of her friend who encouraged her, sharing that her

friend planned to take them as they would be helpful for college and the two went through the

experience together as study partners.

When asked if she felt taking college courses in high school prepared her for college,

Natalie demonstrated belief in herself through the initial verbal persuasion of her friend and the

mastery experience of dual credit (Bandura, 1997), sharing, "I felt like my college classes in high

school were kind of, I don't know, overwhelming. A lot harder than some of my general

freshman classes." She went on to share:

I feel like just by having the experience of dual classes in high school, even though I felt

like they were pretty hard and a lot at the time, that really impacted me and raised my

confidence level. Like, 'Oh, I can, I can do college.' And yeah. So, I feel like that was

pretty beneficial and I'm really happy I did that.

When reflecting on her dual credit experience, Whitney shared that although the courses

were time consuming and sometimes difficult, they affirmed her abilities and had a positive

impact on her self-efficacy through mastery experience as well. She shared:

You felt really good about yourself, like you were confident, you were like, 'I can do this.

I know going to college then I can succeed.' So I guess in that aspect, my classmates

[who weren't in dual credit] didn't necessarily have that, where I was just like, 'yeah, I

know I got this.'

Throughout his interview, Mark did not acknowledge feeling that his dual credit/AP experience had an impact on his self-efficacy or belief in self as he prepared for college. He consistently reinforced that his dual credit experience felt like high school, recalled feeling that the courses were easy, and his transition to college was easy and didn't phase him. When asked whether his self-perception changed as a result of his experience, Mark said no, and shared that he was just always one of the smart kids and took "the smart kid class." He also referenced feelings of pride, a competitive spirit when it came to testing and AP scores, and compared his success to his high school classmates. He did reference taking advanced classes with a consistent group of students and indicated feeling value in being considered "one of the smart kids." These shared examples could be associated with Bandura's (1997) concept of mastery experience or the vicarious experience of competing and working alongside his peers in advanced classes. However, Mark did not verbally assert feeling that the experiences or peer influence increased or affirmed his belief in himself. He referenced AP exams having the largest impact on him throughout his dual credit experience, because he felt the end of year exam held more weight than an entire dual credit course, sharing, "When I was in just the [AP] class, the exams were the only part that I got jittery about." When discussing taking the AP Physics exam having not taken the class, he shared that he just wanted to see if he could do it, "I mean really it was just to pit myself up against my friends that were actually in AP Physics to see if I could still do it." When asked if his confidence level in his academic abilities changed as a result of his dual credit experience, Mark shared:

> I don't think necessarily the confidence itself changed, but when I got the [AP] exam score back, I was just like, yes, I don't know dopamine release, but no, I don't know. Yeah, maybe. I can't say I recall feeling more or less enabled.

When considering research question two, each participant shared unique reflections of their dual credit experience and perceived impacts it had on their preparedness, academic self-efficacy, and overall belief in themselves as they have pursued and persisted in higher education. Whitney and Natalie indicated feeling more prepared for college as a result of dual credit, while Mark did not perceive the experience to have an impact on his preparedness and transition to college. In regards to academic self-efficacy, Whitney and Natalie both referenced feelings of affirmation, established, or increased levels of confidence in their academic skills and ability to succeed. In contrast, Mark did not perceive a change in his academic skills from high school to college, but noted that his study habits had not fully developed by his sophomore year, which was demonstrated in his academics. He also referenced competing priorities in college as he has worked to balance his course load and focus on improving his time management skills. Finally, Natalie and Whitney both indicated feelings of increased self-efficacy through mastery experience. Natalie also referenced the verbal persuasion of her best friend who encouraged her to pursue dual credit, which was outside of her comfort zone. Mark did not specifically reference feelings of self-efficacy through mastery experience, but shared examples that could be considered vicarious experience or mastery experience. The impact of these findings will be further explored in the next chapter.

Summary

Chapter 4 provided an explanation of the qualitative inquiry performed, participant descriptions, and included a detailed analysis and key findings aimed at answering each of the research questions. Chapter 5 offers a discussion of the key findings and limitations of the study, along with implications for theory and practice, and recommendations for future research.

CHAPTER 5. DISCUSSION

Students whose parents did not complete a college degree are less likely to pursue and persist in higher education than their peers whose parents are college educated. A report using data from a cohort of high school graduates from 2002 found that first-generation college students were less likely to pursue higher education, more likely to withdraw due to lack of affordability, and were overall 22% less likely to obtain their degree within eight years of graduating high school than their peers who had at least one parent with a bachelor's degree (Redford & Mulvaney Hoyer, 2017).

When pursuing higher education, first-generation college students cite challenges including cost, lack of academic preparation, family support/expectations, and lack of understanding resources available to them (Collier & Morgan, 2008; Ishitani, 2006; McCarron & Inkelas, 2006; Saenz et al., 2007). According to Pretlow and Wathington (2013), dual enrollment options allow high school students to enroll in college-level coursework during their junior and/or senior year for credit that can satisfy both high school and college degree requirements. Research has shown that first-generation college students who participate in dual enrollment programs are more likely to pursue and attain a postsecondary degree than their first-generation peers who did not participate in the program. However, their continuing-generation peers with college-educated parents have been found to be just as likely to pursue and attain a postsecondary degree regardless of whether they participated in a dual credit enrollment program. These findings indicate that low SES students and specifically first-generation college students benefit more from dual enrollment options than their continuing-generation peers (An, 2013).

Dual credit options allow high school students to enter college with college credits earned, as well as gain a lived experience of the role expectations, academic rigor, and time that it takes to complete college-level work. Research indicates a relationship between college experience and increased levels of self-efficacy. A student with higher self-efficacy after their first semester of college is more likely to persist, and may have a higher GPA. Additionally, a student's generational status, socioeconomic status (SES), and perceived parental support can also impact their self-efficacy (Baier et al., 2016; Gore, 2006; Merritt & Buboltz, 2015; Wright et al., 2012).

The purpose of this study was to investigate the relationship between first-generation college students, dual credit enrollment options, and the potential connection dual credit opportunities may have with self-efficacy in first-generation college students. This was done through interviews with first-generation college students at a four-year public university located in the suburban Midwest United States who completed six or more dual college credits while in high school and persisted to their junior year at the institution. This study sought to answer the following questions:

1. How did completing dual credit courses in high school impact first-generation students' decision to pursue and persist as a college student?

2. What impact do first-generation students perceive their dual credit experience to have had on their self-efficacy as a student?

Additional questions used in the research process sought to get a sense of each student's background, motivation for taking dual credit coursework, and influencers or motivation for pursuing higher education.

Key Findings

The results of this qualitative analysis illustrate several key findings related to the pursuance, persistence, and perceived self-efficacy of first-generation college students who earned dual credits while in high school. Despite unique motivators for pursuing dual credit, each participant indicated extrinsic motivation in their desire to earn dual credit to get ahead in college or to take general education courses they knew they would need. This finding indicated that the idea of pursuing higher education was either present prior to enrolling in dual credit courses, or became part of their plan as they enrolled in or completed the courses. Each participant also showed persistence by continuing to their junior year at the institution and indicating intent to complete their degrees and pursue careers in their field of study. Natalie and Whitney both shared that their dual credit experience either influenced or affirmed their ability to be successful through mastery experience. In contrast, Mark perceived no change in his level of self-confidence or ability as a result of his experience.

Key findings as they related to dual credit and self-efficacy included students feeling more or less prepared for college, feeling that dual credit did or did not help them build academic skills and form beneficial relationships with faculty, mentors or peers, and increased levels of self-efficacy in some cases. While Whitney and Natalie referenced feeling more prepared for college and the confidence that emerged because of their dual credit experiences, Mark did not feel he benefited from his dual credit experience outside of earning credits for college. In regards to building academic skills, Whitney and Natalie shared validated and increased level of academic self-efficacy as a result of their experiences. Both participants referenced increased confidence in their ability to study, take tests, manage their time, and handle a heavy course load due to the rigor of their experiences. They each also referenced beneficial peer and faculty

relationship skills they developed as a result of their experiences. Mark did not express feeling a change in his academic self-confidence as a result of his experience. In his interview he described feeling a lack of rigor in his dual credit courses, referencing his instructors were relaxed, he had plenty of time to do homework, and that the courses felt like another high school course. However, he also referenced the shift in college, feeling that his first year was very easy and he had no issues with time management, but noticed his study habits were not fully developed his second year of college as material got more challenging.

Finally, Natalie and Whitney both indicated feelings of increased self-efficacy through mastery experience throughout their interviews. Natalie also referenced the verbal persuasion of her best friend who encouraged her to pursue dual credit, which was outside of her comfort zone. Mark did not specifically reference feelings of self-efficacy through mastery experience, but shared examples that could be considered vicarious experience or mastery experience.

Discussion

Relationship between Dual Credit Experience and Motivation

Research has shown that first generation college students are less likely to pursue, persist, or complete degrees, despite their aspirations to do so (Ishitani, 2006; McCarron & Inkelas, 2006). Natalie and Whitney's intrinsic motivation is important to note as it supports the idea that intrinsic motivation, coupled with dual credit experience, may have contributed to their overall pursuance and persistence within higher education. All participants also noted the benefits of earning college credits at a reduced rate or at no cost. Ishitani (2006) found that first-generation students were 1.3 times more likely to leave their college or university than their continuing generation peers. Some of the factors influencing departure included family income, lower expectations of their education, and lower intensity of high school academics. Findings regarding

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the extrinsic benefit of credits earned add to Ishitani's (2006) findings, supporting the idea that dual credit experience may reduce cost and credit load for first-generation college students, help them prepare for the rigor of college, and develop important academic skills to reduce risk of withdrawal. The benefit of first-generation students earning college credit through dual enrollment at a reduced rate or no cost is an important note to consider as it relates to implications for practice.

Each participant's extrinsic motivation for earning college credits to get ahead also indicated the motivation to pursue higher education was either present prior to enrolling in dual credit courses or became part of their plan as they enrolled in or completed the courses. Mark and Whitney also indicated levels of parental support and encouragement to pursue higher education. These findings support research conducted by McCarron and Inkelas (2006), who shared parental involvement and perceived importance of academics to be main predictors of first generation students' future success in their study. Findings in this study related to the presence of intrinsic motivation and support systems in participants also confirm research from Irlbeck et al. (2014) who found that parental support, intrinsic motivation, and encouragement from high school teachers influenced students' decisions to attend college and to be successful once there.

Self-Efficacy through Mastery Experience

Findings from this study indicate that the impact of one's dual credit experience on their self-efficacy seems to hinge on whether or not it is truly a mastery experience. Gore (2006) argued that a student's belief in their academic abilities may be related to the extent to which they have experience within academics. This note supports the concept that having a rigorous dual credit experience prior to entering college in which a true mastery experience occurred may

have a positive impact on a student's belief in self and their academic abilities as a college student. Further, students who enter college with this mastery experience may experience increased levels of self-efficacy that those without dual credit experience may lack. This is particularly important in regards to the first-generation student population that was examined for this study. Research has indicated first-generation college students report challenges including lower likelihood of pursuance, persistence, and completion, as well as understanding expectations, role mastery, and other barriers in higher education (Allen & Dadgar, 2012; Collier & Morgan, 2008; Ganzert, 2014; Ishitani, 2006; Lichtenberger et al., 2014).

During their interviews, Natalie and Whitney shared feelings that their dual credit experience either increased or affirmed their belief in their ability to be successful in college. This finding aligns with Bandura's (1997) concept of mastery experience, indicating the experience of mastering academic skills through dual credit experience reinforced or increased their belief in self. Both participants referenced increased confidence in relation to study habits, test taking, time management, and cultivating beneficial peer/faculty relationship, and asserted that their experiences validated their ability to be successful when transitioning to college and pursuing higher education. These findings indicate that true mastery experience occurred for Natalie and Whitney, supporting assertions made by Collier and Morgan (2008) and Lile et al. (2018), and adding to findings made by Merritt and Buboltz (2015).

Collier and Morgan (2008) argued that students who come from backgrounds that lack experience in higher education may not perform as well as those students whose parents were college educated because they lack the background knowledge to naturally master the role successfully. The researchers described role mastery as the student's ability to understand college and faculty expectations, increasing their ability to navigate college successfully. They

found that first-generation college students reported issues with time management, balancing academics with the need to work, and feeling that they did not have resources or people outside the university they could ask for help. The results of this study support this prior work, as findings reveal the benefits of a rigorous dual credit experience in which mastery experience occurs may alleviate some of these role mastery concerns described by the researchers and lead to increased college performance in first-generation college students.

In their study, Lile et al. (2018) found dual credit experience to have positive impacts on participants by introducing them to college, giving them a better understanding of college expectations, and making students more comfortable with the expectations of the college student role. The researchers found that first-generation college students specifically indicated a desire to attain higher degrees than their parents, consistent with claims made by Whitney and Mark in this study. Lile et al. (2018) also suggested in their findings that the dual credit experience may provide low SES and/or first-generation college students with knowledge and transition skills for college that their higher SES or continuing generation peers may find elsewhere. These conclusions are consistent with perceptions shared by both Natalie and Whitney when they discussed the perceived benefit dual credit had on their preparation, transition to college, and academic self-efficacy. Both participants discussed learning self-advocacy skills through dual credit in their interviews, including understanding the importance of peer and faculty relationships that continuing generation students may learn from their parents. Natalie also mentioned not having close family members with college experience, that she was hesitant to enroll in dual credit if not for the verbal persuasion of a best friend, and that her experience made her more confident in her ability to succeed once in college. Whitney asserted that dual credit helped her affirm her desired career path, made her feel more prepared for the rigor and level of

knowledge required in college, and said that all of what she learned about college expectations

likely came from dual credit, given that neither of her parents had gone to college.

These findings also add to the limited research study conducted by Merritt and Buboltz

(2015). In this study, researchers found that increased levels of familial SES, parental

involvement, and college generational status had a positive impact on a student's levels of self-

efficacy. One could argue that in the case of Natalie and Whitney, dual credit experience also has

a positive impact on a student's preparedness, academic, and overall self-efficacy when mastery

experience occurred. While the results were not the same for Mark, findings from this study in

relation to outcomes for Natalie and Whitney argue that rigorous dual credit experience has a

positive impact on self-efficacy of first-generation college students prior to their transition to

college. This may also indicate a higher likelihood of pursuance, persistence, and completion of

higher education.

In contrast, Mark's experience with dual credit was not consistent with Lile et al.'s

(2018) findings, as he did not indicate feeling more prepared or an increase in his academic self-

efficacy as a result of the experience. He noted a lack of rigor when describing his dual credit

experience, sharing that it was under high school rules, which didn't "translate." He asserted

feelings that his experience did not prepare him for the academic expectations of college, and he

did not perceive to have benefited from his dual credit experience outside of earning credits for

college. This may indicate Mark did not build the role mastery skills needed to successfully

transition to college through his dual credit experience, or that he did not perceive the ease of his

college transition and first year of collegiate academics to be a result of his dual credit

experience. These findings also indicated mastery experience as described by Bandura (1997)

did not occur for Mark. While he noted the ease of his first year of college, he also noted

struggling with study habits, motivation, and time management. In his interview, he discussed

the need to work more than 20 hours a week and difficulties with budgeting his time between

school, extracurricular activities, and work. These findings support the research of Collier and

Morgan (2008), and differ from the positive findings provided by Natalie and Whitney, who

affirmed mastery experience occurred through their dual credit courses. These findings also

provide implications for future research regarding the consistency of instruction, and impact

perceived rigor of dual credit has on whether a mastery experience occurs as well as the level of

efficacy perceived by participants.

The nature of one's dual credit experience is a key hinge point in determining whether

those benefits are realized and mastery experience occurs. Findings in this study indicate the

nature of the dual credit experience needs to be rigorous enough to provide a mastery experience

to help participants recognize and develop the skills they need to increase self-efficacy and be

successful in a college classroom. In this study, Natalie and Whitney clearly indicate that

mastery experiences occurred as a result of their dual credit experience, while Mark's perception

of his experience indicated that his dual credit experience was not consistent with that of a

mastery experience.

Implications for Theory

The purpose of this study was to investigate a potential connection between dual credit

experience and self-efficacy of first-generation college students. Findings in this study provide

an illustration of Bandura's (1997) concept of self-efficacy as it relates to the dual credit

experience of first-generation college students. Specifically, facets of self-efficacy defined by

Bandura, including mastery experience, verbal persuasion, and vicarious experience, manifested

in the experiences described by study participants and, ultimately, influenced their perceptions of their level of self-efficacy.

First, as noted in the discussion, first-generation college students who participated in dual credit programs perceived to be rigorous also perceived an increase in their self-efficacy, which reaffirms Bandura's (1997) concept of mastery experience as a facet of self-efficacy.

Additionally, study results reaffirm Bandura's (1997) concept of verbal persuasion as a facet of self-efficacy. Verbal persuasion is the concept that someone an individual views as influential can support or reinforce one's belief in their ability to succeed (Bandura, 1997). In this study, Natalie indicated that her friend encouraged her to pursue dual credit, sharing it would help them get ahead on courses they would need for college. Natalie viewed her best friend as a positive influence, who strengthened her belief that she was capable in succeeding in dual credit courses.

Finally, while Mark reinforced throughout his interview that he did not perceive a change in his academic self-efficacy as a result of his dual credit experience, he did discuss Bandura's (1997) concept of vicarious experiences in his interview. Bandura's (1997) concept of vicarious experiences is related to observing the behavior of others, and the notion that when we see peers or those we look to as role models experience success, it may reinforce an individual's belief that they are capable of mastering roles and experiencing the same success. In conversations regarding taking dual credit courses with the same group of peers, the pride he felt in that, and the competitive nature of wanting to be successful and outperform his peers on AP exams, one could argue Mark indicated feelings of self-confidence when he reflected on and felt that he performed consistently with or outperformed his peers.

The results of this study reaffirm Bandura's (1997) well-tested theory of self-efficacy, as first-generation college students who participated in dual credit programs perceived to be rigorous also perceived an increase in their self-efficacy. Additionally, this study expanded the use of self-efficacy theory to investigate the connection between dual credit and self-efficacy as it relates to first-generation college students.

Implications for Practice

The result of this study are important as K-12 professionals, as well as college and university administrators, consider the future of dual credit as a means to prepare high school students for the rigor and expectations of college. As of 2010, at least 40 states had formal education policies addressing dual enrollment, and dual credit programs were found in various forms in all 50 states (Allen, 2010). Research suggests that completing dual credit courses has a positive impact on college persistence and completion outcomes (Allen & Dadgar, 2012; Ganzert, 2014; Lichtenberger, Witt, Blankenberger, & Franklin, 2014). However, these results may vary depending on the state, delivery method of courses, and number of courses completed.

The results of this study are crucial as we consider the reality that first-generation college students are 22% less likely to obtain a college degree within eight years of graduating high school than their peers who had at least one parent with a bachelor's degree (Redford & Mulvaney Hoyer, 2017). Key findings in this study indicate a positive relationship between a rigorous dual credit experience and the concept of mastery experience as it relates to developing self-efficacy in first-generation college students. This information is important for K-12 and higher education administrators to note as they build dual credit and AP programming partnerships in schools or on college campuses. Dual credit experiences must be built on rigor to

create a true mastery experience that aids first-generation students in building academic self-efficacy.

First-generation college students cite challenges including cost, lack of academic preparation, family support/expectations, and lack of understanding resources available to them (Collier & Morgan, 2008; Ishitani, 2006; McCarron & Inkelas, 2006; Saenz et al., 2007). As shown in the results of this study, a no-cost, rigorous dual credit experience that results in mastery experience may reduce barriers for first-generation college students. First generation college students in this study indicated the reduced or free cost of college credits were a large part of their motivation to pursue dual credit. The benefits, however, went beyond just the accumulation of credits, as those students who had a true mastery experience also noted feeling more prepared for the rigor and expectations of college, and referenced examples of building important and mutually beneficial relationships with faculty and peers along the way.

These findings are important as they further indicate the importance of dual credit experience in preparing first-generation students for the rigors of college. Further, findings of this study show that first-generation college students interested in pursuing higher education would benefit from a rigorous dual credit experience to prepare for the academic rigor and expectations of college, improve transition skills, help students learn to cultivate effective relationships, and increase overall self-efficacy. Additionally, these skills and self-efficacy through success in an academic environment prepare first-generation students who may not have the opportunity to build these skills or gain knowledge elsewhere, compared to their continuing generation peers.

Findings from this study indicate that first-generation college students who gain college experience prior to college may be more likely to pursue or persist at higher rates, consistent

with An's (2013) research result. This student population may have higher rates of self-efficacy as a result of a rigorous dual credit experiences. This also further demonstrates the benefit of dual credit course offerings to first-generation students for free or at a reduced cost. In summary, as policy-makers and administrators make decisions related to dual credit, they should consider the following recommendations that have emerged from this study. First, dual credit should be free for first-generation students. Second, for first-generation students to build academic skills and understand college expectations they may not learn in comparison to their continuing generation peers, the dual credit options must be a rigorous experience to translate into a true mastery experience. Regarding rigor, policymakers should consider ensuring consistency regarding academic criteria for students enrolled in dual credit, expectations of dual credit instructors, and consistency regarding testing methods for students enrolled in dual credit courses. As noted in the findings of this study, rigor consistent with that of a college environment is particularly important in building academic skills and self-efficacy as first-generation students prepare for and transition to college.

Limitations and Recommendations for Future Research

Limitations that occurred over the course of this study included constraints in the diversity and number of participants, and potential timelines of the research. Ideally, an increase in the number of participants, as well as a wider range of dual credit delivery experiences and socio-demographic diversity would have been preferred to increase the saturation of information. While I was satisfied with the range of information gathered from three participants, two to three more participants may have helped further demonstrate and affirm the key findings in this study. Additionally, an increase in the ratio of male and female participants may have provided further insight into gender dynamics to the dual credit experience and outcomes that weren't covered in

this study. Participants in this study also lacked apparent ethnic diversity, which may have added insight into additional familial or cultural dynamics to the results.

In regards to limitations with delivery method, most participants experienced dual credit and AP courses in the high school classroom, with the expectation of Whitney's summer Ivy League dual credit experience. All dual credit and AP courses examined in this study were taken in a college (in Whitney's case) or high school classroom with other high school students. Further depth in findings may have occurred in research participants who pursued dual credit through part or full-time enrollment on-site at a college or university with classmates who identified as college students.

Participants in this study were in their junior year at the institution. The interview provided a snapshot in time, which was a study limitation as it required students to rely on their recollection of events from over two years prior. While Whitney and Natalie were able to vividly recall how their dual credit experiences felt and affected them, at one point in the interview Mark remarked that his experience was a long time ago as he tried to recall specific memories of how the classes felt and impacted him as a student. In correlation to the findings of this study, Mark's experience further indicates that his dual credit experience may not have been as impactful as was the case for Whitney and Natalie. Additionally, while all participants indicated intent to graduate and pursue careers in their fields of study, they have not yet completed degrees or graduated from the institution, so the impact of dual credit on their ultimate completion of their degrees was not able to be assessed.

Based on the limitations and results of this study, I have several recommendations for future research to build on the results of this study. First, the findings in this study indicate an importance on the consistency of instruction and rigor involved in a dual credit experience in

order to better evaluate whether true mastery experience occurred as well as the overall impact on self-efficacy of the student. An observational case study based on a cohort of students enrolled in a dual credit or postsecondary enrollment program at a particular high school, college, or university may be beneficial to gain this consistency in research. The ability to track GPAs may be another benefit in future research studies to better align perceptions of mastery experience and future success or struggle with academic outcome data. Specifically, a study investigating the transition from high school to college, including whether students pursued college right away or delayed attendance, as well as whether dual credit participants were more or less likely to complete, or less likely to fail classes their first year than non-dual enrolled peers. As mentioned in limitations, a wider range of demographics in participants, including an increase in the ratio of male and female participants, as well as an increase in ethnic diversity of participants to would be a benefit in future research studies. Finally, a longitudinal study that tracks students from their experience in high school through college graduation would provide rich data regarding motivation, pursuance, persistence, completion, and self-efficacy as it relates to first-generation college students and the impact of a dual credit experience on their self-efficacy.

Conclusion

Dual credit opportunities continue to be offered nationwide and conversations regarding affordable and free education are constant. The results of this study provided clear evidence that first-generation students who engage in a rigorous dual credit experience that results in mastery experience are more prepared for the academic expectations of college, master the role of a student, and experience an increase in self-efficacy as a result of their experience. The participant who did not share evidence of a dual credit experience that resulted in mastery experience did

not indicate feeling an impact on his self-efficacy as a result of his experience. The results of this study indicate the benefit of free dual credit options, particularly for first-generation college students as it helps them develop skills and prepare for college. Finally, dual credit experience that results in mastery experience may provide low first-generation college students with knowledge and transition skills for college that their continuing generation peers may find elsewhere.

REFERENCES

Allen, D. (2010). Dual enrollment: A comprehensive literature review and bibliography.

Retrieved from

https://www.cuny.edu/academics/evaluation/library/DE_LitReview_August2010.pdf

Allen, D. & Dadgar, M. (2012). Does dual enrollment increase students' success in college?

Evidence from a quasi-experimental analysis of dual enrollment in New York City. *New Directions for Higher Education, 158*. doi:10.1002/he.20010

An, B. P. (2013). The impact of dual enrollment on college degree attainment: do low-ses students benefit? *Education Evaluation and Policy Analysis, 35*(1)*, 57-75. doi: 10.3102/0162373712461933

Baier, S., Markman, B. & Pernice-Duca, F. (2016). Intent to persist in college freshmen: the role of self-efficacy and mentorship. *Journal of College Student Development. 57*(5). 614-619. doi: 10.1353/csd.2016.0056

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review. 84*(2), 191-215. Retrieved from

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.315.4567&rep=rep1&type=pdf

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: W.H. Freeman.

Collier, P. & Morgan, D. (2008). "Is that paper really due today?": differences in first-generation and traditional college students' understandings of faculty expectations. *Higher Education, 55*(4) 425-446. doi: 10.1007/s10734-007-9065-5

Education Commission of the States. (2018). *Dual Enrollment: Who Is Primarily Responsible for Paying Tuition.* Retrieved from http://ecs.force.com/mbdata/MBQuestNB2?Rep=DE1504

Ganzert, B. (2014). Dual enrollment credit and college readiness. *Community College Journal of Research and Practice*, *38*(9), 783-793. doi: 10.1080/10668926.2012.719483

Giani, M., Alexander, C., & Reyes, P. (2014). Exploring variation in the impact of dual-credit coursework on postsecondary outcomes: a quasi-experimental analysis of Texas students. *High School Journal*, *97*(4), 200-218. Retrieved from http://www.jstor.org/stable/43281031

Gore Jr., P. (2006). Academic self-efficacy as a predictor of college outcomes: two incremental validity studies. *Journal of Career Assessment, 14(*1). 92-115. doi: 10.1177/1069072705281367

Irlbeck, E., Adams, S., Akers, C., Burris, S., and Jones, S. (2014). First generation college students: motivations and support systems. *Journal of Agricultural Education, (55)*2, 154-166. doi: 10.5032/jae.2014.02154

Ishitani, T. (2006). Studying attrition and degree completion behavior among first-generation college students in the united states. *The Journal of Higher Education, (77)*5, 861-885.

JoHyun, K. (2014). Relationship of tech prep and dual credit to college readiness and retention. *College Student Journal*, *48*(3), 337-346.

Lichtenberger, E., Witt, M. A., Blankenberger, B., & Franklin, D. (2014). Dual credit/dual enrollment and data driven policy implementation. *Community College Journal of Research and Practice*, 38, 959-979. doi: 10.1080/10668926.2013.790305

Lile, J., Ottusch, T., Jones, T., & Richards, L. (2018). Understanding college-student roles: perspectives of participants in a high school/community college dual-enrollment program. *Community College Journal of Research and Practice, 42*(2), 95-111. doi: 10.1080/10668926.2016.1264899

McCarron, G. & Inkelas, K. (2006). The gap between educational aspirations and attainment for

    first-generation college students and the role of parental involvement. *Journal of College*

    Student Development, 47(5) 534-549. Retrieved from

    https://doi.org/10.1353/csd.2006.0059

McQuillan, E. (2007). PSEO: are your tax dollars really paying off? *Undergraduate Economic*

    *Review, (3)*1. Retrieved from http://digitalcommons.iwu.edu/uer/vol3/iss1/3

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th Ed). Thousand Oaks,

    CA: SAGE Publications.

Pretlow, J., & Wathington, H. (2013). Access to dual enrollment courses and school-level

    characteristics. *Community College Journal of Research and Practice, 37,* 196-204. doi:

    10.1080/10668926.2013.739513

Ramos-Sanchez, L. & Nichols, L. (2007). Self-efficacy of first-generation and non-first-

    generation college students: the relationship with academic performance and college

    adjustment. *Journal of College Counseling, 10*(1) 6-18. doi: 10.1002/j.2161-

    1882.2007.tb00002.x

Redford, J., & Mulvaney Hoyer, K. (2017). *First Generation and Continuing-Generation*

    College Students: A Comparison of High School and Postsecondary Experiences.

    Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018009

Ryan, R. M., and Deci, E. L. (2000). Intrinsic and extrinsic motivations: classic definitions and

    new directions. Contemporary Educational Psychology, *25*(1) 54–67. doi:

    10.1006/ceps.1999.1020

Saenz, V.B., Hurtado, S., Barrera, D., Wolf, D., & Yeung, F. (2007). First in my family: a profile
of first-generation college students at four-year institutions since 1971. Los Angeles:
Higher Education Research Institute, UCLA.

Saldaña, J. (2016). The coding manual for qualitative researchers (3rd Ed). Thousand Oaks, CA:
Sage.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26,
207-231.

Taylor, J. (2015). Accelerating pathways to college: the (in)equitable effects of community
college dual credit. *Community College Review, 43*(4) 355-379. doi:
10.1177/0091552115594880

Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic
success of first-generation college sophomore students. *Journal of College Student
Development. 51*(1) 50-64. doi: 10.1353/csd.0.0109

Welsh, J. F., Brake, N., & Choi, N. (2005). Student participation and performance in dual-credit
courses in a reform environment. *Community College Journal of Research and Practice,
29*, 199-213. doi: 10.1080/10668920590901158

Wright, S., Jenkins-Guarnieri, M., & Murdock, J. (2012). Career development among first-year
college students: college self-efficacy, student persistence, and academic success. *Journal
of Career Development, 40*(4), 292-310. doi: 10.1177/0894845312455509

Young Jr., R., Joyner, S., & Slate, J. (2013). Grade point average differences between dual and
nondual credit college students. *Urban Studies Research, 2013.* doi:
10.1155/2013/638417

APPENDIX A. INTERVIEW GUIDE

Thank you for meeting me today. As a reminder, this interview is being conducted as part of a qualitative research study for my thesis project as a Master's student at North Dakota State University in the Educational Leadership Program. My topic is dual credit enrollment and the role it plays in academic and personal outcomes and levels of self-efficacy for first-generation college students. Do you mind if I record the interview? As a reminder, your participation in this interview is completely voluntary, and you may withdraw at any time. When the interview is completed, I will transcribe and de-identify your responses. The de-identified transcript would be utilized by myself for coding and analysis purposes. I plan to conduct six to eight interviews in total, and the overall themes and ideas for future study from these interviews would be shared in detail in my thesis, but you will not be directly identified. Do you have any questions before we begin?

☐ Complete Informed Consent

1. Tell me about yourself and your academic journey, from taking college courses in high school to where you are now. (ie. Where are you from? Where did you take college courses? In what format? How did you decide to attend this institution? Your major? etc.)
2. Tell me about yourself as a college student. (ie. What are you studying? What are your career aspirations? Have those changed over the course of your time here? What does your routine look like? What are you involved in outside of the classroom? Did your dual credit experience impact any of these decisions?)
    a. Are you the student you want to be? Why or why not? What impacts your ability to be a good college student?
    b. How have your views of a good college student and your views of yourself as a college student evolved/changed since your time as a dual credit student?
    c. Who did you learn from or/how did you learn about college expectations from prior to enrolling?
3. Describe your confidence level as a student. Has that changed over time? (Ability to do well on exams? Research a term paper? Ask a professor a question? Manage your time as a student? Etc.)
4. How do you handle challenges in your academic life? How has that changed over time?
    a. How do you handle stress/pressure as a student?
    b. Have your academic goals changed since you started college courses? How so?
5. Think back to your experience as a dual credit student in high school. What did that experience look like? Walk me through it. What did it feel like?
    a. What classes did you decide to take and how were they delivered?
    b. Were the classes what you expected? How so?
6. What made you decide to enroll in dual credit courses while in high school?
    a. Did anyone or anything in particular impact your decision to take dual credit courses in high school?
        i. What did those conversations look like leading up to your decision to enroll?
    b. How did you view college as a high school student?
    c. Did your perception of college change after your dual credit experience? How?

    d. Did your perception of faculty/student relationships change after your dual credit experience? How so?

    e. Did your perception of yourself as a student change?

7. Describe your confidence level in your academic abilities prior to taking dual credit. Did it change after your experience? How so?

8. What was your academic transition from high school to college like?

    a. Was there any part of your transition from high school to college that was difficult?

    b. Did your participation in dual credit impact that?

9. How were your experiences as a dual credit student similar to or different from your experiences as a college student?

    a. Do you feel like taking college courses in high school prepared you for the academic expectations of college?

Final Question:

Out of all the things we've talked about today - or maybe some topics we've missed - what should I pay most attention to? What should I think about when I read your interview? (End interview)