DUAL ENROLLMENT STUDENTS’ EFFICACY BELIEFS: AN INTERPRETIVE PHENOMENOLOGICAL ANALYSIS

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Abstract

This interpretive phenomenological analysis explores the lived experience and self-efficacy beliefs of Vermont high school students who participated in a dual enrollment course. Vermont state policy makers have enacted legislation that supports dual enrollment in order to bridge the high school to college transition and create a better educated workforce. These courses carry dual credit, counting toward both a high school and college degree. Bandura’s theory of self-efficacy guides the research to see how the dual enrollment experience informs self-beliefs about ability. High school student participation in courses on a college campus offers an authentic experience resulting in exposure to college expectations and behaviors, and when successful, the development of confidence in college capabilities. Common themes that were identified include improved self-beliefs through academic completion, peer observation, encouragement, coping with emotions, and barriers that make participation in dual enrollment difficult for some. Findings from this study may be used by Vermont policy makers, high school teachers, and college administrators in better understanding the dual enrollment experience and its impact on the college transition process.

Keywords: dual enrollment, early college, concurrent enrollment, self-efficacy, confidence, motivation, bridge high school to college
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Chapter 1: Introduction

Statement of the Problem

With over 60 percent of jobs requiring some postsecondary education in the 21st century, economic opportunity for young adults is tied closely to educational attainment (Carnevale, Smith, & Strohl, 2013). Data show that college graduates make on average almost twice as much money as those with only a high school diploma, earning over $1 million more in their lifetime (Hooker & Brand, 2010). College graduates also benefit from greater employability and superior job benefits (Hooker & Brand, 2010).

Given the lifelong economic value of postsecondary education, American policy makers are paying attention to postsecondary education trends. In 2010, President Barack Obama set a goal to increase the U.S. college graduation rate from 39 percent to 60 percent in just ten years, adding about 8 million more graduates by 2020 (Hofmann, 2012; De Nies, 2010). In order meet this goal, high school students must progress to college in sufficient numbers. Nationally, the percentage of high school students enrolling in two- or four-year colleges immediately after graduation increased from 60% in 1990 to 66% in 2013, which was a slight decrease from 70% in 2009 (Kirst & Bracco, 2004; Kena et al., 2015). In order to counteract identified factors that inhibit postsecondary progression, such as lack of parental education and low socioeconomic status, states are attempting to improve the situation through legislative policy and funding for programs that bridge high school to college. Known as dual enrollment, concurrent enrollment, or early college, these programs finance and facilitate students taking college courses before high school graduation.

In Vermont, a dual enrollment program is being employed as a mechanism for addressing the state’s poor high school to college progression rate (Shumlin, 2013). Vermont has one of the
highest high school graduation rates (91%), “yet only about forty-five percent of Vermont students who begin ninth grade continue their education past high school” (Shumlin, 2013, para 34). Dual enrollment enables high school juniors and seniors to take a limited number of college courses, often at no cost. These courses accrue dual credit, counting for both high school and college. Equally valuable is the experience itself which may influence students’ beliefs about their ability to obtain a college degree (Hunt, Carruthers, Callan & Ewell, 2006).

With legislators budgeting for Vermont’s dual enrollment program, a greater understanding of the student experience is needed. Studies have shown that experiences can influence beliefs about one’s abilities, and these beliefs are tied to motivation and intention. The experience of taking college courses while in high school may affect student beliefs about their abilities to succeed in college. As a higher education practitioner in Vermont, I am interested in exploring the academic self-efficacy of students who have participated in our dual enrollment program.

Organization

Organized within five chapters, Chapter One begins with the significance of the problem and deficiencies in the current research. A description of the different types of programs that allow high school students to enroll in college courses provides context for how states are approaching the idea of bridging high school to college. Vermont’s dual enrollment and early college programs are described along with the state’s funding challenges. My positionality as an educator and parent of a former dual enrollment student is presented with a discussion as to how this experience sparked my interest in this topic. Also included is Bandura’s theory of self-efficacy and how it guided this study. A literature review follows in Chapter Two. As a new topic of academic study, dual enrollment per se has garnered little research. To develop a
comprehensive understanding of it, the literature review presents dual enrollment as an
instrument in education policy and describes select state programs based on research studies with
identified student outcomes. Barriers to participation in dual enrollment programs are explored in
order to understand potential accessibility issues that may limit the effectiveness of legislative
policy. Chapter Three features the research methodology of interpretative phenomenological
analysis (IPA). The research questions guiding the study, the site description, and data collection
and analysis processes are included here too, as well as a description of trustworthiness of the
data and the protection of human subjects. Study findings and analysis are presented in Chapter
Four. Chapter Five provides a discussion of the findings within three conclusions, which are
interpreted and connected to the theoretical framework and literature. Implications for practice
are presented, in addition to suggestions for future research. Answers to the study questions are
summarized, and the researcher concludes with a personal reflection.

Significance of the Problem

As the U.S. population ages and demographics shift toward a higher percentage of lower
income immigrant ethnicities less likely to participate in college, U.S. population trends
foreshadow a significantly less educated national workforce (Hunt et al., 2006). By 2050, growth
of the U.S. population will be driven by immigrants and their descendants, as non-Hispanic
whites decline from 67% to 47% of the population (Baum, Ma, & Payea, 2013). This national
trend masks regional nuances (WICHE, 2013). Unlike much of the nation, Vermont will
continue to maintain one of the largest non-Hispanic white populations due to a negligible influx
of immigrants. In 2008, 95% of Vermont public school graduates were non-Hispanic white (the
highest in the nation); this number is expected to decrease slightly to 92% by 2020 (WICHE,
2013). Seemingly insulated from national ethnicity and immigration trends, Vermont is
vulnerable on other demographic fronts with a declining birth rate and rapidly aging population. The U.S. Census Bureau projects by 2030, Vermont will move from 26th to 8th in the nation with the highest percentage of adults age 65 and older (Bean, 2010). Vermont also has one of the lowest national birth rates, which will result in a 27% drop in high school graduates between 2008 and 2023 (WICHE, 2013). This decrease in high school graduates will exacerbate Vermont’s already low college progression rate and challenge the rural state’s economic and social foundations (WICHE, 2013).

State and local economies benefit financially and socially from an educated population. In 2012, college graduates working full-time earned 60% more than high school graduates working full-time, and college graduates paid 78% more in annual taxes, while using fewer state-funded social services (Baum et al., 2013). Beyond economics, college graduates are greater civic contributors, with 45% reporting that they understand the political issues facing the country compared to 15% of high school graduates (Baum et al., 2013). Additionally, college graduates are 1.7 times more likely to vote, and higher levels of education are tied to quality of life opportunities from social mobility to a lower unemployment rate and greater health insurance coverage (Baum et al., 2013).

Cognizant of the benefits associated with postsecondary education across the nation, state and local governments have increased investment in higher education by 20% over a 15-year period beginning in 1991, reaching $72 billion (Hunt et al., 2006). Yet among other nations, the U.S. is no longer a world leader in the rate of 18-24 year olds enrolled in college, and college participation rates are flat nationally (Hunt et al., 2006). As a method for increasing college participation rates, programs designed to bridge high school to college are being funded through
legislative policy in hopes of countering the myriad of complex internal and external factors that influence academic achievement.

Socioeconomic income, race and ethnicity, academic preparedness, financial resources, and parent educational attainment are external factors that influence a student’s academic success (Walker, Greene, & Mansell, 2006; Aud, Hussar, Johnson, Kena, & Roth, 2012). Research on external factors has shown that low parental education is associated with lower socioeconomic status and students who are less likely to attend college after graduation (Rowan-Kenyon, 2007). In a survey of students whose parents had a high school diploma or less, 46% said they intended to graduate from college compared to 67% of students whose parents had a college degree and 77% of students whose parents had a graduate degree (Aud et al., 2012). Students from families with lower socioeconomic incomes languish behind their counterparts from higher income brackets in progressing to college (Hofmann & Voloch, 2012). Students from middle to upper family incomes “are five times more likely to earn a two- or four-year college degree than those from low-income families” (Hoffman, Vargas, & Santos, 2008, p. 15). Of particular concern is the fact that only 22% of low-income students are prepared academically for college compared to 54% of students from higher income brackets (Hoffman et al., 2008). One might conclude from the research that parental education and socioeconomic income can predict academic success, but there is a significant amount of research that identifies internal factors as having a direct impact on achievement performance (Walker et al., 2006).

Although studies have focused on external risk factors of race and socioeconomic income in predetermining academic success or failure, student internal characteristics of motivation, including ability and belonging perceptions, have been found to “directly impact academic performance” (Walker et al., 2006, p. 2). Walker et al. (2006) cite motivation as an internal
factor that can be influenced through the valuing of academic tasks, being situated in an environment with opportunities, and having the appropriate skills. Motivation also can be affected by positive or negative feedback. Chemers, Hu, and Garcia (2001) cite studies where students in fictitious settings are given positive feedback on their performance which results in students setting higher goals for themselves, persisting longer to identify solutions, and achieving more, as compared to equally able students who are given less-positive feedback. In these studies, student beliefs about their abilities are affected by the feedback and, in turn, self-beliefs impact performance. Students’ belief in their ability to perform a specific task is called self-efficacy, and research on student achievement has identified self-efficacy as a motivational construct (Chemers et al., 2001). Students who possess confidence in performing a task are said to have high self-efficacy, and students who lack confidence in their capability as having low self-efficacy (Walker et al., 2006). High self-efficacy in students leads to a greater level of task persistence, problem-solving, and willingness to take on challenges (Walker et al., 2006).

In a study of first-year college students by Chemers et al. (2001), self-efficacy beliefs were assessed through surveys administered at the beginning and end of the winter quarter. Students were asked to rate their confidence in performing academically, and the study found that students who entered college with confidence in their academic abilities performed better than their counterparts. Walker et al. (2006) suggest that focusing on theories and interventions directed at internal factors such as self-efficacy are more productive in influencing student achievement than external factors that are difficult to influence and control. Factors such as attitudes, behaviors, beliefs, and general awareness of college academic and social expectations increasingly have become the focus of high school programs designed to offer academic choices that bridge to college.
The idea of offering high school students different choices in pursuing academic advancement dates back to 1985, when Minnesota became the first state to enact legislation on concurrent enrollment policy programs, such as dual enrollment (Boswell, 2001). The No Child Left Behind initiative in 2003 began a national focus on transitions from high school to college to employment. Programs were more intentionally developed to link high school and postsecondary education in order to better prepare students for life challenges (Hofmann, 2012). A survey by the Department of Education in 2005 revealed that 57 percent of Title IV postsecondary institutions offered some type of transitional program to college (Berger, Adelman, & Cole, 2010). Dual enrollment has become one of the most prevalent academic pathway programs across all 50 U.S. states, with 47 states having policy mechanisms in place and 38 states enacting legislation or regulations designed to fund such programs (Bragg, Kim, & Barnett, 2006).

The state of Vermont is utilizing dual enrollment as mechanism for moving out of the bottom three of the U.S. states in high school student progression to college (Shumlin, 2013). In 2013, the Vermont state legislature increased education funds for the existing dual enrollment program and increased from one to two the number of free college courses that high school students could take. Politicians view the cost of higher education as a considerable barrier, with Vermont’s state university ranking as the second most expensive public university in the United States (College Board, 2013). Although two free college courses constitute only a fraction of the cost of obtaining a college degree, the dual enrollment program may serve students in other ways. Research as to how dual enrollment serves students has been the focus of studies conducted within the past ten years.
Dual Enrollment Research

Dual enrollment has been studied nationally under many names including: dual enrollment, dual credit, early college, joint or concurrent enrollment, and as a construct of students taking college courses while still in high school (Hoffman, Vargas, & Santos, 2009). The earliest research studies were primarily qualitative and sought to describe student attitudes about these types of programs (Bailey & Karp, 2003). Case studies of high school students taking college courses on a college campus demonstrated that these programs were directed at students who met an academic standard required for participation, and most likely did not increase students’ academic skills (Karp, 2012). Participation in college course programs provided a broader outcome in introducing high school students to the college environment and expectations (Karp, 2012). In a case study of high school students, Karp found that participation in dual enrollment gave students an opportunity to rehearse the role of college student. Students in the study who were interviewed prior to taking college courses had difficulty describing what it was like to be a college student, with one student responding, “I don’t know, I’ve never been to college!” (Karp, 2012, p. 24). After taking a college course, students identified specific behaviors required of college students, including taking responsibility for attending classes, taking notes, and obtaining help (Karp, 2012).

As student data have become more available through advancements in computerized collection processes, quantitative studies have explored student outcomes, such as passing end-of-course tests, reducing time to degree, and college GPA, as indicators of readiness for, and achievement in, college (Allen & Dadgar, 2012). With preparation for college being one of the primary predictors of college success, Edmunds (2012) worked with the North Carolina Research Data Center to conduct a quantitative study on the rigor of high school courses taken
through programs that allow high school students to take college courses. The study found that
these types of programs increased academic rigor in preparation for college (Edmunds, 2012). Smith (2007) conducted a quantitative study on educational aspirations and dual enrollment that revealed a significant correlation between dual enrollment participation and increased educational aspirations. Though not implying causality, Smith (2007) recommends further study based on the research findings. Berger, Adelman, and Cole (2010) summarize the outcomes of the Early College High School Initiative started by the Bill & Melinda Gates Foundation in 2002. A data set from 200 schools over a six-year period was collected by the American Institute for Research and SRI International through annual evaluation reports. Through analysis of this data, one characteristic identified as having a positive impact on student outcomes was location. Students who took college courses on a college campus had higher state assessment proficiency rates and higher rates of college attendance (Berger et al., 2010). This finding supports the “power of place” (p. 344) in providing an authentic experience where students develop confidence in their ability to be successful in college and navigate the college environment (Berger et al., 2010; Karp, 2012).

With research focused largely on outcomes, as demonstrated through quantitative data and qualitative case studies, the student experience as a phenomenon is missing from existing research on dual enrollment programs. As policy makers, school administrators, and teachers feel pressured to improve high school graduate progression to college, an opportunity exists to better understand the psychological effects of the dual enrollment experience. Exploring how participation in dual enrollment programs may affect student beliefs in their abilities, known as self-efficacy, can provide greater insight into the dual enrollment experience.
Positionality Statement

My interest in dual enrollment stems from my work in the Continuing Education division at the University of Vermont. Several years ago, I became aware that the local community college was promoting dual enrollment and requiring students to take a preparatory course before they could enroll. This was a barrier to entry that our university did not have in place, though we did require a student’s guidance counselor to provide a recommendation prior to enrolling in courses. Because high school students are not matriculated, they were considered non-degree students. We decided to encourage Vermont high school students to take a college course at our university during the summer. At the time, my daughter had just completed her junior year of high school and she was a prime candidate for the program. In my conversations with her about taking a college course, she responded with hesitancy, which made me wonder what other high school students might think about taking advantage of this opportunity. With some parental encouragement, my daughter and her friend enrolled in a three-credit writing course over the summer. They began full of doubt in their ability to be successful in the course. As their graded assignments were returned, both realized that they were just as academically capable as the college students in the class. Both successfully completed the course. Through observing my daughter and her friend, I witnessed how the dual enrollment experience can affect a student’s belief in their academic ability and seeing themselves in college. I became curious as to how these beliefs were influenced by the dual enrollment experience. Given my personal experience, I realize that my interest in this topic is significantly biased. Yet, I began my doctoral studies with questions about this dissertation topic that propelled my scholar-practitioner journey.

Carlton-Parsons (2008) suggests that research data should be interpreted within “historical, contemporary, and cultural experiences” (p. 1141). These experiences are
encompassed within a social-cultural bias that stems from how I was raised, the values my family imparted to me, and the person I have become over time. In my family, education was highly valued. From the perspective of my mother, who was raised by her mother and grandmother with very little money, education was a gift, but college was not an option. From the perspective of my father, whose family was wealthy and always presumed he would go to college, education was a right. My perspective is a blend of appreciation and privilege. Maxwell (2005) states that research can be informed through aspects of one’s life that provides insight and hypothesis. I believe that my background informs my interest in education and my desire to understand high school student progression to postsecondary education.

Briscoe (2005) shares that some scholars believe research of the oppressed should not be conducted by the privileged. Given my background, would I be considered a product of the oppressed or the privileged? As a researcher, which might I view as “other”? The idea of “othering” was first introduced to me by Fennel and Arnot (2008) in the context of “othering of motherhood” (p. 530) in terms of the devaluing of an individual’s role based on Western feminist views of mothering. Fennel and Arnot (2008) suggest that aspects of third-world women were selected for study based on “Western’ epistemologies” (p. 529), which offered a limited understanding due to the Western point of view. Briscoe (2005) questions whether “the privileged should be excluded from representing the oppressed” (p. 23). I believe my social group should not dictate whom I study because bias exists within all of us. As Briscoe (2005) suggests, even those who are part of a group are not bias free.

Being aware of my biases requires that I reflect on what I know in order to avoid damaging the credibility of my study (Maxwell, 2005). My personal experience must be closely held to avoid influencing the individuals I am interviewing. This is a difficult task as the
questions I ask, and the way in which I ask them, may lead individuals to answer in a certain manner. Avoiding leading questions, identifying how I might influence what individuals say, and assessing the inferences I might draw are what Maxwell (2005) observes as key to “minimizing” the effect on my research study. Machi and McEvoy (2012) suggest that through controlling personal bias, as well as preferred outcomes and opinions, the researcher can avoid jumping to conclusions and producing findings that are biased. This exercise of identifying bias is part of the control process in research.

It seems that personal experiences can be both an asset and a curse for the researcher. These experiences feed a research passion and also may prompt premature conclusions. Machi and McEvoy (2012) encourage the development of convincing data and connected evidence in avoiding fallacious arguments, which lead to mistaken conclusions. Although I have had an experience that sparked my interest in dual enrollment, I believe that I understand my biases and can openly explore alternative conclusions. For me, it is as interesting to be proven wrong as to be proven right through the research process. Staying open to both possibilities requires an inquiring mind, a healthy dose of skepticism, and continual questioning (Machi & McEvoy, 2012).

**Research Question**

The research question that guides this study is: *How do Vermont high school students understand and explain their dual enrollment experiences within the framework of self-efficacy?*

**Theoretical Framework**

According to Bandura’s (1977) social cognitive theory, people make choices based on their self-efficacy beliefs (Usher & Pajares, 2008). Self-efficacy is defined as the belief in one’s ability to be successful in completing one or more behaviors. Confidence in one’s ability is
influenced through experiences. Experiences inform efficacy and, within the academic setting, self-efficacy can predict student achievement and motivation (Usher & Pajares, 2008). For this study on high school students participating in the dual enrollment experience, Bandura’s (1977) theory of self-efficacy frames the research methodology, data collection, and analysis.

**Self-Efficacy Beliefs**

Much of the research on self-efficacy focuses on the work of Bandura (1986) who theorized that an individual’s self-efficacy beliefs determine their behaviors. Beliefs about ones’ capabilities influence behavior change, as well as individual choice, effort, motivation, persistence, and perseverance broadly in life (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Lent, Brown, & Larkin, 1984; Usher & Pajares, 2008). Bandura (1977) introduced a theoretical framework of behavior change that is based on the concept of self-efficacy beliefs (Lent et al., 1984; Yusuf, 2011). Bandura (1977) studied self-efficacy through phobia research using boa constrictors. The study evaluated changes in behavior associated with enactive and vicarious treatment approaches. Participants either engaged with the snake (enactive) through touching and holding or observed another individual (vicarious) performing these actions. Beliefs were constructed through this task-based experience which informed social learning (Bandura, 1977). In line with social learning analysis, “experiences based on performance accomplishments produced higher, more generalized, and stronger efficacy expectations than did vicarious experience, which in turn exceeded those in the control condition” (Bandura, 1977, p. 205). It is through successfully performing a task that confidence is developed and beliefs about one’s capabilities are established. Bandura (1977) concluded that self-efficacy beliefs are predictive of behaviors when individuals are facing unfamiliar situations. Success in these unfamiliar situations validates self-efficacy beliefs which impacts the way individuals behave.
From Bandura’s (1977) seminal research, Lent et al. (1984) studied academic success and perseverance in relation to self-efficacy beliefs in students considering careers in science and engineering. Forty-two students participating in a career course were asked questions as to their belief and confidence in successfully achieving career requirements. High self-efficacy was related to higher grades and degree persistence. Academic ability, as determined by PSAT scores and high school rank, was determined to be moderately related to self-efficacy. Lent et al. (1984) supported Bandura’s (1977) hypothesis that behavior was influenced more so by the beliefs individuals held about their capabilities as opposed to the actual skills that they possessed. Within Bandura’s (1977) theory of self-efficacy, sources of self-efficacy work together and independently to affect student self-efficacy beliefs as depicted in Figure 1.

![Figure 1: Theory of self-efficacy](image)

Usher and Pajares (2008) conducted a literature review that investigated Bandura’s (1977) hypothesis of the sources of self-efficacy beliefs in four areas: performance accomplishment (mastery/enactive), learning through observation (vicarious), emotional arousal (emotive), and listening/learning (exhortative).
Verbal Persuasion – Exhortative. A common method for attempting to influence self-efficacy beliefs is through verbal persuasion, whereby individuals are encouraged to believe in themselves or their success in a given situation (Bandura, 1977). When used in combination with performance aids that support an action, verbal persuasion can prove to be motivating and contribute to positive outcomes (Bandura, 1977). If personal experiences contradict what an individual is being told, social persuasion is limited in its effectiveness on self-efficacy beliefs.

Psychological State – Emotive. It is natural to have emotional responses to unfamiliar situations. Feelings of anxiety or stress are emotional responses that can inform perceptions of self-efficacy (Bandura, 1977). These emotions can be generated by “fear-provoking thoughts” (p. 199) of incompetence which contribute to avoidance behaviors (Bandura, 1977). Since fear and failure beliefs are often interdependent, failure can become a self-fulfilling prophecy as individuals avoid situations due to their fears. Never having the opportunity to be successful in developing methods for overcoming debilitating thoughts, self-efficacy beliefs can suffer (Bandura, 1977). Coping skills can be learned through exposure to perceived threats, mastery experiences, and modeling in order to reduce fears that inhibit achievement (Bandura, 1977).

Vicarious Experience. Assessment of personal self-efficacy is based on many factors including observations of others successfully completing an action or behavior (Bandura, 1977). Modeling is the mental process of inferring one’s own success based on others’ success. As a source that informs self-efficacy beliefs, modeling is a less reliable indicator of personal capabilities in comparison to personal accomplishment (Bandura, 1977).

Performance Accomplishment – Enactive. Mastery experiences inform self-efficacy beliefs through individuals gaining firsthand knowledge of their competency by successfully completing an action or behavior. Repeated success increases efficacy expectations and
strengthens an individual’s ability to overcome failures (Bandura, 1977). Strong efficacy beliefs obtained through mastery experiences motivate persistence and sustained effort (Bandura, 1977). Individuals apply these behaviors to other situations which demonstrate the broader impact of performance mastery on self-efficacy beliefs (Bandura, 1977).

**Self-Efficacy in the Academic Setting.** Usher and Pajares (2008) identified student self-efficacy beliefs as being most powerfully developed through mastery experience, that of completing a task and assessing the results to judge self-competency. Effort put forth that is interpreted as successful raises a student’s assurance and belief in their capacity to perform similar tasks in the future. Students who possess positive beliefs in their abilities demonstrate behaviors such as persistence and self-regulation which leads to greater educational success (Usher & Pajares, 2008). During skill development, self-efficacy beliefs can change as a student encounters difficulty and challenges. Zimmerman (2000) suggests that academic self-efficacy beliefs are “multidimensional” as thoughts about capabilities in writing a history paper might differ from those on taking an algebra test based on the amount of effort needed to complete these tasks. Mastery experiences that are challenging for students to overcome are powerful influences of self-efficacy beliefs (Usher & Pajares, 2008). As students develop a sense of their own capabilities through judging their efforts as successful, they embrace more challenging goals and set higher standards for themselves which is particularly important during adolescence when identity is being developed (Bacchini & Magliulo, 2003; Zimmerman, 2000).

Within the academic setting, adolescent self-efficacy beliefs also are informed vicariously, verbally, and emotionally. Usher and Pajares (2008) describe the comparing of test scores between students as a vicarious experience that is common in school. The student with the higher test score may gain confidence while the student with the lower score may experience a
loss of confidence in their ability. Self-efficacy can be influenced by supportive conversations where encouragement is given to students who are unsure of their abilities. Through positive verbal interactions with parents, teachers, and peers, students can gain confidence in their abilities. Feelings of anxiety, stress, and fear inform student self-efficacy beliefs, and these emotions are powerful cues that can undermine self-efficacy (Usher & Pajares, 2008). Bad moods and gloomy outlooks on life can cause students to misinterpret mistakes as indicators of inability, which negatively informs self-efficacy beliefs (Usher & Pajares, 2008). Students may use one or all of these sources in evaluating their competency and informing beliefs about their capabilities.

**Linking Self-efficacy to Dual Enrollment**

The extensive research on sources of self-efficacy is linked to dual enrollment in Ozmun’s (2013) study on academic self-efficacy in high school students. Ozmun observes that dual-credit programs have existed for decades, and what is missing from the research are data that show how these programs assist in the “transition phenomenon” (p. 62) from high school to college matriculation. Ozmun asks the question, “Do dual-credit students persist and succeed in college because they derive an increased sense of self-efficacy from the program?” (p. 63). Or, do students already possess a high sense of self-efficacy which contributes to their tendency to enroll in these programs?

Using two electronic survey tools, Ozmun (2013) measured the self-efficacy of 114 predominantly white dual enrollment high school students in Texas. Within the survey, 33 questions were asked about confidence in the ability to complete college academic tasks, such as note-taking and asking questions of professors. An additional 19 questions were asked about student confidence in completing college social task, such as making friends and joining
organizations. Motivation was assessed through eight questions that addressed academic enjoyment, willingness to study hard, and interest in obtaining good grades. Although Ozmun found that a majority of students participating in dual-credit courses made the decision to enroll on their own, and 96.5% planned to continue on to a two- or four-year college after graduation, the data revealed “low levels of confidence in their ability to perform tasks commonly associated with college attendance” (p. 67). On a scale of 5, the mean for academic confidence was 2.22, and on a scale of 8, the mean for social confidence was 2.79. Ozmun concludes that although students are academically motivated, as demonstrated by enrolling in dual-credit courses, they are not confident in their ability to perform specific college-related tasks prior to enrolling. Ozmun observes “that the ingredients for college success may lie within the dual-credit programs themselves” (p. 69) and suggests further research to determine if student self-efficacy increases while participating in dual enrollment courses. Participation in dual enrollment courses may offer experiences that inform self-efficacy beliefs and support the transition process to college.

**Summary**

This chapter describes the reasoning behind state support of dual enrollment programs. Recognizing the economic and social importance of postsecondary education, state policy makers in the mid-1980s began investing in programs that bridge high school to college and most states continue this investment today. For the state of Vermont, an exceedingly low college progression rate, magnified by demographic trends in the coming years, has heightened the importance of understanding the potential for dual enrollment to support student transition to college. External factors such as low socioeconomic income and lack of parental education have been identified as barriers to college progression. But research has shown that influencing
internal factors, such as attitudes and beliefs, can be a productive approach to affecting student achievement.

Qualitative case studies on dual enrollment have focused on student attitudes about these types of programs. Quantitative studies have concentrated on student participant outcomes, such as college GPA. The use of qualitative research methods that identify the psychological experience is missing from the existing research. The theory of self-efficacy frames this study, with a focus on understanding the dual enrollment student experience. Sources of self-beliefs include mastery, vicarious, verbal, and emotional experiences. Questions about self-efficacy beliefs and their role in students who participate in dual enrollment courses provide insight on the experience.

In the following chapter, a review of the dual enrollment literature offers an understanding of state education policy that supports the adoption of these types of programs. Dual enrollment programs in five states have been selected for review because there is research on program outcomes for student participants. Specific programs that assist students in college preparation and efficacy development are highlighted. What is known about the dual enrollment experience and associated outcomes is addressed through a review of research conducted within the past ten years. Research on college-related barriers provides a perspective on student access within and beyond the dual enrollment experience.
Chapter 2: Literature Review

Introduction

This literature review discusses the use of dual enrollment as a state policy mechanism designed to bridge high school to college. Although most states have policy in place to facilitate dual enrollment programming, few have research on program outcomes. Four states have been selected for this literature review because they have both legislative dual enrollment policy and have research on outcomes. Additionally, the state of Vermont’s dual enrollment program is reviewed, and my inability to locate studies on Vermont’s program outcomes is noted. Following Machi and McEvoy’s (2009) literature review model, “the current state of knowledge” (p. 60) on dual enrollment and similar programs is provided through qualitative and quantitative research studies that describe student outcomes. Studies connecting dual enrollment to self-efficacy beliefs offer a base of understanding from which to conduct research on the dual enrollment experience in Vermont. Barriers to dual enrollment programs are explored to fully understand the obstacles students must overcome in order to participate.

Educational Policy

Going back to 1971, the Carnegie Commission proposed structural changes to the United States’ higher education system by recommending that one year of high school be omitted, three-year bachelor’s degrees be created, and high school students in their last year be provided with an avenue for obtaining college credits (Hébert, 2001). Observing that repetition in the senior year of high school was a waste of time and money for students, the report proposed overlapping curriculums during this final year of high school (Hébert, 2001). This concept would allow students to “build a transcript of college coursework that would move [them] through the baccalaureate degree process quicker” (p. 2), saving them time and money. Interest in the
concept increased over the next ten years, as the cost of postsecondary education steadily climbed and the financial burden was increasingly felt by students and their parents. Additionally, there was a growing recognition that not all students were the same as they progressed in their learning, and in response, many states sought to break down education traditions (Meade, 2012). By the mid-1980s, state legislators began implementing policy and funding mechanisms that provided high school students with access to free college courses. The intent was to encourage postsecondary education progression by bridging high school to college through financial relief and program alternatives (Meade, 2012).

Education alternatives emerged as legislators across 47 states agreed that the pace of learning was not the same for all students and money “allocated to K–12 students should purchase the curriculum and instruction most appropriate” (p. 4) for the individual student (Meade, 2012). The National Commission on the High School Senior Year (2001) reinforced the need for program alternatives based on their findings that motivated bright students take less challenging courses during their senior year and engage in a “senior slump” (Johnson & Brophy, 2006, p. 26). Dual enrollment was created as a legislative mechanism designed to push education reform by offering students structured program alternatives to better meet their academic abilities, build high school to college partnerships, and increase the number of students entering college (Meade, 2012).

In the following section, the literature related to dual enrollment programs from five states is reviewed. Each has legislative policy that supports dual enrollment or a similar type of program, and four out of the five states have research studies that describe student outcomes related to college behaviors and progression. These states demonstrate how policy approaches are bridging high school to college for some students.
Florida. Recognizing that the senior year of high school was a “lost opportunity” (Koszoru, 2005, p. 25), Florida enacted legislation in the late 1980s that mandated dual enrollment programs across all school districts and community colleges. By early 2000, Florida’s program had grown to 34,273 student participants who benefited from funding that offset course tuition and text book costs (Hoffman, Vargas, & Santos, 2009). In response to the legislation, Brower County Public School District partnered with Broward Community College to create “a full-time dual enrollment program [called] The College Academy @ Broward Community College” (Koszoru, 2005, p. 25). As a construct that purposefully blurred the lines between college and high school, College Academy prepared students for the academic expectations of college through exposure to college-level courses (Koszoru, 2005). Through a centralized K–20 education data warehouse of student and postsecondary institutional data, the Florida Department of Education monitored and measured the impact of dual enrollment policies. In 2004, “the Florida Department of Education found that high school students who participate in dual enrollment were enrolling in colleges and universities at rates significantly higher than students who did not participate” (Hoffmann et al., 2009, p. 50). A study by Karp et al. (2007) related participation in Florida’s dual enrollment to a 7.7% increased likelihood of enrolling in a four-year college (Allen, 2010).

Utah. Referred to as both early enrollment and concurrent enrollment, a bill allocating $200,000 toward programs that bridge high school to college passed the Utah legislature in the late 1980s (Peterson, Anjewierden, & Corser, 2001). The early enrollment program encouraged high school students to take courses on a college campus taught by college instructors. The state’s concurrent enrollment program followed with college courses taught by high school teachers within high schools. In order to maintain quality, instructors submitted course proposals
that were agreed to by the high school, school district, and community colleges. Instructors worked with college faculty liaisons and participated in teacher trainings. In the spring of 1999, there were 4,817 student participants in concurrent enrollment, of which 604 were randomly sampled to better understand college intentions (Peterson et al., 2001). Of surveyed students, 45% planned to attend college within six months of graduation and 56% indicated that participation in concurrent enrollment encouraged them to attend college (Peterson et al., 2001).

**Kentucky.** The state of Kentucky tackled education reform using dual enrollment in 1997 with the passing of the Kentucky Postsecondary Improvement Education Act (Welsh, 2005). Poor college participation, retention, and graduation rates prompted the centralization of the state’s community colleges into the Kentucky Community and Technical College System (Welsh, 2005). Policy changes in 2000 encouraged the use of dual enrollment programs to increase community college attendance and streamline the transfer of dual enrollment college credits across public institutions (Welsh, 2005). As a result of these policy changes, student participation in dual-credit courses increased from 2,809 in fall 2000 to 4,842 in 2001 (Welsh, 2005). The increase in dual enrollment participation and the academic success of student participants as measured by their GPA led Welsh to conclude that “high school students are capable of meeting the increased expectations that dual-credit courses demand of them” (p. 210). Welsh (2005) also recommended that policy makers more purposefully blend high school senior year and the first year of community college to facilitate college progression.

**North Carolina.** College progression became an issue for North Carolina’s Governor Mike Easley in 2001, as demand for unskilled jobs in tobacco and manufacturing shifted to jobs that required educational attainment beyond high school (“High School Diploma,” n.d). At the time, only four out of ten North Carolina students enrolled in 9th grade were enrolling in
postsecondary education ("High School Diploma," n.d.). In 2003, the North Carolina General Assembly and Education Cabinet supported the Governor and State Board of Education with policy reform that launched Learn and Earn early college high schools ("High School Diploma," n.d.). Learn and Earn schools allowed students to earn two years of college credits at no cost while in high school (Hoffman et al., 2008). By 2004, 42 schools had been created to serve 5,100 students who could earn both a high school degree and a two-year associate’s degree over five years (Hoffman, Vargas, & Santos, 2008). In 2009, there were 60 Learn and Earn early college high schools with plans to grow to 71 schools by 2010 (North Carolina State Board of Education, 2009). Today, North Carolina’s program has 76 Learn and Earn early college high schools (Early College, n.d). The program has since expanded to include online course offerings. High school student enrollment in online college courses grew from 1,421 in 2007 to 5,429 in 2009 (Learn and Earn, 2009).

North Carolina provides approximately $23 million in state funding to cover Learn and Earn program administration, tuition, and textbooks and offers students a formal structure linking high school and college to improve postsecondary progression (Learn and Earn, 2009). Beginning in ninth grade, North Carolina students gain exposure to more rigorous courses, higher academic standards, and positive school experiences through the Learn and Earn program (Edmunds et al., 2012). A longitudinal experimental study was conducted to compare student participants with nonparticipants and the findings support early college as a mechanism for “expanding the college preparatory pipeline” (Edmunds et al., 2012, p. 151).

Vermont. Prompted by a similarly poor postsecondary progression rate as North Carolina, Vermont passed the Flexible Pathways bill (S.130/Act 77) in 2013 which increased funding for an existing state dual enrollment program and the launch of an early college
program. Through increasing the dual enrollment budget with state education funds from $400,000 to $800,000, the state hoped to produce more graduates with the skills needed for a 21st century workforce (Despart, 2015, May 19). This budget increase gave eligible high school students access to eight college credits, or two college courses, through a voucher system at participating colleges and universities. Vermont’s Early College Program (ECP) made funds available for approved colleges to enroll students in taking a full year of college courses while completing their high school degree. The intent of the ECP was to jumpstart a student’s postsecondary degree by providing financial relief for their first year of college (Despart, 2015, May 19). The Flexible Pathways bill structured future funding for the programs as a shared responsibility between Vermont’s Board of Education, school districts, and the state colleges. When school districts and state colleges were unable to take on the additional expense of the programs as planned in 2015 due to budgetary issues and data showed that over 2,000 students were participating in the programs, Vermont’s governor announced that the state would continue to provide full funding and the legislature increased appropriations to $1.2 million for the next two years (Mansfield, 2015; Despart, 2015, May 19). Vermont State Colleges Chancellor Jeb Spaulding stated, “One of the single most effective tools we have to help more Vermonters understand that they can go to college and they can succeed in college is participation in the dual enrollment program” (Despart, 2015, May 19). Funding for Vermont’s programs is uncertain beyond 2017. Research on either the dual enrollment or early college program was not found and does not appear to exist.

The Dual Enrollment Experience

This section reviews “what is known” (p. 61) about the student experience within dual enrollment programs (Machi & McEvoy, 2009). Research conducted by Karp (2012) suggests
that dual enrollment is an overarching experience that helps students understand college culture, expectations, and processes (Karp, 2012). Through exposure to the academic requirements of college, high school students benefit from practicing college behaviors (Karp, 2012). Studies show that for academic success students must demonstrate behaviors in managing their time, working independently, and producing quality work through solid study skills (Karp, 2012). Nonacademic behaviors such as interacting with faculty and peers, as well as making appropriate choices within the college environment, are equally important. Through spending time on a college campus, students can gain exposure and perspectives on college life (Karp, 2012). Considering the multitude of skills and knowledge students need in preparation for college, dual enrollment programs may give students an opportunity to begin the learning process by providing college experiences which can lead to aspirations, progression, and achievement. Several recent studies relate the dual enrollment experience to student outcomes.

**Authentic Preparation.** Dual enrollment programs offer authentic preparation for college as compared to Advanced Placement (AP) courses (Klopfenstein & Lively, 2012). Designed for the most advanced students, the AP course curriculum is familiar approach to college preparation during high school. Offered as part of the high school curriculum, courses are created by the College Board, taught by high school faculty, and students are required to pass a final exam in order to demonstrate competency (Klopfenstein & Lively, 2012). Colleges consider exam scores between 3 and 5 in granting credit for AP courses (Allen, 2010). Most recently, Dartmouth College announced that they would no longer grant AP course credits because faculty believed that these high school courses lacked adequate rigor (Adams, 2013). Unlike Advance Placement courses, most dual enrollment courses are actual college courses taught by college faculty on a college campus. Research shows students who obtain at least six college credits
during their high school years are more likely to graduate from college and earn their college degree significantly faster that students participating in traditional Advance Placement courses (Berger, 2010; Klopfenstein & Lively, 2012). High school students taking actual college courses rather than AP courses is the early college model.

Early college was introduced by the Bill & Melinda Gates Foundation in 2002. This model creates small schools held on college campuses that merge the high school and college experience to create a new environment (Edmunds, 2012). Students in these programs take college courses within their state’s dual enrollment funding policies and benefit from free tuition (Berger, 2010). The original focus of the program was on students who were first in their family to attend college or minority groups less likely to complete high school (Edmunds, 2012. The hypothesis was that even unwilling or discouraged students can be inspired and motivated to visualize themselves attending college by experiencing it firsthand (Edmunds, 2012). Edmunds (2012) studied 9th and 10th grade students attending six early college programs in North Carolina to assess outcomes measured against a control group. The study showed that early college students took more core college preparatory courses than their peers and were more likely to be on track for college-level academics. A national evaluation of early college conducted by the American Institute of Research and SRI International (2009) reported that early college students graduated with an average of seven to eight college classes (roughly 23 college credits) and 40% enrolled in four-year colleges (Edmunds, 2012). Edmunds concluded that preparation for college begins in high school and students must experience an “authentic” (p. 26) college course to benefit from what Karp (2012) calls “role-related learning” (p. 24).

**Behavioral and Social Practice.** Dual enrollment programs provide students with a general understanding of college by allowing them to learn and practice behavioral and social
expectations. Karp (2012) studied 26 junior and senior high school students in one of five dual enrollment courses offered in their school by two New York City community colleges. Using a case-method approach consisting of 76 semi-structured interviews and 18 dual classroom observations, Karp (2012) found that the “explicit and implicit demands” (p. 25) students experienced within their dual enrollment courses facilitated the practice of college-level behaviors and role rehearse as college students. Of students taking dual enrollment courses on a college campus, 80 percent felt that they increased their understanding of what it is like to be a college student (Karp, 2012). The dual enrollment courses specifically provided students with experience following a syllabus, working independently, and participating in analytical discussions (Karp, 2012). A limitation in Karp’s (2012) research is the relatively small population studied of 26 students and the unique aspect of this sample with a majority of students not speaking English at home. From social and behavioral experiences to academic preparation for college, New York City dual enrollment programs were studied to better understand academic outcomes.

**Academic Preparation.** Taking college-level courses while in high school can prepare students academically for college. Allen and Dadgar (2012) studied College Now in New York City. Serving 20,000 students a year as the largest urban dual enrollment program in the country, College Now was developed through an alliance between The City University of New York (CUNY) and the New York City Department of Education (Kim, 2012). The program expanded city-wide to give more midrange students’ academic experiences in preparation for college based on the belief that both high achieving and midrange students can benefit from exposure to college-level course work (Kim, 2012; Hofmann & Voloch, 2012). Allen and Dadgar’s (2012) quantitative research approach used rigorous statistical modeling to understand the differences
between student participants in College Now credit courses and students not enrolled in the program through analyzing student demographics, academics, and matriculation to CUNY. Outcomes were assessed based on student first semester college GPA, credits earned, and retention to a third semester at CUNY. Observed and unobserved preexisting student differences of demographics and student achievement were controlled so as not to overestimate program effect. Study results support previous findings that participation in dual enrollment programs aligns to positive and large effects in assisting students with success in college as defined by earning more credits which may shorten time to degree, increasing academic performance as measured by obtaining a higher GPA, and leading to reenrollment in a third college semester (Allen & Dadgar, 2012, p. 19). In addition to these outcomes, a commonly cited purpose of dual enrollment is to raise student motivation and college aspirations (Allen, 2010).

**Aspirations.** Exposure to the college environment through dual enrollment can inform student’s hopes and dreams about going to college. Edmunds (2012) interviewed students about their early college experience and linked the goal of these programs in “ensuring that every student is ready for college” to an increase in “students’ college-going aspirations” (p. 86). Smith (2007) studied the connection between educational aspirations and dual enrollment in order to provide policymakers and educators with evidence in support of dual enrollment programs. In a study of 246 high school seniors in Kansas, of which 56% were taking college courses and 43% were not, Smith’s (2007) quantitative research revealed that student participation in dual enrollment was more of a predictor of educational desire than grades in high school or parental education (Smith, 2007). Educational aspiration was highly correlated with college courses taken on a campus compared to students taking college-level courses within their high school (Smith, 2007).
**Intentions.** Experiences gained through participation in dual enrollment may inform a student’s plan to attend college. Carpenter and Fleishman (1987) studied 14,000 Australian high school students’ in 12th grade to understand the variables that influence college intentions. A pre and post-graduation survey collected data on attitudes, parent and friend influences, social norms, and academic abilities. The study found that behavioral intentions were the best predictor of college attendance. In addition, perceptions of ability, which might be reflective of overall self-esteem and self-confidence, raised the likelihood of college intentions. Of student participants, 60% with a high perception of ability planned to enter college versus 43% with a low perception of ability (Carpenter & Fleishman, 1987). Greater perceived academic ability increases the likelihood that students will plan to enter college even when the effects of attitudes, social norms, and actual academic achievement are controlled (Carpenter & Fleishman, 1987). Further research in understanding the role of self-concept in connection to college intentions and behaviors is recommended by Carpenter and Fleishman (1987).

**Dual Enrollment and Self-Efficacy**

Self-concept is defined as the beliefs one has about oneself. A myriad of factors inform self-concept, including personal experiences. This section explores the connection between the dual enrollment experience and the development of self-beliefs. Kaniuka and Vickers (2010) surveyed students about their experience taking college courses while in high school. Of the 31 respondents, Kaniuka and Vickers identified two common themes: the development of an identity of success and a focus on the future in preparing for college (Kaniuka & Vickers, 2010). Through participating in dual enrollment, students gained an identity of success that was based on being given the opportunity to excel and achieve in college-level courses. They developed beliefs in their ability to successfully perform college course requirements. These beliefs
determine goals and aspirations (Bandura, 2001). The more capable individuals judge themselves to be, the higher goals they will set for themselves (Bandura, 1991). Ajzen and Madden (1986) studied 90 college students and their expectations of getting an “A” in a particular class. This study linked what student’s believed about their capability with their intention to obtain an “A.” One of the measures of self-efficacy was the student’s belief that they had control over getting an “A” in the course. A sample question of this belief measure was “If I want to, I could get an ‘A’ in this course” (Ajzen & Madden, 1986, p. 467). The measure of intention was the student’s goal to obtain an “A”. A sample question of this measure was “I am aiming at an “A” in this course” (Ajzen & Madden, 1986, p. 467). Using regression analysis, the study found that intention was influenced by a student’s belief that they were capable of attaining an “A” (Ajzen & Madden, 1986). Carpenter and Fleishman (1987) suggest that “intending to go to college raises the likelihood of actually attending college” (p. 97). Through the development of self-efficacy beliefs, dual enrollment may offer an experience that supports college intentions (Karp, 2012).

**Participation in Dual Enrollment**

As a policy mechanism designed to provide resources that support students in bridging high school to college, it is important to understand the barriers that limit participation. Dual enrollment participation varies by state. Nationally, in 2002–2003 only five percent of students took part in dual enrollment programs, and of first-time college students in 2003–2004 only 17 percent had earned college credits during high school (Berger, 2010). In a 2006 study, the National Center for Education Statistics (NCES) measured the number of high school students in college-level courses and found the same five percent participation statistic (813,000 participants out of 1.5 million students), but when analyzing only juniors and seniors who were most likely to be participants, the percentage increased to 13 percent (Hofmann et al., 2009). Overall
participation percentages are small for various reasons. Some school districts restrict access by student GPA or test scores. Some colleges restrict access in multiple ways by requiring student participation in preparatory courses before taking college-level courses, by student high school class standing, or by requiring written recommendations from a teacher/guidance counselor (Boswell, 2001; Berger, 2010). These requirements, although intended to ensure that students can perform at a college level, serve as barriers that limit access to the opportunities dual enrollment offers. Since research study conclusions on dual enrollment face inherent difficulty in controlling for the varied and numerous restrictions to student participation, understanding the barriers that limit high school students from taking college courses provides context for this research study (Lewis & Overman, 2008). We cannot understand the student experience without recognizing the difficulties students face in using dual enrollment as a vehicle for postsecondary progression.

**Structural.** Eligibility for participation in dual enrollment programs often requires students to demonstrate academic ability. Enrollment restrictions vary by state, school district, and postsecondary institution. The state of Vermont limits dual enrollment participation to students entering their junior or senior year of high school, while the Community College of Vermont requires that students complete a skills assessment before enrolling. The University of Vermont requires a guidance counselor recommendation and parent signature acknowledging that the student’s grade will be recorded on the university transcript. The states of Georgia and Oklahoma allow enrollment based on a formulaic calculation of high school grades, class rank, and scores on the SAT/ACT (Boswell, 2001). Michigan requires students take the Michigan Educational Advancement Placement Test and use the score to permit or deny access. Still other selection criteria are used by states and schools for dual enrollment programs such as limiting
access to honors students or students who have already been accepted to college (Berger, 2010; Boswell, 2001). Restricting enrollment based on high admission standards excludes the students who most need exposure to college expectations and academic standards (Hofmann & Voloch, 2012). These requirements, although intended to make sure that students can perform at a college-level, serve as barriers that limit access to dual enrollment opportunities.

**Philosophical.** Dual enrollment has been a controversial initiative for decades. Some college faculty and administrators express philosophical concerns in replacing several years of high school with higher-level college classes and question the maturity of high school students in handling college material (Catron, 2001; Kinnick, 2012). College administrators may view dual enrollment as having an adverse financial effect on their institution’s revenues because courses are free or reimbursed by state funds at amounts lower than their tuition rates (Kinnick, 2012; McCarthy, 1999). Although college administrators can see how exposing high school students to college-level courses may be an approach to improving progression rates, some express quality concerns with high schools offering college-level courses (Kinnick, 2012). Alternatively, some high school teachers are not supportive of dual enrollment as they fear losing their teaching assignments to college faculty when dual enrollment courses are taught on college campuses (Andrews, 2001, p. 11). Some institutions of higher education may take quality concerns to the extreme and deny transfer of college credit based on the individual teaching the class; this practice is an example of institutional philosophy resulting in policy that penalizes high school students (Hébert, 2001).

**Policy.** Policies that facilitate the transfer of credit between high school and college best support the purpose of dual enrollment programs as a strategic college pathway initiative. Yet the administrative bureaucracy within higher education can be “rigid and sometimes dysfunctional”
Interpretation of policy within offices such as the registrar, admissions, and student financial services can be misunderstood and misaligned, which can create administrative confusion for students in gaining the necessary acceptance of dual enrollment transfer credit toward their college degree requirements (Wright & Bogotch, 2006). Policies and practices that create barriers for students exacerbate social factors that are known to inhibit progression to college.

**Social.** Lack of parent educational attainment is linked to low socioeconomic income and students who tend to be less academically prepared for college (Hugo, 2001). Doubting their influence over their child’s academic development, parents who have not attended college may fail to cultivate academic competencies in their children (Bandura et al., 2001). Alternatively, when parents have high academic aspirations for their children, they positively influence their children’s aspirations (Bandura et al., 2001). Individuals whose parents have not attended college are known as first-generation students. These students are less likely to take college entrance exams, be aware of college admissions processes, and understand financial aid opportunities (Hugo, 2001). With social context and socioeconomic hardship having been shown to affect academic development and achievement, the social barriers students face may prevent them from taking advantage of high school to college bridge programs (Bandura et al., 2001).

**Limitations**

This literature review was limited by the available research on student participants who have gained access to dual enrollment programs through overcoming the barriers and entry thresholds dictated by state policy or postsecondary institutions. These may include prerequisite course work, high school guidance counselor permission, honors level student status, high school GPA minimums, or a state test. Within the research gathered for this literature review only a few
studies utilize quantitative research across large student populations to provide a high level of statistical significance. A more nuanced understanding of the dual enrollment student participant experience may be gained from interpretive phenomenological analysis. Exploring dual enrollment as a phenomenon may offer insights into the student experience.

**Summary**

A college education is tied to lifelong benefits in earnings, health, and personal satisfaction. As the federal government and state policy makers contemplate and initiate legislative mechanisms for increasing postsecondary progression, programs that facilitate high school students taking college-level courses are common across our nation. Of particular interest for states such as Vermont with low college attainment in spite of high numbers of students graduating from high school, it is important to understand how dual enrollment supports the transition from high school to college.

For states that have made an investment and enact policy that drives collaboration between high schools and postsecondary institutions, dual enrollment programs have been a solution for successfully bridging high school to college. Studies show that the educational path for all high school students is not the same, and those who engage in dual enrollment programs benefit from exposure to a more challenging curriculum and college expectations. Research studies identify student outcomes of academic preparation, behavior and social practice, as well as confidence and belief in ability.

Dual enrollment programs have faced opposition which has resulted in barriers to access for some students. Traditional educators are concerned with the acceleration of high school resulting in students who are not ready for the rigors of college courses. These barriers contribute to the mere fraction of high school students participating in dual enrollment programs. Barriers
that stand in the way of student participation in dual enrollment programs are both structural and social, as well as philosophical and policy driven.
Chapter 3: Research Design

Research Methodology

The purpose of this study was to explore the Vermont dual enrollment experience and the self-beliefs of student participants. Bandura’s (1977) seminal research on self-efficacy provides a base of knowledge as to how self-beliefs are developed in various settings, including education. Building on the existing dual enrollment research, I reviewed studies that identify various college-related outcomes, including effects on self-beliefs and college aspirations. Participation in dual enrollment is difficult for some. By understanding the social, structural, political, and philosophical barriers that students overcome, this study can shed light on issues that work against dual enrollment legislative policy. Participants in this study are students who have taken one or more courses on a college campus through the Vermont dual enrollment program before graduating from high school.

Guided by a theoretical framework and extensive literature review, the study questions are: What are the lived experiences of Vermont high school students who participated in a dual enrollment course? How do participants understand and explain their self-efficacy beliefs? What meaning do participants give to the experience?

IPA was chosen as the qualitative research study method because it is concerned with the lived experience of individuals, the meaning of the experience, and how individuals make sense of the experience (Smith, 2011). Phenomenology studies fall within a social constructivism worldview (Creswell, 2013). As a researcher, social constructivism fits with my own worldview in seeking to understand, through the perspectives of others. In approaching this IPA study, I was guided by Smith, Flowers, and Larkin (2009) in understanding “the theoretical underpinnings” (p. 1) of IPA, as well as planning my research, collecting and analyzing the data, and writing
about my findings. Beginning with broad questions, the process of inquiry in this study was based on a dialogue with high school students who gave a narrative account of their common experience in taking courses within the context of a college campus. Using the methodology of IPA, I interpreted the dual enrollment experience through each student’s story and seeing the world from the students’ perspective (Rubin & Rubin, 2012; Smith et al., 2009). Within the specific context of the experience, sense making was co-constructed by the researcher and the student participant (Creswell, 2013).

**Interpretive Phenomenological Analysis**

Phenomenology is the study of phenomena to understand “the hidden meanings and the essences of an experience” (p. 183) in order to provide greater knowledge and insight in a particular area (Kafle, 2011; Smith et al., 2009). The focus of this IPA study was to distill the experiences of student participants into a descriptive “essence” that discloses “what” was experienced and “how” it was experienced (Creswell, 2013; Smith et al., 2009). Understanding the meaning of the experience is of equal importance in an IPA study (Smith, 2011). Smith et al. (2009) suggest that the process of understanding is inherently interpretive.

**Hermeneutics.** Within the two primary approaches to phenomenology, descriptive and interpretive, hermeneutics is the interpretation of language and text to discover meaning associated with phenomena (Sloan & Bowe, 2014; Smith et al., 2009). The words individuals use in describing their experience are collected by the researcher as evidence, and language provides the textual data that create patterns or themes in describing the phenomenon. It is the researcher’s engagement and interpretation of an experience that ties IPA to hermeneutics (Smith, 2004). Interpretation is a circular, dynamic process of analysis that involves moving “back and forth” (p. 28) between the data to understand meaning (Smith et al., 2009). As the researcher attempts
to make sense of the individual “making sense of their experience” (p. 24), Smith (2011) suggests that IPA engages in *double hermeneutics*. This complex analysis method can be an effective approach to “giving voice” (p. 3) to an experience (Sloan & Bowe, 2014).

**Idiographic.** The term idiographic refers to the study of specific individuals and their experiences within particular situations or events (Larkin, Watts, & Clifton, 2006; Smith et al., 2009). As is often the case in education research, studies are focused on students in specific educational settings. Conducting a study in an ideographic manner requires a commitment to analyzing the detailed accounts of a small number of individuals, typically through interviews, focus groups, or dairies (Larkin et. al., 2006; Smith et al., 2009). In collecting and analyzing data, IPA requires as close to a first-person account of the experience as possible to understand what it was like for the student, and then an interpretation as to “what it means” (Larkin et al., 2006, p. 104). The researcher builds data from the bottom up and uses inductive complex reasoning skills throughout the process of analysis (Creswell, 2013).

**Inductive.** The inductive techniques for organizing data involve building categories, patterns, and themes to develop “abstract units of information” (p. 45), which are checked against the data (Creswell, 2013). Rather than approaching analysis with a preconceived hypothesis, IPA research questions are broad and allow for emergent themes (Smith, 2004). These themes reflect the mental thoughts, or psychology, of individual study participants.

**Interrogative.** The interrogative approach to inquiry is based on a questioning style that delves into the thoughts of individuals. In IPA, the questions begin broadly. As answers are provided, the questions evolve and become more specific in an attempt to gain greater clarity and understanding. Beginning with “why” or “how” questions, the researcher engages in a dialogue that goes back and forth to create a conversation. Through deep exploration into individual
experiences and detailed coding as to what individuals say, IPA is a methodology that offers additional insights on “meaning and meaning making” (Smith, 2004, p. 41).

**Participants**

Vermont is a small rural state with a distributed population. The population is 94% White and is not reflective of current racial and ethnic demography in the United States (State Health Facts, 2015). The largest county in Vermont is Chittenden with 156,000 residents, which is nearly 25% of the entire state population (Index Mundi, n.d.). Situated within Chittenden County are several of the state’s largest metropolitan areas with the most diverse populations. For this study, I evaluated several large Chittenden County high schools and selected a school with a highly diverse student population. The name of the high school has been disguised and an alias is used to protect the identity of study participants.

Powers High School (PHS) is a public institution that serves the state’s largest and most diverse urban town in Chittenden County (Vermont Cities, n.d.). With 31% minority enrollments, PHS is significantly more diverse than Vermont’s overall minority population of 5.7% (Index Mundi, n.d.). Socioeconomic diversity is evident with 42% of the student body eligible for free or reduced price lunch (U.S. News, n.d.). The school offers the potential for study participants who can speak to overcoming barriers related to lower socioeconomic income or parents who did not attend college.

PHS student enrollment is spread across four grades, 9 through 12, and evenly, 49% male and 51% female (U.S. News, n.d.). In 2013–2014, PHS had 262 students enrolled in 12th grade, which is 15.6% of 12th grade enrollments in Chittenden County and 4.4% in Vermont (Vermont Government, n.d.). PHS offers a comprehensive curriculum of 180 courses and 32% of students are enrolled in Advance Placement courses (Best High Schools, n.d). The high school graduation
rate was 93% in 2013-2014, and postsecondary enrollment within 16 months of graduation was 60.8%, which is slightly higher than the state average of 60% and slightly below the national average (Education Vermont, n.d.; Vermont Agency, n.d., VSAC, 2014; Vermont High School Graduates, 2015). Table 1 provides a comparison of population, demographics, and college continuation for PHS, Vermont, and the United States.

Table 1: City and State Demographics

<table>
<thead>
<tr>
<th>City/State</th>
<th>Population</th>
<th>Postsecondary Enrollment Rate</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>White</td>
</tr>
<tr>
<td>PHS, City</td>
<td>42,452</td>
<td>60.8%</td>
<td>73%</td>
</tr>
<tr>
<td>Vermont</td>
<td>658,715</td>
<td>60%</td>
<td>95%</td>
</tr>
<tr>
<td>United States</td>
<td>320,090,857</td>
<td>61%</td>
<td>61%</td>
</tr>
</tbody>
</table>

A combination of convenience and criterion sampling best supported recruitment for this study. The researcher lives in Chittenden County and in close proximity to PHS, making the school a site of convenience (Creswell, 2013). Phenomenological studies benefit from a narrow sampling strategy in order to recruit participants based on the criteria of having experienced the phenomenon (Creswell, 2013). Criterion for this phenomenological study included currently enrolled senior standing at PHS, age 18 or older, and self-identified as having participated in dual enrollment college course(s) on a college campus. Given PHS’s small student population of 12th graders, additional criteria such as gender, race, or family income would limit recruitment. Therefore, the commonality of participation in dual enrollment course(s) was the primary focus of the study.

Recruitment Strategy

A letter introducing the research proposal was sent to PHS’s principal, as seen in Appendix A - research request letter. The letter outlined the purpose of the study and invites a
discussion with the principal in order to gain approval to conduct the study at PHS. An email was sent to the PHS’s superintendent of schools with a copy of the letter and a request for his signature to conduct the study. Upon gaining approval from the superintendent, principal, and the institutional review board, I began the study. I considered the challenge of identifying students to interview and reached out to enlist volunteers through school posters. Recruitment information was posted in the office of the dual enrollment counselor and on school bulletin boards located in the main hallways. This poster information is shown in Appendix B. A letter was emailed to students who volunteered to participate in the study - Appendix C, recruitment letter. This letter provided a summary of the study and invited students to confirm their age, high school standing, and participation. Incentives were not offered to participants beyond the opportunity to share their experiences through the research with others who might be interested in Vermont’s dual enrollment program.

**Data collection**

There were four phases of the data collection process which are summarized in Table 2. Paragraphs that follow provide additional details and a summary of each phase: selection of participants, approach to interviews, data storage, and participant validation.

*Table 2: Data Collection Phases*

<table>
<thead>
<tr>
<th>Phase</th>
<th>Timeline</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: Participant Selection</td>
<td>Selection of participants completed within one month of initial contact.</td>
<td>Email letter response to student volunteers to validate age, high school status, and having taken a college course. Eight students selected that met the criteria. Date, time, location set for interview.</td>
</tr>
<tr>
<td>Phase 2: Interviews</td>
<td>All interviews completed within four months of study</td>
<td>Duration of interviews was one hour. Interviews began</td>
</tr>
</tbody>
</table>
Participant Selection. Of eleven students who responded to the recruitment poster, eight students met the criteria and were interviewed about their dual enrollment experience. Smith et al. (2009) “suggest that between three and six participants can be a reasonable sample size for a student project using IPA” (P. 51). Smith (2004) states that “detailed and nuanced analysis associated with IPA” (p. 42) is only possible with a small sample which supports the thorough and extensive data analysis required across each student case. Within IPA, an in-depth data collection process involves obtaining personal stories through interviewing, audio recording, and transcription (Smith, 2011).

Interviews. As a method for data collection, Smith (2004) describes semi-structured interviewing as “exemplary” (p. 50) for IPA research. Smith (2004) cites the advantage of real-
time interviewing as providing an opportunity for the researcher to follow up on interesting points during the interview. Through this approach to interviewing, the researcher can create a dialogue to explore responses more deeply (Smith & Osborn, 2003; Smith et al., 2009). Given that this study uses the IPA methodology, semi-structured interviews were employed to understand the dual enrollment student experience (Smith et al., 2009).

Unlike structured interviewing that relies on questions that are controlled and constrained, semi-structured interviewing methods are flexible and facilitate a give-and-take approach to information gathering (Smith & Osborne, 2003; Smith et al., 2009). Rather than using a pre-established set of questions, the interviewer “has an idea of the area of interest and some questions to pursue” (Smith & Osborn, 2003, p. 58). Preparation for semi-structured interviewing involves anticipating what the interview will cover, considering the wording of questions, and foreseeing problems or sensitivities (Smith & Osborn, 2003). For this study, an interview schedule was developed with a sequence of broad questions related to the “what” and “how” of the dual enrollment experience (Creswell, 2013). Possible answers were anticipated and a list of follow-up prompts and probes were created to hone in on specific details. I used a responsive interviewing style which began with establishing rapport. A flexible pattern of questioning followed as I pose initial questions and then new questions based on the interviewee’s response (Rubin & Rubin, 2012; Smith et al., 2009). The goal of the interview was to establish a friendly and supportive tone while listening, responding, and capturing a narrative of the experience (Rubin & Rubin, 2012).

One 60-minute interview was conducted with each student in order to “develop a composite description of the essence of the experience for all of the individuals” (Creswell, 2013, p. 76). The interviews followed the protocol in Appendix E. During the initial interview, I
asked broad, open-ended questions to understand what it was like to be a dual enrollment student. Questions were asked in a manner that engaged the students in a conversation, reflected on their experience, and uncovered something meaningful about that experience (Smith et al., 2009; Van Manen, 1984). To ensure protection of human subjects and confidentiality, the interviews were digitally recorded using a PC Sound Recorder and stored electronically on a password-protected iPhone and in a password-protected electronic storage account.

**Data Storage.** In describing a phenomenon, participants share in-depth and private details that I have an ethical responsibility to keep confidential (Creswell, 2012). I transcribed the interviews, rather than hiring a transcription service, in order to maintain confidentiality of the information. To protect the anonymity of participants in this study, I assigned aliases for use in storing interview audio files, transcript files, and in analyzing the data (Creswell, 2012). The participant aliases are known only to me. The alias list and participant signed consent forms are stored in my locked home file cabinet. Each participant interview transcript was stored on my personal password-protected computer and electronic document account, which was accessible only to me. The protection of human subjects and confidentiality was ensured through the use of aliases, a locked home file cabinet, and password-protected electronic file storage. Transcripts, audio files, and informed consent documents will be stored for five years and destroyed thereafter (National Institutes of Health, n.d.).

**Validation.** Upon completion of each interview, the transcribed interview document was emailed to each participant. The participants were asked to read through the transcript and verify that it was an accurate reflection of their answers to the interview questions. Participants responded within one to two days of being emailed by the researcher.
Data Analysis

Smith et al. (2009) describe IPA as not having a prescribed “single method for working with data” (p. 78) and characterize IPA analysis as a set of processes and principles. The principles are the researcher’s analytical focus on participant understanding and meaning of the experience (Smith et al., 2009). In moving from specificity to commonality and descriptive to interpretive, the researcher engages in this analytical process (Smith et al., 2009). Since there is “no clear right or wrong way of conducting” (p. 80) IPA analysis, Smith et al. (2006) provide guidelines that I followed for analytical discovery.

The ideographic process of analysis begins with conducting a complete review of one interview before moving to the next (Smith et al., 2009). By reading the transcript and listening to the audio recording, carefully and thoroughly, the researcher’s goal is to become very familiar with the initial interview. During the first read of each transcript, I wrote annotations in the left margin of the transcript document and in the second read, I noted emerging theme topics in the right margin (Smith & Osborn, 2003; Smith et al., 2009). In the third read, I highlighted specific words, short phrases, interesting points, reflections, or observations made by the respondent and noted emotions using the electronic comment feature of the document software (Biggerstaff & Thompson, 2008). According to Smith and Osborne (2003), “the skill at this stage is finding expressions which are high level enough to allow theoretical connections within and across cases but which are still grounded in the particularity of the specific thing said” (p. 68).

Following the first step of annotating the transcripts, each electronic document was uploaded into a qualitative data analysis software program (Dedoose) to facilitate segmenting the text into codes. Descriptive coding is recommended as a method for analyzing the basic topics captured within qualitative data (Smith et al., 2009; Saldana, 2013). Saldana (2013) refers to this
coding approach as a way to create a “narrative portrait” (p. 89) of the experience. By using descriptive codes, in the form of short phrases or words, the “primary goal is to assist the reader to see what you saw and to hear what you heard” (Saldana, 2013, p.88). Narrative coding was used to identify recurring themes and “connected meanings” (p. 134) through storied text (Saldana, 2013). Saldana (2013) suggests that this coding approach is appropriate for studies that are both psychological and sociological in context where the environment impacts an individual’s personal experience. In using this coding approach, the goal is to identify “how and why a particular outcome came about” (Saldana, 2013, p. 134).

Guided by Smith & Osborn’s (2013) recommendation for studies of more than three participants, I compare each participant interview to the codes from the initial interview to begin to identify themes across all interviews. Each coded transcript was a point of comparison for the next (Smith & Osborn, 2003). In connecting themes, categorizing them, and ordering them by relative importance, I began to make sense of them (Smith & Osborn, 2003). This interpretive process was iterative and involved going back and forth between interview transcripts to eliminate, combine, group, and regroup emergent themes (Smith & Osborn, 2003).

**Trustworthiness**

Creswell (2013) observes that qualitative research suffers from criticisms of reliability and validity when compared to traditional quantitative approaches. Within this qualitative study, I sought to ensure accuracy through spending time in the field, creating detailed thick descriptions, and becoming very familiar with study participants (Creswell, 2013).

**Member Checking.** Validity and credibility was checked upon completion of interview transcription. Each student participant was given a copy of their transcript and asked to confirm
the accuracy of their answers to the research questions. All students provided written confirmation.

**Rich, Thick Description.** Through engaging with students in the interview process, I have captured a detailed description of the physical, psychological, and social experience of each student. Quotes and phrases offer rich and detailed data that provides an opportunity for transferability to similar settings with individuals who share common characteristics as those in this study (Creswell, 2013).

**Study Limitations**

The greatest limitation of this study is that it is conducted at a single school. Student study participants are self-selected from this school location, and these interviews may not be representative of students at all schools in the state of Vermont. Additionally, the small sample size limits claims as to generalizability of the insights.

**Summary**

The focus of this study is on Vermont’s dual enrollment program as a phenomenon. This study uses IPA methodology to explore the dual enrollment experience and student participant self-efficacy beliefs. A qualitative approach was selected because of the inductive nature of the research in understanding the experience from the participant’s perspective. In constructing the essence of the experience, I used a convenience sample of eight students who meet specific criteria. Students attended a high school located in the largest county in Vermont. They were recruited through the passive vehicle of posters placed on school bulletin boards. Participants self-selected to participate in a 60-minute interview. Interview transcripts were reviewed and validated for accuracy by participants. Through descriptive and narrative coding, data were categorized into emergent themes.
Chapter 4: Research Findings and Analysis

This interpretative phenomenological research study was designed to explore the lived experiences and self-efficacy beliefs of eight Vermont students who enrolled in a community college or public university course while in high school. The theory of self-efficacy was used to frame discussions with participants in exploring four sources of influence: performance accomplishment (mastery), learning through observation (vicarious), emotional arousal (emotive), and listening/learning (exhortative).

There are four sections in this chapter. Participant demographic profiles are presented in section one and detailed in Table 2 with a list of participants’ age, race, place of birth, first-generation status, intention to graduate, and number of college courses taken. The second section presents participant profiles with descriptions of each student, their family life, and plans after high school. In the third section, emergent themes are described with textural narratives from interview data as to how participants understanding their self-efficacy beliefs. In section four, cross-matrices are presented in support of the superordinate and subordinate themes. The final section of this chapter is a summary of the findings.

Demographic Profiles

The four female and four male students who participated in this study were 18 years old at the time of the interviews. Five of them are Caucasian, two students are Black, and one student is Asian-Indian. Of the eight students, four are foreign born. Three students will be the first in their family to attend college. Four of eight students have taken two college courses. Of the eight students, seven planned to graduate in the spring of 2016.
Table 3: Summary of Demographic Characteristics

<table>
<thead>
<tr>
<th>Alias</th>
<th>Age/Grade</th>
<th>Race</th>
<th>Place of Birth</th>
<th>First Gen Student</th>
<th>Graduating this year</th>
<th># On-Campus Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ana</td>
<td>18/12th</td>
<td>Asian</td>
<td>Foreign</td>
<td>No</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Astrid</td>
<td>18/12th</td>
<td>Caucasian</td>
<td>Domestic</td>
<td>No</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>David</td>
<td>18/12th</td>
<td>Caucasian</td>
<td>Foreign</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Ellen</td>
<td>18/12th</td>
<td>Caucasian</td>
<td>Domestic</td>
<td>No</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Hadar</td>
<td>18/11th</td>
<td>Black</td>
<td>Foreign</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>James</td>
<td>18/12th</td>
<td>Caucasian</td>
<td>Domestic</td>
<td>No</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Jeffe</td>
<td>18/12th</td>
<td>Black</td>
<td>Foreign</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Oliver</td>
<td>18/12th</td>
<td>Caucasian</td>
<td>Domestic</td>
<td>No</td>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

Student participants listed in Table 3 had several similarities. They were of the same age and all intended to graduate from high school. Seven of the eight were in 12th grade and were graduating at the end of the current school year. Although they differed in race, place of birth, and first-generation status, each student made the decision to enroll in one or more on-campus college courses while in high school and shared in that experience. Each student was academically challenged by the course(s) and reflected on their learning during the interview. From shy and self-deprecating to confident and enthusiastic in personality, students were similar in their willingness to be open about their life and family relationships. They were excited about moving on after graduation, and they all had a general sense of what they would be doing the following year.
Profile of Student Participants

In place of actual names, aliases have been used to guarantee the anonymity of participants. Personal information about family, education, and interests has been generalized to further protect participants from being identified. Each profile provides some accurate information about each student’s academic and extracurricular interests and family background. Within each profile, participants discuss why they enrolled in a college course.

Ana is an 18-year-old Asian-Indian female who is a senior in high school. Her family immigrated to the United States when she was 10 years old. During the interview, she was soft-spoken and shy. She described enrolling in her high school’s tech center that allowed her to earn college credits for taking honors level courses. She explained that when she graduates from high school she will have almost a year’s worth of college credits that can transfer towards her degree. Ana’s interests included playing on several sports teams and pursuing a career in health sciences. Her father graduated from college in her home country, but her mother did not attend college. Her older sister is graduating from the local public university this year and participated in dual enrollment courses while in high school. Inspired by her sister’s academic accomplishments and encouragement to earn as many credits as she could before college, Ana took one summer course at the community college and another at the public university. She hopes to attend the public university after graduation.

Astrid is an 18-year-old Caucasian female who is a senior in high school. She has lived in Vermont her entire life with her parents and younger sister. Both of her parents graduated from college. Less academically self-assured in comparison to the other students in the study, Astrid was proud of her travels to many countries around the world and her involvement in school athletics. She has taken several AP classes and enrolled in two college courses during the
academic year to pursue her interest in social services. This past summer, one of her college professors helped her secure an internship at a local social service agency. Astrid was accepted to a college on the west coast and plans to attend after graduation.

**David** is an 18-year-old Caucasian male whose family came to the United States as refugees when he was a small child. David is the youngest in his family, and his parents are divorced. Neither of his siblings attended college, nor did his parents. David was reserved and articulate during the interview. He was reflective about his current family life situation and its impact on his education. This year, David was homeless for a period of time, and he says that he does not discuss his education with his parents because they have too many other things to worry about. Enrolled in an alternative adult education program through the high school because he encountered some challenges in his sophomore year, David is taking a college course as part of the program’s curricular requirements for graduation. He is planning to graduate from PHS in the spring and walk with his class. He has decided to work in order to earn money before making a decision about attending college.

**Ellen** is an 18-year-old Caucasian female who is a senior in high school and has lived in Vermont much of her life. She participates in after school athletics, plays an instrument, and enjoys several hobbies. This year, she is taking AP courses. She described herself as a good student and hard worker. Several times during the interview she explained that she can get bored with school work if she is not engaged in a participatory academic environment. Based on the suggestion of her mother, she and her younger brother enrolled in two different courses at the local university during the summer session. Through taking a college course, Ellen hoped to explore an academic subject of interest in anticipation of selecting a major in college. Ellen’s mother has a master’s degree and her father attended college but did not graduate. Admitted
early decision to her first choice school, Ellen plans to attend a college that she feels will challenge her academically.

**Hadar** is an 18-year-old Black female who is a junior in high school. She came to Vermont with her family over 10 years ago as a refugee. She is one of the oldest in her large family and spends much of her time caring for her siblings. In school, Hadar participates in several clubs and is in the Honors Society. On the weekends, she has a part-time job. Neither of her parents attended college. After seeing her older brother take a college course while in high school and then attend college, she is inspired to further her education and attend college too. In the past year, she had several health issues that made school difficult. Her family is encouraging her to stay close to home for college because of her health, so she plans to attend the local public university after graduating next year.

**Oliver** is an 18-year-old Caucasian male who is a senior in high school and has lived in Vermont for most of his life. He is the oldest in his family. Both of his parents have a master’s degree and his father was a college professor at one time in his career. In school, he is involved in academic team competitions and is a peer tutor. Oliver took AP courses during his junior year, and by the end of that year, he had taken all the advanced math classes available to him. He decided to take two math courses at the local university during the summer while working for a computer company as an intern. Interested in computer science and considering the idea of possibly majoring in computer engineering, his first choice college is one that he feels has academic strength in computer science. He is waiting to hear if he is accepted.

**James** is an 18-year-old Caucasian male who is a senior in high school. He and his family moved to Vermont over fifteen years ago. He is the oldest in his family. Both his parents graduated from college, and his mother has a master’s degree. James spoke confidently during
the interview about his commitment to his schoolwork and his participation on two athletic teams. He explained that his athletic schedule only allowed for evening courses at the local community college. Through enrolling in two business courses, he hoped to identify a college major. James was accepted to several colleges and is waiting to hear from the local state university before deciding where to attend after graduation.

Jeffe is an 18-year-old Black male who is a senior in high school. He and his family immigrated to the United States over eight years ago. He learned English during elementary school. Verbalizing his thoughts is sometimes challenging for Jeffe, but he understands what his teachers are saying and what is required of him academically. Jeffe was eager to describe what it was like taking a college course and offered advice based on his experience during the interview. In school, Jeffe enjoys participating in a team sport and writing for the school newspaper. His career goal is to be a journalist. As the first person in his family to pursue higher education, Jeffe decided to enroll in a college course because he wanted to experience the college academic environment. His high school schedule made it difficult to take a course at the local university, so he enrolled at the community college. He was accepted to a local private college and was waiting for the school to provide him with information about his financial aid award before making a commitment.

Emergent Themes

This research study explores how participation in dual enrollment programs affects self-beliefs through the research question: “How do Vermont high school students understand and explain their dual enrollment experiences within the framework of self-efficacy?” In data analysis, significant statements can be grouped into themes whereby the researcher develops a “textural description” (p. 80) of what the participant experienced and “structural description” of
how they experienced it (Creswell, 2007). The overarching “essence” (p. 80) of the experience can be formed by combining the two (Creswell, 2007). The transcript excerpts provide participant stories, observations, thoughts, and beliefs related to the experience of taking a college course in high school.

Data analyzed from interviews with the eight participants revealed two superordinate themes and six subthemes. The first superordinate theme was (1) Improved Belief in Self; and subthemes (1.1) Academic completion; (1.2) Peer observation; and, (1.3) Encouragement. Superordinate theme two was (2) Successful coping with emotion; and the subthemes were (2.1) Handling fear; (2.2) Managing anxiety; and, (2.3) Overcoming barriers. Superordinate and subordinate themes were identified in four or more participant interviews, as listed in Table 4.

This table shows participants who provided evidence for each theme.

**Table 4: Evidence of Superordinate and Subordinate Themes**

<table>
<thead>
<tr>
<th><strong>Superordinate Themes</strong></th>
<th>Ana</th>
<th>Astrid</th>
<th>David</th>
<th>Ellen</th>
<th>Hadar</th>
<th>James</th>
<th>Jeffe</th>
<th>Oliver</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Improved Belief in Self</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1.1 Academic Completion</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1.2 Peer Observation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1.3 Encouragement</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.0 Coping with Emotions</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.1 Handling Fear</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2.2 Managing Anxiety</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.3 Overcoming Barriers</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Smith et al. (2009) describe the process for developing emergent themes as a focus on “discrete chunks of transcript” (p. 91) where the researcher breaks up each interview’s narrative flow and reorganizes the data. In the analysis, identified phrases represent the “psychological essence” (p. 92) of the experience and can support the researcher’s interpretive process in developing emergent themes (Smith et al., 2009). Through this process, two superordinate themes were identified: Improve belief in self and successful coping with emotion.

**Theme 1: Improved Belief in Self**

The first superordinate theme emerged during interviews as participant’s described gaining more confidence while taking the course. Experiencing college through taking a course on campus gave student participants a new perspective as to their abilities and a greater belief in their capabilities. The experience boosted their confidence. Table 5 provides an abbreviated textural narrative to the question of participants’ increased confidence in their abilities.

*Table 5: Cross Matrix of Participant Increased Belief in Self*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Did you gain more or less confidence in your abilities while you were enrolled in the college course?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellen</td>
<td>“I think it definitely influenced my belief in myself…especially in college…I think that it shows me that in college, I’m going to have to work hard and there are going to be classes that I’m not necessarily going to like, but I’m going to have to put in effort…but it is definitely something I can do and definitely something I think I’ll enjoy.”</td>
</tr>
<tr>
<td>Ana</td>
<td>“First of all…I experienced what college would be like as a high school student so that was one accomplishment. I know it is a lot of work to be a nursing student but I know I can do it because…I had that experience.”</td>
</tr>
<tr>
<td>Hadar</td>
<td>“I’ve gained a lot more…. this class has taught me some things. Sophomore year was like pretty bad for me. I was like a little on the down low about college. I was like…eyehh…(sound of skepticism)…since my grades are so bad, I’m not going to get into a school. So I was like thinking maybe that’s not right for me. I thought...”</td>
</tr>
</tbody>
</table>
about maybe if I take that class…maybe that class would benefit me in a way. [This college class] is mostly about motivation and stuff like that so it’s like really helping me and I like it.”

Jeffe “When I was taking that class…I found it a little difficult some of the time…but I was still confident that I can do the materials that we were doing. And, there was some time…actually that class wasn’t that hard as I thought…it wasn’t that hard…it was actually pretty…it wasn’t that hard…it wasn’t that easy…it was more like all right.”

James “Definitely more. So we got to connect with a bunch of different people and it became a very welcoming and open environment. So we had a lot of open discussion, uhm, a lot of presentation so it helped with that confidence in getting up and speaking about what you know in front of people.”

Oliver “I guess I would say that I gained a little bit of confidence….like I was confident that I’d…I was pretty confident that I’d do well but it just removes an unknown. So, I think I’ve have an A minus in this course and an A minus in the previous course and means that its less likely to be a big change for me when I go to college in terms of how I do.”

Astrid “I was like this might be much different from what I’m used to and much harder but I think it was all really manageable and that kinda was a confidence booster cause it was more work than I’m used to but I was able to do everything and I got good grades in both of them.”

David “I’ll say this…I learned how to procrastinate less. I think I learned new things. I learned about…[inaudible]…Robert Thoreau. I learned about Walden. I didn’t know about that before and I actually kind of enjoyed that book or that novel. I just kind of became slightly more education and I enhanced my work ethic.”

Through the course experience, participants learned what to expect from college. Astrid and Jeffe expected that college academic work would be more difficult for them to complete. Successfully completing course assignments gave them confidence in their college abilities. Oliver and James were confident in their high school academic abilities prior to taking a course but were unsure about college expectation. Oliver said his confidence increased when he received an A on several college assignments. James gained confidence in his abilities when he spoke in front of his classmates and felt that it was an open and welcoming environment.
Participants also related their confidence to a better understanding of what it means to work hard in college. Ellen, Ana, Hadar, and David learned about the effort that was required in completing a college course. Ellen realized that even if she was not interested in the course subject, she was going to have to apply herself in order to be successful. Ana’s sense of accomplishment and realization that college is a lot of work increased her confidence in her ability to pursue a degree in nursing. Hadar reflected on how taking the course gave her confidence in her ability to engage at the college level. Finally, David observed that he improved his work ethic through completing assignments, which increased his confidence in his abilities in college.

Through further analysis, three subthemes emerged as evidence for the first theme of Improved Self-Beliefs. They are: 1.1) Academic completion; 1.2) Peer observation; and, 1.3) Encouragement.

**Subtheme 1.1: Academic Completion.** All students reported gaining confidence in their abilities through the academic requirements of completing a course. Of the eight participants, all were academically challenged. Half experienced an academically difficult environment and half described a positive and stimulating experience. Table 6 is an abbreviated textual narrative of the academic experience of participants.

*Table 6: Cross Matrix of Participant Academic Statements*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Academic Experience in the College Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellen</td>
<td>“It was really heavily like graded on tests and so I felt the information…was hard to grasp… because it wasn’t delivered super well and then it was hard to remember the information because it was like you have to study all this for a test and for me tests are [not] necessarily the best way to go about learning something.”</td>
</tr>
</tbody>
</table>
James

“So for the first class I took, I learned a lot. I connected really well with my professor and I did really well in the class. The second one, I’ll consider it a completion if I just get through it.”

David

“I have a problem with procrastination and focus at times. If I’m not interested enough in what I’m about to engage in. Not to say that the class was bad. It wasn’t interesting enough for me to convert my priorities from me producing music and doing whatever to do college work.”

Jeffe

“Allergy of the Cave…I had a really hard time reading that book …in high school I never got this type of text…that is really difficult to read which was a big challenge for me. I figured it out myself because I decided I’m gonna trying my best to work hard for it and understand. I learned so much from that class and that class it did influence my ability to try and prepare for the next level.”

Ana

“A lot of classes we take in high school…the language classes especially…goes at a really slow pace so we can better understand the topics. Sometimes we spend one chapter per month…that’s a long time…but in college in one month there is two or three chapters. I just wanted to try it out. And it worked out well.”

Hadar

“Well, [the] first week of class, we wrote memoires…so with that…I was like really not sure what a memoire was and I got help from students in the class and the teacher. After I wrote that…I felt like I gave my best…like…I put some personal stuff in there so that was like something I probably wouldn’t have shared. I got a good grade on it [and] I feel good.”

Astrid

“None of my classes in high school have required anything over like eight pages so [laugh] that was…uhm…it wasn’t really intimidating but I kinda had to figure out how to manage my time to get that done. I guess…I was kinda proud of myself in the end because I did get it all completed [and] it went pretty well.”

Oliver

“In linear algebra…we had to do a paper, which was my first actual paper in a math class. I got [the assignment] back with I think a 19 and a half out of 20. And so, that was nice [laugh]. [The grade] made me realize that I did enough and that was about what I should be doing.”

Ellen, James, David, and Jeffe were challenged by teaching methods that made learning hard for them. For example, Ellen explained that she found the professor’s long lectures boring. As a result, she did not put in “a ton of effort cause it was…just…like…I don’t really enjoy this.” She said learning the content was hard, and she did not do well on the tests. Ellen was
motivated to take the course because she wanted to try something new and explained that she did not take the grades she received to heart. When asked if she thought she was successful in the course, she replied, “Yes, I’d say I successfully completed it.” In reflecting on the course as a learning experience, Ellen noted that she could confidently say that she has taken a college course and “to many people that’s pretty impressive as a student in high school.”

The manner in which the course material was delivered also was an issue for James. He had taken his first college course in a classroom and was taking his second class online at the time of the interview. Although the course was in accounting, a subject he enjoyed, he said that he had difficulty with learning online. While putting forth significant effort in this second course, James maintained confidence in his ability to complete the online class. James explained that the two courses had taught him that he “can be successful in college.”

David was passionate about music producing and found enjoyment spending time on that activity. Prioritizing academic work over other interests was difficult for him. He knew that completing the course was a requirement for graduation. David was focused on graduating because he said, “I don’t want that over my shoulder for the rest of my life. Might as well get it done. I’ve already put in so much time…I’m like at 98% complete.” Having a goal that was nearly achieved, increased David’s confidence in his ability to overcome the tendency to procrastinate so he could complete the academic requirements of the course.

Jeffé found college reading assignments difficult because English was his second language. The texts made him “realize that these are things I might not be ready [for in college] and I’m going to have to prepare for.” During the interview, he recalled a desire to try his “best” in completing the reading. By applying himself and successfully working through the reading, he gained confidence in his abilities.
For Ana, Hadar, Astrid, and Oliver, completing college-level academic work was a positive experience and an important factor in informing their confidence. Ana had enrolled in Spanish 02 which covered year three and four of high school language classes. She described success in adapting to the increased speed of language learning as giving her greater confidence in her abilities. Hadar based her feelings of confidence on completing assignments that were unlike the ones she had experienced in high school. Receiving a good grade on a writing assignment fueled her confidence and intention to continue taking college courses. She stated: “I have another class I could take…yup…[I’ll] most definitely take another class.” Astrid described feeling uncertain about completing a 10-page paper. She explained that she was a “procrastinator” who waited “till the last minute to do a lot of things when it comes to school” and that was what she was “kinda worried about.” She reflected on feeling pride, confidence, and a new belief in her abilities after she completed the paper. Similarly, Oliver described writing his first math paper in a college course. Through the experience, he learned what was required in completing college-level work, and he could meet the expectations. His confidence was informed by the grade he received on the assignment: “I got an A…I understand it…and, I know more because of it.”

**Subtheme 1.2: Peer Observation.** Beyond academic completion, based on graded assignments or overcoming learning challenges, students in this study compared themselves to their peers to inform their self-beliefs. Hadar watched her high school peers take college courses and explained, “Well last year, I always saw people taking classes, and they would talk about how they were taking CCV [community college] classes…and I’m like…what the heck…I want to take classes…I want to get ready for college.” These observations affected her aspirations and belief that she could be like them.
While taking a college course, Astrid compared herself to students in the class and noted: “They were always participating, but it was never really like I’m less than them.” This thought process was the basis for judging herself equally capable and it was further clarified when she stated:

A lot of those people had experience in the field already so they were more knowledgeable than I was about these topics….and my feeling toward that I didn’t really take that as I’m not as smart as them or anything like that…I just don’t have as much experience or knowledge.

Oliver monitored students in his class and observed: “So one of the things I noticed was that I still in these classes was keeping up well…especially compared to some people, so I think that probably helped my confidence.” Ellen noted her age as a factor that influenced her confidence: “In some ways I think…being I was in high school and some of them were college students…knowing that they are older than you…give[s] you more confidence.” Ana described herself as being “the youngest in the class” and her age gave her confidence because she was more familiar with technology and was able to complete assignments “that some people in the class had a hard time with.”

Oliver, David, Jeffe, and James compared their academic struggles with those of their classmates to inform their self-beliefs. Oliver gained confidence in observing: “Where I wasn’t understanding things…the people that I knew in that class were also unclear temporarily.” David made a similar realization: “It was satisfying to realize that I wasn’t the only person struggling…in comparison to other people. It made me feel better about myself.” In completing a reading assignment, Jeffe recounted that the entire class was challenged with a book that “involved things like Greek words” and “philosophy” and he realized “it wasn’t just me.”
the professor helped James with an assignment and then asked him to assist students who were struggling, James said, “It was good. It definitely helped my confidence to teach others.”

**Subtheme 1.3: Encouragement.** PHS provides an encouraging environment that supports students in pursuing education in a way that best suits their learning. Educational policies are in place that allow students to earn credits toward graduation through non-traditional channels, such as vocational tech programs, adult learning programs, and college courses. All students in this study received encouragement to enroll in a college course. Students differed in their sources of encouragement, which included PHS’s part-time dual enrollment counselor, parents, teachers, and siblings.

**PHS Dual Enrollment Counselor.** Astrid, Jeffe, James, and Hadar identified PHS’s dual enrollment counselor as a source of encouragement. Astrid explained that she was involved in a pre-college program during her junior year where she traveled to look at colleges. She met the PHS dual enrollment counselor through the program. Astrid noted that she “wasn’t really aware of the whole dual enrollment program,” and described the counselor following up with her over the summer, encouraging her to take a college course, and facilitating the enrollment process. Astrid said, “She was really helpful and set me up with the whole thing…so [sound of relief] she has been really great through the whole process.”

Jeffe also learned about taking a college course through PHS’s dual enrollment counselor. She encouraged him to take the pre-enrollment test, and when he received a good score, he gained confidence that he was ready for college-level work. He explained: “Well, uh, I was pretty confident taking that [college] class because I…ah…when I…um…took the test… it showed that I was ready which increased my confidence to take…to go take that class.”
James said that he “worked hard” and had always been “pretty confident” in his “abilities as a student. It was the PHS dual enrollment counselor that talked to him about taking a college class during his junior year. She encouraged him; “[she] thought it might be a good opportunity for me. She knew I was a motivated student so I might take advantage of it.”

Hadar reached out to the PHS dual enrollment counselor for encouragement and academic advice. She explained, “I went to [the dual enrollment counselor] before I even thought about taking a class.” Through asking questions of the counselor, Hadar gained an understanding of college enrollment process. She said: “I went in and sat with her and I was like what is this about? Like how do I get in?” Hadar was persistent in gathering information: “I just kept coming in every Thursday cause that’s when she was there and…like…we got to know each other. Then it was like okay I want to actually take a class.” As she learned more about the opportunity through the counselor, she gained greater confidence in her abilities.

*Parents.* Ellen, Oliver, James, and Astrid received encouragement from their parents. All of these students had parents who attended college. Ellen described her mother’s influence: “I didn’t really become interested [in taking a college class] until my mom was actually looking for something for my brother to do over the summer.” Aware that she had enjoyed “a brief section on astronomy” in her physics class, Ellen said that mother suggested taking a class on astronomy at the local university. Ellen recalled, “So, I decided that taking an astronomy class would further my interest…and see if it is something I want to pursue.” When asked about her parent’s encouragement, Ellen described them as being “very supportive of schooling” and believing that she “can do…anything.”

Oliver recounted growing “up in a house where there was a copious supply of books where…NPR was on probably…basically, all the time when we were home and when people
weren’t asleep.” He described his home as educationally encouraging, with parents who read books to him at night and set an example as to the importance of education. He explained: “My parents have always like helped…like my mom read to me at night until I was in like 5th grad…she read the Odyssey to me, and it was great.” Oliver reflected on how the environment influenced his abilities: “it was…just like that type of support really allowed me to read a lot of interesting things…like way above my reading level but not above my understanding.” He said taking college courses was encouraged by his parents.

When asked about receiving encouragement, James responded that his parents were supportive of his schooling and set high expectations for him. He described his parents’ influence in making “sure I get my work done.” James described how his parents demonstrated encouragement through celebrating his successes: “There was one particular test in my Intro to Business class that I took that I did really well on, and we had dinner to celebrate and that was good.” He described his parents also as pointing out failures: “And then, there was one particular test that I did not do so well on and that was…that was made clear [smile].”

Once enrolled in the college course, Astrid described her parents as being supportive and encouraging. She said “my parents were really excited about it…they just thought it was a really good opportunity for me.” She recalled: “Especially my mom…she always like wanted to read like my essays and stuff for my classes.”

**Siblings.** Hadar and Ana had siblings who had taken college courses while in high school, and both of them received encouragement from them. Hadar described how she turned to her older brother for advice: “My brother is trying to be a psychologist so I tell him my problems sometimes and he’s like maybe it’s this [or that].” As a first-generation student, Hadar’s closest family member attending college was her older brother. Hadar recalled: “My brother also took a
[college] class… and I was like praising him… I guess… and I was just like… I want to take it too.” Similarly, Ana had an older sister who was a senior in college and graduating in two months. She explained: “I mean my parents and my sister always encouraged me to get a head start.” She went on to say, “My sister… took dual enrollment classes when she was at PHS. And, then I just talked to her.” Ana’s sister took one college course with her. She recalled how being in the course with her sister was supportive: “[The college course] was overwhelming at first but my sister also took that class with me.”

**Teachers.** Ellen and David identified teachers as sources of encouragement. Ellen described teachers who “pushed” her to do more academically. She explained: “Teachers have been pretty supportive. In middle school, a lot of my teachers would try to push me, because I was definitely one of like [the] upper students.” David described how he interacted with a teacher who encouraged him: “If I ever had problems, I’d email [her] and be like… uhm… I’m having a difficult time deducing an answer or conclusion for so and so assignment… or just things like clarification, seeking advice.” Neither of David’s parents had attended college and his mother was on public assistance. He said that his parents had “enough going on in their own lives” and he did not “want to trouble them or burden them” with his schooling. Therefore, he did not “really involve” his parents in his education. He relied on teachers for support and enrolled in a college course with a teacher he knew. He said, “It’s going to be more comfortable. So I choose the more comfortable environment. [It] felt safe.”

**Theme 2: Successful coping with emotions**

The college environment can be stressful for high school students. Participants in this study expressed worries and fears related to taking a college course. Some felt anxious about being in class with older students or people they did not know. Several were nervous about being
prepared for college academics. Others faced transportation difficulties or acknowledged personal study habits that could contribute to poor outcomes in their course. Overcoming initial fears, anxieties, and difficulties as they engaged in the college course experience gave participants a greater sense of confidence in their abilities. Table 7 provides an abbreviated textural narrative of participant descriptions of emotions they felt while taking their college course.

Table 7: Cross Matrix of Participant Emotions

<table>
<thead>
<tr>
<th>Participant</th>
<th>Coping with Emotions</th>
</tr>
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<tbody>
<tr>
<td>Ana</td>
<td>“I think before I took the college courses, I was a little scared about taking the college courses and so many credits.”</td>
</tr>
<tr>
<td>Hadar</td>
<td>“They were all college students. There was only one high schooler. The rest were like all 19, 20, 21…and I was like...this is kind of scary.”</td>
</tr>
<tr>
<td>Jeffe</td>
<td>“When I walked into that class…I feel so young because most of the students were…most of them were parents…and they were pretty old…and I feel like ‘Oh my God’.”</td>
</tr>
<tr>
<td>James</td>
<td>“It can be intimidating as an 18-year-old high school senior to walk up to a 35-year-old man who’s been doing it for 10 years [and] be like…no you got to change this.”</td>
</tr>
<tr>
<td>Oliver</td>
<td>“So, the first time I was in the college class I was a little anxious.”</td>
</tr>
<tr>
<td>Astrid</td>
<td>“I feel like I’m a big procrastinator so that’s always kinda a challenge for me and I have been working on it but it’s still…I do wait till the last minute to do a lot of things [laugh] when it comes to school so that’s what I’m kinda worried about for next year.”</td>
</tr>
<tr>
<td>David</td>
<td>“Everyone came with like papers, and I was like…Shoot! I got to think of something real quick…I don’t want to look like an idiot so I’ve got to do something.”</td>
</tr>
</tbody>
</table>
In taking a college course, four of the eight participants in this study articulated their emotions using the following words: scared, nervous, anxious, and worried. Three of the eight participants described a situation in the course where they had feelings of being anxious or worried. All participants expressed the need to cope with their emotions during the course experience. Through further analysis, three subthemes emerged as evidence for the second theme of Successfully Coping with Emotions. They are: 2.1) Handling fears; 2.2) Managing anxiety; and, 2.3) Overcoming barriers.

**Subtheme 2.1: Handling Fears.** The emotion of fear was verbalized by students in being scared or nervous. Hadar said, “it’s kinda scary” being in a class with older students, even though she is not “a person who’s…afraid to talk to people.” Hadar was scared of not fitting which is expressed in her description of being in class with “people…dressed like they were…higher than me.” As the class progressed, she learned about the students and was “touched” by their personal stories. She explained, “when I heard about their story…I was like…wow…this is a different person.” As she became more comfortable, Hadar’s feelings changed from being scared to confident. In reflecting on her experience in the course, she stated, “This class has taught me some things…so, it was like…pretty good.” Ana expressed a similar feeling of being scared. She said, “I was a little scared about taking the college courses and so many credits.” Ana’s fear related to being scared that she might fail. She said, “Since we have to pay for the education, it is even more scary. If I mess up, then I am wasting my parents’ money.” In reflecting on what made her feel more confident, she explained, “I felt more connected to the class because I got to know some more people from that experience.” Similar to Hadar’s experience, Ana said, “[I] learned a lot about the other [people]” and gained “a better
understanding of the differences between...[and] among people.” After completing the course, Ana said, “I’m not scared about entering college anymore.”

David was scared of embarrassing himself, due to his tendency to procrastinate on class assignments. He said in reference to one assignment, “It was never that like...okay...I don’t think I can do this...it was...can I do it in time?” When the assignment was due in class, he described fearing that he might fail in front of his classmates, but managing to pull it together at the last minute. David recalled, “And I did it...I got scared for a quick second but I got it done.” David’s confidence increased through taking the course, because he said, “I learned how to procrastinate less.”

Astrid described being “a little nervous at first” in taking a college course. She confided that she was “not that confident” in her abilities and described herself as “like average” and “not like really smart” academically. In making these observations about herself, she expressed self-doubt prior to taking the course. After taking two college courses, Astrid said that her fears were unfounded and college work was not as difficult as she expected. The experience increased her confidence in her abilities. She explained, “I think it was all really manageable and that kinda was a confidence booster cause it was more work than I’m use to but I was able to do everything and I got good grades in both of them.”

Subtheme 2.2: Managing Anxiety. In response to stress, anxiety is a common emotional feeling related to fear and worry. Ana, Oliver, David, Jeffe, and Astrid felt anxious about taking a college course and used different approaches to controlling their anxiety.

Ana managed her anxious feelings by enrolling with people she knew. In her first course, she said “I didn’t really feel scared or anything because in that class...I had two of my friends.” She took her second course with her sister. She explained, “We took it at the same time. So, I
wasn’t scared, because I knew I had someone.” Oliver confided that he was “a little anxious”
taking his first course, but he said, “fairly quickly [I] found a group of people that I became
friendly with.” Taking courses with people they knew and making friends were approaches to
managing anxiety and developing a greater sense of confidence.

David questioned his choices in not preparing for assignments in his college course. He
described his feelings of anxiety, “I felt like…ahhhh….I should have prepared. Why didn’t I
prepare? Why do I gotta make this like…why do I gotta push myself like that?.” Through
reflecting on what he could do in the future to be successful, David rationalized: “So, there is just
a lack of…you know what I’m saying like…I lack preparation a lot. You know. I should be more
disciplined through my time in that course. That was something I could have improved on.” In
passing the course and reflecting on what he could do better in the future, David gained
confidence in his abilities going forward.

Jeffe described his feelings of anxiety when he realized that he was one of the only high
school students in the class. He said, “It was awkward” because there were few students his age,
which shook his confidence. He described the scene and his feelings:

This is…I didn’t see anyone who was in…only see one student who was probably the
same age as me…but most of them were age like 20 or 25 and some of them were
students who weren’t supposed to be in college or were supposed to be done with
college…there was only like two high school students in that class…I feel a little weird.

After a few weeks in the class, Jeffe’s anxiety subsided and his confidence increased as he
observed the other students. He stated, “I feel like I was able to do what they can do. I feel the
same level as them…but first before the class started I thought [I] might find myself behind those
other students but I felt like they were the same level as me.”
Astrid described her anxiety in entering the unfamiliar academic setting of a college classroom. She was surprise at her own behavior when she stepped up to the challenge, which increased her confidence. Reflecting on the experience, Astrid stated, “I realized that I actually really enjoyed the aspect of coming into a new setting like that with totally different people that I haven’t grown up with and been in school with before and I found myself participating a lot more in class and like being much more engaged because I was actually interested in the class.” Astrid also recalled her learning, “I felt like I really grasped a lot of what they were trying to teach us and I learned a lot personally from the classes and that kinda was my goal.” The outcome of taking a college course for Astrid was a change in her emotions from anxiety to excitement. She said, “It made me excited for college.” Astrid’s new feelings of confidence were motivating and supported her intention to attend college.

Subtheme 2.3: Overcoming Barriers. Participants in this study identified several barriers to taking college courses that contributed to their emotional stress. Some students were required to take a pre-enrollment test and feared that they would not do well. They wondered what would happen if they failed the test. Hadar remembered nervously asking the dual enrollment counselor: “Is there a big test where if I fail I won’t get in?” Fear of failure related to the test contributed to student stress. Another stress inducing barrier for some students was their high school schedule which included academic courses and extracurricular activities. Several students had athletic activities or course schedules that could only accommodate evening classes. James recounted the difficulty he faced in finding a college course that fit his schedule. He said, “[The community college] offered the most flexible [class] times…since I’m an athlete I had to take them at night…it was hard to find those.” In attempting to identify college courses that would fit into a busy high school schedule, some students faced difficulties that contributed to
their emotional stress. An additional barrier to participation in college courses was transportation to the campus where courses were held. Several students described the challenge they faced in getting to their college class. Hadar described her stress in trying to find a ride to class when she missed the community bus: “Once I had to get my friend’s mom to take me, and she was like really tired after work, and she was like okay I guess I’ll take you…” For some, coordinating transportation to and from their college course was a stressful burden. Although students in this study had a common desire to take college courses, several encountered external barriers to participating in dual enrollment which added stress to their lives.

External barriers to student participation in college courses is an important finding of the study. With Vermont employing dual enrollment as a programmatic bridge between high school and college, policy makers may benefit from greater awareness of the external factors that contribute to student stress, such as testing, class/athletic schedules, and transportation. These external barriers can limit the effectiveness of dual enrollment legislative policy. Table 8 presents abbreviated textural narrative of the barriers to participation that participants described.

*Table 8: Cross Matrix of Participation Barriers*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Barriers to Participation – Test, Transportation, Schedule</th>
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<tbody>
<tr>
<td>James</td>
<td>“So, I had to take the Accuplacer and just to make sure I qualified to take classes over [at the community college].”</td>
</tr>
<tr>
<td>Jeffe</td>
<td>“Before you join that class you have to take a test that shows you that you are ready.”</td>
</tr>
<tr>
<td>Hadar</td>
<td>“When I leave from [school], I have to go downtown and then take a bus from there and sometimes the bus leaves me and…I was literally less than a minute late…so then I have to go somewhere else and like go home and try to find someone to take me.”</td>
</tr>
</tbody>
</table>
Ana  “Over the summer…I was taking drivers ed….after my class was over, I took a bus to [the state university] and just stayed there in the library and did my work until my Spanish class started. It was at 6pm at night until 8:30. For my [community college] class, I took the bus [after class] to [another college] and my parents would pick me up from there because it would have been easier for them.”

Astrid  “I took both of them at [the community college] just cause the hours worked better cause I did the night classes [after school from]...6:15pm to 9pm…I was looking for them at [the state university] but most of them conflicted with my high school schedule.”

Oliver  “My current schedule has me doing…on Mondays… school and then scholars bowl practice and then [the state university] for my math lesson…which is an eight to eight day…before homework.”

Policy. PHS has a policy that students must take a pre-enrollment test called the Accuplacer to assess their readiness for college-level work. Most Vermont postsecondary institutions do not require that high school students take this test prior to enrolling. The test is required by the community college, but it is not required by the state university. Several students in this study mentioned taking the Accuplacer test. James recalled, “So, I had to take the Accuplacer and just to make sure I qualified to take classes.” Similarly, Jeffe explained, “before you join that class you have to take a test that shows you that you are ready…you have enough skills to take that class…so that test measured your ability to be able to take that class.” Hadar described having questions about the test. She said, “I went in and sat with [the dual enrollment counselor] and I was like what is this about? Like how do I get in? Is there a big test where if I fail I won’t get in…if I do good, I’ll get in or something?” Astrid explained that the dual enrollment counselor was helpful in facilitating the testing process: “[she] set me up with the whole thing and like walked me through the whole process of like applying and registering and then taking the tests and everything.” Unlike these students, Ellen and David did not encounter the barrier of taking the Accuplacer test because they enrolled outside the PHS process. Ellen
registered for her course through the state university’s summer enrollment system, and David enrolled through his adult learning program.

Although the test is a barrier to entry, it had value for some students in providing assurance and validation that they could be successful in a college course. The test provided Jeffe with information about his readiness for college and gave him confidence in his abilities. He said, “it showed that I was ready which increased my confidence to go take that class.” Hadar said, “I took the test and did really well” which made her feel more confident in her college abilities.

**Structural.** Student participants described the difficulties they faced in fitting a college course into their busy high school schedule. For Jeffe, Oliver, Astrid, and James, evening classes were their only option in order to accommodate their high school schedules. Jeffe was playing a fall sport and participating in extracurricular activities. He described the challenge of balancing a busy schedule, “when you decide to take a college class you gotta think about what class you’re taking in high school…if you have a full schedule you gotta think about time management first…if you have enough time to be able to take that class.” He explained, “you gotta first look at the space you have in your class and if you have enough space for that class…that’s what you have to think about because sometimes you might have a very full schedule in high school.” Oliver described the reality of long days. He explained, “my current schedule has me doing…on Mondays… school and then scholars bowl practice and then [the state university] for my math lesson…which is an eight to eight day…before homework.”

Evening courses were the only option for Astrid and James. Astrid described why she enrolled in the evening, “I took both at [the community college] just cause the hours worked better cause I did the night classes…I was looking for them at [the state university] but most of
them conflicted with my high school schedule.” Astrid’s class met one day a week after school from 6:15 pm - 9pm, and this was about a 12-hour day for her. James explained why he elected to take his course at the community college, “mainly, just cause it was going to be difficult to get into any business classes at [the state university] or at [a local private college] and it offered the most flexible times since I’m an athlete I had to take [college classes] at night.” High school students who choose to enroll in college courses face a structural challenge created by their high school schedules which often makes evening college courses their only option.

Transportation was a barrier to enrolling in college courses for Hadar, Ana, and Jeffe. Hadar described the complexity of getting to her college course. Using the community bus system, family, and friends as resources, she explained:

> Once I had to get my friend’s mom to take me and she was like really tired after work and she was like okay I guess I’ll take you…when I do get the bus, I walk from…where the bus drops me off [to] the school [which] is like right here…[then] I go to my aunt’s house and she lives around [there] and it is like a 10-minute walk.

Ana described riding the community bus to the university after her driver’s education class and staying at the library until her evening class began at 6:00 pm. For her other course, she would take the bus to a location that was closer to her home so it was easier for her parents to pick her up. Jeffe described his parents as being worried about him taking a college class: “my parents actually worried when I was taking that class because I didn't have transportation to get to [the community college].” Transportation to and from college courses was a barrier for some students. There also was an emotional impact when students lacked transportation and asked family members and neighbors to support them.
Summary

The lived experiences of eight Vermont high school students taking college courses was presented in order to answer the questions of how participants understand and explain their self-efficacy beliefs. This study explores how participation in dual enrollment programs affects self-beliefs through the primary research question: “How do Vermont high school students understand and explain their dual enrollment experiences within the framework of self-efficacy?”

The experience of taking college courses while in high school was instrumental in increasing study participants’ confidence in their abilities. It was through mastery of college-level work assignments that students gained the most confidence. Students described feeling uncertain about their ability to complete assignments that were more difficult than what they were used to in high school. While enrolled in their course, they all successfully completed college-level assignments, such as reading a complex book, writing a lengthy paper, or giving a presentation in front of their class. Based on these experiences, students expressed confidence in their ability to complete similar assignments in the future. Completion of the course also was cited by all participants as evidence that they could be successful when they went to college.

Students in this study experienced a range of emotions related to taking a college course and gained confidence in their abilities through coping with these feelings. Before and during the course, students described feeling fearful, anxious, and worried about what it would be like and their ability to complete assignments. Several felt that they might be too young to be in a college course and wondered if they belonged there. Most had been encouraged to enroll by a supportive parent, teacher, or counselor who felt that they could be successful. This verbal encouragement was not enough to convince students of their capabilities. In comparing
themselves to their high school peers, students gained confidence when they felt they were as capable as others in their classes. When students realized that they could perform at the same academic level as their older classmates, their confidence and sense of belonging in the college course increased.

Many students faced obstacles to taking a college course. Efforts to overcome these obstacles informed students’ confidence. For several students, an evening courses was their only option because high school or sports schedules did not allow for day courses. These students made a commitment to 12-hour days. Transportation logistics contributed to a long day and was an added complexity to taking a college course. For some students, transportation to class required that they ride the community bus system or rely on friends or relatives to drive them. In describing their efforts, students said that they worked hard to arrange their schedule and transportation in order to take a college course. They gained confidence in their abilities as they overcame these obstacles.
Chapter 5: Conclusions and Implications

The purpose of this study was to explore the lived experiences and self-efficacy beliefs of Vermont high school students who participated in a dual enrollment course. The theory of self-efficacy was the framework for the study, and a qualitative approach was selected because it is appropriate for research aimed at gaining a better understanding of a human experience (Creswell, 2007). IPA was chosen because it is focused on describing the “essence of the experience” (p. 122) and interpreting the meaning of the phenomena (Creswell, 2007).

Interviews were conducted with eight Vermont high school students who participated in a course at the public university or community college. Through these interviews, a rich, thick data set was compiled regarding students’ lived experiences. As is common with qualitative research studies, an interview guide was developed using open-ended questions which allowed for an inductive approach to data analysis. In moving from one interview to the next and in comparing the details of each individual’s experience, broad patterns emerged (Creswell, 2007). An understanding of the phenomena was achieved through this analytical process, which revealed themes and subthemes that informed findings about the common experiences and self-efficacy beliefs of the students.

For the purpose of providing greater clarity, the study findings are interpreted and related to the theoretical framework and literature within each of the three conclusions presented in this chapter. In addition to an overview of the problem of practice, implications for practice are discussed and evidence in support of existing research is provided. Areas for future research are suggested. Study questions are answered, and the researcher concludes with a personal reflection.
Problem Overview

Dual enrollment programs are employed across the nation as a mechanism for addressing poor high school to college progression rates. Despite one of the highest high school graduation rates in the country, Vermont has one of the lowest college-progression rates (Shumlin, 2013). The goal of Vermont’s dual enrollment program is to increase college enrollment by offering every high school student two college courses. Through the program, students accrue between six and eight college credits at little or no cost towards their degree. Of equal value may be the effect of the experience on student self-beliefs in their college abilities. Based on a scan of the existing research, Vermont’s program has not been studied. A greater understanding of the Vermont dual enrollment experience is needed.

One research question guides this study: How do Vermont high school students understand and explain their dual enrollment experiences within the framework of self-efficacy? Three conclusions were developed from the research findings. The first conclusion is that students can gain greater confidence in their college abilities from a successful dual enrollment experience. The second conclusion is that student self-beliefs about their college abilities are influenced through observation of peers and encouragement from supportive adults. The third conclusion contends that structural barriers make participation in dual enrollment difficult for some students.

Conclusion 1: Dual enrollment increases self-beliefs.

This first conclusion presents information about the role of dual enrollment in increasing students’ self-beliefs in their college abilities. All students in the study were unsure of their college abilities prior to enrolling in a dual enrollment course. Student participants expressed initial feelings of fear and worry about taking a college course. These feelings changed to pride and confidence after successfully completing assignments and/or the course.
Theory & Literature

The role of the dual enrollment experience in increasing self-beliefs can be found in the literature and understood through the theory of self-efficacy. The theory is comprised of four sources of information that influence self-beliefs: emotion/emotive, mastery/enactive, observation/vicarious, and verbal/exhortative. Two sources of information, emotions and mastery experiences, offer evidence in this study to support the conclusion that the dual enrollment experience can inform self-beliefs. The authenticity of the college experience is also discussed in relation to self-efficacy beliefs.

Emotion/Emotive. According to Bandura (1977) and the theory of self-efficacy, emotions are one of four sources that inform beliefs in ones’ abilities. Emotions can be a defensive response to situations where individuals feel unsure of their abilities. Study participants had an emotional response to their dual enrollment experience. Several students expressed fear and worry about taking a college course. Zimmerman (2000) suggests that students’ judge self-efficacy based on psychological reactions. When individuals feel anxious or stressed, they are less likely to feel confident about their prospects for completing a task or behavior successfully (Bandura, 1977). Emotions such as uncertainty, fear, and intimidation are interpreted by individuals as inability while emotions of pride and confidence are interpreted as ability (Zimmerman, 2000). Several students were fearful about taking a course because they did not know anyone in the class. Some students were concerned that they might not be able to complete the work. The anxiety that results from these fearful thoughts can contribute to negative efficacy beliefs (Bandura, 1977). If individuals succumb to their fears, they will not engage in situations that are perceived as threatening (Bandura, 1977). Bandura (1977) identified “fear-provoking thoughts” (p. 199) as often worse than the situation itself. It is through exposure
to perceived threats that self-efficacy beliefs increase, as individuals learn firsthand that they can be successful in completing an action (Bandura, 1977). Through gaining skills and having success in a situation, feelings of fear, worry, and anxiety dissipate (Bandura, 1977). As students become more confident in their abilities, they have greater capacity for coping with these negative emotions. Bandura (1977) reveals that some fears are rather weak and can be overcome through learned coping skills that support successful performance.

**Coping.** Student participants described how they coped with their emotions and how these coping methods increased their self-confidence. Coping behaviors are the thoughts and actions employed by an individual to “manage, reduce, or tolerate” (p. 152) a situation (Folkman & Lazarus, 1985). The students in this study used different coping approaches to overcome their fears and anxiety. Ana enrolled in college courses with friends and her sister. Oliver sought to make friends on the first day of class. Hadar tried to relate to her classmates, and in getting to know them, she felt more confident. David enrolled in a class with a teacher he knew. He said, “I chose the more comfortable environment [with a teacher I had before because it] felt safe.” In using coping methods to manage their emotions, students were able to feel more confident in the college environment.

**Mastery/Enactive.** Of the four information sources within the theory of self-efficacy, mastery experiences are the most powerful (Usher & Pajaras, 2008). According to Bandura (1977), when individuals experience success through mastery of tasks, the experiences “not only promote behavioral accomplishments but also extinguish fear arousal, thus authenticating self-efficacy” (p. 195). Ana and Oscar validated the concept of mastery in informing their confidence. Ana said, “I have to do a lot of presentation(s) [in my high school] technical class…and that really helped [me]…I wasn’t scared at all during [my college course]
presentation.” Her experience of developing presentations in high school gave her confidence and eliminated any fears she might have had in her ability to give similar presentations in the college course. Oscar explained that his grade in the college course was the evidence he needed to feel less anxious and more confident in his college abilities. Usher and Pajaras (2008) observe the enduring effects of mastery experiences. Students who have defensive emotions associated with a challenging experience and are successful in accomplishing a difficult task gain “a boost in self-efficacy” (p. 752) and ongoing belief in their abilities in this area (Usher & Pajaras, 2008).

Usher and Pajares (2008) describe the mental process of assessing mastery as accomplishing tasks and interpreting results and then re-evaluating competency based on this interpretation. From completing assignments to interacting with professors and peers, participants in this study described how they mastered the unknowns of college. Through demonstrating that they could be successful in the course, the experience provided students with evidence of their abilities (Bandura, 1977). As study participants named their accomplishments and identified the positive effect on their confidence, the evidence in this study also revealed that students inferred their future success in college based on their experience. Research suggests that as self-efficacy beliefs increase through repeated success, individuals set more challenging goals for themselves and apply learned behaviors to similar situations (Bandura, 1977; Bacchini & Magliulo, 2003; Zimmerman, 2000). After completing her course, Ana stated: “I know I can do [college-level work].” Jeffe said that he: “learned so much from that class…it did influence my ability to try and prepare for the next level.” Ellen shared: “[taking a college course] made me excited for my future to know that there are a lot more opportunities out there.”
**Practice.** When considering mastery, dual enrollment offers a broad experience beyond college academic work. Students in this study gained an overall understanding of what college was like, which informed their efficacy beliefs. Karp (2012) identified dual enrollment courses as instrumental in teaching students about college expectations and providing an opportunity for student to practice behaviors that assist in meeting these expectations. Additionally, Karp (2012) cites “role rehearsal” (p. 24) as the process by which students gain an understanding of what they need to do in order to be successful in college. Ellen realized that schoolwork would be different in college. She shared her learning from the experience: “I think that it shows me that in college I’m going to have to work hard and there are going to be classes that I’m not necessarily going to like but I’m going to have to put in effort.” Jeffe explained that he gained an “increased understanding of what it means to be a college student” (p. 27, Karp, 2012). He said, “being responsible [for assignments] was something that I actually learned [in that class].” Jeffe’s understanding of what college would be like strengthened his belief that he could be successful in college. In taking her course, Astrid described the learning environment as different from high school. She said, “some people did have little arguments with the teacher sometimes over topics that are a little bit controversial.” She gained confidence in her abilities through becoming comfortable in a critical thinking environment. Through mastering “new ways of behaving, thinking, and interacting with others” (p. 26, Karp, 2012), students gained confidence in their abilities.

**Authenticity.** This study extends the research on authentic preparation by identifying the specific activities and actions occurring on a college campus that inform dual enrollment students’ feelings of confidence. Taking courses on a college campus provided participants with an authentic understanding of social, behavioral, and academic expectations. Students gained
confidence in their college abilities through seeking help, interacting with students of different ages, and exposure to lecture-style teaching methods.

Participants in this study described mastering on-campus interactions that increased their confidence in the ability to navigate the college environment. Oliver visited with his professor during office hours to find out what he missed on the first day of class. He explained: “In college…there is some time where you absolutely know where the teacher is going to be…if you want to find a teacher, it’s a lot easier…and it [is] very useful.” For other students in this study, the college classroom environment informed their confidence. James said: “In my first college class, it was a very interesting group of people. We got to connect with a bunch of different people and it became a very welcoming and open environment.” Ana reflected on learning about different teaching styles: “I realized that there might be a variety of teachers, and [I] need to have [my] way of learning [from each of them].”

The findings of this study supports Kanny (2015), Burns and Lewis (2000), and Berger et al. (2010) in concluding that “place” matters in providing students with an authentic experience that supports their confidence. Kanny (2015) identified a benefit of dual enrollment participation as gaining exposure to “the hidden curriculum” (p. 62) of college that can best be experienced on campus. Burns and Lewis (2000) studied students taking college courses on a campus and at their high school. Study participants perceived taking courses on a campus as having higher value because of the exposure they gained to the college environment. Through providing an authentic experience, Berger et al. (2010) determined that “having high-school-aged students attend school daily on a college campus engenders in them an idea of themselves as individuals who can negotiate an adult environment and succeed intellectually” (p. 344).
Implication for practice. Counselors, parents, and instructors of college courses should understand that high school students are not confident in their college abilities. This study reveals that students may experience feelings of uncertainty in relation to enrolling in college courses. Fears, worries, and anxiety can negatively influence a student’s belief in their ability to be successful in a dual enrollment program. These feelings are not a reflection of the student’s academic abilities, as students in this study performed well in their college courses. In attempting to use dual enrollment programs to move students from high school to college, emotions may impede participation in college courses. As such, educators should be proactive in identifying motivated students to participate in dual enrollment, even if they do not exhibit confidence in their abilities. This confidence will most authentically be developed through the experience of taking courses on a college campus. For underserved and underrepresented students, developing “a vision for success in college” (p. 69) is of particular importance (Ozmun, 2013). The value of participating in dual enrollment for this student population, who can gain greater confidence in their abilities through the experience, cannot be overestimated.

Conclusion 2: Observations influence self-beliefs.

Student self-beliefs in their college abilities are influenced through observation of peers and encouragement from supportive adults. This conclusion highlights the impact of peers, siblings, and adults as influencers of student self-beliefs. Most student participants in this study witnessed either a sibling or peer taking a course while in high school. Observations of individuals, who resembled themselves, living the life of a college student provided self-comparative information that led students to believe that they too could be successful in college. An additional source of efficacy information was encouragement from a parent, teacher, or
counselor. Adults in positions of authority were influential in giving students confidence that they were ready for college.

**Theory & Literature**

Within the theory of self-efficacy’s four sources of information that influence self-beliefs (emotion/emotive, mastery/enactive, observation/vicarious, and verbal/exhortative), the sources of observation and verbal encouragement are discussed as evidence for this conclusion.

**Observation/Vicarious.** For individuals who are less knowledgeable about their capabilities in a particular situation, vicarious sources of information can be important contributors to self-beliefs (Lent, Lopez, & Bieschke, 1991). In this study, several high school participants had no experience with taking a course on a college campus prior to enrolling through their high school’s dual enrollment program. This lack of familiarity caused them to seek out information as to what taking a course would be like. A common source of information was observing their siblings and peers, who were either currently or previously enrolled or had taken a class previously. In witnessing these individuals engage successfully in a course, they inferred their own abilities. Bandura (1977) explains that social comparison is a source of information that can result in modeling behaviors. Individuals benefit most from seeing someone like themselves exert effort in overcoming difficulties in situations perceived as threatening (Bandura, 1977). Observations of individuals most like themselves are personal and relevant in “symbolic modeling” (Bandura, 1977, p. 197). Usher and Pajaras (2008) affirm that “social models” (p. 753) are impactful sources in the development of students’ efficacy beliefs. It is common for students to assess their own academic ability based on comparing themselves to their classmates, and this “self-comparative information is [a] type of vicarious experience [that is] capable of altering people’s self-efficacy” (Usher & Pajaras, 2008, p. 753).
Study participants observed their siblings and peers taking college courses which gave them confidence in their abilities. In describing her older brother, Hadar stated, “My brother also took a class…and I was like praising him…I want to take [a course] too.” Hadar became more confident in her abilities after seeing her brother succeed. When explaining how she became aware of dual enrollment, Ana said, “I think I heard it from my sister because she took dual enrollment classes when she was [in high school].” In taking a college course, Ana followed in her sister’s footsteps and modeled her sister’s behavior. Ellen explained that she “became interested in [taking a course]” when her brother decided to enroll. Siblings had a strong impact on Ellen, Ana, and Hadar in giving them confidence to take college courses.

Similarly, observations of peers taking college courses was a source of influence for study participants. Hadar shared, “I always saw people like taking classes and they would talk about how they were taking CCV [community college] classes…and I’m like…what the heck…I want to take classes.” James said, “I have friends that have done it and are doing it now.” Oliver explained, “[A] friend of mine, who’s also very smart… took Intro to Computer Science at Cornell over the summer.” Usher and Pajaras (2008) suggest that students can be convinced that they can succeed at an endeavor based on observing a classmate of similar ability succeed at a particular challenge.

While enrolled in classes, study participants compared their college academic struggles with their peers. Bandura (1977) observes that individuals may use one source or multiple sources of information in assessing their abilities, but in general, individuals tend to rely on certain sources. The evidence in this study suggests that high school students commonly use peer observation and comparison to inform their efficacy beliefs. Students shared stories of comparing themselves to classmates who were having difficulty with reading assignments, using
technology to create presentations, and completing in-class projects. Oliver explained “One of the things I noticed was that I still in these classes was keeping up well…especially compared to some people, so I think that probably helped my confidence.” Ana described how “some people in class had a hard time with [the] presentation” and “they read a lot from the slides.” Jeffe observed that “it wasn’t just me…there was other students who were really struggling with the book.” Observations of their peer’s academic struggles informed their assessment of themselves as being challenged similarly when completing these assignments. Through witnessing others facing adversity, participants in this study developed confidence their abilities and a willingness to exert the effort needed to overcome challenges presented in the course (Bandura, 1977).

**Verbal/Exhortative.** Human behavior is also influenced through verbal persuasion. According to Usher and Pajaras (2008), parents, teachers, peers and supportive adults can provide encouragement that boosts academic confidence in students who are not yet able to accurately assess their own abilities. Evidence in this study shows that student participants gained confidence in their abilities from a school counselor with special knowledge.

Perna and Titus (2005) identify school characteristics as influencing student’s likelihood of enrolling in college. Resource-rich schools provide a school context that promotes college enrollment through “institutional agents [such] as teachers [and] counselors [who] provide access to resources” (Perna & Titus, 2005, p. 490). Students gained confidence from the school’s dual enrollment counselor, who encouraged several of them to take college courses. According to Bandura (1977), encouragement facilitates action and mobilizes effort. The dual enrollment counselor offered guidance to students on taking a readiness test that assessed their college academic ability. Jeffe said that the test “showed that I was ready” and “increased my confidence to take that class.” Hadar said, “I took the test and I did really well.” James explained, “We have
a counselor at our school that deals with all the dual enrollment. I had to take the test just to make sure I qualified to take classes.” Astrid described that “she encouraged me…and she was really helpful…and walked me through the whole process of applying, registering, and then taking the test.” The dual enrollment counselor created an environment that was effective in supporting student performance and belief in their abilities (Bandura, 1977).

Students received verbal encouragement that supported their efficacy beliefs from other sources, including teachers and parents. Ellen described teachers who “pushed” her to do more academically, because they thought she was capable. Oliver explained that one of his teachers “helped him a lot with largely off-topic things after class” and loaned him books to read so he could learn more about mathematics. James said that he had a teacher who reviewed all his “essays and stuff” and who helped him with his college application. For Astrid, her parents told her that they were “impressed” and “excited” about her pursuing a college course. Ellen’s mother identified a college course on astronomy at the local university and encouraged her to take it. James said his parents encourage him by making sure he gets his work done. In student academic performance, belief in the ability to successfully accomplish tasks or master complex concepts relies on having satisfying relationships, access to adults for help, and social support in school (Bacchini & Magliulo, 2003). The evidence suggests that students in this study gained confidence through verbal encouragement from adults involved in their lives and school community.

**Implication for practice:** According to Bandura (1996), efficacy beliefs are influenced by “environmental” (p. 328) circumstances. Students in this study took cues about their college abilities from individuals within their home and school environment. Educators should create opportunities for high school students to see students like themselves taking college courses.
From the research, it is clear that seeing yourself in a college course is somehow connected to seeing someone like yourself in a college situation. It is not uncommon for students in this age group to compare themselves to their peers or siblings in order to better assess their own abilities. By leveraging this tendency, educators can facilitate interest and enrollment in their dual enrollment program.

**Conclusion 3: Structural barriers create difficulty.**

Structural barriers make participation in dual enrollment difficult for some. The third study finding was that some high school students encountered barriers to participating in the dual enrollment program. School policy, transportation, academic schedules, and extracurricular activities made accessing a college course difficult for several students.

**Theory & Literature**

As identified by Berger (2010), Boswell (2001), and Hoffman and Voloch (2012), enrollment in college courses is often restricted by school policies. This study found that PHS required students to complete an assessment test before pursing dual enrollment. Six of eight students took the test based on school policy. Two students were not required to take the test because they either enrolled directly through a college’s registration system or were in an alternative high school program that facilitated their enrollment. The two students who did not take the test were equally successful in completing a college course. Although the school’s intention was for the test to ensure that students were ready for college academics, it was perceived to be a criterion for selection that created a barrier to entry.

Structural barriers to dual enrollment, such as course scheduling and transportation to the college campus, were missing from the literature. Four of the eight students in this study did not have access to a car and used public transportation to reach a college campus. Hadar said her
class was “kind of hardish” to get to, and she described how she had coerced friends and family members to drive her when she missed the bus. Jeffe shared: “[My parents] worried when I was taking that class because I didn't have transportation to get to [the community college].” Ana said: “I took the bus from CCV to Saint Michael’s College and my parents would pick me up from there because it [was] easier for them.” David had the added complication of being “homeless for five months at one point” during the school year which made getting to class challenging. For several students, their school schedule required that they take college classes in the evenings, which extended their school day from an average of seven hours to 12 hours. Oliver explained: “My current schedule has me on Mondays [going to] school and then scholars bowl practice and then UVM for my [evening] math lesson which is an eight to eight day before homework.” James said: “[The community college] offered the most flexible [class] times since I’m an athlete I had to take [classes] at night.” Ana described her day: “After my class… I took a bus to UVM and just stayed there in the library and did my work until my Spanish class started at 6pm until 8:30pm.”

**Implication for practice:** The existence of dual enrollment programs is an acknowledgement that the path to college is not the same for every student (Karp, 2015). Between high school graduation and college matriculation, students leak out of the postsecondary pipeline (Karp, 2015). Dual enrollment legislation “fuses pieces of the pipeline” (p. 105) together in an attempt to facilitate the transition (Karp, 2015). Vermont policy makers and educators should understand that legislation is only one step in using dual enrollment to increase college progression. Students must determine how to fit a college course into their busy lives. Identifying and removing barriers such as testing, transportation, and course scheduling will better support students in accessing college credits while in high school.
Answers to Questions

This study explored the lived experiences of Vermont high school students who participated in a college course through the state’s dual enrollment program. Eight students from different backgrounds participated and provided greater understanding as to the effect of the experience on their self-beliefs. Given the lack of research on Vermont’s dual enrollment program, the findings of this study attempt to answer questions about self-efficacy and the dual enrollment student experience that may inform future legislative policies designed to facilitate college progression.

Evidence for Ozmun’s Research. Ozmun (2013) speculated that dual enrollment programs “may play a role in increasing self-efficacy and helping high school students transition successfully to college” (p. 61). In researching the hypothesis that students who enroll in dual enrollment courses possess a high level of motivation and academic self-efficacy, Ozmun discovered that students were academically motivated but lacked confidence in their ability to perform in college. Concluding that academic self-efficacy was not an antecedent to enrollment in college courses, Ozmun (2013) suggested further research to determine if student self-efficacy increased while participating in dual enrollment courses. This study affirms Ozmun’s (2013) research findings and supports the speculation that dual enrollment programs increase self-efficacy beliefs.

As revealed through Ozmun’s (2013) research, dual enrollment participants in this study demonstrated academic motivation. Oliver, Hadar, James, Jeffe, and Astrid enrolled in a dual enrollment course because they wanted to challenge themselves. Three students—Ellen, David, and Ana—were motivated to enroll by specific goals. David’s goal was to graduate from high school and the college course was a requirement. Ellen wanted to learn if she enjoyed an
academic subject enough to study it in college. Ana hoped to get a head start in college by taking a course required for a nursing degree. Prior to the start of their college course, all eight participants were motivated by academic goals to take the course but described some level of uncertainty in their ability to complete college-level work.

Consistent with Ozmun’s findings, dual enrollment students described feeling uncertain about their college abilities. Ana stated that before taking her first class, she felt a little scared that “she might mess up.” After completing her course, she makes the connection between the experience and feeling less fearful about her college abilities. Similarly, Astrid said, “I’m not that confident in a way.” She admitted to being a procrastinator on school work and said she was “worried” about this tendency and “nervous” about taking a college course. After finishing the course, Astrid stated, “I was proud of myself…and “[the experience] was a confidence booster cause it was more work than I’m used to, but I was able to do everything, and I got good grades.” As a result of doing “really well” in the class, Astrid felt more confident in her college abilities.

The finding of this study furthers Ozmun’s research in concluding that for many students, the experience of participating in a dual enrollment program was instrumental in increasing their self-efficacy beliefs prior to transitioning to college. Before taking a course, students described uncertainty about their college abilities. As they completed assignments and their class, students described feeling more confident.

**Further Questions.** *What are the lived experiences of Vermont high school students who participated in a dual enrollment course?* Analysis of the data offers evidence that dual enrollment provides an experience that affects self-beliefs through authentic exposure to the college environment and academic expectations. From first learning about dual enrollment through observations of siblings, peers, or by interactions with their dual enrollment counselor,
students described their motivation for taking a course in wanting to challenge themselves or to accomplish a specific goal. Prior to enrolling, several students completed a pre-enrollment test that assessed their readiness for college-level work. Students described how they received encouragement and assistance from parents, teachers, and PHS’s dual enrollment counselor. In anticipating the unfamiliar college environment, students were uncertain about their ability to be successful in the course. As students lived the experience, their belief in themselves and their capability increased based on the realization that their abilities were not so different from others in the course.

*How do participants understand and explain their self-efficacy beliefs?* In assessing their abilities, all student participants used one or more information sources to inform their efficacy beliefs. Mastery experiences were the most impactful in increasing student beliefs in their college abilities. While in the course, students identified high test grades and completion of oral presentations as evidence of their ability to perform in college. One student cited his professor’s request that he assist adult students with completing an assignment as proof of his ability. Feelings of confidence in college abilities were gained through the course experience. Students explained how they coped initially with feelings of fear, worry, and anxiety through encouragement from supportive adults and observation of peers. Academic success, making friends, identifying with peers, and perceiving that they completed the course successfully further informed their self-beliefs. Evidence gathered through the experience was used by students to judge their competence and provided them with a new level of confidence in their abilities. The study offers evidence that student self-efficacy beliefs can increase through the dual enrollment experience.
What meaning do participants give to the experience? Several participants had difficulty seeing themselves in college, because they were high school students. They felt out of place in the class in comparison to the older students, and they initially perceived themselves to be young and less capable. As they observed and compared themselves to peers and siblings, their feelings of confidence in their abilities increased. Encouragement and positive feedback from teachers, parents, and counselors made them feel more confident in their abilities. The experience informed their thoughts on the life they saw for themselves after high school. Students made the connection between what they did in the course and what they were capable of doing in the future in college. Several began to feel more confident that they belonged in the course and could see themselves in college. The meaning derived from the experience was that they could be successful in college. Students became more confident that they could do college-level work and came to realize that they were just as capable as their college classmates.

Study Limitations

The eight participants in the study have diverse social backgrounds and are from one Vermont high school. The personal situations of the students may have uniquely informed their dual enrollment experience. As such, the small sample size, singular location, and student diversity should be considered in generalizing the findings of this study. The findings should not be generalized to all high school students in Vermont who have participated in the dual enrollment program.

A semi-structured interviewing approach was used to gather participant data. Although an interview guide was used by the researcher to ensure systematic data collection, students responded to questions with varying levels of thought. As such, there were inconsistencies as to
how much information was gathered from students on each question. The researcher attempted to expand participant responses but details and descriptions were provided at varying levels.

Participants in this study described their dual enrollment course as a successful experience based on completing class assignments or the course itself. This study does not reflect those students who dropped a dual enrollment course or who had unsuccessful experiences. Therefore, the findings are limited to these study participants and should not be generalized across all dual enrollment students.

**Recommendations for Future Research**

In building on this study, researchers could further explore the effects of participation in Vermont’s dual enrollment program. Because this is an interpretative phenomenological study that is based on a small sample size, it offers a limited view of the student experience. Future research could include students who had an unsuccessful dual enrollment experience. Quantitative studies based on a larger data set that followed the progression of student participants from high school to college, their performance in college, and college completion rates also should be undertaken. Vermont policy makers should develop and utilize a state-wide dual enrollment participant database to more purposefully study student outcomes. Analysis that ties participation to college progression and completion would further validate dual enrollment as a program that supports the state’s college matriculation goals.

In January 2017, the Vermont Agency of Education published a report that demonstrated a concerted effort to collect dual enrollment data over the past four years. Using data from the National Student Clearinghouse (NSC), which tracks 98% of students attending U.S. postsecondary institutions, they were able to determine that “a strong percentage of Vermont students participating in [dual enrollment] go on to enroll in college” (Holcombe, 2017). The
report also revealed that over the past several years, student use of dual enrollment vouchers had increased. In fiscal year 2015, which included summer and fall of 2014, and spring of 2015, Vermont students used 2,165 dual enrollment vouchers. Dual enrollment voucher usage increased 5.5% to 2,287 in fiscal year 2016. According to the Vermont Agency of Education:

In 2013 (baseline), 4,227 of 6,532 high school graduates (i.e. 65%) went on to college. Of those student who went on to college, only 6% had taken part in the state’s dual enrollment program. Within two years (2015) the percent of dual enrollment participants in the graduating class who went on to college was up to 28%. In other words, the proportion of dual enrollment students in Vermont’s college-going population more than quadrupled within three years, despite a declining overall student population. (Holcombe, 2017).

Ongoing and expanded data collection may provide new opportunities for quantitative research that can further reveal outcomes of Vermont students who participate in dual enrollment.

Future research might also delve into how students are influenced by seeing others like themselves taking college courses. In the study, participants described witnessing students at their school taking college courses, as well as their siblings. It is not clear from this study what the connection was in witnessing others, how it happened, or its influence on student motivation in taking college courses. A greater understanding of this connection could be useful for educators interested in increasing student participation in dual enrollment.

**Personal Reflection**

Spending time with highly motivated high school students was informative and inspiring for me as a researcher. During our interviews, students were engaged, enthusiastic, and eager to share thoughts about their college experiences. In telling their stories, they were honest and open
about fears and worries, as well as pride and feelings of confidence. Although they were fearful, I came to see them as fearless. These students put forth effort above and beyond many of their peers. They were courageous in their willingness to conquer their fears by enrolling in college courses. It was my pleasure to honor their voices within this study and to gain a better understanding of dual enrollment from the student’s perspective. I take great satisfaction in knowing that they seemed to enjoy being interviewed and reflecting on the experience. One student concluded our interview by saying: “That was fun.”

This research study has informed my development as a scholar-practitioner. My understanding of how young people gain confidence in their abilities is applicable to my work as a teacher. A positive outcome has been a change in my approach to teaching students who are the same age as the individuals I interviewed for this study. I now realize that students can be motivated by each other and gain confidence by doing academic work, rather than listening to me tell them how to do the work. Instead of lecturing for an entire hour, I now dedicate a portion of class time for students to work in groups in order to analyze problems, develop solutions, and present recommendations. Evidence of student engagement in course topics has included lively classroom conversations, creative problem-solving, and increased confidence in their solutions. Through my research, I also have gained greater assurance in my ability as a teacher to facilitate student learning.

For policy makers who believe that two free courses are the only incentive needed for high school students to enroll in college classes, my study reveals that high school students are complex individuals who experience fears, worry, and anxiety regarding college. These feelings may create unspoken and unseen barriers to dual enrollment that require special attention. Schools offering alternative education programs, as well as providing administrative support for
those options, such as a dual enrollment counselor, may create a more encouraging environment for students as they contemplate taking college courses. In talking with students, it became evident to me that the dual enrollment counselor at PHS provided valuable information and support. This administrative role was instrumental in facilitating their interest and enrollment in dual enrollment. High schools offering alternative education paths that utilize college courses may be underestimating the value of the dual enrollment counselor position.

The experience of taking college courses was instrumental in developing a sense of confidence in student participants. Students began to see themselves in college, because they were in college. Participating in dual enrollment did not come easily for students. Several of them juggled their high school schedules and transportation in order to take the classes. External barriers can make participating in dual enrollment difficult, which students described as stressful. Understanding that dual enrollment legislative policy is only one piece of the puzzle in moving Vermont students from high school to college is an important finding of this study.
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Appendix A: Research Request Letter

Dear <XXX>

My name is Robin Gronlund and I am currently enrolled in a doctoral program at Northeastern University. I am in the process of completing the dissertation stage of the program. My research is focused on the student experience of taking college courses while in high school through Vermont’s dual enrollment program. I am interested in understanding how dual enrollment might impact students’ beliefs in their college capabilities.

Through a qualitative research approach, I will investigate the dual enrollment experience through the eyes of students who have taken college courses on a college campus while in high school. Their stories will identify factors that influence their beliefs and may lead to meaningful insights into the dual enrollment experience. The research process will involve designing interview questions and data collection procedures to develop general themes revealed through data analysis.

In order to gather data about this research, I would like to interview eight PHS students, 18 years of age or older, who have participated in dual enrollment courses on a college campus. PHS has been selected as a site for my study because of the diverse student population, which may offer insights into any barriers they overcame in order to participate in the dual enrollment program. The goal is to identify “what” students experience and “how” they experience it in order to better understand dual enrollment as a program that supports the college transition process.

I am seeking your permission to conduct my study with PHS students and to recruit student volunteers through passive vehicles such as a mailed letter, notices on school bulletin boards, e-newsletters, email, and your school’s website.

Upon your approval, I will complete my study proposal and submit it for approval by Northeastern University.

I will contact you by phone in the next few days to discuss this request. I can be reached via email at gronlund.e@husky.neu.edu or by cell at 802-598-0424.

Thank you in advance for your time.

Sincerely,

Robin Gronlund
Appendix B: Volunteer Request Posting

Have you taken a course on a college campus through Vermont’s dual enrollment program? Volunteer to take part in a study about your experience.

You will speak with me for approximately 60 minutes about your experience. This interview will take place in person at an off-campus location that is most convenient for you.

Participants are required to be 18 years of age or older and to have taken a college course on a college campus while enrolled in high school.

Participation is voluntary and will be kept confidential. There are no direct benefits or anticipated risks to you as a participant.

If you are interested in participating or have questions about this study, please contact Robin Gronlund at gronlund.e@husky.neu.edu or by phone at 802-598-0424.
Appendix C: Volunteer Request Email

Dear Student,

I would like to invite you to take part in a study about your experience taking college courses on a college campus while you were a student at PHS. Your participation in this study may inform other high school students about this program.

Participation in this study requires you to be 18 years of age or older and to have taken a college course on a college campus while you were in high school. You will speak with the researcher about your experience for approximately 60-minutes. To protect your identity, this interview will take place in person at an off-campus time and location that is most convenient for you.

Your participation is voluntary and will be kept confidential. There are no direct benefits or anticipated risks to you as a participant.

If you are interested in participating or have questions about this study, please contact me at gronlund.e@husky.neu.edu or by phone at 802-598-0424.

Thank you,

Robin Gronlund
Appendix D: Informed Consent

Northeastern University, College of Professional Studies

Name of Investigators: Robin Gronlund, Doctoral Student

Principal Investigator: Dr. Karen Harbeck

Title of Project: Dual enrollment students’ efficacy beliefs and college intentions: An interpretive phenomenological analysis

Request for Consent to Participate in a Research Study

Informed Consent to Participate in a Research Study

We would like to invite you to take part in a research project focusing on high school students who have recently taken college courses on a college campus through Vermont’s dual enrollment program.

Why am I being asked to take part in this research study?

You have been selected because you are a PHS high school student who has taken a college course on a college campus.

Why is this research study being conducted?

This research study is being conducted because Vermont high school graduates are not enrolling in college in sufficient numbers. The study has been developed to understand, from the perspective of the student, how, dual enrollment students understand and explain their experience of taking college courses on a college campus.

What will I be asked to do?

By agreeing to participate in this study, you will be asked to take part in one interview. The focus of the interview is on your experience as a dual enrollment student having taken a college course on a college campus.

Where will this take place and how much of my time will it take?

Based on your availability, the interview will be conducted for 60 minutes in person at a time and location that is most convenient for you.

Will there be any risk or discomfort to me?
There is no foreseeable risk or discomfort to you by participating in this study. However, if you wish to stop the interview for any reason, let the researcher know and it will end immediately. You also have the option to decline to answer any questions during the interview.

*Will I benefit by being in this research?*

There are no direct benefits to you for participating in this study. However, your answers may help us learn more about how the dual enrollment program supports the college transition process. This information may be helpful to other high school students and/or policy makers in supporting such programs.

*Who will see the information about me?*

Your name will not be associated with the study. You will be assigned an alias prior to your interview. The alias will correspond to all the information collected including, but not limited to, the interview transcript and audio recording and your demographic information. I will have sole access to a password-protected computer and locked filing cabinet containing all of your demographic information and documents matching your real name to your alias. Once your interview has been transcribed, audio recordings will be destroyed, and the transcription file will be kept on a password-protected computer until the end of the research project, at which time all information will be destroyed.

*Can I stop my participation in this study?*

This is a voluntary research study. You may withdraw from participating at any time. Stopping participation will not result in the loss of any rights, benefits, or services that you would otherwise have.

*Whom can I contact if I have questions or problems?*

If you have any questions about this study, please feel free to call Robin Gronlund at 802-598-0424 or gronlund.e@husky.neu.edu. You may also contact the research advisor Dr. Karen Harbeck at 781-572-4628 or k.harbeck@neu.edu.

*Whom can I contact about my rights as a participant?*

If you have any questions about your rights in this research, please contact Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA, 02115; tel: 617.373.4588; or email: irb@neu.edu. You may also call anonymously if you wish. You may also keep this form for yourself.

*Will I be paid for my participation?* No.

I agree to take part in this research.
Signature of person agreeing to take part

Date

Printed name of person above

Signature of person who explained the study to the participant above and obtained consent

Printed name of person above
Appendix E: Interview Protocol

Alias:

I am speaking with you today because you are a currently enrolled PHS student who has taken a college course or courses through Vermont’s dual enrollment program. Having taken a college course on a college campus while in high school, you have firsthand information about your experience. My study is focused on understanding what it was like to be a dual enrollment student and how the experience affected your thoughts about college. To get started, I am going to record this discussion to make sure I accurately capture your comments.

Are you okay with me recording this discussion? [If yes, say thank you and start recording.] I might also write a few notes during our discussion. The information you share will be held in confidence and you’re recording and notes will be filed under an alias known only to me. The audio tape will be transcribed by a professional company under your alias, and only I will know your real name. This information will be locked in my home filing cabinet. Northeastern requires that I have you read through a consent form and that you provide your signature. [Hand participant the informed consent form.]

The informed consent basically says: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm.

Do you have any questions about the interview process or this form? The discussion today should last 60 minutes.

What is most important is that you share information about your experience taking a college course on a college campus. I have a number of questions that need to be covered so if time runs short, I may need to interrupt you in order to ask the next question. Do you have any questions?

Part I: Background Questions (10 minutes)

• Please tell me a bit about yourself starting with where you are from?

• Did either of your parents attend college?

Transitional Questions (5 minutes)

Introductory Statement: Now, my questions will be focused on what you experienced before you started your college course.

• How did you become aware that you could take a college course as a high school student?

• What motivated you to take a college course as a high school student?
• What were your thoughts about going to college prior to taking this college course?

• Did you believe that you could attend college?

Part II: Self-Efficacy (45 minutes)

Great, thank you. I am now going to move onto questions regarding your experience being a dual enrollment student and events that took place while you were enrolled. Feel free to share any academic, social, or personal experiences. I am most interested in understanding your sense of self-efficacy as you took this college course. Self-efficacy is the belief in your ability to succeed at a given undertaking. In a way, I am interested in your sense of confidence. The questions that follow reference your understanding of your self-confidence.

• How would you describe your confidence in your abilities as a student before you took this college course?

• Did you gain more or less confidence in your abilities while you were enrolled in this college course?

• Can you describe any encouragement by teachers, parents, or anyone else that affected your confidence in your abilities before or while being enrolled in this college course?

• How would you describe your feelings of confidence or lack of confidence in your abilities in taking this college course?

• What were your observations of others who had taken, or were taking a college course? did your observations affect your confidence in your abilities?

• Can you describe your experience in completing an assignment or specific task in class and how it affected your confidence while taking the college course?

• Would you say that you successfully completed the college course?

• Has this experience influenced your belief in your ability to be successful in college?

• Has this experience influenced your belief in your ability to attend college?

• If I were a high school student who was considering a dual enrollment course, what would you tell me about your experience?

Those are all the questions that I have today. Is there anything that you would like to share that we didn’t have a chance to discuss?