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“It is What it is”: A Phenomenological Study of Undergraduate Students Enrolled in a Private Institution Who Were Required to Enroll in Zero-Credit Developmental Coursework

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by
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Abstract

Developmental coursework is the requirement most higher education institutions in the United States implement to address the academic unpreparedness that challenges many of their students. Previous research identified factors that may contribute to students exiting high school while showing signs of academic gaps. Research indicated that the college requirement of developmental coursework may aid some students; however, it can also harm other students (McCann, 2017; St. Amour, 2019). Results from previous research included adjusting how developmental coursework was offered in regard to sequencing, credit-weight, and modalities of curriculum delivery. However, missing from the equation were the students who attended these courses. This qualitative study amplifies the voices of undergraduate students who are required to enroll in developmental coursework by sharing how that experience shaped their perspectives of college. This study concludes that higher education institutions: (a) need to assist students in navigating academic policies, and (b) need to increase communication with students requiring developmental coursework from application through college graduation. Focusing on these areas can significantly increase the level of persistence toward a college degree.

Dedication

To my family and friends who have supported me throughout this adventure– completing this project would not have been possible without you. You allowed me to borrow hope, strength, and resilience. To those who I journey with in this calling called education– this work is hard, but so important. To any student who starts the college process slightly timid (or intensely terrified)– you have people looking out for you and fighting for you. You should be here, and you should finish! Most importantly, to the Triune God who carried me through this entire process– I am excited and grateful to be part of the Kingdom building process.

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I am grateful to everyone I have met along this journey called life; your prayers and cheers are deeply appreciated. I know my life would look drastically different if our paths had not crossed.

Victor, Mary, and Florence, I love you.

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Chapter 1: Introduction

The scope of U.S. post-secondary education has held to common patterns since the 1970s regarding developmental coursework processes. This chapter walks through a timeline of events regrading post-secondary institutions in the United States and provides an explanation of current problems impacting higher education and how they relate to the purpose of this study. However, to better frame that timeline, the following section provides background information surrounding developmental coursework in college as described through personal insights from the researcher.

Significance to the Researcher

I grew up the daughter of educators. My mother was a middle and high school Mathematics teacher, and my father worked alongside students who were part of special education programs in a high school. I was a capable student, and I grew up desiring education. Since school came easy to me, studying was not a concept I fully grasped during my elementary and middle school public education years. When allowed to pursue more challenging subjects, I did so with full enthusiasm. I had my eye on a college education because it was ingrained in me that education would open all doors. I breezed through algebra in eighth grade, and during my freshman year of high school, I enrolled in honors geometry. At that point my confidence in navigating education was shattered; geometry offered foreign letters and unknown concepts I felt incapable of mastering. My competency in Mathematics, which had been a crutch to support me in all academic endeavors, waned. Two grueling semesters, which often included five weekly tutoring sessions and a helpful student-teaching assistant, resulted in a passing grade of 72.

Four years later, during freshman orientation at college, we were required to take a Mathematics placement test. Thoughts flooded my mind: flashbacks of high school geometry,

alongside memories of my difficulties with pre-calculus; thoughts of the standardized tests I took multiple times, and unpassed advanced placement (AP) exams that did not showcase my abilities. When it was time to receive our Mathematics course placement, I inquisitively listened to those in line ahead of me. Sam, a friend since elementary school, received a grade of 15 and was told he would need to take MAT 1010, which, based on his score, was a required course before taking college algebra. The proctor told me I received a grade of 13. I panicked, looked at the proctor, and asked him to let me into college algebra. I told the proctor about my mother, a Mathematics teacher; I shared my achievements in my high school Mathematics classes, and I shared my willingness to do whatever it took to *not* have to take MAT 1010. The proctor looked at my high school transcript, which revealed a B average in Mathematics and low standardized test scores. He looked up from the transcript and told me to read the first chapter of the college algebra book before the first day of school. He saw my motivation and desire and granted me a chance to prove my work ethic by allowing me to bypass MAT 1010. Yet, I was confused by how my friend and I could equally take challenging courses in high school but have woefully different placement test results. Why did this proctor allow me entrance into a course for which, based on my scores, I was not academically prepared?

I knew I was capable of Mathematics beyond the basic level; if I could handle AP statistics and pre-calculus, I could handle college algebra. In fact, I ended up with a B in the course that semester. During my sophomore and junior years of college, I sought employment as a teaching assistant (TA) for MAT 1010. It seemed fitting that I would now get to influence the course I escaped. During our training, we were told that MAT 1010 was a developmental Mathematics course, and would prepare students for college-level Mathematics. After one semester of being a TA, I fell in love with the material and happily led multiple sections each

semester until I graduated. I loved helping students find their “aha!” moments when the content clicked; what had been an albatross around their neck was now their stepstool to march forward with bold, new confidence.

Unfortunately, the typical student attitude I encountered was apathy toward this course. Students' attitudes toward this course were a result of the knowledge that this course would be a “free elective” and would be taking the place of a class the student desired. “Cs get degrees” was the mantra associated with this course which, from my perspective, seemed to attach itself to other courses deemed non-essential.

Six years beyond my undergraduate career, I had the opportunity to serve as an academic advisor and program coordinator for students in need of developmental coursework. Some of my students walked a high school journey similar to mine. They left high school feeling college-ready but were met with placement test results deeming them academically ill prepared. However, due to the institution not having effective placement strategies, requirements to take developmental coursework were based primarily on standardized test scores with no option to petition the decision. I counseled students that it would be all right; the courses would be easy enough to provide a big GPA boost as well as dust off forgotten material they would need in future classes. I noted a difference with this experience, as compared to my undergraduate peer-tutor experience: Students did not receive credit for their developmental coursework at this institution. I was confused and troubled that students were required to enroll in a course carrying the same financial weight as other courses, but it would not support their GPA nor help them reach their college credit hour goal. Entering into this research project, I realized that each school chooses whether or not to offer credit for developmental coursework.

During the past eight years of working with this population, I have watched students start their college career full of hope only to develop bitterness toward education primarily due to requirements they did not fully understand prior to enrollment. To help students find their voice, I collaborated with faculty to design and conduct an in-house placement test for those who wanted a way out of developmental coursework. This assessment created the opportunity for students who *should not* have been enrolled in the course to move up; it also provided the chance for those who *should* be in the class to find their trouble spots and successfully stay in the course. Regardless of the test outcome, students needed to have a say in their coursework.

Both students and faculty at different institutions who engage with developmental work have shared their experiences—a myriad of placement processes, curriculum delivery methods, and motivation techniques—associated with developmental education. While researching this topic, I realized that in the varying options and alternatives, the voices of students are not always heard. This study brings to light the students' voices, once hiding in the shadows, for the betterment of all.

Higher Education Degree Attainment Gap

Sixty-five percent of American professions and careers require post-high school credentials (Carnevale et al., 2013). Benefits of degree completion include more significant job opportunities and options, healthier financial wellbeing, social mobility, and an increased overall higher life expectancy (Carnevale et al., 2013; Cutler & Lleras-Muney, 2010; Perna, 2005; Rose, 2013). In 2016, approximately 2.2 million high school graduates enrolled in college (U.S. Bureau of Labor Statistics, 2017). However, only 60% of those students entered college and earned a bachelor's degree within six years (National Center for Education Statistics, 2019a). This disparity leads to the question of what happened to the students who enrolled and did not

complete their degree. Questions surrounding college completion have befuddled higher education researchers since its inception and continue to evoke inquiries. Common contributing reasons behind students' lack of completion include the cost of education and academic preparedness; the latter attests to students' ability to handle college rigor. One attempt to answer the perplexing discrepancy includes identifying needed measures to reduce the degree attainment gap.

The Organization for Economic Cooperation and Development (OECD), an association designed to promote economic growth and trade, ranked America third in degree attainment out of over 30 countries in the OECD (NCES, 2020). Yet, the U.S. six-year college graduation rate ranged from 18%-80% (Leonhardt & Chinoy, 2019), with an overall graduation rate of 60% (NCES, 2019b). The disparity of these percentages is due to the incorporation of all post-secondary institutions, including: (a) community colleges, (b) private non-profit colleges and universities, (c) for-profit institutions, and (d) public and research universities.

Moreover, this includes all states and all demographics from race, age, dual enrolled, part-time, and full-time enrollment. These statistics infer that when compared internationally, U.S. college degree completion appears strong for its citizens; yet, within the nation, degree attainment rates across demographics indicate inequalities. Opportunities to improve degree attainment enhances the U.S. higher education system, health systems, and economic systems needed to remain globally competitive (Institute of Medicine, 2015).

Researchers recognize that a primary reason students do not reach graduation on time is due to students entering post-secondary education not academically prepared for college (Butrymowicz, 2017; Johnston, 2010; Morgan et al., 2018). Butrymowicz (2017) declared that "A high school diploma, no matter how recently earned, doesn't guarantee that students are

prepared for college courses" (p. 1). This is a reminder that the pools of students entering college are not equal and colleges must be prepared to service the specific student populations that enter their institutions.

To help undergraduates who are deemed academically underprepared by their university, institutions offer coursework to remediate knowledge gaps as part of a curriculum strategy to aid degree attainment (McCann, 2017). Simultaneously, higher education administrators recognize that collegiate remedial education is a tool that needs continual investigation to ensure that outcomes maximize degree completion (Center for the Analysis of Postsecondary Readiness CAPR, n.d.; Manpower Demonstration Research Corporation MDRC, 2013; St. Amour, 2019).

Research centered on the successes and failures of remedial coursework resulted in conflicting findings and some students who engaged in developmental coursework progressed slowly to the next level, while others who dropped out of college make that choice more quickly (McCann, 2017; St. Amour, 2019). The success of developmental coursework is often measured by how well students gain acceptance and enroll in college, and not necessarily by its ability to close student knowledge gaps.

Additional tuition costs and prolonged time to graduation are hindrances to taking a course in college that mirrors material assigned in high school, which marks the failures of developmental coursework (St. Amour, 2019). To some administrators, developmental education provides students with tools for success; however, this success initiative often contributes to students dropping out. McCann (2017) noted that "full-time bachelor's degree-seeking students who take a developmental education course in the first year after high school graduation finds that they are 74 percent more likely to drop out of college" (p. 7) when compared to those who did not take developmental coursework.

Finding pathways to effectively help students pass and avoid repeating developmental coursework needs further exploration. Previous research over-emphasized the statistical success story of developmental programs at the expense of how these programs impacted the students' overall college experience. However, the qualitative research stories were also missing. Therefore, this study will highlight the stories of six undergraduate students who enrolled in remedial coursework at a private institution to help administrators understand the college experience from the student perspective.

Inequity Within U.S. Higher Education

Harvard University was founded in 1636 to provide religious training for men going into ministry (Davidson, 2018; Thelin, 2011). Affluent, White males had access to the first college campuses in the United States (Thelin, 2011). It was during these centuries the slave trade became more prolific and the growth of African enslavement increased until the Emancipation Proclamation in 1863 (Library of Congress, n.d.). After the passing of the 13th and 14th amendments—the freeing of slaves and granting slaves citizenship (Senate.gov, 2021)—education for African Americans increased, allowing the opportunity to pursue college education.

Amidst the tumultuous time of the Civil War, the Morrill Act supported the development of higher education institutions, with some schools created specifically for people in the racial minority (Davidson, 2018; Thelin, 2011). U.S. education became accessible for all races and genders; yet, inability to progress toward degree attainment was a persistent problem. The earliest reliable data on college graduation revealed that less than 25,000 degrees were granted to the 60,000 students who enrolled in college between 1889 and 1920 (Snyder, 1993). One significant explanation proposed was lack of academic preparation prior college arrival (Snyder, 1993). Prior to this time frame, there

were no accurate statistics regarding college enrollment and graduation rates especially specific to ethnicity.

Harvard President Charles Eliot became the catalyst for revolutionizing U.S. higher education between 1869 and 1909 (Davidson, 2017). Eliot reimagined U.S. higher education from a business industry perspective; changes regarding selection and diversity of courses led to more students gaining post-secondary credentials (Arendale, 2006; Cassaza & Silverman, 1996; Davidson, 2017). Unfortunately, a stronger educational experience did not promote degree attainment for all students. As once-enslaved African Americans found their freedom and early education, segregation limited their access and preparation for post-secondary education.

The 20th century brought federal legislation that transformed the U.S. education system. *Brown v. Board of Education* in 1954 and the Civil Rights Act of 1965 abolished segregated schooling and provided more equal opportunities for all races, classes, and genders (U.S. Department of Education, 2016.). The passing of educational equality legislation continued with President Lyndon B. Johnson signing the 1965 Elementary and Secondary Education Act (ESEA), which offered additional funding geared toward education in the K-12 system (U.S. Department of Education, n.d).

The 1970s, 1980s, and 1990s introduced more legislation surrounding education, including the following:

- The Family Educational Rights and Privacy Act (FERPA) (1974) allowed students the option to protect their educational information or elect for family to gain access to private information (Bornfreund & Severns, 2010).
- The Individuals with Disabilities Education Act (IDEA) (1975) provided students with disability access to equitable learning (Edwards, 2012).

- The Education for Economic Security Act (1984) provided funds for new Mathematics and science programs throughout K-12 and also post-secondary levels (Edwards, 2012).
- The Student Loan Reform Act (1993) created new direct lending for students from the federal government (Edwards, 2012).

Each piece of legislation created significant access to post-secondary education and provided more opportunities for upward mobility.

Additionally, the 2002 No Child Left Behind Act increased awareness and exposure to areas within education needing additional support, such as teacher training, student performance accountability, and supplemental academic services for both students and parents (Department of Education, n.d.). In 2015, President Obama signed the Every Student Succeeds Act, which provided accountability for educators, students, and families. The primary goal of each piece of legislation was to provide equal access to quality education.

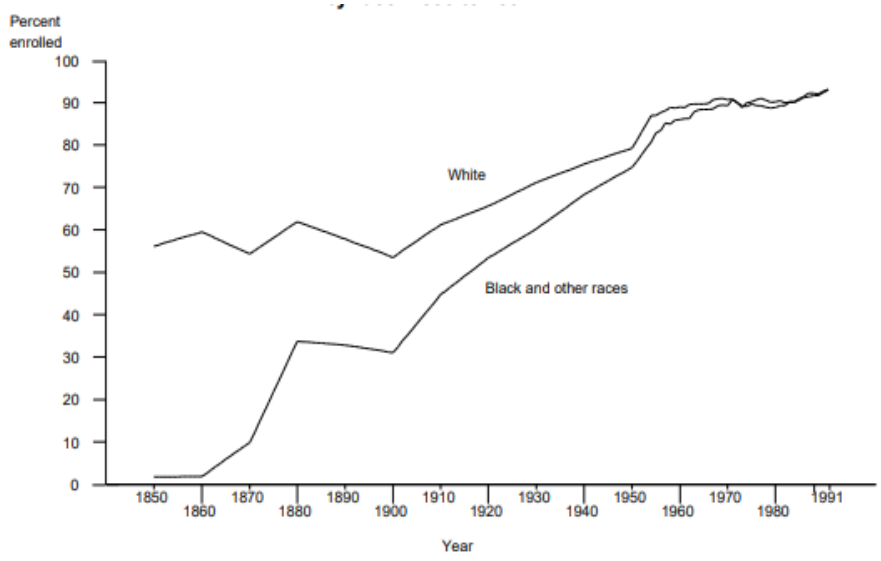
As doors of access opened, affordability disproportionately plagued communities that shouldered the weight of oppression caused by legal segregation in the forms of redlining and Jim Crow laws (Rothstein, 2015, 2017). U.S. public K-12 education is financed primarily through property taxes; however, due to unjust zoning policies implemented at the conclusion of slavery, Jim Crow laws, and legal segregation, communities were not economically equal, and these inequalities continue to impact education today (Quick & Kahlenberg, 2019). Studies indicate that academic performance was lower for those who lived in areas of poverty (Kena et al., 2016; Taylor, 2017). College students needing developmental coursework carry the burden of poor academic preparation into a higher education setting often not created for them. Students entering college with the heaviness of oppression and wide knowledge gaps created by an

underfunded and broken educational system can explain the prevalence of remedial education within higher education (Bowman et al., 2018; Davis, 2020).

School enrollment of students of color for over 150 years is displayed in Figure 1 (Snyder, 1993). It took over 100 years for non-White students to enroll at a rate equal to that of White students. For over 100 years, education for minority students in the K-12 grade system remained imbalanced (Snyder,1993).

Figure 1

Percent of 5- to 19-Year-Olds Enrolled in School by Race, 1850-1991



SOURCE: U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970;* and Current Population Reports, Series P-20, *School Enrollment - Social and Economic Characteristics of Students*, various issues.

Despite the increased number of minority students in college, the history of education gaps continues to impact degree attainment (Jackson, 1988; McCann, 2017; Ogbu, 1978).

Inequity Within Academic Preparation

The historical inequalities surrounding primary and secondary education resulted in many students' lack of preparation for college, predominantly from students dwelling in low socioeconomic communities; this presently contributes to inequitable higher education outcomes (Elliot & Hughes, 2019; Garcia & Weiss, 2017). Gaps in approaches to learning and non-cognitive

skills appeared greatest in those from low social-economic backgrounds, primarily among students who had lower parental educational involvement (Garcia & Weiss, 2017). Studies indicated that high school rigor and college preparatory work across the United States were not equal for all students (Davis, 2020; Glass, 2012; Jackson, 1988). Darling-Hammond (2001), as cited in Smedley et al. (2001), stated that the "wealthiest 10% of school districts in the United States spend nearly 10 times more than the poorest 10%" (p. 208), in which primarily minority families dwell in under-resourced communities resulting in underfunded schools.

Furthermore, the recruitment and retention of qualified instructors is difficult in low-income communities (Carver-Thomas & Darling-Hammond, 2017; Price, 2020). The cyclical nature of under-resourced communities leading to lower quality education that produces underprepared students needs to be addressed. Providing additional resources and support to break this cycle is at the root of remedial education efforts (OECD, 2012). Incongruent educational requirements among the states also exacerbates inequities. For example, the Education Commission of the States (2007) noted that for a standard high school diploma, the state of Alabama required four units of Mathematics with Algebra 1 and Geometry as mandatory; however, Alaska only required two units of Mathematics, and Florida schools allowed a computer science course or an industry certification to replace up to two of the four required Mathematics units needed for a diploma (Florida Department of Education FLDOE, 2019). A lack of nationwide consistency in Mathematics and English requirements affects the expected academic preparedness associated with a high school diploma. To account for state-based differences, higher education often utilizes standardized tests to circumvent the varied high school diploma requirements. Yet, preparation for standardized tests carries a financial burden and the test results are criticized for a lack of accuracy in predicting outcomes (Dumestre, 2016).

College admissions personnel utilize the Scholastic Aptitude Test (SAT) and the American College Testing (ACT) as predictors of student success. Yet, research indicates that standardized tests contain several biases and do not predict collegiate success (Dixon-Roman et al., 2013; Guiner & Torres, 2002). For example, 27 states with high poverty districts do not receive extra funding for public schools; additionally, 14 states with low-income districts, primarily servicing students of color, receive even less funding than affluent neighborhoods (Morgan & Amerikaner, 2017). Too much emphasis on testing can result in under-resourced schools focusing on the standardized tests, thus restricting teachers' ability to develop curriculum (Black, 2017). Conversely, the lack of prioritizing standardized testing practices reduces student preparation; as of 2017, states could determine rates of acceptable proficiency which increased performance disparities among schools, students, and districts regarding testing success (Black, 2017).

Researchers noted that students from White families with a yearly income of less than $10,000 scored significantly higher SAT scores than students from Black families with a national average income of over $75,000 (Thernstrom, 2002). Furthermore, the advent of super scoring, a collection of the highest scores on individual subjects within the SAT or ACT tests when taken multiple times, allowed students who could afford test fees to focus on one subject at a time to create the highest composite score possible. Super scoring lead to significant under prediction, resulting in students appearing academically stronger than their actual ability (Mattern et al., 2017). Standardized tests no longer fulfill their original purpose; rather, they are now used as a tool for affluent families and communities to secure college admission.

Academic Preparation Addressed through Remedial Coursework

Presently post-2010, 40% of first-time undergraduates enrolling in post-secondary schooling, including four-year, two-year, and certification programs, are academically underprepared and in need of developmental coursework (Hartman, 2018). Additionally, research indicated that less than 50% of students engaging in developmental coursework earn a bachelor's degree within six years (Attewell et al., 2006; Camara, 2003). This trend highlighted the fact that developmental coursework cannot deliver desired success by itself but needs to be coupled with additional educational resources –in this case, remedial classes.

Research in the early 2000s found that support for students in need of developmental coursework started with provisional college admittance and commonly included learning communities as well as formal and informal mentoring with faculty and peers (Bruch et al., 2004; Inkelas et al., 2007). Developmental coursework included mandatory courses both for credit or with zero credit. Mathematics and English subjects tended to be typical foci for developmental course work (Bailey & Cho, 2010; Jenkins et al., 2010).

The focus for this research was to understand the perspectives of students, specifically underprepared undergraduates taking developmental courses, as they progress through college. In contrast to previously published research and to better understand the students' educational experiences, this research will be from the vantage point of students who enrolled in developmental coursework.

Statement of the Problem

Based on the fact that less than 50% of students engaging in developmental coursework in college earn a bachelor's degree (Attewell et al., 2006; Camara, 2003), higher education administrators would do well to adopt a new perspective for developmental education. The goal

is not to abandon developmental education, but rather to glean information from students' lived experiences to understand if developmental education effectively closes the college achievement gap. Remedial coursework highlights academic deficits in students and often does not contribute to earning credits toward graduation; students react to this challenge with differing levels of motivation and fluctuating attitudes of frustration and confidence throughout their experiences (McGee et al., 2014). By learning from students engaged in developmental coursework and understanding college through their perspectives, higher education professionals can foster a better environment for degree attainment while also improving the overall experience for all students.

Purpose of the Study

Developmental courses were created to help underprepared students successfully remediate weaker areas and progress toward degree completion. Consequently, students progressing through remedial courses have differing paths toward degree completion than those who do not take development classes. Universities advertise a path designed for students where developmental coursework is not included, often leaving students and their faculty with a "behind" mindset. Therefore, this qualitative phenomenological study examines the lived experiences of 18- to 25-year-old undergraduate students required to take zero-credit coursework while attending a four-year, private, liberal arts college. The study results provide administrators with student perspectives on zero-credit coursework and its subsequent impact on their collegiate experiences. This research supplements previous quantitative data analyses about zero-credit coursework by highlighting student narratives.

Research Methodology and Research Questions

To complement existing quantitative research, this phenomenological qualitative study will utilize interviews to explore the perspective of six undergraduates who engaged in developmental coursework. This study is guided by the following research question:

RQ1: What are the lived experiences of six undergraduate students attending a residential four-year, private university who were required to take developmental coursework, primarily noncredit-bearing, during their first semester?

Significance of the Study

The United States has a history deeply rooted in racial separation and inequality that is intertwined within communities and schools. The impact of historic legal and illegal practices continues the imbalances between races and influences academic preparation for students in the 2020s. Remedial education is the primary instrument post-secondary institutions utilize to mitigate academic preparedness, decrease the achievement gap, and promote college degree attainment. Despite these efforts, there is a growing population of students enrolling in college who exhibit educational deficits (Hodara & Jaggars, 2014).

The weak pipeline from high school to college for the under-resourced 14 states, which primarily service minority students, contributes to the fact that 29% of students need developmental coursework. Furthermore, this poor developmental foundation leads to less than 50% of students earning a bachelor's degree (Attewell et al., 2006; Camara, 2003). Viewing college through the lens of students who are part of under-serviced populations can contribute to developing initiatives to increase college completion rates, as well as develop stronger educational systems to aid low-income communities and under-prepared students entering college.

To ground this qualitative study in current higher education research, Chapter 2 includes the following: (a) an overview of the history of higher education remedial coursework; (b) an explanation of why higher education developmental coursework is needed; (c) an exploration of the convergence and development of zero-credit coursework; (d) perspectives on alternative remedial curriculum delivery methods; and (e) an analysis of how students in need of zero-credit developmental coursework are identified.

Definition of Key-terms

At-risk – A term used to describe students who are below college readiness levels, including boundaries to learning. For this study, at-risk is interchangeable with unprepared, underprepared, and ill-prepared (Bettinger & Long, 2009; Bulger & Watson, 2006).

Developmental education – An umbrella term that includes courses needed to help students remediate gaps in subject matters to progress them to college-level courses (Bailey, eet al., 2010; Chen & Simone, 2016). Developmental coursework can include credit-bearing courses as well as zero-credit courses.

College-level – This term relates to courses that are credit-bearing and applicable to a student's GPA and earned credit hours toward graduation (Bailey et al., 2010).

Credit-bearing – Courses that carry a grade that contributes to the student's grade point average, transfers to other institutions, and counts toward degree requirements needed for graduation (Breneman & Haarlow, 1998; U.S. Department of Education, 2016).

Ill-prepared – A term used to describe students who by institutional standards are deemed academically below college readiness levels. For this study, the term is interchangeable with unprepared, underprepared, and at-risk (Bettinger & Long, 2009; Bulger & Watson, 2006)

Noncredit coursework – A term that refers to coursework that the university deems as non-contributing to a student's earned credit hours. Typically, this does not impact a student's grade point average. This term is used interchangeably with zero-credit coursework (Breneman & Haarlow, 1998).

Persistence – A term typically tied to students' completion of coursework ending with an earned certificate, degree, or diploma despite obstacles and challenges. For this study, it is interchangeable with retention to describe a student's continuation in college semester to semester and year to year (Astin, 1993; Goguen et al., 2010; Tinto, 2012).

Provisional – A term used to indicate a student's acceptance to an institution that typically holds a contingency of required coursework. This term is interchangeable with developmental (NCES, 2009)

Remedial education –An umbrella term used to indicate below college readiness and the need for support services from the institution; this term is used interchangeably with developmental courses (Bailey et al., 2010; Chen & Simone, 2016; Institute for Higher Education Policy, 1998).

Retention – A term specific for first-year students who return to the same school from fall semester to the next fall semester (Tinto, 2012). However, for this study, retention will be used interchangeably with persistence to describe a student's continuation of college, semester by semester to graduation.

Traditional undergraduate student – A subgroup referring to students between the ages of 18 and 25 who are financially dependent on someone else, enrolled in college post high school graduation, and who do not have any dependents (NCES, 2015).

Underprepared student – A term used to describe students who, by institutional standards, are deemed academically below college readiness levels. For this study, this term is interchangeable with at-risk, unprepared, and ill-prepared (Bettinger & Long, 2009; Bulger & Watson, 2006).

Zero-credit coursework – A term that refers to coursework deemed by the university as not contributing to a student's earned credit hours. Typically, this coursework does not impact a student's grade point average. This phrase is used interchangeably with noncredit coursework (Breneman & Haarlow, 1998).

Many of the educational inequalities in the United States started with enslavement and were perpetuated through segregation, resulting in multiple imbalances that emphasize unequal educational opportunities (Elliot & Hughes, 2019). The changing of laws and the creation of higher education institutions ushered in more students desiring advancement of their education. This led to a shift of student demographics and exposed the academic gap by race that exists in the United States. Academic gaps revealed a need to remediate these deficits and led to the creation of developmental coursework for new college students. Yet, after years of developmental coursework offerings, minor variations occurred due to quantitative and qualitative data on intended learning outcomes. The perspectives of students engaging in zero-credit developmental coursework, specifically at a private, liberal arts college, are components needed to complete the puzzle on how to shrink academic gaps.

Developmental education is part of the fabric of higher education; however, the mechanisms by which institutions employ this education need to be refined. Understanding the perspectives of students who engaged in this coursework will create opportunities to aid a

population that routinely has a high dropout rate and identify ways to increase their degree attainment.

Chapter 2: Literature Review

In the early 2000s, the national average of students in need of developmental coursework stood at over 25% of the entering cohort, and that group of students had a graduation rate of less than 50% (Attewell et al., 2006; Camara, 2003). The number of students needing remedial work needs must be addressed. In the United States, the disparities between those needing remedial coursework and those who do not began by subjugation and was propagated through separation, creating unbalanced scholastic opportunities (Elliot & Hughes, 2019). Legislation has served to advance the equalization of academic opportunities, creating new educational options for the increasingly diverse U.S. population. However, the diverse population entering college differed from the previous demographics of academic cohorts and exposed knowledge gaps among high school graduates entering post-secondary education. Many institutions of higher education offered developmental coursework as a strategy for remediating these gaps and that coursework proved successful in educating many students. However, these developmental courses also served as a hindrance to degree completion due to the additional time and resources needed to complete them (McCann, 2017).

Eliminating developmental coursework is not the aim of this paper; however, utilizing research guided by theories to understand student perceptions of this coursework, and gleaning information on their actual college experiences, will serve educators in curriculum development and support strategies. This chapter focuses on theories and previous research that provide guidance and structure to this study.

Theoretical Framework

Theories are like overarching umbrellas that provide guidance and solutions for both large and small issues (Collins & Stockton, 2018). Because theories are created through the

framework of ideas, theories are not laws and are meant to be tested. Yet, it is through these theories that potential solutions emerge and, as a result, raise awareness. Regarding education, several theories explain the inequalities that have led to achievement gaps and, ultimately, college completion disparities. For this study, the social equity theory (Mckown, 2013) described what led to U.S. inequalities that shaped education, and the self-determination theory (Deci & Ryan, 1985) explained how interactions created life perspectives that influence motivation and action. This research will use both theories to explain how economic disproportions have led to the present academic inequalities. These intertwined theories provide a basis to explore the experiences of six undergraduate students assigned to developmental, zero-credit coursework, and to explain how remedial coursework shaped their college experiences.

Social Equity Theory

Inequalities are part of the fabric of the U.S. higher education system, including imbalances with regard to wealth classes, races, and gender. The theory behind these social inequalities is known as social equity theory (SET) (Frederickson, 1990; McKown, 2013; Rawls, 1971). Traces of SET date back to the age of Enlightenment with grounding in the fundamental notion that all are equal. However, the social inequalities still present in the United States need continual monitoring to make progress toward an equitable society.

Rawls (1971), a political philosopher, suggested that humankind ought to have basic liberties, that inequalities ought to be balanced to aid the least advantaged, and that offices representing humankind should look through a lens of creating equal opportunity for all. Frederickson (1990), a public administrator, continued this thought process and developed SET. This process included examining the law, social equity, and grievances of the past in order to create a more equitable foundation in the United States. Proponents of social equity theory

challenged public administrators to balance the economy, social equity, and the need for efficiency, and noted that an absence of social equality leads to a lack of understanding of the complexities that exist between efficiency and economy (Frederickson, 1990). The belief that fairness and equity guided the common sense, as noted by Frederickson, led to McKown's (2013) SET and racial-ethnic achievement gaps.

McKown (2013) stated that SET deeply impacts racial communities disproportionately and those dissimilarities can lead to academic and achievement differences. Noted in this theory are how direct influences—both actual and signal, and felt cues—both negative and positive, lead to perspective development. As time progresses, perspective is developed which leads to a manifestation of false hypotheses towards one's achievement abilities, specifically racial-ethnic aptitudes. McKown highlighted different settings in which influences assist or hinder the achievement and academics of students, including home, school, peers, and neighborhoods. An imbalance of interactions promoting positivity of achievement and academics, coupled with confusing and ambiguous felt stereotypes through other influences in any of these settings comprise achievement and academic gaps (McKown, 2013).

Self-Determination Theory

Deci and Ryan's (1985) self-determination theory (SDT) recognized that life experiences create perceptions that can impact motivation and dictate action. The origins of SDT are found in Deci's (1971) experiments regarding external versus internal motivations; Deci noted that "verbal reinforcement and positive feedback" (p. 105) increased internal motivation. Furthermore, if an application of external motivation existed, the removal of the external stimuli resulted in reduced motivation overall.

Deci and Ryan (2000) deepened their exploration of SDT and noted that motivation not only differed between internal and external stimuli, but also differentiated depending on an individual's perspective of "the value and regulation of the requested behavior" (p. 71). In other words, SDT is dependent on a person's internationalization of the perceived value and the perceived impact it will have on oneself. Deci and Ryan (2000) further explained that the internationalization process develops in early childhood and progresses throughout life in various settings based on exposed experiences. Additionally, the ability to independently understand and apply learned information forms an integral part of autonomy that Deci and Ryan connect to SDT. Furthermore, social environments, which include model behavior and actions, inform and influence the internalization process and thus informs motivation. Lastly, Deci and Ryan (2000) established that humans have the inclination toward momentum but a propensity toward passivity which, if ill-nourished during childhood and adolescence, precipitates into several settings of one's life, creating gaps often exposed in work or in school settings. Yet, the intersection of autonomy, competence, and relatedness to one's life improves motivation and can help close such gaps.

The juncture that perceived value, whether true or fallible, of one's self, one's behavior, or one's ability starts early in childhood and only progresses through life is where SDT and SET meet (Deci & Ryan, 1985, 2000; McKown, 2013). This intersectionality will provide a new perspective on developmental education in the college setting.

Social equity theory (SET) noted that within a school setting, students from second grade and beyond are capable of deciphering felt negative signals; and there was an overwhelming amount of these signals associated with race (McKown, 2013). In addition, SDT prescribed that the reception of interactions contributes to the development of one's internal and external

motivation by evaluating the perceived value of the experience (Deci & Ryan, 1985). From students' recognition of themselves as a minority to overt racism, students' social interactions within the school setting influence their perspective of education, which leads to academic gaps that influence motivation and attitudes toward engagement (Deci & Ryan, 1985; McKown, 2013). This cycle continues and can translate into high school graduates who lack the academic skills necessary for college, a lack which often is remedied through required developmental coursework.

Developmental coursework in post-secondary institutions prepares students for college-level coursework (Bailey et al., 2010). Based on SET, the quality of instruction in K-12 systems in some communities, as well as students' lack of motivation, contributed to academic gaps (McKown, 2013). Researchers argued that deeper concentration on Mathematics, reading, and writing preparation in the K-12 system would aid in decreasing the need for colleges to provide developmental coursework (Koch et al., 2012; Long & Boatman, 2013). Additionally, as noted in SET, an increased frequency of reading at home during the adolescent years leads to literacy and numeracy ability (McKown, 2013). Parents who can afford to spend additional time in the household with their children linked to those who belong to a higher socio-economic grouping (Chen & Miller, 2013). This luxury was not found in low-income communities that have the greatest need; thus, the achievement gap and the academic gap continued to persist among social classes and races.

Overview History and Literature

Higher education in the United States continues to be a conduit for upward career mobility, access to opportunities, a sense of personal growth and accomplishment, and a piece of the American dream (Erisman & Looney, 2007). Furthermore, earning a bachelor's degree

allowed individuals to earn over 15% more on average, or 2.6 million dollars, than individuals with only a high school degree; this equated to 1.3 million dollars over their lifetime (Association of Public & Land-Grant Universities, APLU, 2020; Engle &Tinto, 2014). The Bureau of Labor Statistics (2017) reported an unemployment rate of over 16% for Americans without a bachelor's degree and 2.5% for those with a bachelor's degree or higher in 2016; this implied that the higher the level of education, the lower the chances of unemployment. Just under 70% of students immediately start college after high school (Jaschik, 2019), yet only 70% return for a second year, and less than 55% complete their bachelor's degree from a four-year institution within six years of their start (Fishman et al., 2017).

Several factors have contributed to a college degree attainment gap, including inequalities stemming from past racial discrimination, lack of college preparatory curriculum in high schools, and college coursework that leaves students doubting their collegiate abilities (Griffin & Allen, 2006). However, missing from the research was a targeted view of students who engaged in developmental coursework and an analysis of how it impacted their college experience. This review of the literature will focus on elements that explain the degree attainment gap for students: the creation of developmental coursework within U.S. higher education, barriers that impair credential completion, and differing styles of curriculum modalities. This section concludes with an exploration of the theoretical framework model by Tudor et al. (2010), which examines students' perceptions and approaches to learning and serves as a lens for the research methodology.

Developmental Coursework Overview

To better understand developmental coursework, it is vital to understand its underpinnings and governance as it relates to higher education. Developmental education exists

to fill knowledge gaps needed for success in college (Boylan & Bonham, 2007). In the late 2010s, developmental education encompassed many subjects; however, most institutions focused on the development of Mathematics and English skills, including reading and writing (McCann, 2017).

History of Developmental Education

Developmental education originated when Harvard professors recognized a need for added support in helping students understand the Latin language; Charles Eliot, former Harvard president, used tutoring to ensure students were able to find academic success (Ali, 2019). As the field of education evolved, specific courses were developed encompassing more subjects, especially Mathematics and English, which were considered necessary life skills (Arendale, 2002; Butrymowicz, 2017; Cafarella, 2014; Hodges & White, 2001; Merisotis & Phipps, 2000; Oudenhoven, 2002). The demographics of the student population enrolling in college has changed drastically since the inception of U.S. education started in 1636; which has resulted in a more diverse student body entering post-secondary education over the past 400 years (Thelin et al., n.d.).

Developmental Coursework Governance. As the need for developmental coursework increased, with an emphasis on addressing the needs of the new demographic arriving at U.S. college campuses, a conference on developmental education took place in Chicago in 1972; from that gathering emerged the National Association for Remedial/Developmental Education in Postsecondary Education to provide oversight (Boylan & Bonham, 2007). There was later a name change to the National Association for Developmental Education, and then another name change in 1984 to its present name, the National Center of Education Statistics (NCES) (Boylan & Bonham, 2007). This vein of developmental education splintered into state or regionally

focused channels, which included the following: (a) the National College Learning Center Association, (b) the College Reading and Learning Association, and (c) the National Tutoring Association (Boylan & Bonham, 2007). In addition, similar state programs focused on improving developmental education (Boylan & Bonham, 2007). The purpose behind developmental education remained focused on supporting students' academic success in college (Bettinger et al., 2013). Academic success became an increasingly complex and important undertaking due to the increase of students from various backgrounds with different needs (Hearn, 2006).

The U.S. Department of Education recognized data collected by the National Center for Education Statistics (NCES) proved essential in understanding how to best serve underprepared students in higher education (Kuh et al., 2006). From 1983 through the early 2000s, the percentage of students needing developmental coursework remained consistent at 29% of students entering U.S. colleges in all forms of post-secondary higher education, including two-year, four-year, and technical colleges (Boylan et al., 2006). Unfortunately, isolating and deepening the focus on how developmental education impacted each form of higher education (two-year public, two-year private, for-profit, four-year private, and other variations) was overlooked, oftentimes creating confusion about how to implement change and assess results (Kuh et al., 2006).

One study focused on developmental coursework determined that the United States fall 2017 high school graduate cohort included 22.6% enrolled in community colleges (which also included vocational and certificate-granting programs) and 44.2% enrolled in four-year universities and colleges (Chen & Simone, 2016). These numbers combined both part-time and full-time students, traditional-aged students (18-25), and nontraditional-aged students (25 and over), as well as on-site and online students. This study revealed the need to distinguish people

groupings for further clarification (traditional versus non-traditional, private colleges versus public institutions, and online versus on site) in order to implement better and more targeted intervention strategies and promote greater retention and graduation rates. There was a higher graduation rate for those who attend private institutions as compared to the graduation rates at public or two-year institutions (NCES, 2018). Duffin (2019) projected that over the next decade private institutions will continue to increase in enrollment; thus, administrators at public higher education institutions would benefit from creating stronger strategic plans to enhance degree attainment by learning from students enrolled in developmental coursework at private higher education institutions. Taking a segmented view of each type of institution, and coupling that with a narrowed focus on each subpopulation, could lead to new approaches to help students in need of remedial coursework; those new methods could improve academic success and increase degree completion.

The purpose for post-secondary remedial coursework is supporting student success, yet it has been viewed as a roadblock to degree completion (Gordon, 2016; McCann, 2017; Minor, 2017; Public Policy Institute of California PPIC, 2020; Watanabe, 2016). The method of instruction, the lack of explained purpose behind content, and the absence of understanding participants' vantage points help explain why developmental education has divided outcomes (McCann, 2017). To understand the success or failure of developmental education in post-secondary education requires a deeper look into the social constructs that influence U.S. college infrastructure. This includes looking at environmental and socioeconomic factors, as well as barriers in the educational system that impact students' emotions, attitudes, and inability to attain a degree.

Developmental Education Contributing Factors

This portion of the literature review will focus on external and internal factors that contribute to the need for post-secondary developmental education coursework.

Environmental Factors Contributing to Academic Gaps

A goal for developmental coursework offered in post-secondary institutions is to prepare students for college-level coursework due to previously exposed academic gaps (Bailey et al., 2010). Researchers argue that a concentration on Mathematics, reading, and writing preparation in the K-12 system would aid in decreasing the need for colleges to provide developmental coursework (Koch et al., 2012; Long & Boatman, 2013). Additionally, as noted in SET, an increased frequency of reading at home during adolescence leads to increased literacy and numeracy skills (McKown, 2013). Parents who can afford to spend additional time in the household with their children link to those who belong to a higher socio-economic grouping (Chen & Miller, 2013). This luxury is not found in low-income communities that have the greatest need; thus, the achievement gap and the academic gap continue to persist among social classes and races.

Most students entering developmental coursework share a commonality of coming from a low social-economic background and identifying as a racial minority (Crosnoe & Muller, 2014). Both segregation and redlining were byproducts of Jim Crow laws, which was a modernized systemic version of slavery once the Emancipation Proclamation established slavery as illegal (Rothstein, 2015). The issue of segregation led to lines of division in communities and towns, which were an illegal governmental bank and insurance plan known as “redlining,” designed to ensure that brown families did not receive access to funds to procure homes (Merriam-Webster,

2020; Rothstein, 2015). Remnants from past inequalities still plague school districts. In the 2020s several types of separation and discrimination still exist in the United States, typically based on skin color, sex, and race. For example, banks have been known to refuse to grant loans to brown families, oftentimes resulting in housing projects and zonings based primarily on race. Yet another example was schools with a high influx of marginalized students in redlined areas; they received less financial aid. These locations also had lower property values and property taxes (Rothstein, 2017).

The onset of Jim Crow laws in the late 1800s extended into the early 1900s and created the ability to segregate cities; this segregation manifested itself in some areas of town receiving more financial assistance than others, another form of redlining (Gross, 2017; Rothstein, 2017). Property taxes fuel the building and repairing of public schools, and a lack of tax funding creates schools in great need of assistance with wide gaps in the education they provide. When a limited view of upward mobility presents itself to a generation, it can create a mentality that the same lack of opportunity awaits them (Smeeding, 2018). With no promise of upward mobility in their environment for a prolonged period of time, internal and external motivational factors related to the self-determination and social equity theories come into play (Deci & Ryan, 1985; McKown, 2013).

Additionally, families with limited financial resources often have limited time to invest in their student's educational experiences due to long work hours (Krupnick, 2018; Schneider et al., 2006). Because of parents' busy work schedules, teachers can end up assuming primary caregiver responsibilities, again limiting actual teaching and learning time. Families with limited financial resources contribute to educational disparities in the classroom within the same communities.

Under-Resourced School Systems. Educators are tasked with caregiver responsibilities which, if positively received, can lead toward students' sense of security and achievement; however, when perceived negatively, this can derail their self-determination, creating academic and achievement gaps (Deci & Ryan, 1985). Additionally, the lack of perceived value and positive reinforcement at home can lead to misaligned inferred perspectives regarding education, which can manifest in low motivation (Deci & Ryan, 1985; McKown, 2013). Instead of addressing the deeper psychological needs created through these perceptions, educators who are preoccupied with a crowded classroom often transfer students from one teacher or grade to another with little direct intervention from the instructor (Johnson et al., 2019).

Conversely, students who actively engage in their learning are harmed by a broken education system because teachers and administrators are focusing their attention on helping create plans for students with greater needs (Epstein et al., 2008). Despite educational hardships, these highly motivated students are still pursuing a university degree. However, when these high school seniors are met with a requirement for developmental coursework, lack of self-esteem, poor morale and minimal motivation stifle their desire to attend college.

Students in need of developmental coursework are a byproduct of social forces that impact students' determination and motivation (Deci & Ryan, 1985; McKown, 2013; Yabiku & Schlabach, 2009). Even for students who successfully navigate and complete the complicated system of college enrollment, they are met with information and knowledge gaps that college accreditation boards believe must be overcome to enter college. This system creates the need for developmental and remedial education for almost 30% of students beginning college (Boylan et al., 2006).

Lack of Perceived Control. The image of the American dream generally connects college with upward mobility (Kuh et al., 2006). Once students turn 18 or 19 and realize that their free and familiar education system ends with high school graduation, they recognize the limited options outside of the school walls and employ a version of institutionalization. This form of institutionalization started after World War II when returning soldiers and high school graduates were encouraged to enroll in college for financial opportunity and upward social mobility; however, that American dream is not true for all U.S. citizens (Hitch, 1946; Horowitz, 2018; Rosenbaum, 2001).

Students who sense a foreboding future in life without school are slightly behind the timeline for college selection; they are fearful of the missing out on the American dream, typically need more academic preparation, and tend to select a college that does not match their ability (Dillon & Smith, 2017). The mismatch between abilities and universities leads to mis-matched opportunities, especially concerning developmental course work (Dillon & Smith, 2017). Students oftentimes no longer feel in control of their future; that sense of control drives motivation needed to engage in academia (Deci & Ryah, 1985). Researchers have found that students who do not select proper high school coursework to prepare them for college often require developmental coursework in post-secondary education (Ehlert et al., 2017; Kirst & Usdan, 2009). This loss of control or perceived autonomy can contribute to reduced motivation to progress toward college degree completion (Deci & Ryan, 1985). The intersection of SET and SDT are perpetuated through lack of motivation, and often leads students to enroll in community colleges.

Higher education institutions determined to support underprepared students designed developmental coursework to address the knowledge gap based on several factors: (a) social

environment, (b) under resourced schools, and (c) students' lack of autonomy. While these factors contribute to a knowledge gap that inhibits degree attainment, there are also barriers found within developmental coursework itself.

Barriers to Degree Attainment Through Developmental Coursework

In addition to the factors that contribute to the need for developmental coursework in post-secondary education, students encounter significant barriers in remedial coursework that can lead to low course completion rates.

Institutional Barriers at Community Colleges

Community colleges typically offer remedial coursework to students who are seen as academically unprepared (Gordon, 2016). Yet the graduation rate for students who engage in remedial coursework offered at community colleges can derail graduation. Furthermore, research indicated that only 28% of students enrolled in developmental coursework at a community college earned a degree in eight years, which created financial complications for students because of prolonged periods without a degree and increased time attending school (Goudas, 2018; Jaggars & Stacey, 2014; Zeidenberg et al., 2007).

Another barrier of community college is the sequencing of developmental coursework. Often there are several levels of sequencing—taking one course first, then a subsequent advanced class—a student must complete prior to starting college courses. Not being able to take a particular course can greatly impact student motivation by blocking their independence and autonomy, highlighting their lack of competency.

Difficulty in transferring to a four-year institution to complete their degree and overcoming academic gaps are further contributing factors to low degree attainment for students engaged in remedial coursework at community colleges (Williams & Siwatu, 2017). Moreover,

community colleges without an articulation agreement with a four-year institution contribute to the loss of motivation to persist and attain a degree (Williams & Siwatu, 2017). Discussions on boundaries have emerged, specifically with regard to how far a community college reaches in developmental education as compared to that provided at a four-year institution (Howell, 2011).

Significant research dedicated to understanding developmental education occurs more frequently in community colleges and in public universities due to their expansive and diverse incoming cohorts. Although beneficial, these studies are typically narrower, blanketed approaches, and their generalizations ignore the need for individualized remedial coursework in various college settings.

Institutional Barriers at Four-Year Colleges. The National Center for Educational Statistics (NCES) noted in 2009 that just under 48% of students entering college chose a two-year public school, 29% of students chose a four-year public institution, and 10.5% decided to attend a private, nonprofit institution (Boylan et al., 2006). Additionally, NCES (2018) noted that students from the 2009 cohort who attended a two-year public institution obtained degrees or certifications at a rate of 23.3% within six years, as compared to 46.9% for those attending four-year public institutions and 57.4% attending a private, four-year institution all in the same six-year time frame. These statistics infer that credential attainment is much higher for students in need of developmental coursework when they attend a private, four-year institution than if they attend a community college or public university. Yet, barriers surrounding faculty perception of developmental coursework can derail students' degree attainment journey.

McMann (2017) and Chen and Simone (2016) found that four-year universities reported stronger retention and persistence rates than that of community colleges for students who engaged in developmental coursework. However, university faculty and staff members believed

that developmental work was not the role of four-year universities (Ignash, 1997). The push to remove remedial coursework at baccalaureate-granting institutions was due to a more substantial financial burden associated with attending a four-year institution than that of a two-year college. In times where college enrollment numbers fluctuated, and 29% of enrolled students needed developmental coursework, universities used this population to supplement enrollment (Boylan et al., 2006). Enrolling students based on finances rather than academics raises ethical considerations, yet students use their success in one set of courses to motivate them through their remedial coursework. Students must fight through the stigma of taking remedial coursework in college. This stigma can bring out emotions and attitudes that create additional barriers to success.

Students' Emotions as Barriers. The requirement of developmental coursework often elicits feelings of frustration or embarrassment from the enrolled students (Bachman, 2013); the coursework is thought of as wasted time. Valiente et al. (2012) noted a correlation among emotions, motivation, and academic achievement. For example, success on a test created enthusiasm and deeper engagement, which led to deeper learning and achievement; however, the opposite was also true in which failure on a test demotivated and led students to draw back (Valiente et al., 2012). The emotional ties associated with coursework previously viewed as a point of weakness can drudge up past experiences and highlight educational inequalities.

Perceived academic inequalities often increase stress levels for the students and manifests in low confidence (Colclasure et al., 2018). Moreover, when students feel deflated, they look for assistance from their instructor; if met with a negative reaction, students oftentimes shut down and may even drop out of school. An investigation of students' emotions, relative to their

motivation and progress toward graduation, could aid in the development of new structures to support students toward degree attainment.

Untrained Faculty as Barriers. Colleges recognized that having engaged and relatable faculty instructors for introductory courses are critical to student engagement and retention; the same can be said for developmental coursework instructors (Supiano, 2018). Howard and Whitaker's (2011) study highlighted the importance of the faculty role in the success of developmental students. Participants from their study mentioned that the faculty member's ability to recognize when a student was struggling was a pivotal turning point. They found it was imperative that faculty have the knowledge of university resources and support services to aid student success. Colclasure et al. (2018) found that student perspectives and success through their developmental sequencing was partly dependent on their interactions with faculty. In order for students in need of developmental coursework to achieve academic success, they must feel support from the community within the institution to cross the educational finish line (Williams & Siwatu, 2017). Students face a range of emotions when their deficits are exposed or when faculty reiterate that their developmental coursework delays academic progress; these conversations diminish students' academic confidence (McGee et al., 2014). Tough words shared in advising and instructing lead to reduced confidence in students, which, when coupled with a knowledge gap, can lead a student to abandoning their college pursuit (Darling-Hammond et al., 2019).

Luoch (2016) noted that faculty often believed teaching remedial coursework was not part of the core college requirements and they did not have the buy-in needed to engage their students. Instructors with poor attitudes toward developmental courses further perpetuated several psychological and psychosocial challenges students faced, causing more damage than

good (Deci & Ryan, 1985; Luoch, 2016; McKown, 2013). A survey of colleges noted that only 5% of full-time faculty members taught developmental courses, leaving the remainder to be taught by adjunct-teachers (CCSSE, 2014; Kolodner, 2016). Over 35% of part-time teachers had four years or less teaching experience; over 70 % of faculty ranked as instructor, and over 20% had less than a master's degree (CCSSE, 2014). The Community College Survey of Student Engagement (CCSSE) report further noted that a significant number of adjunct professors did not refer students to advising or tutoring services, and did not use an early warning system. Part-time faculty must balance their time and schedule to meet the needs of their students, even though this can prove to be difficult when, on average, their salary is less than $50,000 a year (Flaherty, 2020). All faculty, including adjunct faculty, balance busy schedules, which is why it is imperative that the *right* faculty—engaging, passionate, caring—teach developmental coursework (Kolodner, 2016).

Part-time instructors often had specific intrinsic motivations for teaching, especially related to developmental coursework when properly supported by their institution (CCSSE, 2014). Adjuncts' primary focus on this subpopulation, coupled with reduced course loads, allowed greater focus on remediation and deeper explanations of topics, which led to deeper learning (Swaincott Kautz, 2016).

More than credentials or faculty-status, instructors need to understand the internal struggle associated with students taking developmental coursework; instructors must have the determination, energy, and commitment to educate students beyond the curriculum to change student mindsets regarding academics. It is critical that faculty communicate the importance of developing competency on topics taught in developmental coursework in order for students to understand the value of the course (Kolodner, 2016). The value is imperative to internal

motivation of a student, especially when remedial coursework provides no tangible external motivation.

Zero-Credit Coursework as Barriers. U.S. higher education began when the president of Harvard, Charles Eliot, recognized that his students needed additional support with learning Latin (Ali, 2019). While Eliot created academic structure and organization, Andrew Carnegie created the separation between high school and colleges and introduced the credit unit system (Silva et al., 2015). The intents behind this system were to:

(a) create stronger parameters for college admissions and high school completion;

(b) provide eligible college instructors a pension;

(c) create metrics to determine the finances behind cost per student and faculty workload;

(d) link competencies and time into measurable units; and

(e) create a common system would allow all colleges to determine enrollment transaction differences, between secondary and post-secondary schooling (Silva et al., 2015).

These essentials were the foundation for the credit hour system used in higher education in the United States today (Silva et al., 2015).

The credit unit system developed in 1906 noted that high school competency in a subject area required a minimum of 120 contact hours or 7,200 minutes of instruction (Shedd, 2003). According to Carnegie, a one-hour unit at the high school level corresponded to five 60-minute weekly meetings across 24 weeks per academic year. Moreover, in order to graduate high school, students had to complete a minimum of 14 units, including language, English, history, Mathematics, and science; however, states were left to determine how many units of each subject contributed to a diploma (Goldin, 1994).

The minimum of 120 contact hours carried over to the post-secondary level; however, there was a different formula to establish credit units. This formula approximated that one unit for each hour spent in class and an additional two hours of preparation per week over a period of a 14-16-week semester equaled approximately 120 hours of hours related to competency (Silva et al., 2015). Unfortunately, college credit was often not attached to developmental coursework (Bettinger et al., 2013). Institutions believed much of the work done at the lowest level, such as remedial coursework, was substandard and did not merit credit (Bettinger et al., 2013). A tangible value for students' work done in college is college credits, and the absence of concrete value for noncredit courses can decrease student motivation. "Credits serve as the coin of the realm," (Heffernan, 1973, p. 64) and earned praise as the pathway to a college degree. If college completion is the ultimate goal, then an increase in credit hours supports increased retention, and thus, improved graduation rates (Boatman & Longman, 2018; Campbell & Cintron, 2018; Jaggars et al., 2015).

Some colleges provide credit for developmental coursework and others do not, creating a true conundrum. While higher education must maintain the standards set by accreditation agencies regarding faculty qualifications, the assigning of credits on curriculum falls on each institution (American Federation of Teachers AFT, 2015). An inconsistency across post-secondary educational systems surrounding credit verses noncredit coursework impacts reports found in the Integrated Postsecondary Education Data System (IPEDS); this lack of consistency was also apparent in the reporting of developmental coursework data (Sykes et al., 2014).

In the California Community College System, instructors of noncredit coursework must minimally hold a bachelor’s degree (Academic Senate for Community Colleges, 2006). By hiring instructors with lower credentials, institutions can save money because their salaries are

less costly than more educated faculty members. In institutions that charge students for remedial courses, students must find additional credit hours to compensate for earned zero-credit hours. Fiscally, it is beneficial to college budgets to charge students for zero-credit courses and hire minimally credentialed faculty to teach remedial courses. Although financial considerations were not the primary reason behind zero-credit coursework, the implications were ethically concerning. The additional time and costs associated with surplus courses can discourage students and create barriers toward degree attainment (McCann, 2017).

In addition, students felt apathetic about courses that did not aid their GPA or earn credit toward a degree; students deemed developmental coursework unnecessary and focused on courses that impacted their graduation credit hours (Cafarella, 2016; Golnabi, 2017). The reasons why students prioritize one class over another, coupled with knowledge of how the barriers impact their other courses, can inform decisions on adjusting remedial education to better meet student needs.

Summary of Barriers

Low motivation was found to be a common barrier to degree attainment for students engaged in developmental coursework (Kuh et al., 2006). The absence of motivation has been tied to historical inequalities in the education system that negatively influenced students' academic attitudes and was perpetuated through lack of credit earnings.

By researching students' perspectives regarding developmental coursework, college administrators can better understand these barriers and discover ways to remediate academic gaps, create plans for strategic change, and overcome impediments to degree attainment. What seems apparent is that instead of addressing the core issue of student motivation, higher education administrators often focus on adjusting the delivery methodology.

Coursework Delivery Overview

Former Harvard President Charles Eliot's vision of colleges allowing student choice, combined with the credit unit system created by Carnegie, established standards that many colleges follow, though individual institutions manage the frequency of required meetings to reach the 120-hour competency requirement within an academic year. The advent of technology allowed for variations with traditional face-to-face formats, online formats, and hybrid formats. Also, within the structure of these newer formats, instruction can be accelerated and the paring of classes to enhance education have become emergent methods. Ho and Polonsky (2009) and Colclasure et al. (2018) recognized that adjusting the delivery of developmental coursework would improve student performance. This section focuses on the top five delivery modalities of developmental coursework occurring in U.S. post-secondary education: (a) traditional formats, (b) accelerated format, (c) online formats, (d) hybrid approaches, and (e) co-requisite designs.

Traditional Format Model

An overwhelming majority of U.S. higher education institutions follow a 15- or 16-week semester calendar that offers in-person courses facilitated by a professor. Class and session frequency depend on the institution and its interpretation of the Carnegie unit and the student hour (Silva et al., 2015). Students preferring in-class instruction from a professor favor the traditional method of instruction. Aided by the instructor, students gain information and practice their subject throughout the week. Instructor feedback allows students to adjust their learning strategies and seek additional support; however, this traditional format has been criticized for its length. Specifically related to remedial education, several semesters are needed to complete developmental coursework sequencing, adding cost and reinforcing student feelings of inadequacy, which can lead to stopping out (Rutschow & Schneider, 2011). An additional

critique of the traditional method offering pertained to the demands placed on the student due to the amount of face-to-face instruction, which can be especially burdensome for nontraditional and commuter students. Frustrations with frequency of meetings and time of classes associated with course completion led to the creation of accelerated and online course delivery formats.

Accelerated Format Model

Adjusting content delivery to an accelerated eight-week or ten-week semester, instead of a 16-week semester, means that developmental work associated with Mathematics and/or English needed for college-readiness is covered quickly (Campbell & Cintron, 2018; Deggs, 2011; Hodara & Jaggars, 2014). Strengths of this model included quicker progression through sequencing and higher retention rates (Hodara & Jaggars, 2014). Furthermore, the ability to progress through courses increased motivation; quick progression through developmental coursework increased retention which fueled graduation and degree attainment (McCann, 2017).

Conversely, the quickened pace can be difficult for some students, especially those with unique challenges such as non-traditional students with competing priorities (Deggs, 2011). In addition, some faculty members could not handle the pace of an accelerated course (Carless & Boud, 2018). Furthermore, some institutions were not prepared for accelerated courses requiring properly trained faculty, adjustments to classroom facilities, and advanced technology (Darling-Hammond & Bransford, 2005). Lastly, de Jong (2010) noted the challenge of enhancing knowledge without overloading a student in accelerated learning. These factors relate back to the importance of having faculty that understand the many caveats associated with developmental education instruction.

Qualitative and quantitative research on accelerated course delivery for developmental coursework has yielded a generally positive student and faculty reactions regarding persistence

through coursework toward degree completion (Bailey, 2009; Colclasure et al., 2018; Rutschow & Schneider, 2011; Schudde & Keisler, 2019). However, most of these studies occurred at community colleges and included both traditional and nontraditional students. Gathering data solely from four-year degree-granting institutions focused on traditional students will aid developmental education overall, and can guide the development of stronger curricula to improve degree attainment rates for this specific population.

Online Format Model

Offering courses through an online format addressed student critiques of face-to-face delivery and solved the issue of frequent in-person meetings (Kemp & Grieve, 2014). Online courses allowed students flexibility and convenience (Xu & Jaggers, 2011). Online offerings put students in control their learning with the ability to replay instructions and learned material through various technological options. Students are not limited to a structured format provided by the instructor, effectively placing the responsibility of learning in the hands of the student. However, there are several downsides to online learning: primarily the digital socioeconomic divide; some students lack access to the internet and devices necessary to complete assignments (Maloney, Lain, & Clark, 2009). Peña-López (2010) noted that the digital divide that occurs primarily in underserved communities in elementary and secondary schooling fuels a digital skill gap typically needed in college.

Challenges for students switching to a completely online course format include: (a) learning a course management software system, (b) becoming proficient with traditional computer programs such as Microsoft Office, and (c) balancing these demands while navigating other coursework (Jones, 2015a). A disproportionate number of students from low

socioeconomic background need developmental coursework; however, they may lack access or experience with the necessary technical knowledge for online coursework.

Whereas online developmental coursework delivery was initially met with success, it has become cumbersome and stressful for some students, leading to a drop outs or early stop outs. Protopsaltis and Baum (2019) stated that "fully online programs have not been productive routes for these [at risk] students" (p. 5). In order to bridge the chasm between face-to-face meetings and online coursework, another method was needed, and thus a hybrid model was developed.

Hybrid Model

A hybrid model of course delivery combines less frequent in-class meetings with online learning. Jaggars et al. (2015) revealed a need to incorporate physical interaction with online options to promote accountability for completing coursework and to create space for interactions with peers and instructors, especially regarding developmental coursework. Hybrid courses have accompanying software to aid with online components, allowing students different multimedia options through which they can learn the material.

The hybrid model allows institutions to host more students than they would in a traditional face to face format due to the low frequency of meetings. For example, a professor could host a class of 25 students on Tuesday and a different group of 25 students on Thursday; this structure allows students to gain face-to-face instruction and then continue their studies and assignments online.

However, Goertler et al. (2012) noted negative factors regarding hybrid models, including student confusion regarding class requirements and methods of turning in completed homework assignments. Most incoming first-year students had never had a course that was split between online and in person. Although minimal research on hybrid models existed at the time

of the study, data indicated students using this method is performed more poorly in comparison to those in traditional delivery modalities (Harrington, 2010). Poor performance, linked to the digital divide, was also a strike against that online format shares (Peña-López, 2010). However, since the COVID-19 impacted education globally, it is possible that the hybrid-method that some K-12 schools utilized may have trained students to navigate the unique challenges of blended learning modalities.

Institutions noted the challenges associated with traditional, accelerated, online, and accelerated formats when developing a new model. However, instead of changing modalities, the primary focus should be on student competencies with instructional materials and how that affects completion and retention. The concept of side-by-side learning—learning the information coupled with immediate application of knowledge—ushered in a co-requisite model.

Co-requisite Model

The co-requisite model is the newest alternative course delivery format method. This model traditionally allows students with remedial needs to take developmental coursework alongside a course that is deemed college level (Jones, 2015b). Instead of expediting knowledge acquisition in a truncated time frame through an accelerated format, or stacking developmental courses one semester after another such as in a traditional format, students take their remedial coursework and the college level course simultaneously. The repetition of learned material in multiple courses helps students feel competent and underlines the value of the material as it is viewed across courses. Vandal (2017) recognized this model as the most successful. Prior to employing this model, only 22 % of students needing remedial coursework completed and enrolled in the college level courses after two years of developmental course sequencing;

however, with the co-requisite model, over 55% of students completed their remediation within one year and advanced to the next set of college courses.

By uniting developmental and college-level courses, students received the support they needed, progressed through college-level courses, and completed college-level coursework at a higher rate. One negative factor with the co-requisite model was the challenge to build a schedule around two required paired courses (Jones, 2015b). In addition, finding faculty and facilities that can accommodate the parallel instruction proved troublesome for some institutions (Logue, 2018).

Summary of Delivery Modalities

Developmental curriculum can be delivered in various modalities: traditional, accelerated, online, hybrid, and co-requisite. Although all models address progression through developmental coursework, no model fully addresses student motivation and the understood value needed to persist through remedial coursework to attain a degree. Missing from the research literature were student accounts of their experiences traversing remedial education. Only through the accounts of the participants expounding on their perspectives and experiences of engaging in post-secondary education will administrations know how to best serve this population. Using the Tudor et al. (2010) model for question cultivation to understand students' perspectives, educators can strategically create better solutions to motivate students through their developmental coursework and onto degree completion. Asking questions and gleaning students' answers can help fortify remedial coursework curriculum and programs.

Framework for Questions

Deci and Ryan (1985), as well as McKown (2013), provided introspection into students' mentality regarding motivation development. Yet, to ascertain how motivation and perceptions

relate to learning, a framework dedicated to question development provides a context to learn about student experiences.

Students' Perceptions and Approaches to Learning Model

Tudor et al. (2010) noted key factors that mirror elements found in the self-determination theory (Deci & Ryan, 1985) and the social-equity theory (McKown, 2013) that connect to academic persistence. The Tudor model illustrated that the context surrounding instruction influences student perspectives on their learning. In fact, Tudor et al. (2010) stated that "in aiming to increase student retention [,] being aware of student's perceptions could . . . be crucial" (p. 2). Influenced by a particular environmental context, the perceptions and approaches to learning model (Tudor et al., 2010) recognized that personal motivation, relationships with staff, the institution's characteristics, relationships with peers, and faculty feedback all influenced student experiences and contributed to how student perceptions impacted their approach to learning.

Boylan et al. (1994) evaluated the characteristics of developmental students in college, including those from a lower socioeconomic environment, minorities, and older students from a combination of all post-secondary institutions. They noted that over 70% of students requiring developmental coursework received financial aid, and African Americans were the largest minority group (Boylan et al., 1994). Perchinunno et al. (2019) studied why students in Italy did not reach degree attainment and noted that personal motivation, lack of credits, knowledge gaps, minimal knowledge of institutional resources, and ineffective study habits were the primary contributing factors. By gaining first-hand insight into these factors, education can support underprepared students.

Golnabi's (2017) study indicated that there is a slim channel that separates boredom (which can lead to apathy) and anxiety. This finding implied that low motivation was found in students not enticed by the information or who had apprehensive feelings toward subjects, which could lead to a lack of learning, failure, and even drop out (Cafarella, 2016). It is imperative to understand this narrow window of enthusiasm. From there, finding alternatives to increase interest or decrease apprehension in order to foster motivation can lead to positive student perceptions ultimately enhance the students' learning approach (Tudor et al., 2010).

In the model presented by Tudor et al. (2010), personal motivation sits at the top; yet, Cafarella (2016) noted that "students' low motivation and overall poor attitude negatively affect their success rates" (p. 57). Conjuring up motivation can be difficult, especially from the perspective of students enrolled in a zero-credit course who may not see the tangible fruit of their labor. If this trend continues, lack of motivation can lead to lack of participation, lack of completion, and subsequently, dropping out of college.

Lastly, the Tudor et al. (2010) model resounded with students across many studies who were enrolled in traditional four-year colleges, had credits count toward graduation, and who showed an eagerness to learn because they self-selected their given courses (Awofeso & Bamidele, 2017; Sakurai et al., 2016; Thornton, 2014). The Tudor et al. (2010) model will guide this study of students who did not self-select into remedial or noncredit coursework.

Summary of Literature Review

The less than 50% graduation rate for students who must take developmental coursework needs further investigation. This study sought to understand undergraduates who completed developmental coursework and how those experiences shaped their college perspectives and experiences. The intertwined theories that guided this exploration are the psychological lens of

the self-determination theory (Deci & Ryan, 2000) and the sociological lens of the social equity theory (McKown, 2013). Barriers were exposed through these lenses, institutional (external) and student (internal). Barriers ascribed to external environmental factors based in home life or academic settings have a profound impact on a student's challenges. Seeing external and internal barriers through the lenses of SDT and SET clarifies the elements that contribute to academic gaps. These gaps lead to a failure to attain degrees among the subpopulation of students needing developmental coursework. Moreover, exploring the impact delivery modalities have on student perceptions and how undergraduates perceive their educational experiences can lead to development of pedagogical practices to support students toward degree attainment.

Chapter 3: Methodology

One-third of students entering college require developmental coursework, yet less than 50% graduate with a degree (Adelman, 1998; Atwell et al., 2006; Camara, 2003). The goal of this study was to recognize the experiences of students who enroll and complete developmental noncredit coursework alongside credit-bearing coursework. Self-determination theory (SDT) and social equity theory (SET) provided the lenses to understand factors leading to academic achievement gaps. The perceptions and approaches to learning model by Tudor et al. (2010) provided an understanding of how context influences student learning; the model was also used to shape the interview questions.

This research study utilized a qualitative phenomenological research methodology to deepen the understanding of developmental education from student perspectives. The phenomenological method seeks to understand the essence of a shared phenomenon (Creswell, 2014). This chapter explains the research collection and analysis process.

Purpose of the Study

The purpose of this study was to understand the perspectives of six 18- to 25-year-old undergraduates attending a private, faith-based, Mid-Atlantic liberal arts university who were required to enroll in developmental coursework; the study placed an emphasis on noncredit remedial work.

Research Question

To better understand the attitudes of students enrolled in a noncredit developmental course and learn of their lived experience, the following research question guided this study:

What are the lived experiences of 18- to 25-year-old undergraduate students required to take zero-credit coursework while attending a four-year, private, liberal arts college?

Participants

Participants in this study included six undergraduate students from a private, faith-based, Mid-Atlantic liberal arts university. Participants were recruited through an email sent to the 2,166-member undergraduate community through representatives from the provost and registrar's office. Included in the email was a secure link that allowed students to input their demographic information, contact information, desired virtual meeting platform, and a preferred date for the interview. Fifteen students who completed the questionnaire were contacted via email regarding the date of the interview, videoconferencing platform preference, and a consent form which explained the study. Twelve students confirmed their participation by responding with their completed consent form and were subsequently interviewed; three students did not respond to the consent form or follow up meeting requests. Furthermore, conversations revealed that an additional two of the students did not match the criterion. Within each interview, the researcher asked if the interviewee would be willing to: (a) recommend students, (b) pass along the survey contact information to other potential participants, or (c) consider joining a focus group. Unfortunately, this style of purposive snowball sampling did not elicit more participants.

Of the final participants, three had completed a noncredit developmental course, one student had completed a credit-bearing developmental course, and two students were currently enrolled in a noncredit developmental course (see Table 1). After six weeks of emails and interviews with the six participants, themes and phrases became repetitive and reached saturation (Creswell, 2014). To ensure themes represented the voices of the interviewed students, four of the six students were briefly re-interviewed by phone to ensure proper understanding of their experiences and perspectives.

Table 1

Participant Demographics

Pseudonym	Gender	High School configuration	Developmental Course	Credit/ Noncredit	Classification	Interview Duration
Laney	Female	International Boarding school	Basic Algebra	Non-credit	2nd-year student	74 minutes
Faye	Female	Public	Basic Algebra	Non-credit	1st-year student	38 minutes
Hazel	Female	Home School	Foundations of Writing	Credit	4th-year student	79 minutes
Dave	Male	Public and Private	Introduction to Mathematics	Non-credit	1st-year student	43 Minutes
Han	Female	Private school	Basic Algebra	Non-credit	5th-year student	54 minutes
Pamela	Female	Home School	Basic Algebra	Non-credit	2nd-year student	60 minutes

Participants met the following inclusion criteria:

(a) enrolled in a four-year traditional undergraduate program;

(b) completed developmental coursework offered at the institution within the past five years;

(c) required to take at least one developmental course as a condition to their college admittance; and

(d) under age 22 while taking developmental coursework.

Location of Research Participants

The study's site location was in a state that currently has no educational policies or legislation barring or limiting post-secondary education developmental coursework. An example of governance regarding post-secondary developmental coursework can be found in the education system in the state of Florida: In 2020-21, Florida public state colleges and community colleges were not allowed to require developmental coursework completion, and students could enter into college-level curriculum. The private, four-year, liberal arts residential college setting was deliberately selected because U.S. not-for-profit private schools have a higher overall graduation rate in comparison to other types of post-secondary institutions (i.e., public, for-profit, and community colleges) (NCES, 2018). A pseudonym was assigned to the institution for the purpose of this study: East Coast College (ECC).

IPEDS data indicated East Coast College's enrollment at 2,166 undergraduate students; the college is a bachelor's, master's, and doctoral degree granting institution. The institution's characteristics include: a female majority representation, 92% of students aged 24 and under, and a demographic of 74% White, 7% Black or African American, 3% Latino/Hispanic, and 14% of unknown ethnicity. This institution's first year retention rate for fall to fall in 2019 was 73% with an overall six-year graduation rate of 59%. Lastly, 99% of the enrolled students received aid and almost 40% were Pell Grant eligible for school year 2019-20.

East Coast College is a faith-based evangelical Christian university, which signifies that they "are guided by missions that are informed and motivated by their faith convictions" (p. 1) of Christianity (Daniels & Gustafson, 2016). Non-faith-based and public institutions may have similar moral and spiritual convictions, although not as pronounced as in private Christian higher education. Public institutions must abide by policy changes set forth by the state's Department of

Education, and several states have removed required developmental coursework offerings; private institutions serve as an alternative to community colleges that offer remedial courses and are a four-year university (Oudenhoven, 2002).

The racial and economic demographics of students attending ECC differ from generalized characteristics of college students; however, they mirror the national averages of private institutions, specifically that of private, faith-based, evangelical universities. These noted differences within the ethnic composite of the institution garnered results specific to East Coast College, however colleges with similar demographics may glean valuable information.

Developmental Coursework at East Coast College

The institution's website provided information on developmental coursework with regard to the course placement process, credit-hour limits, academic policies related to developmental coursework, supportive course offerings, as well as related communication enabling students to make informed decisions.

Placement

The university primarily uses standardized test scores to determine which students need to take a placement exam. Writing samples and placement exam scores are then used to place students in developmental coursework to enhance their success. Students with low standardize test scores are notified of a required placement test. Students must pay to take an online Mathematics placement test and must score a certain percentage in order to avoid developmental coursework. Students who are unsuccessful in the Mathematics placement are given instruction on how to seek tutoring and they can retest at a later date if they so choose.

Credit Hours and Credit Limits

According to the institution's website, developmental coursework is offered with no credit going toward a student's grade point average or 120-hour credit requirement; however, they do count toward the students' course load. Students in need of multiple developmental courses are limited to 14 credits total, which includes their noncredit developmental coursework. This would mean at the end of a student's first semester, a student can only earn a max of eight hours toward degree completion. An interesting distinction for ECC students is that they must also register for cultural and chapel credits, which count toward graduation.

Academic Policies

The institution encourages students who receive a grade of D or F in any course—developmental or not—to repeat the course in the hopes of improving their grade point average. If after three repeated attempts, a student does not reach a C or above in a course that is required for graduation, no other coursework is allowed for registration until the repeated course is successfully passed. This policy means that if, by the spring of their sophomore year, a student failed a noncredit course on their third attempt, they could not continue at ECC.

Students receiving financial aid must complete 67% of their attempted courses and students with less than 30 credits must have a cumulative GPA of 1.5 or higher to meet the Standard Academic Progress (SAP) requirements for financial aid. However, remedial courses are not calculated in the attempted credits because they carry no credit. Thus, a student who earned less than 30 credits, attempted 14 hours (in which six hours are zero-credit) the student's GPA would be dependent on the remaining eight hours to generate a GPA of 1.5 or above in order to meet SAP requirements.

Lastly, the college noted that federal student aid is limited to 150% of the academic program time length; that is, only an additional 60 credits (approximately two years' coursework) above the 120 credits are covered under financial aid. This changes if a student changes majors, at which point only courses toward their academic program will count toward the 150%. A student must initiate the official process to reset their timeframe calculation. This is significant for students taking remedial coursework with multi-level sequencing and/or they change their major.

Supportive Supplemental Courses

A two-credit learning strategy course and "first year experience" course are required at ECC for all students taking multiple developmental courses. The learning strategy course assists students in creating practical and effective skills for studying and adjusting to collegiate life. The first-year experience course supplements the learning strategy course by reinforcing study and learning skills, exposing them to resources and holistic development. However, this course is only available to students in multiple remedial courses at ECC.

The institution offers a remedial English course that meets three hours per week to help students remediate their gaps in academic writing. The first level course is noncredit-bearing. Completion of this noncredit English course allows students to enter a credit-bearing remedial course that further emphasizes writing fundamentals; this course is credit-bearing but does not meet the general requirement of English. A grade of C or higher is required prior to moving on to the composition course, a general requirement.

There are two levels of remedial coursework in Mathematics. The courses meet three hours per week, are noncredit, and follow sequentially. This means that students must achieve the first level of remediation before going on to the next level of remediation. After both

remedial courses are successfully passed, a student can then move on to their general Mathematics credit requirements. Buried in the institution's catalog is a note that students requiring developmental coursework may need to factor in an additional one or two semesters to complete their degree.

Data Collection

This study utilizes three primary data streams: individual semi-structured interviews, re-interviews for member checking purposes, and supplemental materials related to East Coast College's developmental coursework available on the institution's website and in the university's catalog.

Interview Protocol

None of the six participating students wished to join in a virtual group interview with other students, which removed the option for a potential focus group.

Individual Interviews

For this study, the perceptions and approaches to learning model (Tudor et al., 2010) served as a guide for the interview questions. The interviews included a focus on understanding how motivation, relationship with staff members, institutional resources, peer associations, and faculty assessments influence student perceptions of learning; SDT and SET also house these elements. Developmental coursework taught at East Coast College share a common set of intended learning outcomes based on the university's approved curriculum; therefore, participants shared similar phenomena even though professors, enrollment years, and technology differed. Furthermore, the Tudor et al. (2010) model emphasized that understanding the students' approach to learning would provide feedback to the institution on how to better serve their students. The interview protocol is located in Appendix A.

Open-ended questions were utilized, allowing new questions to emerge and creating space for participants to guide the conversation. Semi-structured interviews aided in data collection since they are flexible and include open-ended questions (Patten, 2014). When using a semi-structured interview process, the restructuring of questions is permissible to help the interviewee understand what is being asked; not all questions were asked in each interview, which allowed for the introduction of new questions relating to the topic (Patten, 2014). Prior to the interviews, participants had an opportunity to read a summary of the study and provide consent for their answers to be shared in the study (Creswell, 2014). Furthermore, demographic questions asked in the initial email established the characteristics of the participants. Interviews were held via videoconferencing so that the students could be in a comfortable environment suitable for dialogue; hosting conversations in a relaxed atmosphere is beneficial for honest feedback (Merriam & Tisdell, 2016; Patten, 2014).

Videoconferencing Platforms

The opportunity for in-person, face-to-face conversation was not available; this study utilized Zoom and Google Meet (formerly Google Hangout). By offering different videoconferencing options, interviewees could choose the platform with which they were most comfortable. Researchers noted that the use of videoconferencing is a suitable tool for qualitative interviews as a cost-saving measure and when in-person interviewing is not available (Brown, 2018; Deakin & Wakefield, 2014; Mirick & Wladkowski, 2019). While there are limitations to videoconferencing, it allowed the researcher to observe non-verbal cues often missed when visual capability is absent. Interviews were also recorded, which allowed for more opportunities to review the conversation and gather additional non-verbal cues that a typical face-to-face interview would not permit.

Zoom Security. Archibald et al. (2019) noted in their study that the Zoom videoconferencing platform had the "ability to securely record and store sessions without recourse to third-party software . . . user-specific authentication, real-time encryption of meetings, and the ability to backup recordings to online remote server networks ('the cloud') or local drives, which can then be shared securely for the purpose of collaboration" (p. 2).

Google Meet Security. Similar to Zoom, Google Meet continues to engage in multiple measures of cybersecurity (Lakshiminarayanan & Hashim, 2020). Utilization of meeting codes, encryption, and compliance with FERPA and HIPPA aid in the security of information shared through this videoconferencing platform.

All individual interviews were recorded and transcribed. Otter.ai aided with transcribing interviews. Otter.ai is described as a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text with high accuracy in real-time (Otter.ai, 2018.). When reviewing the recordings, word choices could be altered in the transcription to ensure stronger accuracy of participants' words. A digital recording device was used to further support Otter.ai and help ensure accuracy of the transcription from Otter.ai. Only Otter.ai and the researcher did transcriptions.

Supplemental Material. Collected supplemental material collected prior to the interviews included information on course sequencing, and communication between the university and students required to take noncredit developmental coursework. The information compiled from and about each student framed the students' understanding and perceptions of college from the start of their college application process to the present.

Data Analysis

Individual interview transcripts, the re-interview transcripts, and supplemental materials were analyzed. The analysis of course descriptions in conjunction with student voices provided multiple perspectives that showed areas of congruence and difference regarding information communicated about curriculum and courses.

Open coding helped formulate categories and themes that arose through repetitive re-reading and line-by-line readings of the transcripts (Khandkar, 2009; Orcher, 2014). The open-coding process required the creation of memos and notes on each transcription, followed by groupings into categories that revealed themes and told a story (Merriam & Tisdell, 2016; Orcher, 2014).

Limitation and Delimitations

There are several limitations and delimitations that occurred within this study, including: recruitment, world-wide pandemic, politics, timing, and technology.

Recruitment

The contact person at the registrar's department at ECC was gracious to send out the research emails and survey to their student population several times. However, the emails did not target the specific population who had engaged in noncredit remedial coursework, and the email subject line read, "Amazon Gift Card for your Thoughts," and thus, students responded who did not meet the research criteria. A population of over 2,000 students received this email and the researcher held the expectation that students would read the survey description prior to filling out the survey; that was not the case, however, and unqualified students were subsequently interviewed. It was well into the interviews before was it discovered that several students did not meet the criteria for the study; those students were quickly and respectfully dismissed—but they

still received a gift card in appreciation of their time. Also, two additional students who were presently in their first semester of college engaging in zero-credit coursework may not have possessed full reflective capabilities to understand their experiences. Bachman (2013) noted that as students progress in their college career, hindsight conjoined with maturity may impact reflection. Students who have fully progressed out of developmental coursework more adequately explained their perspective and overall experience; however, it was important to hear from those who were currently taking a noncredit developmental course.

COVID-19 Pandemic

The pandemic shut down businesses, stadiums, schools, and many aspects of everyday normalcy globally for several weeks in early 2020. In the United States, the number of people testing positive for this virus ebbed and flowed and each state had different rules and regulations regarding social distancing between individuals, as well as requirements for wearing personal protective equipment to stop the spread of the disease (Bunis & Rough, 2021; Price & Myers, 2020). Although ECC originally welcomed guests that would adhere to their COVID-19 safety policies, two weeks prior to an on-campus visit, the administration determined that no outside visitors were allowed on campus, which canceled any potential for in-person interviews and recruitment. The lack of person-to-person contact limited opportunities to gain additional participants and host focus groups. Thankfully, videoconferencing created a safe and easy environment for the students. However, even with the reassurance that the video recordings would be kept confidential, some students felt additional unforeseen stress in the process. One student, Dave, was apprehensive of being recorded because he has family members that work for East Coast College. However, during the interview and follow up interview Dave felt more comfortable in the interview to freely share his thoughts.

Politics

Another competing issue occupying the U.S. headlines during the timing of these interviews were the protests surrounding the misuse of police authority on the lives of Black people. The deaths of multiple Black men and women in 2020 and previous years led to many gatherings of civil disobedience across the United States as people demanded reform within the justice system and awareness of the racial injustices that have occurred over centuries (ACLED, 2020). Views surrounding racial equality and inequality are more exposed and continue to divide cities in South Carolina (Dobrasko, 2020; Wortham, 2020). As the issues of inequalities were at the forefront during the research period, it was expected that answers in the interviews about the phenomenon students experienced would also incorporate views on issues related to race. However, the topic of Black Lives Matter did not emerge. When discussing their K-12 experiences, conversations relative to "good" and "bad" schooling were determined by students' interpretation of school safety and not their demographic composition. Moreover, the topic of politics did not arise in the interviews, despite a divisive United States presidential election occurring within six weeks of the conversations.

Timing

An additional limitation for interviews was their timing. Interviews were held during the middle of the semester, near students' mid-terms, Homecoming, and fall break. This timeframe reduced the number of students available for a 75-minute interview. In light of the busy time of year, two interviews were canceled and never rescheduled by potential participants. Text messages, phone calls, and emails were sent to follow up with students who originally agreed to participate, though they had not completed the consent form, but contacts subsided to respect the students' decisions to change their mind.

Three students, Han, Dave, and Laney, were re-interviewed for triangulation purposes, which occurred during their winter dorm move out and finals. One student, Faye, agreed to a re-interview after the start of the spring semester. Dave also sent a follow up email stating he had passed the first level of noncredit developmental coursework.

Technology

A last limitation of the research was the use of video platforming services. Students indicated their preferences between Zoom and Google Meet and were provided a link to their choice. However, due to updates and unstable wireless connection, occasional glitches occurred and words would be cut out words on both sides of the conversation. Although recorded, when a student would repeat an answer, it was possibly shorter than the original answer. Conversely, when a student restated an answer they would provide more context, which beneficially allowed more fodder for the conversation.

Validity of Data and Findings

To ensure trustworthiness of the findings the use of member checking, triangulation of data, and reflexivity were employed.

Member-checking

This process occurs when the researcher takes additional steps to ensure transcripts are correct and that their interpretation of shared information matches the intent of what the interviewee shared (Creswell, 2014). After conducting interviews, the researcher reviewed the Otter.ai transcription against the recorded conversation to ensure the accuracy of shared information.

Triangulation of Data

This method involves examining information from multiple sources to create themes and justification. The East Coast College website, transcription of the conversation, and field notes provided data to compare and contrast; data congruence provided triangulation and added to validity (Creswell, 2014). Five students who engaged in noncredit developmental coursework were asked for a short re-interview. Four students, Laney, Han, Dave, and Faye, all agreed to a follow-up interview to ensure the interpretation of data gathered and themes created matched.

Reflexivity

Sharing personal perspectives and positions with readers and keeping an ongoing journal of research reflections add to this study's trustworthiness. Ongoing reflection helped identify how my personal story and experience may intersect with participants; recognizing bias helps mitigate its impact on study findings. With the participants, I maintained a bracketing stance to not unduly influence their stories (Creswell, 2014).

Ethical Considerations

Research must be ethical and follow each institution's Institutional Research Board (IRB) guidelines. The purpose behind the IRB is to ensure the protection of human rights (Creswell, 2014). Kvale (2007) reminded researchers of the moral requirement to maintain an underlying purpose for studying human subjects, to improve their current situation, and to enhance overall knowledge. This research followed guidelines set by the Collaborative Institutional Training Initiative (CITI), which provided training and certification. Principles taught in this training included: informed consent, confidentiality, privacy, and humane treatment of all human research subjects. Informed by CITI training and IRB guidelines, the research was focused on strong ethics throughout the research process. Researchers Merriam and Tisdell (2016) noted that

"validity and reliability of a study depend upon the ethics of the investigator," (p. 260) which speaks to the trustworthiness of the collector.

Summary of Methodology

This study utilized a qualitative phenomenological approach to ascertain the lived experiences of students attending the same private, faith-based college who were enrolled in zero-credit developmental coursework during their first year. The Tudor et al. (2010) model of students' perceptions and approaches to learning was used to formulate interview questions. This model served in conjunction with SDT and SET by seeking out motivation and attitudinal shifts over time that factor into the cultivation of one's perspective. The research included individual interviews with six East Coast College students who were required to complete a zero-credit developmental course during their first year in college. The next section will discuss the results of the interviews.

Chapter 4: Analysis, Implications, and Suggestions

Data Analysis

In order to understand the impact of remedial coursework on students, this study explored the question, "What are the lived experiences of six 18- to 25-year-old college students attending East Coast College who enrolled in zero-credit developmental coursework?" Through individual interviews, students described their experiences leading up to enrolling in college, their feelings about taking developmental coursework their first term, and their views of college after taking one or more remedial courses.

Deci and Ryan's (1985) self-determination theory (SDT) and McKown's (2013) social equity theory (SET) were used for this study to understand how and why students were enrolled in developmental coursework. The self-determination theory noted the stimuli that impacts internal and external motivation include competence, autonomy and connection (Deci & Ryan, 1985). The social equity theory stated there are direct and indirect messages sent from various influences over time that lead to imbalances that, when manifested, become reality (McKown, 2013). Based on the available literature, these theories separately provided an understanding of students in need of developmental college coursework. Using these theories in tandem, they provide a new lens through which to view the college perspectives and experiences of students who enrolled in remedial coursework in college.

Students shared statements such as this in their interviews:

"I knew I was going to go to college—I just wasn't sure where."

"I wasn't ready for college when I graduated high school."

"I wanted to keep playing my sport."

The uncertainty and apprehension surrounding the college application process wove its way into the students' stories as they shared the steps they took to apply and gain admission to East Coast College. For most interviewees, ECC was their first choice; yet, for a few, this institution became the only viable option as the August start date approached. After transcribing and coding the interviews and then triangulating the information by re-interviewing four students, the themes that emerged were as follows:

(a) The cumbersome process of hoop jumping, which reinforced students' lack of competency and impacted students' motivation prior to college.

(b) The heteronomy and students' lack of understanding and purpose behind the courses.

(c) The importance of support and connection to the course purpose as a pathway to increase student motivation.

Throughout the interviews, students expressed concern about the price of college, specifically on how noncredit developmental course work generated unbalanced views of trust toward the institution, and how the cost of time paired with added courses impacted their graduation plans.

Direct and Indirect Influences

During each interview, when students shared the process of transitioning from high school to college, there was a consistent, frustrating sigh before their explanation. They shared a timeline of standardized tests, applications, additional tests to determine mathematic placement, attempts to test out of noncredit mathematic courses— along with the realization they could not test out. The requirement of a noncredit-bearing class, along with the other required steps for college entry, appeared to be another hoop to jump through to get into college. These interviews connected SDT and SET together in that there were direct and indirect messages from various

factors that reminded students of their lack of academic competence. Furthermore, students felt a need to continue to prove they should be in college. Constant messaging telling students they are inadequate lead to negative stimuli impacting their motivation levels prior to the start of college.

Before College Acceptance Process: Standardized Test and Scholarships

During the interviews, students described their experiences finishing high school and applying for college. SAT and ACT exams were a significant part of that process. Many participants took these standardized tests multiple times. They needed to score well on standardized tests in order to gain specific scholarships—another hoop to jump through.

> During her interview, Pamela shared her experience preparing for standardized tests:
>
> My mom actually got an SAT prep course that I took to help me prepare for that. So that helped a lot. I think I took it two or three times. Um, I think, I think I might have taken it twice. And then like, the second time I took it, my English score was like, the exact same as the first time.

The amount of money and time dedicated to taking standardized tests took away from Pamela's senior year of high school. However, she knew that she had to receive certain scores in order to ensure entry into college.

Similar to Pamela, Han also had a laborious process preparing for standardized tests in order to get scholarships:

> I did the SAT I think two or three times. Just because my math score was never high enough. And then I did the ACT, to try to see if that would change anything, never changed anything. . . . I had to take it multiple times so that I could get the scholarship. My mom was like, I don't care, you're getting this. . . . It was definitely a, I need to do this over and over again so that I can get the credit so that I can get the scholarship.

After Han earned the necessary score, she was granted a scholarship to ECC. The hard work required to enter college set the tone for her college experience. The repeated testing to achieve a score was set of hoops students jumped through prior to enrolling in college.

Given the cost of attending ECC, Laney expressed her commitment to earning a scholarship and gaining access to ECC, which is why she took standardized tests more than once:

> I don't even remember really being prepped that much. I took the SAT and the ACT. And I think I took the SAT twice. . . . but we've never had any classes for that. I took two AP courses, my junior year for English, but like that, you know, wasn't really anything for that. It's just, they didn't set out like a class time or anything. . . . You had to like study and prepare just a little bit stressful, um, and I hated those tests. So this was really terrible for me. I was like, man, I need to do this. . . . I don't like that SAT and ACT, because I'm like, your kind of testing me on things that I haven't learned before. Like, that's not very fair. But it is what it is.

Laney's frustration over the hard work involved with college testing and enrollment requirements during her senior year of high school, which should be a celebratory time, was evident throughout her interview.

For first year students Dave and Faye, enrolling in college was not a key priority in high school. Faye decided to take time after high school and enroll in a technical college to earn her cosmetology license. Dave explained his standardized test process as, "I took it once, but I think I took a practice test but that's it. Like they never like told me to do it over or anything."

The students' motivation to attend college varied. Some participants expressed a desire to secure a good job, while others wanted to continue with their sport, or just move on to the next expected step. The idea that someone had to endure standardized testing and advanced classes to

improve their GPA in order to gain scholarships and access to college was an understandable hoop to jump through. However, the picture that came to mind before college even started for these students was one of jumping through hoop after hoop.

Before College Enrollment Process: Extra Testing

The interviewees spoke of the laborious process of preparing and taking the SAT and ACT exams. Then, they expressed additional frustration upon finding out that they would also need a Mathematics placement test.

Han shared her experience when she had to take the Mathematics placement test required by ECC:

> I had to take a math test because they said my score wasn't high enough to place into the math that would actually count for credit hours. So they said that I had to take a math test, and that was just in a room with other people who didn't have high enough scores either.

Han noted this was part of her orientation, which was a unique way to be welcomed to collegiate academia.

Faye shared a similar story about taking the Mathematics placement test:

> Um, I remember feeling like I did relatively well on it and then not doing well, as well as I expected. . . .I would have taken it again if I wasn't on such a short notice of my classes starting, um, yeah I really wanted to take it again but I took it the very last day that I could have.

Faye's description of wishing for another opportunity to show her ability shows an internal motivation that may not have been reflected in her grade on the placement exam. Many students attempted to retest in order to remove the noncredit course requirement; yet, due to time

constraints, business, or a lack of awareness of the impact this would have on their collegiate journey, no student was successful in their retest.

Dave shared his journey through the process of taking and retaking the Mathematics placement test:

> Whenever I took the math placement test, I did really, really bad on that, and I ended up, I got like the worst the first time and then I did the homework and . . . study . . . and I still did bad. . . . You have to log in a certain amount of hours to, to be able to take it again. And I did that and I did pretty bad on it again.

The locus of control Dave experienced, having the option to retest, appeared beneficial. However, when the results did not match the expectation, new emotions regarding developmental coursework and college ability developed—for better and for worse.

Pamela's retelling of her Mathematics placement test process showed her feelings of remorse:

> I had to take that like, um, I think like a couple, like a month or so like two months before I moved into campus, it was like, sometime over the summer before I moved in. Um, and then like, after I took it, I could have like, um, like, trained, like, done practice. And then after so many hours of practice taking it again. I first I tried to, like, do the practice. And then it was just too hectic with like, preparing for college and like dealing with the summer. So I didn't end up taking it a second time. . . . I kind of realized like, oh, shoot, this isn't gonna be like college credit. I probably should try to get out of this class. And then I was just like, oh, well.

Pamela's decision to not push to take the test does not necessarily equate with lack of motivation; however, it appears there was lack of full comprehension of academic policies and how the collegiate credit system operates.

> During the interview, Laney continued her story about the Mathematics placement test: I'm like, actually the worst in math. And I took [the math Placement test] and they're like, okay, so like, you have an option to take it again. Like right now you're going to be put into basic algebra, because like the scores, you made it so you can take it again. But if you take it again, like you're gonna have to do, I think it was like seven or eight hours of prep work, and like it will be recorded. So it's not like you can just like study on your own. . . . And then like, you have to retake the test. And by that point, like it was the end of my senior year, and I was like, wrapping up everything with people and like packing up and my transitioning back to the states. And I just didn't have time to do it. I mean it is what it is, I guess.

Laney's attitude mirrors that of Pamela, in which there was motivation to try and to jump through another hoop. With the inability to fully grasp the collegiate credit system coupled with higher priorities in her senior year, Laney's choice to focus on the present and not the future demonstrated her need for support, communication, and guidance during the pre-enrollment phase as a student needing developmental coursework. Students need assistance deciphering and understanding the college system.

Heteronomy and Lack of Understanding Led to Low Motivation

The self-determination theory focuses on three vectors that impact external and internal motivation; one vector includes a sense of independence and control known as autonomy (Deci & Ryan, 1985). Students expressed feeling a lack of autonomy and communication, which was

experienced through their incapability to self-select courses and a forced requirement of certain courses. Lacking the opportunity to adjust their schedule was a hurdle these students faced.

After committing to ECC, the students overcame an additional hurdle before starting college—the Mathematics placement test. Once scores were tabulated, students were told they would be placed in a noncredit Mathematics course. ECC offered little additional information as to the purpose behind the noncredit course, which led to students to cultivating their own ideas that led their initial low motivation levels. Han stated in her interview: "In the beginning, it was very much I hate it here, I know all this stuff. I know, two plus two equals four. It was very basic." She also reported that she had low motivation to participate and engage:

> "I'm gonna sit in the back of the class, not gonna pay attention, doodle you know I don't need this I don't need to be here. This isn't even going to count for anything."

Han noted in her interview that her feelings changed as the material became harder, which required her to put more effort into her Mathematics study. However, because there was no explicit communication at the start of the course, Han did not see this course as a necessity, especially considering she had successfully completed college coursework through dual enrollment in high school.

Course Selection and Requirements

Pamela shared her frustrations regarding heteronomy demonstrated in multiple standardized tests to get into college, the need to pay for and take a placement exam resulting in a required course, and her inability to select her courses:

> Um, so for our first semester, they just like, give us a random schedule. We don't make our schedule. . . . So I was just, like, shoved in a bunch of random gen eds. . . . um, that's

> one thing I like, I don't know if like. . . . I just was basically just thrown in a bunch of different gen eds like I had, I had the basic algebra and introduction to Old Testament.

Although courses were selected by East Coast College based on Pamela's selected major, she still wanted to have a voice in the selection of her courses. There appears to be an absence of communication and connection to course selection, and no explanation of the "why" behind the need for developmental mathematic curriculum and its role as a support program. Pamela's reflection regarding her basic algebra course from her first semester conveyed her motivation:

> I was kind of nervous because I was like, you know, I flunked the math placement test. I was like, okay, like, is this gonna be easy or hard? I don't know why, like, what to expect. Um, and I just like, you know, treated it like it was a course that was going to give me credits, like, I didn't think, oh, I'm not giving any credits.

Pamela's mindset repositioning to see her noncredit course as equal to her credit-bearing course provided the positive stimuli to motivate her to successfully complete the course.

Different from Pamela, Han shared that although she was told she could adjust her schedule, she trusted ECC advisors. Pamela said:

> I mean, uh, my freshman year, they actually do all your classes for you your freshman year and you can call them to change it if you want, but I was sort of like, I'll just do whatever they say, because I don't know they probably know better than I did.

However, Han provided a different perspective and additional feedback when asked how she felt about having a noncredit Mathematics course on her first-semester schedule:

> I was so upset. I did not want to. I was like, are you kidding me because you're going to try to finish and get all these credit hours and then you realize you're not going to be like

you're going to be gaining from it but you're not going to be gaining what you want as in the credit hours from it.

Han's interview revealed that she knew at the start the impact her noncredit course would have on her degree completion plan. Her inability to adjust her schedule and her requirement for this course painted her outlook on college negatively.

Furthermore, Hazel, Han, and Pamela had completed and passed college courses via dual enrollment while still in high school, showcasing their ability to handle the collegiate rigor. Faye had attended a technical school specializing in cosmetology prior to enrolling at ECC. However, standardized test scores were the deciders of who took the placement test to form the primary pool of students enrolled in the two noncredit Mathematics courses ECC offered. Standardized test scores were how ECC determine the need for noncredit developmental coursework; however, if a student properly advocated, it was possible to change that decision.

Self-Advocacy

Hazel, a student who had completed approximately 12 hours of dual-enrollment courses in Mathematics and science while being homeschooled, was asked to take an introductory writing course because of her standardized test scores. During Hazel's interview, she described her feelings regarding her writing and her steps to self-advocate for a schedule adjustment. When asked about her schedule and her first semester writing course, Hazel stated, "I mean it was on my schedule and I was like okay gotta take it, so I took it."

Hazel was told she needed to take the noncredit Mathematics course but fought against that decision. She maintained she did not need a remedial Mathematics course. She proved, via her grade point average for her dual-enrollment courses, that her standardized test scores and placement test scores did not accurately depict her mathematical knowledge. Hazel said:

> They were going to put me in like that basic math one. And the thing that saved me from taking what they called basic math or whatever was because I had finished college algebra. Now that is frustrating because can they not see that I dual-enrolled in college algebra and didn't need that type of class.

Hazel proved her collegiate capability should free her from taking a course that was required due to standardized testing. Her ability to self-advocate and speak up to those who make the decisions about her freshmen schedule allowed her to enter into a math course that would benefit her major and degree completion.

Furthermore, Hazel continued advocating for herself regarding her schedule, establishing autonomy over her schedule when she added a science course:

> For physical therapy, I have to include quite a few more classes that the actual program doesn't include. So I knew that it required me taking almost a science, every single semester. And my first semester they didn't have me taking a science. So I changed that…. The curriculum didn't have any, and I knew. In order not to do a lot of classes. Back to back heavy sciences, that's what you need to do.

Hazel's insight into college and the requirements could be attributed to being the third child in her family going to college, or to her mother's help; in either case, Hazel had the external stimuli of family expectations to graduate, and internal stimuli of knowing her capabilities, which impacted her motivation for the positive. She was able to advocate and regain independence with her schedule and degree plan from the start of college. Hazel established her autonomy based on her competencies in school and she could connect that to the big picture, which provided positive motivation to progress through her other developmental coursework (Deci & Ryan, 1985). In addition, Hazel had various sources over the course of time reinforcing that she was capable of

college level courses, evidenced by her high school GPA, dual enrollment course, and interactions with her family. This created academic confidence, which mirrored the social equity theory (Mckown, 2013).

Throughout the interviews, students indicated the importance of feeling an established sense of autonomy and ownership of their college journey. Students were frustrated by having courses preselected with inadequate explanations as to their importance and connection to the overall degree program. Furthermore, lack of ability to self-advocate further reinforced heteronomy, which resulted in a negative stimulus toward motivation. Moreover, the continued heteronomous nature of sequenced developmental courses, coupled with a lack of connecting the beginning courses to the end, further increased negative stimuli and motivation.

Expressed Emotions

During her interview**,** Pamela shared her thoughts about the process of applying to college: "One thing I didn't realize was that if my SAT score, like math score was high enough, I didn't have to take the math placement test." East Coast College provided students an opportunity to test out; however, the practice of using standardized test scores as the distinguisher has been called into question. Upon entering the course and navigating the semester, students felt that the course was easier and had mixed feelings about its purpose. Additionally, Pamela shared the following about her nervousness entering her Mathematics course:

> "I was kind of nervous . . . I don't know why, like, what to expect. And it was, honestly really easy. And I just, it was an easy A."

Pamela experienced a progression from nervousness to confidence, which reflects research on the fluctuating emotions that occur for students taking developmental coursework (McGee, Vasquez, & Cajigas, 2014).

Similar to Pamela's motivational and emotional shifts, Han also was apprehensive about the start of the course and what it would entail:

> I wasn't really sure how to feel about it, I for some reason I assumed it was going to be a bunch of high school kids who were in there to take it like as a dual enrollment or something like that. I wasn't exactly sure. I was like, am I just going to be the oldest one in here and I'm not going to know any of these people none of these people are going to actually go here.

As Pamela continued to share about her experience, her story indicated an attitudinal shift about her developmental Mathematics course:

> And so, I think, as I went through, I started understanding why I needed it, but in the beginning it was very much I hate this. And I was like, these people must be the dumb ones around me over here they don't know this stuff and then I was like oh, I'm the dumb one now.

At first, Pamela's realization of being "the dumb one now" appears negative, when in reality it was her wake up to understanding the value of the developmental course and why she was placed in it. Han also recognized that although her original thoughts were negative, which suppressed her motivation, her continual engagement led to a more positive experience, increasing positive stimuli resulting in a growing motivation.

Although more than year had passed since Laney took her noncredit math class, she still harbored frustration toward the course:

> They told me that it wasn't [counting for credit], which kind of frustrated me because I was like, it's a three-hour credit course. And, I have to take college algebra; I also have to take a stats class for my major. And so I don't know, a little bit frustrating that it didn't count for

> something, because that's like three credit hours is a lot like that. That's a lot of hours. And so that was really kind of frustrating.

Despite time moving on and excelling in harder Mathematics courses, Laney continued to feel disappointment due to lack of receiving college credit; she provided justifiable reasons as to why credit should be awarded:

> Because I'm like, if a lot of people are taking it, why don't you just count it for credits? So like, even though it didn't count his credit hours, that was frustrating, like, it was fine. So if some of it was a little bit like, Okay, why am I here?

During her interview, Laney's campaign for college credit and displeasure over the noncredit Mathematics course came to a halt as she recounted and explained the reasoning behind placement testing:

> Like, I know how to do this, like, this is actually really, really basic and easy. Um, and I was like, why? Why are they teaching this? Like, do people not know how to do this? But then there's also the chapters where I was like, okay, yeah, I haven't done this in like three years. So it's good that I'm reviewing this, because I do have to take like, more math classes.

Laney's perspective changed to a positive tone during her interview when she described how she felt taking the course:

> I hadn't taken an algebra course, by that point, since like, my junior year, it was helpful, because it gave me like, a lot of really good reminders. And also, like, it wasn't that hard for me. Like, there are some aspects like some triggers are a little harder than others. But the majority of it was like, pretty easy, which was kind of nice to have, like, not a slacker class, like an easier class my first semester freshman year, because I was getting adjusted.

Laney's progression of emotions from frustration, confusion, acceptance, and ultimately confidence reflects the findings of McGee et al. (2014). Laney's original discontent resulted in decreased stimuli, which impacted her motivation (Deci & Ryan, 1985), however over time and with proper direct and indirect messages stemming from her professor and positive grades in her course, her stimuli became positive and her motivation increased, shifting the original negativity to its opposite (McKown, 2013).

Faye, a current first-year student who took a few years off between high school and college, stated that she had a strong background in Mathematics:

> Actually, I went through calculus in high school but I took those two years, I forgot a lot of just basic information so I decided that before I got too heavy into things I wanted to make a basic level box that I could refresh and not have to struggle, trying to remember everything. . . . It's very easy I'm pleased with how it's going. It's just a good refresher course I don't have much to complain about with it.

When Faye was asked about her feelings toward the course not having any credit, she said, "At first, I was a little bummed out by it but the more I thought about it the more that I realized there's probably gonna be for the best." The timing of Faye's interview coincided with ECC'S midterms, yet she remained optimistic about her experience thus far when she said:

> *"*It's helping me remember some of those basic skills that I'm going to need because I think also with my major I'm not going to have to take like calculus-based math, more like probability and stats-based class."

Faye was able to change her mindset and see the connection between what she was learning and the impact it was having on her overall knowledge. Although she did not have the autonomy she desired over her schedule and course selection, she was able to connect what she

was doing to the outside world (Deci & Ryan,1985). However, not all students made the connection between curriculum and the next level of education.

During the interview, Dave declared he was never told that the course would not count for credit. Even though the name of the class and the course code matched what the catalog indicated as noncredit, Dave remained unconvinced of this information. This lack of understanding the credit hours could negatively impact his academic journey.

Students expressed elements of heteronomy regarding their schedules and course choices, including their developmental math courses, which directly impacted their motivation. According to Deci and Ryan (1985), the need for autonomy is a vital element in determination that drives external and internal motivation. Furthermore, if the ability to establish autonomy remains elusive over time, specifically for these students regarding their education, there are negative stimuli reinforcing unbalanced beliefs about education, Mathematics in particular. The perspectives of these students who engaged in developmental coursework at ECC progressed positively when they recounted the relationships and connections they experienced.

Increased of Understanding of Connection and Importance of Relationships

The element of connection, in which someone can link the information to the world and their overall goal is the last factor in Deci and Ryan's (1985) self-determination theory. When connection is established alongside autonomy and competence it drives internal and external motivation. Moreover, when this connection occurs over time through various direct and indirect measures, the unbalanced perspectives can shift the currently manifested hypotheses for the better (McKown, 2013). Ensuring that positive communication and connection to the external world occurs rests largely on the relationships between students and their institution.

Connection with Faculty

"He makes work fun; it makes people want to do work" were Dave's sentiments regarding his Mathematics professor. During the interview, Dave indicated that he liked both the class and the professor and there did not appear to be a separation of the two. Dave's class experience remained primarily optimistic when he said:

> We're all in the same situation we here to learn, and I just think that way. I don't think anyone's not able to do it. It's just that they weren't taught in the right way. And they're there to learn it so. So I don't really think of it is any different than what I'm there for. It's a good class. Really like the professors, he's pretty funny. He makes work fun.

Dave had only completed half of the Mathematics course at the point of his initial interview, but he saw the connection between his professor's desire for him to learn, and that ignited Dave's internal motivation.

Faye's remarks about her professor indicated her ability to see material apart from the teacher. She said:

> He's pretty straightforward. There's a little bit of a language barrier so I don't always understand what he's saying. But he's pretty good about just making sure he writes everything on the board, because I think he understands that there is a language barrier so he just writes everything on the board. We're having a hard time understanding what he's saying. But other than that he's in there, he teaches he doesn't, talk about anything other than math and then we're out the door.

Faye's comments on her professor showed the interesting dichotomy of having the ability to explain a subject matter and the importance of engagement with the course, which Williams and

Siwatu (2017) recognized as an important element a faculty member must possess when teaching students in developmental coursework.

Pamela, who enrolled in this course several semesters earlier, had a vivid description of her professor:

> The professor was really, really funny. He would just like, joke around with us. And then I had it like, at 8 a.m. So he would like always, like, make jokes and try to like, help us interact, even though it was the morning. He was funny he would like say jokes or whatnot. Um, he would like explain everything really well and make sure that we understood it, and then he was like writing sample problems on the board and show us exactly how like step by step how to do the problems. So that's what really helped me.

As the interview progressed, it was evident that Pamela's professor had a profound impression on her. This was evident as she continued her description:

> Even in my college algebra class that's how my professor did it. Like she would be like okay, I'm going to show you this problem like you're going to write down this problem, exactly like I am, and she will just show us exactly what we're supposed to be doing and how we're supposed to be working it. I'm currently in prob and stat, and I'm actually really struggling in that because my professor isn't doing that, she like shows the problem and like kind of show us how to work it but then like skip steps . . . I can really see in like my basic algebra and college algebra how they like going step through step on the board.

During Pamela's developmental coursework, she identified her best learning style and worked to use it to strengthen her academic ability.

Han, who has not had this course in several years, vividly recounted her freshmen year Mathematics experience and her teacher when she stated:

> My teacher made it fun and made it very, I don't even remember my teacher's name, but he made it very, very enjoyable and he didn't make us feel like we were dumb for not being able to get into the course. . . . He made it almost like, hey, you didn't do well but we're gonna make sure that once you get there, you got there, and you know what you're supposed to be doing.

Han continued, describing her experience with a teacher who left an impact of dedication and commitment to education, which created a lasting first-year memory for Han:

> My teacher for that class was super great. I mean, even to this day if I see him in the cafeteria, he still stops me and talks to me even though I only had him for that one class. He takes the time to get to know his students he knows they don't want to be there in the beginning, but he understands and he helped. So that's a bonus as well.

Additionally, Han appreciated the pragmatic approach her Mathematics teacher utilized as he taught the class:

> I definitely took what I learned in that first class and used it for my other classes because there were specific ways that I learned, math, that I had not been using prior, so like definitely writing down the practice problems and figuring it out, step by step, even when I had right in front of me exactly how it was supposed to be but just taking the time to write it out by hand and memorize it I guess. I hadn't been doing that before.

The professor's step-by-step instructions, coupled with not having extraordinary expectations of the students and making sure the students understood the material well, turned Han's feelings of frustration toward the class into positivity. It is unclear if Han's professor was a full-time or adjunct professor at ECC; however, through the description provided by the students, it appears

the professor had the intrinsic motivation needed to teach developmental coursework (CCSSE, 2014).

Laney noted a similar experience regarding her Mathematics professor two semesters earlier:

> He was just really friendly. And just like very supportive in general it's like hey like if you didn't make an "A" like that's okay. . . . And so, like, he was just super great and was like, listen, I just want you to succeed so like, I'm going to be really easy with my grading and like this is how you do this kind of problem just like a really good job of making sure you're prepared for the test or quiz or whatever we had, and he was just really, really good about that.

The relationships that developed over time were largely positive and influential to the students. An interesting phenomenon to note was that the interviewed students who were a year or more removed from completing the noncredit course had strong sentiments regarding their frustration over not receiving credit, but yet they expressed an appreciation for their professors and what was learned. Students who were currently enrolled in the course were pleased with how easily the information could be acquired.

There appears to be an emotional tug and pull between taking an easy class designed for "dumb students" while learning and understanding previously confusing topics. Faye noted that besides "information I forgot" she determined that this course:

> "helped to shape a better outlook on life and not have a negative look on myself if that makes sense. It's not, it's not . . . the end of the world and it will end up helping more than you think.

Faye's interview reflected the importance of having strong educators teach this course, faculty who understand the needs of students taking developmental coursework (Supiano, 2018).

In Laney's interview, she shared from her feelings and experience regarding her professor:

> And he was just like, really awesome. And he was like, listen, you guys, I really just want all good to pass this class really well. And so like, he was really like, easy with his grades and like, just really nice. So I didn't hate the class, honestly, like I was, okay with it. Until I got to college algebra. And college algebra is a completely different story. Basic algebra was not this difficult.

However, it was during the re-interview that Laney demonstrated a realization that while the "easy" time she had in her first semester with her noncredit course felt great at the time, it ultimately did not prepare her well for further studies.

Throughout the interviews, the students concluded that the experience of taking a noncredit course was often made pleasurable depending on the professor's interaction with the students. However, apart from Han, not a single student mentioned getting support or help from their professor. Be it the language barrier, lack of felt connection to their professor, or the decision to utilize the resources found in the Mathematics software, students chose to seek help outside of their professors' tutelage. One student, Pamela, noted that:

> I was doing so well on my own, [ECC] offers free tutoring. I know for athletes I don't know if it's like for everybody but I know for athletes, specifically, but I just never went to that. Because I was like, I don't need to.

Students often mentioned other resources they used as support and how the connection to those resources aided and/or frustrated their experiences.

Connections with Resources

The growth of the information and technology age since the 1980s led to the development of online programs and software that aid education. During the COVID-19 pandemic, online resources became essential for educational delivery, however, they could replace the role of the instructor. During her interview, Laney noted the use of free resources available to her apart from her professor:

> I went to, we had this thing called math lab and I went there probably twice, maybe two or three times. And that was helpful because they were just a bunch of college students and they were just like, explain problems to you and work with you and I was always helpful, um, but it was just kind of frustrating too, because that took out time like out of your schedule.

Laney then related her frustration in using additional resources for a class she was not receiving credit for when she said:

> Because you know how it is like in college you're just like so busy like you're constantly going somewhere and something we're studying for something instead of like, allot out like an hour to an hour and a half to like go during this like certain time period when they're open and like get to like work around that just bit frustrating, but it was helpful every time I went.

Laney's perspective made a strong case that the additional work needed to find success in developmental coursework ought to be rewarded with credit hours applied to graduation.

While students mentioned finding friends who understood the material or utilizing the Mathematics resource lab and the free tutoring offered, the main resource students used was the easily accessible Mathematics software. Han described the built-in resource: "You always had

not necessarily what the teacher taught you in class, but you had a ton of resources available to help you."

Although the use of their professor as a primary source of assistance was not often mentioned, all students elaborated on the importance of step-by-step instructions that led them to understand the material better. It was not apparent if the professors were full- or part-time instructors, or that students were aware of the difference between adjunct and full-time professors, but the students indicated they never saw their instructors as the first person to turn to for help when the material was difficult. Students repeatedly reported that the most learning occurred when professors took the time to explain the content in a step-by-step manner. Additionally, professors who engaged with the students and fostered a positive classroom environment created an optimistic perspective and experience.

While the students agreed that not every topic needed to be taught in a sequential manner, the habit of completing the steps in a logical order helped them learn the material thoroughly, and allowed them to utilize this step-by-step method in other courses. Han shared how this strategy had a lasting impact on her learning, and how she discovered her learning style:

> And so I think doing that really helped for my later math classes and I sorta learned that that helped in my other classes so I can sit there and type on word all day long or type out whatever I want on my computer, but it will not help me memorize it as well as writing it out and I definitely learned that in this math class.

The ability to understand one's own learning style, especially with a subject matter that has proven difficult, increased Han's motivation. Furthermore, students' preference for step-by-step instruction was supported by the accompanying Mathematics software. However, students had different views on the technology policies in their noncredit developmental Mathematics course.

In each interview, students expressed elements of frustration on various aspects of their remedial coursework experiences. Disappointment regarding lack of earned credit hours was a top frustration; however, they shared shifting views of frustration regarding the use of technology.

The COVID-19 pandemic forced traditional in-person methods of instruction to move to virtual delivery. While many students found success in the change, some students did not. Dave and Faye were the only students interviewed who took this noncredit math course during the pandemic; all other students took this course prior to the pandemic shutdowns. As Dave and Faye discussed the online structure and methodology of the course, their descriptions did not include any noticeable differences from what the other students described about their face-to-face courses.

The noncredit developmental mathematic course required purchasing an access code that included the book and a software program through which they would submit their homework, and take their tests and quizzes. Students were asked about their perspectives of the software; their views were mixed.

Faye, a current freshman, disclosed her conflicting views regarding the Mathematics technology associated with her course:

> I don't really like the online format for math homework because I just prefer to be able to write it down on a paper, and that way there's not weird like glitches with putting it in the system or like, I found that sometimes I've been putting the right answer and will still tell me it's wrong and that's frustrating. The other thing that I've run into an issue with that because I do, I do have a little bit like, I do remember a little bit more than what we're doing. Sometimes I'll oversimplify overdue what I'm still doing do it at a higher level

than I'm supposed to be like yeah you got the correct form but it's not. You're not you don't have the equivalent to the right answer.

Faye's confidence level would wane because her answer was not completely wrong, however it was not correct for the system she utilized.

Dave's perspective regarding ECC's Mathematics technology was heavily steeped in frustration:

> I don't like how it doesn't like really give you an example. At least, I couldn't find any like whenever you do it something and you get it wrong. Which, [another Mathematics program] I use they always give you like examples to look over. So, you like you can learn how to do it, but it doesn't really do that. It just pretty much tells you what to do. So I don't like that.

Similar to Faye, Dave shared frustration with the Mathematics resource that many institutions utilized. Furthermore, Dave shared a comparison between what he utilized upon applying to college with the Mathematics placement test, and then having to learn a new system to use for his collegiate course.

The opportunity to know one's grade instantaneously, and therefore understand what improvements are needed, appeared to be the tradeoff with the difficulty of adjusting to a new method of completing homework, especially when a student submitted an acceptable answer. Cost was a primary criticism of this Mathematics program. Laney noted:

> It's really expensive, like I don't know why. I mean like, all books with access codes are expensive, but for some reason [brand of Mathematics software] is just really expensive, and like why am I spending like $90, like, an online math, like textbook. Like that's insane. I'm not made out of money.

Throughout the interview process, Laney would routinely return to the costs associated with her developmental coursework. However, some students saw the benefits of using online Mathematics software—getting an immediate answer for every problem.

Pamela shared her positive experience with this online course in comparison to her homeschool Mathematics course:

> In homeschool well I did it all like pen and paper. We just had a hard back book. I liked [Mathematics software program] because it graded instantly so like immediately like whether you got it wrong. And then we would always get like two tries, or like two tries per problem and then like, if you got that problem wrong you could try another problem before it marked it like completely wrong. So you can really like even if you got it wrong, you could go and okay, this was what the answer is supposed to be figure out how to work it and then go to the next problem, and work it out correctly.

Pamela's appreciation of the abundance of available resources highlighted the value of the Mathematics software.

Han, who also was homeschooled, shared similar sentiments regarding the built-in technological resources:

> The math that I was doing when I was homeschooled it was just a guy on a DVD and I would watch him do some practice problems and then I would go through my book and do the problems. With being homeschooled and the curriculum I used it was the exact problems that he taught you and if you had something a little different than you didn't really know how to figure it out yourself. But whenever I got to [East Coast College], it seemed a lot easier I think that everything was online. It was just, you always had not necessarily what the teacher taught you in class, but you had a ton of resources available

> to help you. I had a crazy amount of resources to help me versus just the one practice problem online that you sort of hope you figured everything out based off of.

The accompanying software provided opportunities for students to learn different methods in solving Mathematics, and allowed students to achieve success.

During the interview, Han shared her perspective regarding the submission of homework online:

> Now there were some times where I was like, I know this is right this computer has got to be wrong, but then I was always wrong. But, and it made it easy to contact my teacher as well because you could put in the answer and if you couldn't get it you could just submit it automatically to your professor and it would say this specific question this students having a problem with, did you help her and then he would sort of get back with you as soon as possible. So I think, I think it made it easier.

Han continued to highlight the benefit of the Mathematics software and how it helped her improve as a student.

Laney shared different sentiments when she confessed a fear she had when she would use the program “It's, like, it locks up on me and I can't do anything about it.” Laney shared her conflicting views regarding the Mathematics program:

> I have like a love-hate relationship with [Mathematics software program]. I don't like how particular it is, especially because, my teacher was super relaxed. It was like, you know how to do it online is like has to be, exact like, it was a little bit frustrating sometimes because they might like take-off points. So it's just that it was a bit frustrating, but it wasn’t terrible.

Laney's reflective interview indicated that although she had several frustrations with aspects of her noncredit remedial course, she found the purpose that strived to bring her success.

Students expressed confusion with the institutional policies that allowed the use of software programs to aid them with their Mathematics, but would not allow use a graphing calculator. Laney said:

> I think it's just the math department in general, but we couldn't use like scientific calculators, which I just have never understood, like it is just basic algebra you don't need that kind of calculator, but there's also some stuff where it's a little bit more difficult and like those little like $2 ones from Walmart are just not going to cut it like you just have to like somehow like figure out the math like this like back corner way and there's just like so many rooms for mistakes.

There is no explicit policy against the use of calculators for remedial courses at ECC; however, the college policy for Mathematics placement testing allows for an on-screen calculator but prohibits the use of any other calculator.

With the advent of personal computers, the requirement of online tools is a rising source of information distribution to education (Escueta et al., 2017). According to Kavanaugh (2018), "technology has both solved and created instructional problems, serving as a reminder that it is important to assess how the requirement of online course material and technological software aids or suppresses students' ability to learn the material" (p. 19). Yet, by providing students with technological options, there is greater opportunity to learn the material in ways suitable to their learning styles.

The process of progressing through developmental coursework, although viewed by the participants as frustrating and laborious, matched the expected outcomes of Deci and Ryan

(1985) and McKown (2013). Over time, the students' success through their developmental course, seen through their grades and through learned information, shifted the balance and allowed students to believe in their capability to conquer their Mathematics weakness.

Furthermore, internal and external motivation stimuli increased now that students saw:

(a) connection to how their course helped them presently and prepared them for the next course;

(b) the competency and understanding of material that previously confused them; and

(c) the ability to operate independently which includes selection of future courses.

Increased motivation and success in this course aided the students in gaining confidence in their academics over the course of the semester.

Academic Confidence

Students in this study saw growth in their Mathematics ability and understanding as their course progressed throughout the semester. Pamela expressed feelings of confidence regarding how a noncredit developmental course benefitted her college experience when she said:

> I think it really helped boost my confidence as far as math goes, um, because it kind of like okay I'm not totally terrible at math so that really helped me going into the college algebra . . . like it did help boost my confidence with math. And then like some of my harder classes, like I didn't get good grades in two of my classes, but then I always had that [noncredit developmental Mathematics] class where like, I got an A on this quiz like it kind of, you know, made my week better or like made my day better sound like okay I failed that test but I got an A in math, so you know what life is good.

Pamela's expressed confidence is a goal associated with the developmental coursework program in post-secondary education.

Han also echoed feelings of confidence in her mathematic ability when she shared these thoughts:

> It actually was one of my best classes my first semester because I felt like I could do it. After that, and so it sorta of puffed me up a little bit, in a way, it made me realize that even. This was my worst subject, and now I'm growing, and I can do it. And so, if I can do it in this class then I can make it through and I think that's how I got my senior year honestly just was like this awesome amount of confidence for like, if I can do it in math. I can do it. It just sorta of pushed me on I guess.

Han shared that despite taking dual-enrollment coursework, it was finding success in a weak subject matter that improved her confidence:

> It was, um, it was the first class that really made me feel like I wasn't behind even though it wasn't the class that was going to count for my math. It made me. It helped me know that in the future I had what I needed to be able to succeed in future math classes, and also it may be, it made me aware that if I can do this math class, I can do any other class because math was definitely my weak point.

Han continued by explaining how taking a developmental Mathematics course shaped her college experience:

> And so I felt like if I could accomplish this, then I could go on to do whatever else I needed to do . . . really it's just a confidence thing I mean I went in thinking I wasn't going to know anything I didn't know anybody had been homeschooled for my life. I was afraid I was going to be behind. And then I got there and had to start off in this math class that didn't even count for anything. And so my confidence was super low I just was not

feeling like I needed to be there. But then once I met the people in the class. And saw, how they were basically the same person as I was, it was really a booster after that.

Confidence is a cornerstone to motivation (Deci & Ryan, 2000), and motivation is a catalyst to degree completion and college success (Wong, 2018).

Laney shared in her interview the mixed feelings she had regarding the noncredit developmental Mathematics coursework:

> It did help me in the long run, I guess that it was worth it because I know I did better in my like future math classes because I took that class. But, like you want to get like your bang for your buck kind of thing, because, like, because I had to take that class, you know, and then I had to pay for it and [not] even count for credit. So frustrating.

Despite the boost of self-confidence students felt in finding success in a weak area, they shared a sense of frustration and decreased confidence in the institution relative to how tuition dollars were spent as well as the value of the institution's advisement through the next semesters.

Decreased Confidence in the Institution

East Coast College provided a well-rounded liberal arts education that these students sought. Students are required to pay for chapel and cultural event credits as part of their tuition bill. These credits are earned through a set number of chapel services and cultural activities each semester, and these credits contribute toward their overall graduation credit hours—unlike their developmental Mathematics courses, which are also part of their tuition. Laney shared in her interview how her confidence in her institution waned as her time in college progressed:

> Okay, well this isn't like this is kind of the school's fault but when I was registering for classes this semester. I couldn't register and after contacting my advisor asking why can't I register. And I found out that it was because I was still registered as a freshman,

> even though I'm a sophomore . . . and the reason why is because that basic algebra class that I took because it didn't count towards anything.

During the conversation, Laney shared how not registering with her cohort impacted her freshman experience:

> My advisor had told me she was like “hey you’ll need to make up that credit at some point” and I was like, fine. No big deal. But she didn't tell me that I was still registered as a freshman, and I was like what like now I can[not] even sign up for my classes on time. And now I have to like later make up those credits.

Laney’s feeling of success and confidence increased as she engaged in learning, however there was a shift in attitude as she recounted her feelings once she realized the cost of not being able to register along with her peers.

In contrast to Laney, Faye, shared that her level of confidence in the institution knowing what is better for her proved questionable when she was able to choose her own schedule:

> This semester, because I, I guess, thinking back and like looking at it from a perspective of maybe a higher level of trust. It might be because I trust myself more than them to get the schedule that I need [to] help my education because I feel like my schedule last semester wasn’t really beneficial to me.

Faye, a freshman at the time of the interview, has registered only once alongside her freshmen cohort and was unaware of the frustrations Laney shared regarding registration for a new academic year.

Han, who graduated at the end of the 2020-2021 school year, shared that despite her confidence in Mathematics, she “was constantly worried about credits” and craved academic

direction. She said there was limited guidance on classes to take, and fear of classes being canceled:

> It's not all digital or online or anything it's I mean I guess it is for the teachers, but the students don't really see that you get a piece of paper at the beginning of your students, time, they're at the school which tells you all the classes you need to take and some can only be taken in the fall, some can only be taken in the spring. And so you're constantly trying to figure out what you need to take. And then sometimes those classes get cancelled because there's not enough students so there's not a teacher to teach it, and it was very stressful with scheduling and everything. So, I was constantly worried in registration was always just a mess of things like every time I had asked my advisor for this or this or this. Like on the morning that I was supposed to be scheduled.

Han furthered this discussion and shared perspectives on how institutional funds were spent when she said:

> I don't know when it comes to what my money [is] spent on at university. I don't feel like it's necessarily where it needs to be going like I don't feel like school should cost as much as it does to pay teacher salaries and things or faculty. Yes, but it just seems like they do a lot of very elaborate things and every week they're re-mulching the ground. Just like I don't feel like it should cost as much as it does . . . but at the same time, those kind of [student employment jobs] and those little side things that I have to do to get those scholarships, take up so much of my time. It feels almost like I'm working during school and I'm doing more work for school than I am. Actually, in class and doing homework and things like that it's more like, I'm just trying to catch up with the money aspect.

Han's attempt to reconcile the amount of work and effort she put into developmental Mathematics courses for which she did not receive credit, and the money ECC spent on landscape plans, created feelings of imbalance in her mind.

Pamela shared, "I almost lost my scholarship," because she did not have enough credits completed. She is grateful that she had taken advantage of dual-enrollment prior to starting at East Coast College. Pamela recounted in her interview:

> Honestly it kind of almost screwed me over. Because I took 15 hours, you know, counting that math course my first semester and then 15 hours my second semester. So add up to 30 hours. Yeah, um, but then those three hours didn't count. So I only had 27. And I almost lost my Life Scholarship [South Carolina Scholarship based on credit hours and GPA] because of it, because they're like, you have to maintain a minimum of 30 each year in order to keep your life scholarship. So if I hadn't dual enrolled, I would have lost that scholarship. So I was panicking for a second.

Pamela's felt stress over losing institutional aid and losing her athletic scholarship as well. According to NCAA rules, students must complete a minimum of 18 credit hours during each academic year, otherwise they would be considered ineligible during the following season (NCAA.com).

As the interview ended, Pamela offered advice for incoming students regarding noncredit remedial coursework:

> Make sure either your first semester or second semester, make sure you have 18 hours, okay because that would make up for those missing credits that you're going to miss with that basic algebra, and then that would make sure like you're set on your scholarships. So I'd make sure like have that extra class like you don't want to be missing this, because this

could like potentially hurt you so I just make sure to tell them like you need 18 hours, your first semester your second semester like you can choose make take easy classes so that way like the 18 hours isn't that difficult. But make sure to fit that in.

These sobering words regarding fear of missing credit hours and their impact on graduation and scholarships serve to show that confidence in the institution can wane if proper guidance regarding academic policies is not provided.

These students, especially Pamela, received messages from various sectors on campus reinforcing that they were behind and would need to make up credits, which, over the course of time, created an imbalance in their confidence in the institution; this fact mirrors McKown's (2013) theory. Improper advisement is a determining factor in which students do not progress toward degree completion (Darling-Hammond et al., 2019).

Summary of Results

Students interviewed for this research attended East Coast College and had various backgrounds and college preparation prior to enrollment. All were told they would need a noncredit developmental course due to their low standardized test scores and placement exam scores. Only one student was able to prove, based on previously earned college credit, that she did not need a noncredit course; however, she was still required to take a credit-bearing remedial course.

Students taking the course within their first year of college saw the benefits of the course and how it had the potential to position them for success in their collegiate experience. Conversely, students who were a year or more away from this course expressed deeper frustration due to issues with registration, financial aid, and graduation. After the first year of schooling, the students showed clear movement from positivity and trust with institutional

academic direction to a significant level of distrust due to additional coursework, course fees, and lack of guidance.

Furthermore, the use of technology was met with mixed feelings. Students noted the benefits of receiving answers instantly; however, they expressed confusion when the software reported correct answers as wrong because the answers did not meet exact specification. Students also noted that faculty who curated an atmosphere of positivity and engagement helped dispel negative attitudes, as compared to professors who offered minimal engagement.

Ultimately, the students interviewed expressed a desire for greater communication and understanding, two elements missing from their navigation of many challenging steps to enroll and progress through college. Communication and understanding became increasingly pivotal as students described their feelings while navigating a noncredit course and how it colored their college experience. Noncredit coursework increased feelings of confidence, but also heightened a sense of fear of being behind or off track. Institutions would do well to offer better support to students for their college journey, repeatedly giving clear guidance on needed steps throughout the college process. This support would help students stay on track and persist toward graduation.

Chapter 5: Discussion and Recommendations

This chapter connects Deci and Ryan's (1985) self-determination theory (SDT) and McKown's (2013) social equity theory (SET) to the participants' perspectives and then explains possible recommendations for East Coast College (ECC) to provide a richer student experience. These recommendations are designed to positively enhance the experience of students engaging in noncredit developmental coursework.

The time spent interviewing students at East Coast College (ECC) revealed several important themes, the first of which was the need for clear communication with students enrolled in developmental coursework. An important factor for ECC to consider is how to increase the frequency of information communicated to students; moreover, varying how information is disseminated is critical. It is proposed that ECC modify their current strategy of email and phone communication and add additional methods of messaging specifically for students needing developmental coursework. It would be helpful if this messaging included ways for new or prospective students to connect with students who had already taken developmental coursework.

The recommendations outlined in this paper are likely relevant for all higher education institutions due to the disruptions to education caused by the COVID-19 pandemic. This disturbance in education may lead to increased academic gaps (Dorn, 2020). Most important is how post-secondary institutions best serve underprepared undergraduates. The primary recommendations for ECC to improve the experiences of students taking developmental coursework as follows:

(a) diversify communication,

(b) determine better placement methods, and

(c) enhance connections and relationships between faculty and students.

These recommendations will reduce barriers, create stronger connections to the institution, and increase student motivation to enhance the college experience and ultimately promote persistence to graduation.

Strategizing Communication to Enhance Competence and Autonomy

The standard practice at ECC is for applicants to work with an admissions counselor regarding submitting documents needed for college enrollment. Communication primarily includes information about orientation, health and wellness, financial aid, campus living, and campus events. However, there is minimal instruction and information regarding their choice of a major and how curriculum builds over time based on course selection.

There is light emphasis placed on understanding curriculum sequencing during the first year nationwide, since over 30% of students change from their initial college major to a new major (Lederman, 2017). At ECC, there appears to be minimum communication prior to enrollment regarding how college works and how noncredit courses impact the college journey. The "constant worry about credits," as shared by Han in the interviews, greatly affects student attitudes. Thus, the ability to navigate college is made more difficult and it is even more laborious when communication is infrequent.

Improving communication includes a focus on frequency and diversified methods, as well as ensuring accuracy and constancy. As reported by Dave during the interviews, not all students are clear about credit versus noncredit when they enroll in developmental coursework. If ECC improves their communication by providing multiple resources with consistent messaging from the start of a student's enrollment and throughout their first year, students will likely experience: (a) greater connection to on-campus resources and to their degree, (b) enhanced competence for institutional understanding of college processes, and (c) greater autonomy and ownership over

their education. These enhanced experiences will impact student motivation and contribute to higher retention rates. Moreover, a higher level of student competence in the college processes will promote stronger advocacy skills.

Self-Advocacy

As the interviewed students progressed through their coursework, they appeared to release control over their academics and demonstrated a lack of self-advocacy. Hazel, one of the participants in the study, was the exception. She opposed the university's policy and advocated for herself, establishing a locus of control over her education:

> As a science major, I knew that it required me taking almost a science every single semester. And my first semester they didn't have me taking a science. So I changed that and have taken a science every semester up to this my last year. I did that in order not to do a lot of back-to-back heavy sciences.

Hazel, who has siblings who have already completed college, recognized the need to self-advocate and take ownership of her education early in her collegiate process. She had resources that provided her information on how curriculum was sequenced. Unfortunately, not many students obtain additional advice as to why proper course selection matters from day one. Advice from peers is a great addition to the communication process that helps build connection with the institution and develop competence in the college process.

Peer to Peer Communication

The use of peers and upper classmen as a tool in the communication process is documented as valuable. Much of Schafer et al.'s (2016, 2017) research, although specific to students with intellectual disabilities, noted the importance of peer supportive relationships and their impact on the lives of students needing assistance. Peers provide a fresh perspective and

context with information that an email from the institution or a staff member cannot achieve. Providing current students with correct information and allowing them to help with communication prior to a new student's enrollment, and again as the semester(s) transpire, can reinforce the messages shared by administration. The combination of the current communication methods, enhanced with peer-to-peer messaging, would provide students with greater information, improving their understanding of ECC's processes. This knowledge can also enhance new students' ability to self-advocate, which ultimately allows for greater autonomy.

Peer-to-peer communication prior to enrollment and throughout the students' first year is especially useful when dealing with noncredit courses. Ideally, incoming students would hear from peers who have similar majors (i.e., disciplines) to better understand the connection between their remedial coursework and future courses. Laney provided an example of this very type of communication:

> I'd also heard from a friend of mine who is at [ECC)]. Now she's a senior this year. She's like, listen, I took basic algebra, and like, just take it because college algebra is really hard. And like you just like, take it it's easy, and like you all like feel better prepared.

Laney received valuable information from a trusted friend. Similar advice and support from current students would benefit any incoming student who is unsure about the college process.

Modernizing Placement Processes to Enhance Competence and Autonomy

In addition to utilizing communication as a mechanism to enhance the student's experience, placement strategies also need to be revisited. East Coast College identifies students with low test scores and determines a cohort of students who need developmental coursework. The students with low mathematic scores take an online placement exam, which must be paid out-of-pocket by the student; scores from this exam determine placement. Students noted that the

placement test provided an opportunity to see their mathematical strengths and weaknesses. East Coast College provides students the opportunity to retake their placement test once they complete tutoring through the placement test software.

The placement test software, the option to retest, and the supportive help through the Mathematics platform provides valuable resources for students. However, it is the selection process used in determining which students are required to take this placement test that would benefit from restructure.

Multiple Measurements

Hazel shared that she was almost put into a noncredit developmental algebra course, but due to her self-advocacy, she proved through her dual enrollment grades that she did not need the course. She said: "Now that is frustrating because can they not see that I dual enrolled in college algebra." It is a reasonable expectation that previously completed dual-enrollment courses should provide insight into a student's ability that standardized test scores do not demonstrate. An and Taylor (2015) stated that "dual enrollment provides an opportunity for students to transition more seamlessly from high school to college" (p. 6). Furthermore, studies indicated that high school grade point averages are a better predictor of college success than standardized test scores (Barnett & Kim, 2017; Witkowsky & Clayton, 2020). By modernizing and broadening ECC's placement processes to include multiple measures, fewer students may be required to take the placement test, which could result in fewer students enrolling in noncredit Mathematics, and a greater number of students persisting to graduation.

Furthermore, while many school districts have policies associated with the choice of courses for high school dual enrollment, it might be advantageous for high school students to take college courses in areas where they excel in order to promote feelings of collegiate success

(Education Commission, 2016). For example, a gifted music student may feel pressure to take an advanced history course in order to appear attractive to a university when they should actually take a dual enrollment music course to help boost their overall confidence in their collegiate ability. Dual enrollment oftentimes alleviates pressure to take a heavy load during a student's first year, allowing them to engage with their institution without feeling behind in credit hours. This strategic use of dual enrollment courses can also improve confidence, motivation, and competencies, which Deci and Ryan (1985) noted are needed to progress toward goals and minimize the dropout rate.

Hazel is a health science major who excelled in language in high school and dual enrolled in languages at ECC:

> I did American sign language one and two, Mandarin one and two, college algebra, and computer science. We knew I needed to get like a language, out of the way so that worked out but then the major I went into didn't actually need a language, but it was good experience.

By realizing her language strengths and engaging in advanced education surrounding those strengths, Hazel finished high school and entered college knowing she had successfully completed university credits. Astonished at her journey, Hazel continued:

> If I told myself . . . [I would be] taking 18½ credits and working a couple of jobs . . . I thank God who has brought me through it, and I've gone through college. So, that's what I love so much about college. I definitely seen myself change and grow and thrive.

Hazel said that dual enrollment showed her that college was possible and helped foster a positive attitude to continue and finish strong. Like Hazel, Han and Pamela also noted that they engaged in dual enrollment coursework prior to entering college and were successful (i.e., they earned a

passing grade) in the course; however, their experience was not enough to appeal the need for developmental coursework.

Authors Song and Zeiser (2019) found that high school students who took college courses during their high school season as a dual-enrolled student had an over 20% completion rate of college within four years. Moreover, additional studies indicated that students from low socio-economic backgrounds and under-represented populations who participated in early college coursework had stronger college completion rates, especially when coupled with additional guidance (An, 2013; An & Taylor, 2019). Researchers also noted a stronger understanding of the role of a college student associated with completion of dual enrollment courses (Lile, Ottusch, Jones, & Richards, 2018). With this in mind, it would be important to consider completion of college credit while in high school alongside standardized test scores in assessing the need for developmental coursework.

Recommendations

Promoting dual enrollment helps to soften a critical barrier due to developmental coursework—course registration. When the registration period opens and is contingent on credit hours, students taking noncredit course(s) typically do not have enough credits to register with their cohort. Pamela's advice to those who are required to take a noncredit developmental course is as follows: "You need 18 hours one semester . . . like you can choose to take easy classes so that way like the 18 hours isn't that difficult. . . . Make sure to fit that in." To a first-year student, however, this could seem like a daunting number of credits to take and could even instill fear before starting college.

East Coast College administrators might consider evaluating those students traditionally identified in need of developmental coursework to see if the college credits they earned during

high school are better predictors of college success than standardized test scores. An and Taylor (2015) stated that "[D]ual enrollees are more likely to understand what it means to be a 'college student' and are able to navigate the college landscape better than non-dual enrollees" (p. 6). In addition, this navigation enhances competence, autonomy, and overall motivation.

This recommendation does not suggest suspension of the Mathematics placement assessment tool; in fact, ECC's tool provides students an opportunity for an education refresher and the option for retest is great practice. However, giving equal weight to a student's completed dual enrollment courses and high school GPA alongside standardized test scores could reduce the number of students needing to take a Mathematics placement exam. The reduction of students taking the test could allow the school to absorb the cost of the test, benefiting students who cannot afford the placement test. Ultimately, fewer students required to enroll in remedial coursework could help graduation rates as more students persist through their courses.

Developing Stronger Connections with Institutional Resources

The COVID-19 pandemic disrupted the education for many students, specifically the 2020 freshmen cohort (Dorn, 2020). The use of technology and online resources became a primary resource tool for learning instead of the professor (Purdue University, n.d.). While the possibility of personalized learning still exists, the relationship between students and teachers has changed. In this interview, Han noted that she preferred connecting with her faculty more than utilizing online support. She said:

> Definitely use the office hours. Like anytime I had trouble with homework I would just go straight to my teacher, they always encouraged us to go to math lab but it just seemed like a bunch of super smart people in there trying to teach me how to do really a lower

level . . . so I usually went straight to the teacher or asked somebody in the class if they could help me but. I think we used an online homework thing.

Han enrolled in this course prior to any social distancing policies; yet the professor encouraged the use of online resources. Achieving a happy balance between technology and in person instruction requires discernment to know where one begins and the other ends.

Importance of Classroom Instruction with Faculty.

The students interviewed shared that adjunct professors taught their developmental courses. While studies indicated that some adjuncts had a particular propensity and understanding of students who needed developmental coursework, not all adjuncts nor all full-time faculty shared the same passion (CCSSE, 2014).

The inability to access one's professor on any given day can be problematic, and even more difficult with adjunct professors. For institutions like ECC, with multiple sections of noncredit courses, introducing the students to the professors and tutors could foster an ethos of support, curating a holistic atmosphere. A collaboration of all instructors teaching remedial coursework could expand the students' network of support and assistance in learning. Furthermore, students may find themselves drawn to an instructor or tutor in this collective approach, which ultimately benefits the student's success in the course. Adding an embedded tutor or peer mentor who eagerly supports development of strong, healthy habits would prove beneficial, especially with remedial courses. Giving students time to navigate the campus and find their professor's office would also help students and would promote supportive communication between students and faculty members.

Creating and fostering strong relationships between students and faculty members can aid in the student's engagement and help shape a student's perspective (Tudor et al., 2010). Students

will feel supported when they experience a safe environment that helps them understand how to navigate college policies, learning systems, technology, and software programs. Additionally, this early knowledge can inform institutions as to which students may need additional financial support if the student is having difficulty procuring course materials.

Wrap-around support, which includes professional staff that help guide students to and through college, would aid first year students who are enrolled in developmental coursework progress through college. The supportive network of caring faculty and professional staff provides students with additional resources for motivation and success.

Recommendations

As stated previously, East Coast College would benefit from a network of professionals dedicated to assisting students who are taking developmental coursework by:

(a) providing clear communication regarding academic policies,

(b) developing better placement strategies, and

(c) strengthening connection between students and the resources at the institution.

ECC has a student success center; however, there are no dedicated personnel tracking these students and routinely following up with their progress toward graduation semester-to-semester and year-to-year.

An additional recommendation to help strengthen student relationships with the institution could include bringing students who need developmental coursework to campus early. The ability to move in early and connect with faculty sooner could be seen as an incentive. Furthermore, if it is possible to offer college credit for a transitional program, students would see that the credits earned early allow them to take a standard number of credits in the fall and have sufficient credits by the end of their first year of college, despite taking noncredit coursework.

The offering of credits and ability to fully understand the college transition would close communication deficits revealed in the student interviews. Moreover, with the ability to have a credit-bearing summer program that counts toward graduation, completing college becomes possible without the requirement of summer school or credit hour overload. According to Baily and Karp (2003), there are strong benefits of offering a credit-bearing transitional course. Transitional courses can:

(a) "Prepare students for the academic rigors of college."

(b) "Provide more realistic information to students about the skills they need to succeed in college."

(c) "Improve motivation through high expectations."

(d) "Lower the cost of postsecondary education for students . . . [and] promote institutional relationships between colleges" (Bailey &Karp, 2003, p. 2-3).

Students noting their institution's investment of resources into their academics reinforces their confidence and buy-in to the university. This confidence can positively enhance motivation and result in greater persistence rates. East Coast College would benefit from a redesign of their placement metrics and conducting further research into incentives to enhance completion for students taking noncredit developmental coursework. By doing so, students can gain more opportunities to create connection to ECC faculty, staff, and resources, and establish healthy academic habits early.

Limitations

The opportunity to interview students at East Coast College provided unique challenges. Due to the COVID-19 pandemic and social distancing policies, in-person interviews were not possible. The use of Zoom and Google Meet was an excellent substitute because it provided the

students a comfortable setting. Yet, for a few student interviews, the internet connection became unstable during the conversations. Additionally, only four of the six students were available for re-interviews. The opportunity to interview in person would have allowed for clearer communication, however students may not have felt as comfortable in person as they did with videoconferencing. The chance to be in person would have allowed for different recruitment as well; students could have been contacted in person rather than via emails sent through the office of the registrar. It would have been helpful to use purposive snowball sampling through personal relationships developed with professors of remedial coursework and with former students who enrolled in developmental classes at ECC.

Future Research

Research is abundant surrounding developmental educational programs and curricula at the university level. However, much of the information was quantitative data, generalized for all types of collegiate settings and for all ages of college students (Shields & O'Dwyer, 2017; Valentine et al., 2017). Additionally, much of the research combined credit and noncredit-bearing courses. The collection of data from all institutional settings and credit offerings created generalizations which were then cast on colleges to create programs. Yet, each institutional type had distinguishing factors, including credit or noncredit course offerings, which impacted student graduation dates. The developmental programs produced from generalized data were not as impactful as they could have been.

Further research is needed to effectively compare various types of college settings, including liberal arts, community, private, research, and technical colleges. The cost of attendance, acceptance rates, age of students, and class size are noticeable differences among the various college settings with deep implications for a student's commitment to enroll and

complete developmental coursework (Chen & Simone, 2016). The prestige of attending a particular university may overshadow key frustrations associated with requirements for developmental coursework, which this study did not take into consideration. The determination and motivation of an older, nontraditional student's return to college is often different from that of traditional-aged students attending college, and that may require a different approach in teaching (Cotton et al., 2017). Comparing the success rates of students enrolled in noncredit vs credit-bearing developmental courses at different schools could provide additional fodder for developing better programs and support for underprepared college students. This style of research would be longitudinal, tracking various factors across several institutions. The data collected could be categorized according to different demographic elements for strategic programing and understanding of the student experience through a variety of lenses.

An additional opportunity for future research is the exploration of students required to take developmental coursework in college who had apparently successfully completed college coursework as a dual enrolled high school student. Colleges identify students who should be in remedial coursework through a composite of standardized test scores, college placement tests, and high school grade point averages, often with more weight placed on standardized tests. The dramatic increase of high school students completing early college coursework, coupled with normalizing of college as the next step, is worth investigating to see if the idea of college credit prior to acceptance to a university is a strong determiner of college success and completion. An additional step within that study would be to decipher if credit or noncredit developmental course work determines retention and persistence to graduation.

A final opportunity for future research would be to understand developmental coursework offered in high school or during summer programs prior to entering college could

curtail the need for such coursework in college—or at the least, minimize the need to offer noncredit developmental coursework in college. It is vital to study the level of success of students who take a summer program or test out of developmental coursework to understand if this endeavor aids retention and persistence to graduation, and if it impacts their views of the college experience.

Lastly, the choices that individuals make to attend higher education or decisions that institutions make in regard to developmental education curricula were not the primary subject of this research. Findings in this research are not germane to all students or all institutions due to the qualitative research approach (Patten, 2014). Also, due to the phenomenological approach used in this study, findings may not directly assist the participants interviewed but can generate thoughts about education as a whole.

Call to Action

It is important to utilize more than a student's standardized test score and high school grade point average to determine the need for developmental coursework (An, 2013), especially when less than 10% of students placed in remedial coursework graduate (McCann, 2017). As educators, we must hold our pedagogical practices accountable and create better curricula. There is meaningful data housed in a student's ability to engage and complete dual enrollment coursework prior to college attendance, which could be a more significant measure of success for a first-year undergraduate.

The issue of credit-bearing courses versus noncredit courses is a surface-level issue. The root stems from the value a college institution places on the course, the faculty, and the students participating in these courses. Institutions that see worth in utilizing developmental coursework to aid students toward degree completion will garner the necessary tools and strategies for

success to ensure their students are supported from beginning to the end. Institutions that place high value on education will provide measurements to assess initiatives and efforts from the students' perspective to ensure the equation adds up to educational success.

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Appendix A

Interview Protocol

A. Introduction

The purpose of my study is to explore the experience of traditional aged undergraduate students who were required to take zero-credit developmental coursework at a four-year university. You are being interviewed because (1) you agreed and (2) match the criterion. I appreciate your willingness to spend time discussing this topic.

B. Interviewee Background (build rapport, skipping questions already previously aware of through prior encounters.)

- What is your name
- What name would you like for me to use for this report? To protect your privacy, I will use a pseudonym of your choosing.
- Who did you primarily live with growing up?
- Tell me about your hometown

C. Set up of questions

- For this research, I came across a model that noted students' approaches to learning

D. Questions surround personal motivation prior to college

- Tell me a story from your high school years. What was high school like for you?
- How did you decide to attend East Coast College?
- What was the college admissions process like for you?

E. Questions surrounding institutional communication

- How did you decide what to take your first semester?
- Tell me about [name of course] – what did you know about it before the class began?
- What were your thoughts about the course(es)?
- When did you learn that it would not count for credit?

- Overall tell me about your experience in the course?

F. Questions about Developmental coursework as it relates to their self-perceptions

- Why do you think you were required to take this developmental course(es)?
    - What were your thoughts about these courses (before you even stepped foot in the university?)
- What elements from your past do you think factored into your placement into the course?

G. Question about peer relationships and institutional resources

- How did being in a classroom environment with others that shared similar academic struggles [**I plan to use the verbiage they indicate as to the reason they were in this course]** shape your experience (positively and negatively)?
- What resources, if any, did you use to assist you in this course?

H. Questions about relationships with staff and faculty

- How do you think/feel your instructor supported/interfered with your learning of the curriculum?
- How do you think/feel the structure of the course supported/interfered with your learning of the curriculum?
- If you were in charge of teaching this course what would you do similarly and differently? And why?

I. Questions about their assessment of the course

- What aspects of the curriculum and delivery helped you best under the subject?
    - What aspects of the curriculum and delivery did you not like?
- In what ways do you think taking this course helped or harmed you?
- How did this course prioritize itself amongst your other courses; how much energy did you put into it?
- Why or why not would you have selected this course if given the free will?
- How did this course impact your approach to learning in your other courses?

        - What did you learn from this course that you applied to other courses?
    - How did the process of going through developmental coursework shape your college experience?

J. Learn about any other possible outliers that shaped their perception, perspective, experience of college

- What would you do or say to an incoming student who was standing in your position **[I plan to use the day they determined they started college search/accepted into East Coast College]** ago?

Appendix B

Institutional Review Board Partial Approval

Institutional Review Board
3900 Bethel Drive
PO2322
St. Paul, MN 55112

August 12, 2020

Comfort Olugbuyi

Bethel University

St. Paul, MN 55112

Re: Project SP-30-20 Undergraduate students who participated in developmental coursework share their experiences

Dear Comfort,

On August 12, 2020, the Bethel University Institutional Review Board completed the review of your proposed study and approved the above referenced study.

Please note that this approval is limited to the project as described on the most recent Human Subjects Review Form documentation, including email correspondence. Also, please be reminded that it is the responsibility of the investigator(s) to bring to the attention of the IRB any proposed changes in the project or activity plans, and to report to the IRB any unanticipated problems that may affect the welfare of human subjects. Last, the approval is valid until August 11, 2021.

Sincerely,

Peter Jankowski, Ph.D.

Chair, Bethel University IRB

Appendix C

Institutional Review Board Approval – From Host School

[redacted] University
Institutional Review Board for Protection of Human Participants

[redacted] INSTITUTIONAL REVIEW BOARD

Approval Form

Institutional Review Board (IRB) approval refers to research involving human subjects whether on or off campus. Significant changes in design, participants, or measures must be approved by the IRB. Any unexpected adverse effects on human subjects due to the procedure should be reported to the IRB Chair immediately.

Date: 9/9/2020

Principal Investigator: Comfort Olugbuyi

Faculty Investigator (if one): Jolyn Dahlvig

Application Type: ☐ Exempt ☒ Expedited ☐ Full Review

Project Title: Undergraduate students who participated in zero-credit Developmental Coursework share their experiences

---

Board Comments:

Board Decision:

☒ Approved, Minimal Risk
☒ Approved, Expedited
☐ Approved, Exempt Status
☐ Conditional Approval, with the following stipulations:

☐ Not approved for these reasons:

Approval Period:

Chair Signature

9/9/2020 Date of Approval

9/8/2021 Expiration Date

(Form created - 10/20/2015)

Appendix D

Institutional Review Board Full Approval

Peter Jankowski <pjankows@bethel.edu> Sep 9, 2020, 5:57 PM

to me

Yes.

On Wed, Sep 9, 2020 at 4:42 PM Comfort Olugbuyi <coo58293@bethel.edu> wrote:

> Hi Peter,
> Will this documentation grant me full IRB approval from Bethel as well?
> -comfort
>
> On Wednesday, September 9, 2020, Peter Jankowski <pjankows@bethel.edu> wrote:
>
> > Thanks for submitting the documentation.

Comfort Olugbuyi <coo58293@bethel.edu> Thu, Aug 27, 2020, 7:37 PM

to Peter, Jolyn

Hello Peter,
A new element I would like to add to my study is a form of communication to determine meeting times with my participants by using a survey. I attached a draft of what it would look like, however, I will tailor it to the site school's courses. Please let me know if I need to resubmit through the process again.
-Thank you,
Comfort

Peter Jankowski <pjankows@bethel.edu> Fri, Aug 28, 2020, 8:05 AM

to me, Jolyn

Comfort,

Thank you for submitting this revision. The prior approval, SP-30-20, is extended to cover this revision to your proposed study. Please also remember to send me the NGU IRB approval of your proposed study, as per my previous email.

Please also remember to address the previous condition to the approval of your proposed study: "(1) clarifying your confidentiality procedure further, and specifically, (i) who will have access to the external hard drive? and is access to this hard drive password protected, or could anyone access this hard drive should they obtain it? and where will this hard drive be securely kept? and (ii) when will the raw data of the study be destroyed?"

Peter Jankowski
Chair, Bethel IRB

Appendix E

Participants Recruitment Email

BETHEL UNIVERSITY

Comfort Olugbuyi <coo58293@bethel.edu>

Re: Win a gift card to Amazon

Comfort Olugbuyi <coo58293@bethel.edu> Wed, Mar 17, 2021 at 10:38 PM
Draft

From: Academics <Academics@[redacted].edu>
Sent: Tuesday, October 13, 2020 2:43 PM
To: Academics <Academics@[redacted].edu>
Subject: Win a gift card to Amazon

Hello [redacted],

My name is Comfort Olugbuyi and I am a student in the Doctorate in Leadership in Higher Education Program at Bethel University. I am also the Assistant Director of Academic Support at Palm Beach Atlantic University. I would like to invite you to participate in a study conducted for my dissertation research focused on students who took any of the following courses their first semester at [redacted]: MATH 0310 Intro to Mathematics, MATH 0320 Basic Algebra, and/or ENGL 0310 Basic Writing.

As a token of my appreciation for your time spent interviewing you will receive a $20 gift card to Amazon.

This study aims to explore the experiences of undergraduate students attending Private Liberal Arts institutions who completed non-credit developmental coursework during their first year at [redacted]. Due to the current health crisis, I will conduct the interviews online via Zoom or GoogleMeet. Individual interviews could take up to 75 minutes and will be video and audio recorded.

For those not comfortable with an individual interview I am also looking for students to participate in a focus group of students who completed that developmental coursework at [redacted] to discuss themes that emerged from the interviews and how it impacted a student's college experience. Focus groups can last up to 90 minutes and are also video and audio recorded.

To maintain confidentiality and anonymity, a pseudonym replacing your name will be used in the research, and participants will sign an agreement to keep shared information confidential.

Participation in this study is entirely voluntary. If you would like to be a part of this research study, please complete this survey at your earliest convenience so we can schedule an interview. Your participation and input are extremely valuable, as you will be contributing to the enhancement and development of education.

I look forward to hearing from you and to the opportunity to learning from you. Please let me know if you have any questions!

Sincerely,

Comfort Olugbuyi, MA

Graduate Student

Doctorate in Leadership in Higher Education

Bethel University

214-901-7477 (best to text)

COO58293@bethel.edu

Appendix F

Participants Interest Sign-Up Survey

Research Interview Time sign-up for ***EAST COAST COLLEGE***

Thank you so much for your willingness to help me with this research project. The goal is to find students who took Intro to Mathematics, Basic Algebra, and/or Basic Writing during their first year in college at ***ECC***. This form will allow you to supply me with demographic information and aid me in setting up a meeting time. Please click as many as you can! At the end of our interview, you will receive an Amazon gift card for $20.
Thank you again. And let me know if you have any questions- Comfort Olugbuyi (214) 901-7477.

***** Required

1.Please indicate which interview you are interested in (you can select one, or both options.) *

- [ ] Individual interview (which may last up to 75-minutes)
- [ ] Group Interview (which may last up to 90-minutes)

2.Which Video Conferencing platform do you prefer? *

- [ ] Google Meet
- [ ] Zoom
- [ ] Other

3.Please provide an email address and a phone number to call. Email confirmation regarding day and time will be sent, however, I can additionally provide reminders via text messages. *

4.For this study please list 1 or 2 pseudonyms (false names) that you would like to be referred to in order to keep your identity private. (ex: a shortened version of your first or middle name, "Michelle" could be shortened to "Shelly"). *

5.Please indicate which course(s) you enrolled in *

- [ ] MATH 0310 Intro to Mathematics
- [ ] MATH 0320 Basic Algebra
- [ ] ENGL 0310 Basic Writing

6.What is your current age, class status, and Major? *

7.Please indicate in the below options all of the days and times you could be available for an interview. The last question allows you to leave a comment if there is a preferred day/time. No answer is needed for this entry.

8.Mondays: October 5th, October 12th, or October 19th

- [ ] October 5th, 5 pm
- [ ] October 5th, 7 pm
- [ ] Another time on October 5th
- [ ] October 12th, 5 pm
- [ ] October 12th, 7pm
- [ ] Another time on October 12th
- [ ] October 19th, 3pm
- [ ] October 19th, 4pm
- [ ] October 19th, 5pm
- [ ] October 19th, 6pm
- [ ] October 19th, 7pm
- [ ] Another time on October 19th

Tuesdays: October 6th, October 13th, or October 20th

- [ ] October 6th 3pm
- [ ] October 6th 5 pm
- [ ] Another time on October 6th
- [ ] October 13th 5
- [ ] pm October
- [ ] 13th 7 pm
- [ ] Another time on October 13th
- [ ] October 20th, 5pm
- [ ] October 20th, 6pm
- [ ] October 20th, 7pm

Another time on October 20th

Wednesdays, October 7th, October 14th, or October 21st

- [ ] October 7th 3 pm
- [ ] October 7th 5pm
- [ ] Another time on October 7th
- [ ] October 14th 3 pm
- [ ] October 14th 5pm
- [ ] October 14th 7pm
- [ ] Another time on October 14th
- [ ] October 21st, 5pm
- [ ] October 21st, 3pm
- [ ] October 21st, 4pm
- [ ] October 21st, 5pm
- [ ] October 21st, 6pm
- [ ] October 21st, 7pm
- [ ] Another time on October 21st

Thursdays: October 8th, October 15th, or October 22nd

- [ ] October 8th 3pm
- [ ] October 8th 5pm
- [ ] Another time on October 8th
- [ ] October 15th 3pm
- [ ] October 15th 4pm
- [ ] October 15th 5pm
- [ ] October 15th 6pm
- [ ] October 15th 7pm
- [ ] Another time on October 15th
- [ ] October 22nd 10am
- [ ] October 22nd 11am
- [ ] October 22nd 12pm
- [ ] October 22nd 3pm
- [ ] October 22nd 4pm
- [ ] October 22nd 5pm
- [ ] October 22nd 6pm
- [ ] October 22nd 7pm
- [ ] Another time on October 22nd

Fridays: October 9th, October 16th, or October 23rd

- [ ] October 9 th 3 pm
- [ ] October 9th 5 pm
- [ ] Another time on October 9th
- [ ] October 16th 3 pm
- [ ] October 16th 4pm
- [ ] October 16th 5pm
- [ ] October 16th 6pm
- [ ] Another time on October 16th
- [ ] October 23rd 10 am
- [ ] October 23rd 11am
- [ ] October 23rd 12 pm
- [ ] October 23rd 1pm
- [ ] October 23rd 2pm
- [ ] October 23rd
- [ ] 3pm October
- [ ] 23rd 4pm

October 23rd 5pm

Saturdays: October 10th, October 17th, or October 24th

- [ ] October 10th 11am
- [ ] October 10th 1pm
- [ ] October 10th 3pm
- [ ] Another time on October 10th
- [ ] October 17th 11am
- [ ] October 17th 12pm
- [ ] October 17th 1pm
- [ ] October 17th 2pm
- [ ] October 17th 3pm
- [ ] Another time on October 17th
- [ ] October 24th 11am
- [ ] October 24th 12pm
- [ ] October 24th 1pm
- [ ] October 24th 2pm
- [ ] October 24th 3pm

Sundays, October 11th, October 18th, or October 25th

- [ ] October 11th 4pm
- [ ] October 11th 6 pm
- [ ] Another time on October 11th
- [ ] October 18th 4 pm
- [ ] October 18th 5pm
- [ ] October 18th 6pm
- [ ] Another time on October 18th
- [ ] October 25th
- [ ] 4pm October
- [ ] 25th 5pm
- [ ] October 25th 6pm

Another time on October 25th

15. Thank you again for selecting multiple days and times. If I find a time that seems very popular, I may schedule that for the group interview for those interested in participating in the focus group. I will follow up with you regarding the interview day/time with the aim provide you at least 72 hour notice or more. If you have any questions you are welcome to text me at 214-901-7477.

Did you have any comments or questions?

Appendix G

Participants Confirmation Email

BETHEL UNIVERSITY

Comfort Olugbuyi <coo58293@bethel.edu>

Research study

Comfort Olugbuyi <coo58293@bethel.edu> Wed, Mar 17, 2021 at 4:48 AM
Draft

---------- Forwarded message ---------
From: **Comfort Olugbuyi** <coo58293@bethel.edu>
Date: Thu, Oct 22, 2020 at 7:28 PM
Subject: Research study
To:

Hello and thank you so much for your information and your willingness to participate in this study. This study will focus on your freshmen year at [redacted] and these courses (MATH 0310, MATH 0320, and/or ENGL 0310) you took that year.

You indicated that you would be available on Sunday 10/25/20 at 4 pm via Zoom. Please confirm that you are able to meet at that time.

---This is the Zoom web address you will use:
https://zoom.us/

Attached is an informed consent form for you to review, sign, and return.

How to sign the consent form:

option 1: If you have the ability to print off the form, you can sign and date the 2nd page, and scan the form back to me.

option 2: if you have the ability to print off the form, you can sign and date the 2nd page, take a picture of page 2 with your phone and email it/text it to this email address

option 3: If you do not have the ability to print, but have access to a smart-phone. You can open the document with your phone, and draw your signature at the bottom of the page and type in your name and date.

Thank you again for your help. I am still recruiting students so if you know anyone that would be interested in interviewing and took the mentioned classes, feel free to send them my way!

Please let me know if you have any questions and thank you again!

Comfort Olugbuyi
coo58293@bethel.edu
214-901-7477

2 attachments

[redacted] informed consent (2) (4).docx
27K

[redacted] informed consent (2) (4).pdf
119K

Appendix H

Follow-Up Recruitment Email for Second Interview

BETHEL UNIVERSITY

Comfort Olugbuyi <coo58293@bethel.edu>

A little more help

Comfort Olugbuyi <coo58293@bethel.edu> Wed, Mar 17, 2021 at 4:56 AM
Draft

On Thu, Dec 10, 2020 at 5:32 PM Comfort Olugbuyi <coo58293@bethel.edu> wrote:

Hi there, Comfort again. Hope you had a great finals week. Would you be willing to spend 15 minutes(possibly 20) in a phone/zoom or googlemeet conversation? I just want to make sure I accurately portrayed your words. In return for your time, I would be happy to provide a $15 e- gift card to a place of your choosing.
Thank you again for your help and hoping to connect with you one more time,

-Comfort

On Sat, Nov 28, 2020 at 4:04 PM Comfort Olugbuyi <coo58293@bethel.edu> wrote:

Hi there. I realized I sent this as a blind copy so it may not have made it to you.

I hope you are doing well. After more time that I had anticipated, I finally typed up all of my interviews and found a couple of common themes.
I want to say thank you again for your help and your insight. With the majority of students I spoke with one common thread is that you all took Basic Algebra, which is where I am now steering my focus.

The next step in my research is a process called triangulation. This means I run these themes by you to see if I interpreted them correctly.

I'm wondering if you would be willing to do one more quick meeting (25-35 minutes) but in a group setting with 2-3 other students via zoom?

I'm wondering if you would be available next week Tuesday or Wednesday any time after 5pm?
I would be open to Monday, but usually most students are playing catch up from the previous week/weekend.

Please let me know your thoughts.

Thank you so much,
Comfort Olugbuyi

Appendix I

Consent Form and Signed Consent Forms

Informed Consent

You are invited to participate in a study of Undergraduate Students who participated in Developmental Coursework during their first year ***at East Coast College***. I hope to learn about the students' experience of Developmental education and if it shaped their college perspective. You were selected as a possible participant in this study because you are 18-25, an undergraduate student, and completed MATH 0310 Intro to Mathematics, MATH 0320 Basic Algebra, and/or ENGL 0310 Basic Writing within the past five years. This study aids in a research dissertation that is partial fulfillment for a Doctorate of Education at Bethel University.

Participation in this study is voluntary. If you decide to participate, I (Comfort Olugbuyi) will ask you a series of questions during a 75-minute individual interview or a 90-minute focus group interview. Students can participate in both studies, if so inclined. Before the session, demographic questions will be asked and collected via email to responders who indicated their desire to participate. The information obtained will remain confidential. The purpose of these questions are to ascertain you, the student, individual and collective experience and perspective of college after engaging and completing developmental coursework at your institution. There is a possibility you may encounter new feelings toward the school, education, and your college experience. Additionally, the purpose of this study is not to cause harm but to encourage you to degree completion. I will have information available to provide contacts to assist with any challenges mentioned during the interview. At any time, if you experience any discomfort or inconvenience, we can stop the interview process.

Participants engaging in focus groups agree to not share any information outside of the focus group learned during the interview. I will take every precaution to keep all information confidential. This includes housing all information on a password encrypted external hard drive that is kept in a locked box in which only I have access to. Additionally, participants agree to not share any learned information with anyone. Yet, the nature of focus groups prevents me from guaranteeing 100% confidentiality. I would like to remind all participants to respect the privacy of each other and not repeat information shared in the group to others.

Any identifiable information obtained in connection with this study will remain confidential and disclosed only with your permission. No recognizable descriptors will appear in any written reports or publications. Each participating student will select a pseudonym that I will use in the study. Interviews will be audio and video reordered to ensure accuracy in transcription

as well as to capture nonverbal communication. Your decision to participate will not affect your future relations with ***East Coast College*** in any way.

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as **at *East Coast College*.** If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

* I have read the consent form and all of my questions about the study have been answered. I understand that the all sessions will be recorded. I agree to participate in this study.

_____ _____

Signature Date

_____ _____

Printed name of the participant Signature of Investigator

as well as to capture nonverbal communication. Your decision to participate will not affect your future relations with [redacted] University in any way.

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as [redacted] University. If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

* I have read the consent form and all of my questions about the study have been answered. I understand that the all sessions will be recorded. I agree to participate in this study.

Deuchairgw 10/14/20

Signature Date

Comfort O

Printed name of the participant Signature of Investigator

Informed Consent

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as [redacted] University. If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

* I have read the consent form and all of my questions about the study have been answered. I understand that the all sessions will be recorded. I agree to participate in this study.

[redacted] Oct 27, 2020

Signature Date

[redacted] Comfort O

Printed name of the participant Signature of Investigator

as well as to capture nonverbal communication. Your decision to participate will not affect your future relations with [redacted] University in any way.

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as [redacted] University. If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

* I have read the consent form and all of my questions about the study have been answered. I understand that the all sessions will be recorded. I agree to participate in this study.

Signature — 9/29/20 — Date

[redacted] — Comfort Olugbuyi — Signature of Investigator

Printed name of the participant

that is kept in a locked box in which only I have access to. Additionally, participants agree to not share any learned information with anyone. Yet, the nature of focus groups prevents me from guaranteeing 100% confidentiality. I would like to remind all participants to respect the privacy of each other and not repeat information shared in the group to others.

Any identifiable information obtained in connection with this study will remain confidential and disclosed only with your permission. No recognizable descriptors will appear in any written reports or publications. Each participating student will select a pseudonym that I will use in the study. Interviews will be audio and video reordered to ensure accuracy in transcription

Informed Consent

as well as to capture nonverbal communication. Your decision to participate will not affect your future relations with [redacted] University in any way.

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

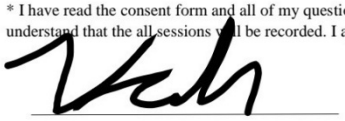
You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as [redacted] University. If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

* I have read the consent form and all of my questions about the study have been answered. I understand that the all sessions will be recorded. I agree to participate in this study.



9-18-20

Signature

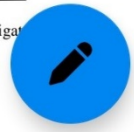
Date

[redacted]

Comfort O

Printed name of the participant

Signature of Investigat



as well as to capture nonverbal communication. Your decision to participate will not affect your future relations with [redacted] University in any way.

I will also use Otter.ai to help with transcribing interviews which is a private and secure artificial intelligence audio and visual recording service that can transcribe spoken text in real-time. At the conclusion of the interview, you, the participant(s), will see a draft of the transcription. I will analyze the recording and transcription for accuracy and can make the final draft available to you. For your safety all original collected data kept in a locked box on a password encrypted external hard drive will be destroyed after 10 years.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above, your permission to participate in this study, your willingness to share your demographic information, be video and audio recorded. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Additionally, after the completed interview, I will email you a code for a $20 gift card to Amazon for your help with this project.

1. your permission to participate in this study, including collected demographic information, video, and audio recording
2. Agreement to keep all information learned confidential

This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans as well as [redacted] University. If you have any questions about the research and/or research participants 'rights or wish to report a research-related injury, please connect to Comfort Olugbuyi coo58293@bethel.edu 214-901-7477

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[redacted] 9/26/2020

Signature Date

[redacted] Comfort O

Printed name of the participant Signature of Investigator

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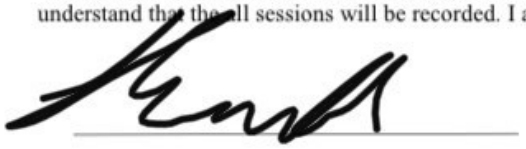
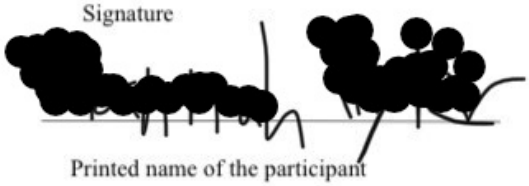


10/14/2020

Signature Date



Comfort O

Printed name of the participant Signature of Investigator