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Understanding the Influence of Academic Experiences on the Academic Motivation and Engagement of Early College High School Students

Gabriela E. Gomez
Concordia University - Portland

Concordia University–Portland

College of Education

Doctorate of Education Program

WE, THE UNDERSIGNED MEMBERS OF THE DISSERTATION COMMITTEE

CERTIFY THAT WE HAVE READ AND APPROVE THE DISSERTATION OF

Gabriela Elizabeth Gomez

CANDIDATE FOR THE DEGREE OF DOCTOR OF EDUCATION

Brianna Parsons, Ed.D., Faculty Chair Dissertation Committee

William Boozang, Ed.D., Content Specialist

Jacqueline Lookabaugh, Ed.D., Content Reader

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Gabriela E. Gomez

Concordia University–Portland

College of Education

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Brianna Parsons, Ed.D., Faculty Chair Dissertation Committee

William Boozang, Ed.D., Content Specialist

Jacqueline Lookabaugh, Ed.D., Content Reader

Concordia University–Portland

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Abstract

The early college high school (ECHS) model was implemented to increase the number of underrepresented students who attain a college degree by immersing students in a postsecondary environment and providing them with the necessary skills to experience success. This qualitative instrumental case study explored how ECHS students perceived their academic experiences as meaningful and how such experiences influenced academic motivation and engagement. The study site was an ECHS located in Texas. All 11 participants were currently enrolled in 11th or 12th grade at the ECHS. Data was collected through semistructured interviews, observational notes, and artifacts. Synthesized member checking was conducted following transcription of interviews to increase credibility of results. Data triangulation also allowed for increased validation to results. The results of this study indicated that participants perceive their academic experiences as meaningful when those experiences lead to personal connection, gave a sense of direction, and resonated with the participant. Unexpectedly, the results indicated the importance of academic experiences in aiding students in the formation of their educational identity.

Keywords: early college high school, underrepresented students, academic experiences, academic motivation, engagement

Dedication

I dedicate this dissertation to my family, who had to endure the most time away from me. To my children, Jesus, Sarah, and Alejandro, who sat next me while I worked, eagerly waiting for me to look away from the screen to begin a conversation. I began this program when Alejandro was still floating around in my belly and I had nothing to do but remain in bed rest. For me the extra time meant to begin a new challenge, and now Alejandro is about to turn five. It has taken longer than expected, but life happens. To my husband, who has encouraged me to continue even when I have been in tears believing I am no longer capable. To my mother, sister, and brother, who cared for my children so that I could have time to finish writing without being disturbed. The last year alone we have been faced with challenges, but together we have overcome and fortified our bond. This degree is not just an achievement for me, but for all of us. Without your love and support, this would not be possible. I love you all.

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Chapter 1: Introduction

In order to improve educational opportunities for every student, students need to graduate from high school ready for college, careers, and life (U.S. Department of Education, 2015). According to the National Center for Education Statistics (NCES, 2017; 2018), the national rate for students gaining their diploma within four years of starting ninth grade is 84%, with only 63% of students enrolling in college following graduation. Of those students who enter college seeking a bachelor's degree 59% complete the degree within 6 years (NCES, 2017). In today's economic climate, a high school degree is not sufficient. Students need to attain a college degree in order to succeed economically (NCES, 2018). Somewhere between high school and college graduation, a large number of students decide to not complete their college degree (U.S. Department of Education, 2015). Factors for students not enrolling in college or completing a college degree vary from personal experience, social interaction, financial issues, family support, to simply not feeling prepared for college (Hawkins, Catalano, & Miller, 1992; Jordan, Lara, & McPartland, 1999; Lehr, Hansen, Sinclair, & Christenson, 2003; Rumberger, 2001). This study seeks to gain an understanding of how early college high school (ECHS) students perceive their academic experiences as meaningful, and how such experiences influence student academic motivation and engagement.

In Texas, the public high school graduation rate is 89.1%, with a graduation rate of 86% for economically disadvantaged students (Texas Education Agency, 2017a; TEA, 2017c). The ECHS model is implemented in order to provide underrepresented students with the tools necessary for success in college (Berger, Turk-Bicakci, Knudson, & Hoshen, 2014). ECHSs are established to serve underrepresented students in higher education, such as low-income, students of color, first-generation students, and English language learners (Jobs for the Future, 2012).

According to Conley (2008), ECHSs provide students with content knowledge, cognitive strategies, learning skills and transition knowledge for success in college. Attending an ECHS provides students with the opportunity to take college courses while simultaneously earning high school credit (Berger et al., 2014; Jobs for the Future, 2012). Students attending a traditional comprehensive high school have the ability to also take dual enrollment courses, but do not have the opportunity to be in smaller, fewer than 400 students, and specialized environment and earn a college degree (Schaefer & Rivera, 2016). While the success of students attending ECHSs is undeniable, there are still challenges those students must overcome (Alaie, 2011; Beall, 2016; Berger, Adelman, & Cole, 2010). ECHSs must provide students with the proper experiences to find success while in the program and continue past graduation (NCES, 2017; NCES, 2018). The challenge for an ECHS program is not only for students to succeed while in the program, but for students to succeed once enrolled in college programs (Cooper, 1998).

According to Jobs for the Future (2013), ECHSs are designed to prepare all students for college and careers by replacing remediation with acceleration, engaging and rigorous instruction, and individualized support. These factors are implemented in order to prepare students for success in taking college courses (Berger et al., 2010; Edmunds, Willse, Arshavsky, & Dallas, 2013; Muñoz, Fischetti, & Prather, 2014; Pitchford-Nicholas, 2015). The expectations placed on students are no different than those students attending a traditional high school, but the implementation of the ECHS model is what differs (Edmunds et al., 2010; Edmunds et al., 2012; Hall, 2013). ECHSs are typically composed of smaller settings with additional support for students (with similar demographics as the nearby comprehensive high school) and include taking courses on the college campus (Edmunds et al., 2012; Hall, 2013). By understanding how ECHS students perceive their experiences as meaningful and how such experiences influence

academic motivation and engagement, administrators and teachers may provide ECHS students with valuable ECHS experience to increase academic achievement.

Background, Context, History, and Conceptual Framework for the Problem

Previous studies focus on the academic success, partnerships, perceptions and culture of ECHSs (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2010; Jobs for the Future, 2013; Muñoz, Fischetti, & Prather, 2014; Schaefer, & Rivera, 2016). Through the implementation of cognitive theories of motivation, this study forms an understanding of how ECHS students perceive educational experiences as meaningful and their influence on academic motivation and engagement (Tollefson, 2000). Literature on expectancy-value theory, self-efficacy, and goal orientation theory was examined in order to form an understanding of academic motivation and engagement (Cerasoli, Nicklin, & Ford, 2014; Hidi & Harackiewicz, 2000; Schaefer & Rivera, 2016; SRI, 2010; Valentine, Dubois, & Cooper, 2004). Gaining an understanding as to which academic experiences students view as influential to academic motivation and engagement provides ECHS administrators and staff with the knowledge necessary to arrange similar experiences for students, leading them to success throughout the ECHS program.

Statement of the Problem

For underrepresented students attending an ECHS, the rigor and transition between high school and college courses is a challenge which is not easy to overcome (Alaie, 2011). For underrepresented students' low expectations, academic and cultural isolation, lack of motivation, and little support are struggles to overcome (Summers & Hrabowski, 2006). A student's experiences both inside and outside the classroom can provide the necessary motivation for students to improve academically (Alaie, 2011). The experiences of ECHS students have the potential to positively or negatively influence academic motivation and engagement (Alaie,

2011). Experiences in which a student has success improves self-efficacy and may provide a student with higher academic expectations, resulting in increased academic engagement and motivation (Alaie, 2011; Muñoz et al., 2014). This study addresses the issue of how the academic experiences of ECHS students influence academic motivation and engagement.

Purpose of the Study

The purpose of this qualitative instrumental case study is to form an understanding of what makes academic experiences meaningful to ECHS students and how such academic experiences influence academic motivation and engagement. For students to be successful in the ECHS program, administrators and teachers need to provide the adequate support (Jobs for the Future, 2013). The ECHS model differs from the traditional high school model because of the increased rigor of concurrent enrollment in both college and high school courses (Jobs for the Future, 2013; Ongaga, 2010). The academic experiences such as academic field trips, guest speakers, and educational environment are an integral part of the ECHS model (Ongaga, 2010). During the study interviews, classroom observations, and artifacts are collected in order to form an understanding of how academic experiences are perceived as meaningful by students and encourage academic motivation and engagement. Gaining this understanding aids in the development of academic experiences that increase academic motivation and engagement in students attending ECHSs.

Research Questions

This case study was guided by the following questions:

RQ_1. How do ECHS students perceive their academic experiences?

RQ_2. How do ECHS students understand their academic experiences as meaningful?

Two additional research questions were asked that supported the central research questions:

RQ3. How do the academic experiences of ECHS students influence academic motivation and engagement?

RQ4. How do the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement?

Rationale, Relevance, and Significance of the Study

The ECHS in this case study was established within the last decade and had their first graduating class in the late 2010s (NICHE, 2020). The challenges faced by this campus include establishing new courses and an accelerated curriculum, as well as implementing support for student success and retention in the program. Each year as a new grade level is introduced new challenges are met and handled with care. Challenges include scheduling, student supervision, student support in science and math courses, and finding resources necessary to support academic experiences (Ongaga, 2010). According to Alaie (2011), the influence of positive experiences results to increase self-esteem, reinforce feelings of intellectual ability, and academic performance. The experiences of students attending an ECHS must reflect the uniqueness of the campus and encourage students to remain motivated and engaged. Administrators and teachers need to provide ECHS students with educational experiences that aid in the development of both academic and social skills. Attending events such as field trips, guest speakers, and working in positive and engaging classroom environments influence the academic motivation and engagement of students in the program. The application of a cognitive motivational framework was used to build an understanding of how academic experiences are perceived and academically and socially support students, in order to increase student motivation and engagement.

Definition of Terms

Academic achievement: Academic achievement can be defined as a student's performance in academic areas such as science, math, reading, language arts, and history (Cunningham, 2012).

Academic motivation: Academic motivation is defined as a student's desire that stimulates the behavior to achieve in academic areas (Gogoi, 2014).

College readiness: Schools provide students with the necessary skills and competencies for success at the postsecondary level without the need for remediation in basic skills courses (Conley, 2014; Scott-Clayton, Crosta, & Belfield, 2014).

Dual Enrollment (DE): The most common definition is "high school students who earn college credits for courses taken through a postsecondary institution" (Kleiner & Lewis, 2005, p. 1).

Early College High School (ECHS): A school model designed to service underserved and underrepresented students through a combination of resources blending high school and college courses to improve the likelihood of students attending higher education institutions (Lieberman, 2004).

Expectancy-value theory: Defined by Vroom (1964, as cited in Van Den Broeck, Vansteenkeiste, Lens, & De Witte, 2009), expectancy-value theory is a "cognitive-motivational model in which individuals' motivation to strive for or choose a particular goal is regarded as a function of their expectancies to successfully attain this goal" (p. 5).

Self-efficacy: An individual's belief in his or her own capability to organize and carry out a course of action required to produce a given attainment is known as self-efficacy (Bandura, 1997).

Underrepresented students: Underrepresented students fall into one or more of the following categories: racial minority, first-generation college students, or low-income (Rosenberg & O'Rourke, 2011).

Goal orientation theory: The focus of goal orientation theory is on motivation being a manifestation of a student goal pursuit rather than innate traits (Ames, 1992; Midgley, Kaplan, & Middleton, 2001; Pintrich & DeGroot, 1990).

Assumptions, Delimitations, and Limitations

Assumptions. There are many assumptions inherent to qualitative studies due to the researcher's aims, knowledge, and assumptions of the case (Hathaway, 1995). One assumption was that students who participated in this study had positive academic experiences, which influence academic motivation and engagement. Another assumption is that students would provide honest responses about their academic experiences during the interview. The interpretation of the interviews and what a participant means was also an assumption made by the researcher. In order to gain an understanding of how to appropriately interpret the data, it was important for the researcher to understand the assumptions, delimitations, and limitations which applied to the particular study.

Delimitations. Delimitations describe the boundaries set by the researcher for the study and also the characteristics that arise from limitations (Simon & Goes, 2013). One delimitation for this study was to focus on academic experiences such as fieldtrips, guest speakers, and educational environment. These types of academic experiences help narrow the scope of high school student experiences. Further delimitations are evidenced through the use of specific methodological procedures. Essential to quantitative methodology is the collection of numerical data and analysis using mathematically based methods to explain a phenomenon (Muijs, 2004).

A mixed methods design allows for a more flexible approach which combines quantitative and qualitative methods (Muijs, 2004). In order to form an understanding of the phenomenon, a qualitative case study approach was implemented. The research questions for this study were not suited to be answered using quantitative methods but instead the implementation of qualitative methodology which can provide depth into how ECHS students perceive their academic experiences as meaningful and the influence of such experiences on academic motivation and engagement. Applying such delimitations to the study allow for the researcher to control the limit of scope of the data.

Limitations. Limitations, such as time, funding, and access to specific populations, can threaten the validity of a study (Merriam & Tisdell, 2015). The scope of this study was limited to participants who are not currently enrolled in the course taught by the researcher and who had already completed at least one college course on the college campus. Due to time constraints, the number of participants was reduced from 15–20 to 8–10 participants. Limitations arising during the study include filtration of information through the students, researcher bias, and the inability of students to articulate and be perceptive. According to Taylor, Bogdan, and DeVault (2015), participants "simply do not have equal ability to provide detailed accounts of what they have been through and what they feel" (p. 109), to help the participant the researcher must ask questions to probe further and clarify responses. In qualitative research, a combination of interview and observations are necessary to gain a holistic understanding of an individual's perspective (Taylor et al., 2015). What a person says during an interview may be completely different then their interactions in different situations (Taylor et al., 2015). Keeping observations and interviews in mind while analyzing the data helped the researcher not only gain a better understanding of what the participant means but limit the assumptions made during an interview

(Taylor et al., 2015). “Because qualitative research occurs in the natural setting it is extremely difficult to replicate studies” (Wiersma, 2000, p. 211). The limitations of the study influenced the design of this study and methods used to establish internal and external validity. The case study methodology allowed for inductive research in understanding the phenomenon.

Summary

Chapter 1 provided an overview of the study beginning with an introduction to the problem of ECHSs need to present students with academic experiences that positively influence academic motivation and engagement. The overview then continues with the discussion of cognitive motivational theories to form a conceptual framework for the study, a defined problem statement, purpose of the study, research question, significance of the study, definition of terms, and ends with assumptions, delimitations, and limitations of the study. Chapter 2 provides a comprehensive and relevant review of the literature pertaining to how academic experiences might influence academic achievement and engagement. Chapter 3 explains the methodology in detail and the decision and explanation to implement an instrumental case study, as well as the research population, instrumentation, data collection, attributes, data analysis procedures, limitations, validation, expected findings, and ethical issues of the study. Chapter 4 provides a description of data analysis, results of data analysis and findings of the study. Chapter 5 is comprised of a discussion of the study findings and a conclusion addressing recommendations for further research.

C**hapter 2: Literature Review**

The implementation of the ECHS model is intended to provide support for students of low socio-economic status or those who are underrepresented to achieve academic success and improve college completions rates of high school students (Muñoz et al., 2014). A steppingstone to the achievement of a higher educational degree for underrepresented students is often the opportunity to be submersed in and experience college courses at a young age (Kaniuka & Vickers, 2010). Without such experiences, students do not always understand and attain the personal motivation, self-efficacy, and autonomy needed to take college courses, much less complete a college degree (Alaie, 2011; Kaniuka & Vickers, 2010).

According to Alaie (2011), student experiences with ECHS have the potential to be constructive or counterproductive. Through the examination of the perceptions in regards to academic achievement of ECHS students and patterns of motivation, aid can be provided to improve academic performance and ensure course completion (Alaie, 2011). The following literature review is a compilation of studies, beginning with a focus on the impact of the ECHS initiative. The use of online peer-reviewed journal articles, reports, print materials, and other resources are used to conduct a comprehensive review of related literature. Once a solid foundation is established, an analysis of studies pertaining to ECHS student performance and motivational theory application is conducted. Next, an analysis of applied methodologies and examination of existing needs for further inquiry is provided. Finally, the research findings reveal the need for examining student experience in order to better understand how ECHS students perceive their academic experiences and influences on academic motivation and engagement.

Early College High School

Underrepresented students are faced with a number of challenges when attending a traditional comprehensive high school, such as an inadequate number of counselors, medial coursework, and the lack of college or career preparation which leaves students ill-informed about postsecondary options (Balfanz, 2009; Owens, Simmons, Bryant, & Henfield, 2011; Roderick, Nagaoka, & Coca, 2009; Schaefer & Rivera, 2016). An alternative to the traditional high school model is the ECHS model. According to Alaie (2011), nationwide in 2007, 17 ECHSs graduated 900 students, of which 65% of the graduating students were accepted to a 4-year college, and 85% of students graduated with substantial college credit. By 2013, Jobs for the Future (2013) reported that 93% of ECHS students graduated high school and 94 % of them earned college credit. By analyzing the experiences of ECHS students this study will form an understanding of how the academic experiences provided in ECHSs influence academic motivation and engagement.

The ECHS initiative is meant to immerse high school students in the college experience (Alaie, 2011; Muñoz et al., 2014). According to Edmunds et al. (2010), having students participate in activities similar to college students is part of creating that college experience and expectations, and should also include the formation of supportive teacher-student relationships. The relationships formed by students' aid in the formation of positive student experiences and perceptions (Edmunds et al., 2010). The establishment of well-rounded relationships serves to support students and motivate students, even when faced with challenges (Alaie, 2011). ECHSs immerse students in challenging curricula, demanding more time, effort and academic rigor to achieve success (Alaie, 2011). Not all are successful, but the experience of failure can also be a learning opportunity and serve to productively strengthen relationships students have formed

(Alaie, 2011; Edmunds et al., 2010). Depending on the student, the experience of failure can either lead to an increase or decrease in motivation (Alaie, 2011). Studies focus on the support students attending ECHSs receive but fail to address the support for students who fail courses (Alaie, 2011; Edmunds et al., 2010; Muñoz et al., 2014). According to Alaie (2011), failing a course can cause students to feel insecure about their capacity to complete college courses and leave them questioning if the program is suited for them. Aside from harming a student's self-esteem, negative early college experiences can decrease academic performance (Dweck, as cited in Alaie, 2011). Students who continually experience failure become disengaged, leading to a decline in grades and motivation (Alaie, 2011; Miller, Fleming, & Reed, 2013). The experience of failing a course can damage a students' sense of academic efficacy (Miller et al., 2013).

Significance

It is important for ECHSs to provide students with resources and an environment in which students have the ability to form positive experiences (Alaie, 2011; Muñoz et al., 2014). Students who persistently are met with failure, whether it be in social relationship formation or course completion, may begin to form negative perceptions of college and their own abilities (Alaie, 2011). According to Dweck (1975, as cited in Alaie, 2011), "a failing early college experience may pose a threat to self-esteem, reinforce feelings of intellectual inadequacy, and actually impair future academic performance" (p. 427). It is necessary to examine the academic experiences that positively influence students in an effort to improve student motivation and to teach students how to overcome struggle and failure (Alaie, 2011). The relationship between student experiences and motivation can prove essential to ensuring student success in such a rigorous program and aid the study in forming an understanding of how students perceive academic experiences and influence academic motivation and engagement.

A key principle of ECHSs is to provide students with the proper support system to develop both the academic and social skills needed for college degree completion (Berger et al., 2014; Edmunds, et al., 2010; Muñoz et al., 2014). The support system implemented by the ECHS should not only reinforce study skills but should also help students in the formation of social skills necessary to be successful in and out of the classroom (Berger et al., 2014; Muñoz et al., 2014). Important to the role of shaping student experience are teachers, counselors, and administration – all of whom should provide opportunities for students to implement the acquired skills (Muñoz et al., 2014). According to Muñoz et al. (2014), it is important for teachers to be provided with professional development in order to correctly implement the most effective instruction in the classroom.

The rigorous curriculum of each course offered at an ECHS requires for teachers to understand and appropriately implement strategies to aid student success (Muñoz et al., 2014). According to Muñoz et al. (2014), teacher professional development serves as a support to teachers in attaining the skills for proper implementation to aid in student success. Terms such as "active participation, cooperative learning, higher order thinking questions, and inquiry learning" are often thrown at teachers by administrators without proper training as to what this looks like in the classroom (Lee & Buxton, 2013; Muñoz et al., 2014). Being asked to implement different strategies can prove difficult if a teacher has not received the proper training as to how it should be implemented (Lee & Buxton, 2013; Muñoz et al., 2014; Thompson & Ongaga, 2011). According to Lee and Buxton (2013), professional development may prove valuable in helping teachers face challenges in the classroom. When properly implemented, professional development can help teachers to properly implement effective strategies in the classroom (Lee & Buxton, 2013). The core features of effective professional development are content focus,

active learning, coherence, sufficient duration, and collective participation (Garet, Porter, Desimone, Birman, & Yoon, 2001). According to Garet et al. (2001), proper practice of the core feature of effective professional development improves effectiveness, allowing teachers to view and model how strategies look in the classroom. Effective professional development provides teachers with the ability to adapt the strategies learned in training and adapt for implementation in their own classroom (Garet et al., 2001; Lee & Buxton, 2013).

Problem Statement

ECHS students are faced with the challenge of managing the transition from a high school environment to the college environment (Thompson & Ongaga, 2011). The high school environment is focused on the learning being the responsibility of the teacher, compared to a college environment in which learning is the responsibility of the student (Alaie, 2011; Muñoz et al., 2014). Summers and Hrabowski (2006) stated the struggles of underrepresented students "include academic and cultural isolation, motivation and performance vulnerability in the face of low expectations, peers who are not supportive of academic success, and discrimination" (p. 1870). ECHSs implement a higher level of rigor compared to their comprehensive high school counterparts (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2010). Students attending an ECHS are taught to manage rigorous high school courses, college courses and extracurricular activities simultaneously through increase rigor of instruction, relevance, and relationships (Thompson & Ongaga, 2011). For a high school student, balancing high school courses, college courses and extracurricular activities often proves difficult (Berger et al., 2014; Edmunds et al., 2010). Teacher and administrators are responsible for implementing the proper support for students (Garet et al., 2001; Lee & Buxton, 2013). Through the appropriate support students can

form positive experiences to support their continued motivation and academic success (Alaie, 2011).

According to TEA (TEA, n.d.), Science, Technology, Engineering, and Math (STEM) ECHSs provide students with a curriculum focused on science, math engineering, healthcare, biotechnology and technology. The ECHS study site is located in Texas and is one of three high schools in its school district. The school is in its fourth year of operation. Unique to the institution is the designation of not only an ECHS but is also designated as a STEM school (Facebook, 2020). According to the TEA (2017b), the campus housed approximately 300 9th, 10th, and 11th grade students, of whom approximately 80% are economically disadvantaged, 3% are English language learners (ELLs) and 45% are At-Risk. The first class of freshman for the 2014–15 school year enrolled roughly 110 students (TEA, 2018). The following school year (2015–16) the enrollment for this sophomore class was about 105 (TEA, 2018). By the 2016–2017 school year about 90 students were enrolled in the 11th grade (TEA, 2018). This data shows that between freshman year and junior year approximately 20 students unenrolled from the program. This study sought to understand how students perceive their academic experiences as meaningful and how such academic experiences influence academic motivation and engagement to benefit teachers and administrators in minimizing the number of students who unenrolled from the program.

Organization of Literature Review

While a number of studies focus on the experiences of students on achievement or motivation and student achievement (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2010; Jobs for the Future, 2013; Muñoz et al., 2014; Schaefer, & Rivera, 2016), few studies attempt to understand how the school environment helps form student experiences and influences

motivation and engagement. A gap exists between which academic experiences positively influence and engage students to perform academically (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2010; Jobs for the Future, 2013; Muñoz et al., 2014; Schaefer, & Rivera, 2016). Filling the gap between academic experiences and influences on academic motivation and engagement is necessary to understanding what additional resources and support services are necessary to change the experiences of ECHS students so the student can increase motivation, engagement and academic performance (Alaie, 2011). The use of cognitive theories of motivation as a conceptual framework may prove valuable. A review of methodology and methodological issues is conducted in order to address the appropriate implementation of methodology to the study. The synthesis and critique of the literature brings together previous research published.

To examine the effects of student's perceptions on motivation and achievement, a clear understanding of both the conceptual framework as well as the crafting of a theoretical framework is necessary. Furthermore, an inquiry into cognitive theories of motivational frameworks aids in understanding the relationship between how students perceive academic experiences and academic motivation and engagement (Roberts, 2012). The literature review discusses the use of cognitive theories of motivation as a conceptual framework. The methodology and methodological issues section address the methodology and methods best suited for the study. And finally, a synthesis and critique of previous literature provides an overview of research and data published.

Conceptual Framework

There are a number of factors that influence a student's academic performance (Edmunds et al., 2012). The ECHS model is designed to service underserved and underrepresented students

through a combination of resources blending high school and college courses in hopes of improving students' likelihood to attend institutions of higher learning (Lieberman, 2004). The aim of ECHS is that through the additional support provided to students, opportunities aid students in seeking to further their education past their high school career (Edmunds et al., 2012). Due to poor preparation during the primary years of a student's educational career, students are left to begin their high school career unprepared and unmotivated for the challenges of high school (Balfanz, Bridgeland, Moore, & Fox, 2010; Heck & Mahoe, 2006; Long, Monoi, Harper, Knoblauch, & Murphy, 2007; Schaefer & Rivera, 2016). The goal of the ECHS model is to bridge the gap between poor preparation in primary school and the challenges of high school, in order to better prepare students to meet the demands of higher education courses through the immersion of students into college courses (Edmunds et al., 2012; Edmunds et al., 2016; Lieberman, 2004). Through the application of a cognitive motivational framework the researcher can form an understanding of how to academically and socially support students through appropriate academic experiences in order to increase student academic motivation and engagement.

As a teacher, the researcher experiences students struggling with the content presented in the classroom. For some students, the struggle serves to motivate them to do better. While some students seek help by attending tutoring and asking questions, there are still those students who continually struggle with their courses. The researcher is also able to observe the difficulty some students experience transitioning from the high school classroom to the college classroom. The high expectations of both the high school and college courses causes an increase of anxiety and stress to students (Alaie, 2011).

Wilmer's (2008) proposed model for success highlights the need for an early-warning system created in partnership between student's faculty and advisor. The protocol of placing high school teachers in the college classroom acts as the early-warning system Wilmer (2008) defines and allows for students to be provided with quick support and intervention. At the study site where this study is conducted, high school teachers are assigned a college course in which they monitor and communicate with the professor to keep track of student performance. On Fridays (No college courses are offered on Fridays), high school teachers have a two-hour study hall period, with the students they monitor at the college, which serves as an additional instructional support service. According to Wilmer (2008) instructional support services are provided in a variety of methods including professional and peer tutoring. During the study hall period the teacher provides tutoring on course assignments and allows for students to work cooperatively to complete college course assignments. An early-warning system and instructional support services are two elements implemented to the success and retention of students in college courses (Wilmer, 2008).

The application of a motivational theory for the purpose of forming an understanding of the influence of academic experiences and its connection to motivation is useful (Markland, Ryan, Tobin, & Rollnick, 2005; Ryan, 1995; Zimmerman, Bandura, & Martinez-Pons, 1992). Through the application of motivational theory on the formation of student perceptions, both high schools and colleges can find additional resources to support student achievement and improve motivation (Zimmerman et al., 1992). Motivation can serve as an insight to the formation of certain perceptions and their impact on student academic performance (Zimmerman et al., 1992). Fundamental to self-determination theory is the principle that individuals have innate organizational tendencies to grow, integration of the self, and resolutions of psychological

inconsistency (Markland et al., 2005; Ryan, 1995; Ryan & Deci, 2000). Students begin their educational career with a desire to learn and self-motivation (Markland et al., 2005; Ryan, 1995; Ryan & Deci, 2000). It is the experiences of success and failure that shape students' perceptions and determines the path a student takes (Alaie, 2011). Positive and negative experiences have different effects on motivation and academic achievement for each student (Alaie, 2011).

Students enter school and begin to discover what achievement means to them as well as set academic goals (Zimmerman et al., 1992). For example, a student being praised for doing well in a spell test now sets academic goals to continue to do well because of the satisfaction gained from being praised. For some students' success can be minimal mastery of a topic, while for others it may be exceeding mastery of a topic (Tollefson, 2000). The perceptions they form about characteristics needed for success in school leads to the development of perceived self-efficacy for academic achievement as well as other domains of functioning (Zimmerman et al., 1992). Students' behaviors in the classroom begin to reflect "their personal, implicit theories about the variables that produce success or failure in school" (Tollefson, 2000, p. 64). Motivation can serve as a precursor to determine if highly motivated students have better perceptions of their experiences at an ECHS (Tollefson, 2000). Students who are highly motivated may form different perceptions of the same experiences compared to their lower performing peers. Students' perceptions of ECHS and college courses can be considered within the frameworks of different cognitive theories of motivation to help institutions shape the experiences of students who experience failure and change perceptions, increase motivation and in turn increase academic performance.

Cognitive Theories of Motivational Frameworks

Expectancy-value theory. According to Vroom (1964, as cited in Van den Broeck, Vansteenkeiste, Lens, & De Witte, 2009), expectancy-value theory is a "cognitive-motivational model in which individuals' motivation to strive for or choose a particular goal is regarded as a function of their expectancies to successfully attain this goal" (p. 5). Expectancy-value theory provides one framework that allows for student perceptions to be viewed in relation to course completion. The amount of effort resulting in performance, the result of performance based on reward, and the perceived value of the reward are the products of motivation (Kini & Hobson, 2004; Tollefson, 2000; Van den Broeck et al., 2009). A student's perceptions about how well they perform at a task may determine if the task is attempted or not (Kini & Hobson, 2004; Tollefson, 2000; Van den Broeck et al., 2009). Those tasks which a student may find difficult and uncertain of receiving a high grade, could lead to the expenditure of a minimum effort (Van den Broeck et al., 2009).

Vollmer (1986) implemented effort calculation theory in order to determine if the perception of task difficulty and personal ability influenced the calculated expectancies for the levels of effort expenditure on the task. Students' who have prepared for the exam and perceive they perform well based on this preparation demonstrate a better effort at completing the exam and the resultant reward in this situation is the grade (Vollmer, 1986). It was determined that the time spent studying and the perceived ability were significant predictors of the expected grade (Vollmer, 1986). According to Vollmer (1986), having the perception that the performance on the exam will be positive based on the time spent preparing and the student's own abilities leads to the expected grade matching the actual grade. Noted within Vollmer's (1986) study is the measure of effort expenditure and the number of words in the exam response could have been

confounded by students' prior knowledge. It may not be wise to say students who provide long elaborate responses or who studied for longer periods of time will pass an exam as prior knowledge is a variable that can work in favor of the student or against (Vollmer, 1986). Students who have formed misconceptions and integrated them into their memory now are at a loss due to misconceptions or errors in information (Thompson & Logue, 2006). The misconceptions acquired by students make it difficult for students to learn a topic in depth or even build on what they know (Thompson & Logue, 2006). On the other hand, a student can have a solid foundation on a particular topic, in which case the calculated amount of effort could just have been due to what the student already knew and not necessarily how hard they tried on the exam (Vollmer, 1986).

According to Pintrich and DeGroot (1990), students who valued achievement tasks reported higher use of cognitive and self-regulation strategies. "Students who believed they were capable were more likely to report use of cognitive strategies, to be more self-regulating in terms of reporting more use of metacognitive strategies, and to persist more often at difficult or uninteresting academic tasks" (Pintrich & DeGroot, 1990, p. 37). Those students with a belief in the importance of a task and interest, would exercise the use of strategies and self-regulation strategies which correlated with student achievement measures (Pintrich & DeGroot, 1990). According to Pintrich and DeGroot (1990), a strong relationship exists between implementation of cognitive strategies and self-regulation:

> Students who were motivated to learn the material (not just get good grades) and believed that their schoolwork was interesting and important were more cognitively engaged in trying to learn and comprehend the material. In addition, these students were more likely to be self-regulating and to report that they persisted on their academic work. (p. 37)

Students cannot be expected to perform well on all tasks simply because they are high performing students (Pintrich & DeGroot, 1990). It is important to provide meaningful tasks that keep them motivated and encourage top performance (Pintrich & DeGroot, 1990). The value assigned to seat work, exams, and essays influenced the willingness to engage in cognitive and self-regulation strategies, which correlated to higher classroom achievement (Pintrich & DeGroot, 1990). When students place value in the activities, exams or essays, it is more likely the student will integrate learning strategies and place forth more effort increasing achievement (Pintrich & DeGroot, 1990). This ties back to the need of understanding student perceptions in order to determine the effect on course completion. Understanding which assignments influence the willingness for students to engage in cognitive and self-regulation strategies leads to the development of similar assignment used to teach and aid in the development of cognitive and self-regulation strategies (Pintrich & DeGroot, 1990; Zimmerman et al., 1992).

Self-efficacy. Bandura (1997) defined self-efficacy as "the belief in one's capability to organize and execute the courses of action required to produce given attainment" (p. 2). A major premise of Bandura's (1997) work is a student's ability to make interpretations based on prior accomplishments and failures and to set goals based on those interpretations. A person's efficacy beliefs influence choices made, course of action, expended effort, and persistence in the face of difficulty or failure (Bandura, 1997). Students who lead a successful academic career have better perceptions of their own self-efficacy (Bandura, 1997). The effort exerted in courses is based on prior experiences which have shaped a student's perceived capability and expectations (Bandura, 1997). Students with high self-efficacy will expend more effort on a task and persist when faced with difficulty (Bandura, 1997; Schunk & Pajares, 2005; Tollefson, 2000). For such students, difficulties encountered during a task become a challenge they know they can overcome.

However, students with low self-efficacy due to prior failure often fail to persist when faced with a challenge. Self-efficacy expectancies are not definite and may change through the different experiences encountered and processed (Schunk & Pajares, 2005). Understanding the underlying perceptions of students who attend ECHS may prove valuable in aiding students with low self-efficacy to develop and change their efficacy expectancies (Duggan, 2009; Schunk & Pajares, 2005; Tollefson, 2000). According to Woodcock and Beal (2013), the transition from high school courses to college courses is sometimes difficult. Students have to adapt from having a teacher responsible for their learning to learning being responsibility of the student (Alaie, 2011). Students who experience difficulty with the transition between high school courses and college courses require extra support to learn how to take experiences of failure and process the experience to positively affect self-efficacy (Woodcock & Beal, 2013). According to Tollefson (2000), "for efficacy expectations to be enhanced by mastery or success on a task, success on the task needs to be attributed to ability or effort" (p. 68). Students still need to be provided a challenge they can master and not simply given an easy task in order to enhance efficacy expectations.

Goal orientation theory. Mastery, performance approach, and performance avoidance are three established facets of goal orientation theory, which focuses on motivation being a manifestation of students' goal pursuit rather than innate traits (Ames, 1992; Midgley et al., 2001; Pintrich, 2000). Brookhart, Walsh, and Zientarski (2006) stated, "Students' perceptions of the assessment task (interest, value, importance), perceptions of their ability to accomplish it (self-efficacy), and perceptions of the reasons why they might want to accomplish it (goal orientations) are positively related" (p. 157). As motivation is focused on goal pursuit, the difference between performance goals and learning goals has to be established. Students with

performance goals take failure as a determinant of low ability, where students with learning goals see failure as a cue to differentiate the strategy used for completing the task and increase efforts (Tollefson, 2000). Perception of the significance of the outcome varies depending on the type of goal set by the students (Ames, 1992; Midgley et al., 2001; Pintrich, 2000). Students in ECHS who set learning goals will have a different perspective than those focused on performance goals. Brookhart, Walsh, and Zientarski (2006) found in their study that conceptualized motivation is a combination of perceived self-efficacy as well as mastery and performance goal orientations. This leads to a broader motivational construct in which goal orientation theory and self-efficacy theory are constructs of a higher-order motivational construct (Ames, 1992; Brookhart et al., 2006; Midgley et al., 2001; Pintrich, 2000; Tollefson, 2000).

The implementation of cognitive motivational theories to this study may help uncover the root of student perceptions and its influence shaping student motivation to increase course completion at an ECHS (Cerasoli et al., 2014; Hidi & Harackiewicz, 2000; Schaefer & Rivera, 2016; SRI, 2010; Valentine, Dubois, & Cooper, 2004). For any model seeking to understand academic achievement, motivation is a fundamental component (Cerasoli et al., 2014; Hidi & Harackiewicz, 2000; Schaefer & Rivera, 2016; SRI, 2010; Valentine, Dubois, & Cooper, 2004). Identifying how student perceptions effect course completion may help teachers and institutions understand best practices for student success (Church, Elliot, & Gable, 2001). Understanding ECHS students' perceptions may lead to aiding students in changing efficacy expectations and improved performance by providing them with academic experiences that positively influence academic motivation and achievement (Cerasoli et al., 2014; Church et al., 2001).

Review of Research Literature and Methodological Literature

The implementation of the ECHS model is intended to improve high school completion rates, as well as increase the probability of underrepresented students attending college (Conley, 2008; Jobs for the Future, 2008; Kaniuka & Vickers, 2010; Lieberman, 2004; TEA, 2016b). According to Conley (2008), the aim of ECHS is to prepare students for college and career readiness through success in general education courses without the need for remediation at 2- or 4-year institutions. The partnerships formed between ECHSs and postsecondary institutions are crucial to ensure students are provided with essential resources (Muñoz et al., 2014). Essential resources vary from proper scheduling to support services for students (Muñoz et al., 2014). "A key principle of the early college is the belief that, with the appropriate preparations and a well-designed program, high school students can successfully complete college work at an earlier age" (Muñoz, Fischetti, & Prather, 2014, p. 38). Underserved and underrepresented students do not normally perform well and so the aim is to push these students to successfully complete challenging curriculum with extra support (Conley, 2008; Kaniuka & Vickers, 2010; Lieberman, 2004). Extra support services such as tutoring, counseling, and incentives can improve the likelihood of academic success for students (Muñoz et al., 2014).

According to a comprehensive annual report performed by SRI International (2010), students attending ECHSs had positive effects in several factors. Those factors include student attendance, test performance in core subject areas, and participation in accelerated learning courses. It is important to determine the relationship between academic experiences, motivation and student achievement. The report highlights that extra support services may be developed both by college campuses and ECHS campuses to increase student course completion (SRI, 2010). Focus can be on those students who have experienced failure and how to better support

them so these students continue in the program. While the ECHS model already provides students with small class sizes and extra support not typical of the traditional comprehensive high school model, there are still students who struggle and eventually leave the program due to experiencing persistent failure (Ongaga, 2010). Further research is needed to uncover why the extra support and resources already available for these students is not enough to warrant success.

According to Tomlinson and Jarvis (2009), students benefit through the implementation of a curriculum which:

> authentically reflects the nature of the discipline it is designed to teach, engages students in complex thought and work representative of what an expert in the field would do, and helps them organize and understand the essential underpinnings of a topic and discipline. (p. 571)

ECHS have the responsibility of implementing such rigorous curriculum to students who may not necessarily have the skills to engage in such complex thinking and work (Tomlinson & Jarvis, 2009). To avoid discouraging students from particular courses or disciplines, the proper support must be implemented (Ongaga, 2010). Academic performance may suffer due to negative experiences in courses (Alaie, 2011; Dweck, 1975), the development of both academic and social support systems for students is important (Bruce-Davis et al., 2014; Lundgren, Laugen, Linderman, Shapiro, & Thomas, 2011; Marshall, McGee, McLaren, & Veal, 2011). Students entering ECHSs are met with a challenging learning environment and depending on their experiences can lead to the formation of positive or negative perspectives. It is those negative experiences and perspectives that may lead a student to not completing the ECHS program.

Alexander, Entwisle, and Horsey (1997) discuss the link between students' performance patterns and established perceptions. According to the qualitative study, as students move from one year to the next, they acquire perception of school, based on experiences at school as well as in the household (Alexander et al., 1997). The formation of negative perceptions serves as predictors towards high school completion (Alexander et al., 1997). Alexander et al.'s (1997) study highlights the importance of positive and constructive experiences in a student's educational career.

The academic experiences of ECHS students are different than that of students attending a traditional comprehensive high school (Ongaga, 2010; Shear et al., 2008). ECHSs are designed to be small high schools in which students are presented with rigorous curriculum and provided with an extra support system (Ongaga, 2010). The support implemented at ECHSs are vital to ensure student success. The small community of an ECHS allows for the formation of close, supportive and positive relationships (Shear et al., 2008). These relationships may serve to influence "academic identity, convincing students that they are capable of performing at high levels, and getting seemingly unmotivated students to come to school, stay in school, complete assignments . . . and persist on the face of academic challenges" (Saphier, Haley-Speca, & Gower, 2008, p. 319). Not all ECHS experiences students encounter will be positive and it is important for students to have appropriate support in order to move forward.

Currently ECHSs have expanded from three schools to 280 in 2014, serving about 80,000 students (Jobs for the Future, 2014; Ndiaye & Wolfe, 2016). According to Jobs for the Future (2014), 90% of early college students earn college credit versus 10% of students nationally. The college credit earned by ECHS students is also more substantial compared to college credit earned by students attending a traditional comprehensive high school (Berger et al., 2014). By

graduation, 30% of ECHS students have either earned an associate degree or other credential along with a diploma (Berger et al., 2014; Jobs for the Future, 2014). ECHSs focus on serving underrepresented students in hopes of giving them an opportunity they would not have at a traditional high school. According to Jobs for the Future (2014), the "college for all" culture motivates low-income youth, first-generation college goers, and students of color (p. 1).

Review of Methodology and Methodological Issues

This study examines the academic experiences that may influence students' academic motivation in an attempt to uncover and understand how those experiences influence academic performance. According to Kothari (2004), the use of methodology within a study requires advance planning in order to obtain maximum information with minimal expenditure. This section will focus on the methodology already implemented by other researchers and issues that arise from the implementation of different tools. For this study, it is necessary to compare quantitative and qualitative methods previously used to examine the experiences of ECHS students and their academic performance in effort to build an understanding of methodological issues. Both research designs were used to create an understanding of the benefits of the ECHS model.

Quantitative studies. There are numerous quantitative studies demonstrating either the relation or correlation between the ECHS experience and academic success (Berger, Adelman, & Cole, 2010; Curry, 2013; Edmunds et al., 2016; Edmunds et al., 2010; Edmunds et al., 2013; Hall, 2013; Kaniuka & Vickers, 2010; Muñoz et al., 2014). One such study was conducted by Edmunds et al. (2016), it examined links between the ECHS program implementation and student outcomes. Edmunds et al. (2013), conducted a longitudinal experimental study, in which random assignment was used to select students from an eligible pool of students who applied to

the school. The use of random assignment in Edmunds et al. (2013) and other studies is important in ensuring there is no systematic differences within the sampling at the beginning of the experiment. Random assignment gives all participants an equal opportunity to be in either the experimental or control group, and therefore eliminating confounding variables (Edmunds et al., 2013). Furthermore, quantitative studies routinely use larger sample sizes which allows for the experimental group to be more representative of the population, ensuring validity and reliability of conclusions (Creswell, 2003).

Because quantitative studies focus on obtaining numerical data and using it to form a generalization across groups or to explain a particular phenomenon (Babbie, 2010), they do come with certain limitations. Understanding sample sizes and validity are important to the construction and implementation of a study. In the study by Edmunds et al. (2012), the sample may not have been representative of all ECHSs creating a limitation on the external validity. Requiring the sample to meet certain conditions may limit the ability of the study to be representative of the population. Participants in Edmunds et al. (2012) study were required to meet two conditions: "(a) they had to have more applicants than slots, which ruled out most schools in very small districts, and (b) they had to be willing to use a lottery" (p. 155). Meeting the conditions set forth by the researchers, automatically excluded the smaller schools, which may have resulted in different results for the study. Another limitation of quantitative studies is the inability to capture complexity and depth of value questions (Morris, 1991). Due to this study examining how the experiences of ECHS students shape their perspectives with regards to academic performance, there is a need to dive deeply into the thoughts and issues important to the students. While qualitative studies demonstrate the correlation between ECHSs and academic success, without qualitative data, there is a gap in providing detail as to how and what factors

influence the success (Cowan & Goldhaber, 2015; Edmunds et al., 2012; Edmunds et al., 2013). Quantitative studies have shown that the implementation of the ECHS model works (Edmunds et al., 2012; Edmunds et al., 2013; Edmunds et al., 2016; Muñoz et al., 2014), but do not explain why or how.

Qualitative studies. Understanding how students derive meaning from the academic experiences provided by ECHSs and their influence on academic motivation is as important as understanding the data derived by quantitative inquiry (Creswell, 2013; Yin, 2014). The use of qualitative study methods can prove helpful in uncovering themes relevant to uncovering how to appropriately shape positive experiences for students to improve student performance. Kothari (2004) described qualitative methods as follows:

> Qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is a function of researcher's insights and impressions. Such an approach to research generates results either in non-quantitative form or in the form which are not subjected to rigorous quantitative analysis. (p. 5)

Through the use of qualitative data analysis, A. Howley, M. Howley, C. Howley, and Duncan (2013) used research methods such as semistructured interviews to uncover salient themes from student accounts of event, relationships, and important issues. This study hoped to uncover themes that will help in providing meaningful academic experiences that positively motivate students attending ECHSs to increase student achievement, and the choice of qualitative methods proved wise as the researchers could gain insight as to why ECHS students experience success.

McDonald and Farell (2012) implemented the use of qualitative methods to explore and describe experiences of participants and produce a deeper understanding of behaviors, stories,

and organizational functioning. While Woodcock and Beal (2013) used mixed-methods for data collection that would enable them to gain insights into the experiences of student through focus on individual perspective. The conclusions reached were solely based on the responses of interviewees.

While there are many types of qualitative methodology, according to Baxter and Jack (2008), a case study is used to answer 'how' questions. Leonard (2014) implements a case study and used semistructured interviews with participants, giving voice to their experience and understanding. Through the use of constant comparison and inductive analysis of the data the researcher was able to increase research rigor (Leonard, 2014). Descriptive triangulation served to increase the validity of the data. Qualitative methods allowed for the extrapolation of data that improved the external validity of the study.

A major limitation of qualitative studies is the use of small and unique sample size. Qualitative studies do not allow for generalizations to be made to a larger population (McDonald & Farell, 2012). Furthermore, often the use of a small sample size does not allow for a diversity of representation and the data uncovered applies specifically to the sample used in the study (McDonald & Farell, 2012; Yin, 2014). Another limitation is that qualitative studies are reliant on participant interview responses being truthful (Yin, 2014). Researchers have to rely on how accurate and honest participants are and employ various tactics such as member checking and triangulation to ensure the trustworthiness of the data (Creswell, 2013; Yin, 2014). The implementation of qualitative research methods can prove valuable in achieving the objective of the study (Yin, 2014).

According to Mack, Woodsong, MacQueen, Guest, and Namey (2005), qualitative research has an "ability to provide complex textual descriptions of how people experience a

given research" (p. 1). Qualitative methodology serves to gain insight and build an understanding of complex issues. Through the use of qualitative methodology, this study can increase the understanding of what makes academic experiences meaningful and their influence on motivation. Due to the school being in its early stages of development, the information gained from the study may easily be applied when deciding what experiences to provide for students. Qualitative methods are effective in identifying factors, such as experiences, relationships, and educational environment to reach a better understanding of the complexity of a situation (Creswell, 2013; Mack et al., 2005; Yin, 2014).

Synthesis of Research Findings

The ECHS model was implemented to increase performance and college attendance rates in underrepresented students. School size, academic and social support, along with a rigorous curriculum are combined to shape the experiences of students and maximize students' college readiness (Jobs for the Future, 2013; Ongaga, 2010). The need to develop a better understanding of why certain experiences are meaningful to students guided the research to explore its impact on motivation and academic performance.

Woodcock and Beal (2013) identify the need for research to include voices and perspectives of ECHS students through the use of narrative inquiry. The use of student experience in research enables researchers to explore personal and social conditions. Understanding student experience serves to expand the literature on the process instead of just outcome. According to Flutter and Rudduck (2004), "the most important argument for listening to the pupil voice lies in its potential for providing schools with directions for constructing a better future" (pp. 131–132). How students interpret experiences as meaningful may aid in the development of improved programs and models.

The challenges students face when attending an ECHS calls for a need to properly support students to improve academic success and overall quality of life. A key principle of the ECHS model is the implementation of a "comprehensive support system" that engages all students to develop the academic and social skills, including the "behaviors and conditions necessary for college completion" (Berger et al., 2014, p. 2). Success in college courses is intended to be attainable by all students and not just high achievement students. The implementation of a proper support system for students both academically and socially, suggest that there is a need to address the influence of ECHS experiences in the formation of student perspectives.

Setting an environment that values academics and college increases the likelihood of underrepresented students to attend college (Koyama, 2007; Mehan, Hubbard, & Villanueva, 1994; Roderick, Nagaoka, Coca, & Moeller, 2008). If an ECHS has a college readiness environment, the perceptions of students towards college may be positively influenced. Aside from the environment, a proper support system also needs to provide students with preparation for college courses. The support system may include a college preparation class in which students are modeled proper strategies in note taking and studying. Preparation to be successful in college courses includes study skills, notetaking skills, and tutoring (Muñoz et al., 2014). ECHS students need the proper support for students to successful.

ECHSs are designed to improve the opportunities underrepresented students have in attending and completing college through college readiness, academic support, and rigorous instruction (Edmunds et al., 2012). According to Jobs for the Future (2013), the national graduation rate is 78% compared to the 90% graduation rate of an ECHS. Nationwide ECHS students outperform their peers. A principle of the ECHS model is to provide additional

academic and social support for student (Bruce-Davis et al., 2014) in order to increase the retention of underrepresented students through high school and college. The extra support ECHS students receive is vital to helping students' complete high school. Following graduation 76% of graduates enroll in college compared the national rate of 68% (Jobs for the Future, 2013). Despite the implementation of the ECHS model there is still not a 100% graduation rate. While graduation rates increase, ECHS still fails to reach all students who attend the school. Through proper implementation of the ECHS model, the creation of a college-going culture can be established which offers students access to college prep courses and the training and skills necessary for college readiness (Edmunds et al., 2010). There is still a need to examine how to create the college-going culture and relationships that support all students. Providing students with the appropriate skills and introducing them to college courses may serve to give students the motivation they need to continue a college degree after high school.

ECHSs can be distinguished from traditional high schools through the implementation of five core principles:

1. Early college schools are committed to serving students underrepresented in higher education.
2. Early college schools are created and sustained by a local education agency, a higher education institution, and the community, all of which are jointly accountable for student success.
3. Early college schools and their higher education partners and community jointly develop an integrated academic program, so all students earn one to two years of transferable college credit leading to college completion.

4. Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion.
5. Early college schools and their higher education and community partners work with intermediaries to create conditions and advocate for supportive policies that advance the early college completion (Jobs for the Future, 2008, p. 2).

Principle four stresses the importance of the ECHS model to establish a comprehensive support system that provides all students with the ability to succeed (Jobs for the Future, 2008). The ECHS model is focused on serving all students in attendance and not just high achieving students (Jobs for the Future, 2008). In traditional high schools, students who perform well academically are usually the ones offered the opportunity to take college prep and college courses (Klopfenstein, 2004). ECHSs are intended to serve the underrepresented student through additional support to allow for all students to be successful (Jobs for the Future, 2008). According to Jobs for the Future (2012), a third of students who enter postsecondary education require remedial education. "In the 21st century high schools shouldn't just make sure students graduate—they should make sure students graduate ready for college, ready for a career, and ready for life" (Obama, as cited in Jobs for the Future, 2012, p. 1). The design of the ECHS model is an attempt at bridging the gap for all students to be provided with the opportunity to catch up and succeed in college courses (Edmunds et al., 2010).

ECHS Experience

ECHSs provide students with significantly different experiences compared to students attending traditional high schools (Howley et al., 2013). Aside from exposure to college courses, ECHS students are met with a rigorous curriculum applied to their general high school courses

(Edmunds et al., 2010; SRI, 2010). The ECHS experience does not always offer all the activities found at traditional high schools (Howley et al., 2013). The accelerated curriculum may sometimes be too much for students to manage along with extracurricular activities. This is where support becomes vital. Students need to understand the importance to develop not only academically but socially as well. According to Thompson & Ongaga (2011), ECHSs provide supportive and safe spaces that help students address the challenges faced by taking college courses. The extra support provided by the school is not only in building academic skills but meant to be well-rounded and apply to all aspects of a student's life.

ECHS students clearly are at an advantage compared to their traditional counterparts because the ECHS model is focused on servicing underrepresented students to increase academic performance and college attendance rates of this demographic (Jobs for the Future, 2013; Muñoz et al., 2014; Ongaga, 2010). Jobs for the Future (2013) state the demographics of ECHSs are about 41% Latino and 22.5% Black, 61% from low-income families and 56% are first in immediate families to attend college. ECHSs do not focus on those students who exhibit high academic achievement but instead provide the support for low performing students to meet and supersede expectations (Berger et al., 2014; Howley et al., 2013; Hall, 2013). Understanding the experiences of ECHS students and how academic experiences shape a student's perceptions on academic performance may help contribute to the success of ECHSs (McDonald & Farrell, 2012).

There are numerous factors, from class size to support, that shape the experiences of ECHS students. The literature reveals appropriate implementation of the ECHS model increases the success of students in the completion of higher rigor courses (Jobs for the Future, 2013; Muñoz et al., 2014; Ongaga, 2010). ECHS students receive support to achieve academic success

(Ongaga, 2010), this study focuses on forming an understanding of how students perceive their academic experiences in order provide students with experiences that positively influence motivation and engagement.

Critique of the Literature

Significant information can be obtained about the perceptions of students in regards to aspects of school design and its potential to support college readiness (McDonald & Farrell, 2012). The ECHS model is meant to be implemented in order to prepare underrepresented students for college in an attempt to increase college attendance and degree completion (Jobs for the Future, 2013). This is not an easy task for both the ECHS and the students. Gathering insight to how learning experiences shape student perceptions can aid schools in shaping the school structure and design (De La Ossa, 2005). Therefore, the perceptions of students become a valuable tool in shaping the support needed for students to succeed in the rigorous courses offered at the high school and at the college.

In the study by McDonald and Farrell (2012), the use of focus group interviews was implemented to identify three themes regarding participants' perceptions of college readiness. McDonald and Farrell's (2012) study consisted of 198 freshmen and sophomore students enrolled in an ECHS program, who were randomly selected through a lottery process and reflected demographics parallel to freshman and sophomore student population. McDonald and Farrell (2012) discussed the limitations that occur with most qualitative studies, in which "generalizations cannot be made to a larger population, even one that shares similar college integrated coursework and an accelerated learning program design" (p. 239). The short longevity of the program did not allow for cross-examination of historical records on the impact on academic progress, college perceptions, or social and emotional preparedness (McDonald &

Farrell, 2012). Due to the program's short history, the findings are not representative of the larger ECHS population in which the program may already be well established (McDonald & Farrell, 2012). Overall McDonald and Farrell's (2012) study, along with numerous other studies, have supported the need for schools to provide customized curricula options to meet student academic needs (De La Ossa, 2005; Farrell, McDonald, & Carman, 2009; Heilbronner, Connell, Dobyns, & Reis, 2010; Kirst &Venezia, 2001). ECHSs are one option students have to meet those needs.

ECHS model is implemented with the intention for extra support, challenging curriculum, and a small community, to allow for the number of underrepresented students who attend and complete college to increase (Jobs for the Future, 2013; Muñoz et al., 2014; Ongaga, 2010). Studies have shown that ECHS students not only are more likely to progress in core college prep courses, but also more likely to remain in school (American Institutes of Research [AIR] & SRI International, 2009; Edmunds, Bernstein, Unlu, Glennie, Willse et al., 2012; Edmunds, Willse, Arshavsky, & Dallas, 2013). Edmunds et al. (2013) combined qualitative data from a previous study with quantitative data to conclude ECHS students "reported higher expectations, better relationships, more support, and more rigorous and relevant instructional practices" (p. 28). The culture of ECHSs differ from that of traditional high schools and therefore the expectations and student motivation is different as well (Edmunds et al., 2013). While these studies have demonstrated the success that ECHS students' experiences, it is important to note that this may not be applicable to all students (AIR & SRI International, 2009; Edmunds et al., 2012; Edmunds et al., 2013).

ECHS and student experience. Alaie (2011) focused on examining student experiences in which students were unsuccessful. According to Alaie (2011), the majority of research shows

the success of ECHSs, but it is important to note that not all students experience success. ECHS experiences in which students experience failure can be damaging to some students (Alaie, 2011). As Dweck (1975, as cited in Alaie, 2011) stated, "a failing early college experience may pose a threat to self-esteem, reinforce feelings of intellectual inadequacy, and actually impair future academic performance" (p. 427). The experiences of ECHS students are important in shaping and motivating students to continue tackling academic challenges. Focus should not only be on those positive experiences such as the formation of strong relationships in ECHSs, but also on negative experiences that allow for growth.

While studies have examined different aspects of ECHS students' experiences, there is still a need to focus on how academic experiences may influence motivation and improve student achievement. A gap in the literature exist when considering how the experiences of students shape the perspectives students develop in regards to maintaining motivation to achieve academically. Most of the literature focuses on student perspective and reveals common variables which result in greater success for the students in college (Byrd & McDonald, 2005; Chemers, Hu, & Garcia, 2001; Cornell, Callahan, & Loyd, 1991; De La Ossa, 2005; Drew, 2001; Matthews & Mellom, 2012; Muratori, Colangelo, & Assouline, 2003; Noble, Arndt, Nicholson, Sletten, & Zamora, 1999; Noble, Vaughan, Childers, Chow, Federow, & Hughes, 2007; Shepard, Foley Nicpon, & Doobay, 2009). Gaining an understanding of how academic experiences such as field trips, guest speakers, and environment influence student academics, motivation and achievement can provide ECHS administrators with insight on how they could better assist students academically and socially.

Chapter Summary

Presented in this chapter is an overview of the ECHS model. A main principle of the ECHS model is to provide underrepresented students with the appropriate support to achieve academic success. Through the implementation of these proper supports, students may overcome the challenges faced when taking college courses. The literature reveals the success ECHSs experience with student achievement, attendance, graduation rates, and college entrance (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2012; Jobs for the Future, 2013; Muñoz et al., 2014; Schaefer, & Rivers, 2016). A gap exists in examining the experiences of ECHS students and the influence of forming students' perceptions.

The conceptual framework focuses on my interest and experience as a teacher of ECHS students, the academic achievement perceptions influenced by academic experiences, and the relationship between perception and achievement through the implementation of a cognitive motivational theory framework. A review of the literature and methodology reveals the use of quantitative and qualitative methodology to uncover the need for ECHSs to provide students with experiences and support to be successful with the rigorous curriculum and college courses by researchers. In the review of methodological issues, a clear comparison of qualitative and quantitative methodology is examined to determine which is better suited for this study. The synthesis of the research finding explores the different factors affecting the achievement of ECHS students. Finally, the critique of the literature discusses the need for examining student perceptions with a special focus on the formation of such perceptions based on experiences encountered through attendance of an ECHS.

A primary methodology to answer such questions is through the use of a qualitative study. Based on this review of literature which develops a unique conceptual framework using

expectancy-value theory, self-efficacy, and goal orientation theory to understand student perceptions, there is sufficient reason for thinking that an investigation to form an understanding of academic experiences would yield socially significant findings. The researcher, therefore claims that the literature review has provided strong support for pursuing a research project to answer the following multi-part research questions: (a) how do ECHS students perceive their academic experiences, (b) how do ECHS students understand their academic experiences as meaningful, (c) how do the academic experiences of ECHS students influence academic motivation and engagement, and (d) how do the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement?

Chapter 3: Methodology

Proper implementation of the ECHS model has led to success in increasing student attendance and student academic success compared to their comprehensive high school counterparts (Alaie, 2011; Edmunds et al., 2012; Edmunds et al., 2016; Muñoz et al., 2014). Researchers, such as Edmunds et al. (2012), Curry (2013), and Alaie (2011), have studied the academic success, partnerships, and culture of ECHSs, but a need still exist to focus on what makes academic experiences meaningful and how those experiences may impact student academic engagement and motivation. The focus of this instrumental case study was to understand how ECHS students perceived their academic experiences as meaningful. Furthermore, it sought to understand the influence these academic experiences had on student engagement and motivation. This study ultimately sought to add knowledge to best practices which aid in the academic success of ECHS students.

According to Bandura (1991) perceptions of self-efficacy influence different aspects of an individual's life, including goals, decision-making, level of perseverance, and positive or negative thought patterns. Through the implementation of a single site, instrumental-case study, students who attend an ECHS had the opportunity to describe their positive and negative academic experiences (including field trips, guest speakers, and learning environments), specifically those which the participant considered meaningful and purposeful in their academic motivation and engagement. An instrumental case study allowed the researcher to focus on which academic experiences participants found motivating and positively impacting to their academic career.

Through an instrumental case study, the researcher had the opportunity to gain a holistic understanding of a single issue and the study itself was designed around an established theory

(Baxter & Jack, 2008; Stake, 1995; Wiebe, Durepos, & Mills, 2010). Within this study, the researcher gained a holistic understanding of how ECHS students perceived their experiences as meaningful and how collectively, student experiences related to and influenced academic engagement and motivation. This study was designed to implement cognitive theories of motivation to create a deeper understanding as to what experiences were more influential and essential to increasing student motivation and engagement (Duggan, 2010). Through the application of a cognitive motivational framework, the researcher formed an understanding of how-to better support students academically and socially to increase academic motivation and engagement in ECHS students. Uncovering the root of student perceptions shaped through meaningful academic experiences and the influence in shaping student academic motivation and engagement served to increase students overall academic performance (Duggan, 2010).

Research Questions

The purpose of this study was to understand how ECHS students perceive their academic experiences as meaningful and explore the influence that such experiences had on academic motivation and engagement. Through an understanding of how students perceive academic experiences as meaningful and in turn how such experiences influenced academic motivation and engagement, administrators and educators may better provide academic experiences that positively influence student achievement (Hall, 2013). An instrumental case study was utilized to answer the research questions for this study. An instrumental case study "uses a particular case to gain insight into an issue or theory" (Wasburn, 2007, p. 66), and in this instance the academic perceptions and motivation of students influenced by academic experiences was studied. The intent of an instrumental case was to "understand a specific issue, problem, or concern" (Creswell, 2013, p. 98). In this study, students enrolled in one ECHS were selected as the case to

understand how students perceived academic experiences as meaningful and the influence of such experiences on academic motivation and engagement. This study addressed the following research questions:

RQ$_1$. How do ECHS students perceive their academic experiences?

RQ$_2$. How do ECHS students understand their academic experiences as meaningful?

Two additional research questions were asked that supported the central research questions:

RQ$_3$. How do the academic experiences of ECHS students influence academic motivation and engagement?

RQ$_4$. How do the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement?

Purpose and Design of the Study

The purpose of this instrumental case study was to form an understanding of how ECHS students perceived their academic experiences as meaningful and how such experiences influenced their academic engagement and motivation. ECHSs are designed to provide students with a demanding core curriculum compared to their traditional high school counter parts (Edmunds et al., 2016; Marcy, 2006; Ongaga, 2010; Roberts, 2012). The increased rigor of concurrent enrollment in both college and high school courses produced a need for administrators and teachers to provide the adequate support for student success (Ongaga, 2010). Integral to the ECHS model is providing students with academic experiences that surpass the traditional experience of high school (Woodcock & Beal, 2013). Academic experiences vary from academic field trips, guest speakers, to academic environment (Pascarella & Terenzini, 2005). Having a better understanding of how such experiences encouraged motivation and achievement has been critical for administrators and teachers. According to the TEA (2016a), as

part of the ECHS blueprint, schools should provide students with enrichment opportunities including:

a. The ECHS shall implement a structured program of community service to promote community involvement.
b. The ECHS shall partner with community businesses to expose students to a variety of potential career options and possible internship opportunities.
c. The ECHS shall provide college awareness to current and prospective students and families, including:
    - Application assistance,
    - Financial aid counseling, and
    - College and career counseling. (p. 5)

While students in traditional high schools are provided some opportunities to participate in internships, community service, fieldtrips, and guest speakers, ECHS students' academic experiences are scheduled into the day so that all students take part in the activity (Muñoz et al., 2014; Hall, 2013; Woodcock & Beal, 2013). Having a better understanding of how those experiences encouraged motivation and engagement has been critical for administrators and teachers. This understanding may serve in the development of academic experiences that increase achievement in students attending ECHSs.

Research Design

A case study is intended to "develop an in-depth understanding of a single case or explore an issue or problem using the case as a specific illustration" (Creswell, 2013, p. 97). As a result, this study required the development of an in-depth understanding of how ECHS students perceive academic experiences as meaningful and how their experiences influenced academic

engagement and motivation. Through the implementation of case study methodology, Ongaga (2010) was able to examine the learning experiences of ECHS students. Case study methodology allowed Ongaga (2010) to examine questions such as: "What factors influence students to attend an ECHS, what factors do students attribute to their success, and what challenges do students experiences in an ECHS" (p. 378). An instrumental case study design was selected because the purpose of this study was to form an understanding of how ECHS students perceived their academic experiences as meaningful, and how such experiences influenced motivation and engagement to increase academic achievement.

While phenomenological research may also serve this study's purpose, because a phenomenological study focused on describing the commonalities of a shared experiences of phenomenon (Creswell, 2013), a case study better suited this study as it gave the researcher the capacity to establish meaning. A case study allowed the researcher to gain a deeper understanding of the data collected and observations conducted during the case study allowed the researcher to gain insight as to how a participant interacted in different settings and better interpreted responses during an interview (Yin, 2014). As a result, the researcher had the ability to gain multiple perspectives, creating a better understanding of academic experiences and their impact on ECHS students (Creswell, 2013; Yin, 2014). Furthermore, the researcher gained a holistic understanding of a phenomenon within real-life contexts from the perspectives of those involved (Merriam & Tisdell, 2015; Stake, 1994; Stake, 1995; Yin, 2014).

Instrumental case study. According to Stake (1995), instrumental case study research focuses primarily on reaching an understanding of a particular phenomenon rather than a case itself. According to Grady (2010), an instrumental case study facilitates the understanding of a phenomenon through the development of new theory or testing out existing theory and "allows

researchers to use the case as a comparative point across other cases in which the phenomenon might be present" (p. 475). Case studies include such a limited number of participants, that it is important for researchers to keep in mind that conclusions are representative of only a small number of the population (Creswell, 2013; Yin, 2014). While findings may not be generalized for all ECHSs, they may be valuable within the case study site (Yin, 2014). The results obtained from this study served to illuminate the influence of academic experiences on academic motivation. Schramm (1971, as cited in Yin, 2014) defined a case study as "the essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result" (p. 15). This statement aligns with the goals of this study to not generalize, but instead explore what makes academic experiences meaningful to ECHS students and how such experiences impact academic engagement and motivation.

Unlike an intrinsic case study in which the focus is the case itself (Baxter & Jack, 2008), an instrumental case study focuses on the phenomenon and the case is of secondary interest to facilitate understanding (Stake, 1994). The insights gained from an instrumental case study are either used in the development of a preliminary conceptual framework or the study can be developed from already developed theories (Stake, 1995). The application of cognitive motivational theories to this study aided in forming an understanding of the influence academic experiences have on academic motivation and engagement (Kaufman et al. 2008; Ozmun 2013; McDonald & Farrell, 2012). Motivation is a fundamental component of any model seeking to understand academic achievement (Cerasoli, Nicklin, & Ford, 2014; Hidi & Harackiewicz, 2000; Schaefer & Rivera, 2016; SRI, 2010; Valentine, Dubois, & Cooper, 2004). Linking meaningful

academic experiences to the formation of academic perceptions help educators increase student performance.

Research Population and Sampling Method

This study included the participation of students attending an ECHS in Texas. The location was selected due to the researcher's access to the school and students enrolled in the school. During the current 2018−2019 academic year the school had an enrollment of approximately 360 students (Texas Student Data System [TSDS], 2018). The study site was comprised of a primarily Hispanic population similar to other high schools in the . According to TEA (2016a), the district serviced approximately 85% economically disadvantaged students during the 2015–2016 school year. TEA (2018) defined economically disadvantaged as a student who is eligible for free or reduced-price meals. The graduation rate for the district was approximately 90%. Student demographics for the school involved in this study were approximately: African American 1%, Hispanic 97%, and White 2% (TEA, 2017b). Graduation rates for the 2017–2018 academic year was 100%.

While the school's demographics were similar to the district's demographics, the ECHS differed in population size with an enrollment of about 360 students when compared to its traditional counterparts (TSDS, 2018). The implementation of curriculum was also different than at the other two district high schools. All high school core courses taken by the students were Pre-AP and much like college courses, where a class is a semester long, all high school courses were also taken in an 18-week semester (as indicated in the organizations online profile). For example, a general physics course was taught in a time period of an entire school year at a traditional high school, at the ECHS the course was only 18 weeks long and the student also received one high school credit for the course. This meant that by the end of their first high

school year, a student would have taken the 9th and 10th grade required courses in the core subjects of English, Math, and Science (as indicated in the organizations online profile).

The fast pace of the courses required faculty and staff to provide additional support to students (as indicated in the organizations online profile). The accelerated schedule required for students to learn a large amount of content in a shorter amount of time (as indicated in the organizations online profile). Support was provided for students in several different ways in order to ensure academic success. In the classroom, teachers were expected to implement best practices and differentiated instructions in order to support student learning (as indicated in the organizations online profile). Support was also offered to students in the form of tutoring almost daily afterschool and tutoring during a two-hour study hall period on Fridays (as indicated in the organizations online profile). The ECHS selected for this study is still a developing program established within the last decade. Most of the students who graduated earned a high school diploma with either an associate degree or at least 30 hours of college credit.

In purposive sampling participants were chosen based on preselected criteria relevant to the research question (Ritchie, Lewis, & Elam, 2003; Yin, 2014). For this study, participants were those attending the ECHS research site who had attended a minimum of three academic fieldtrips, guest speakers, or had at least two courses at the partner college. The use of purposive sampling in this study allowed for participants to be chosen with particular characteristics to "enable detailed exploration and understanding of the central themes and puzzles" (Ritchie, Lewis, & Elam, 2003, p. 78). Purposive sampling permitted for the exploration of student perceptions regarding how meaningful academic experiences influenced academic motivation and engagement. Morse (1991) described purposeful sampling as giving the researcher the ability to choose participants with:

> Broad general knowledge of the topic or those who have undergone the experience and whose experience is considered typical. . . . Finally, informants with atypical experiences are sought so that the entire range of experiences and the breadth of the concept or phenomena may be understood. (p. 129)

Through the implementation of purposeful sampling, the researcher obtained a holistic understanding of how students described academic experiences at the ECHS and how these experiences served to motivate student achievement (Morse, 1991). Participants who were selected for this study had taken at least two college courses on the college campus. This allowed for the researcher to gain insight into student perspectives who had experienced both the high school and college campus setting. Studies by Roberts (2012), Ozmun (2013), and Thompsons and Ongaga (2011) implemented the usage of purposeful sampling in order to demonstrate different perspectives on the phenomena. For participants who were under the age of 18, parental consent was acquired as well as participant assent. Participants were invited to participate in the study through a letter informing them of the purpose of the study and the value of their participation, given to them during their advisory period. Letters were also sent to parents to encourage the participation of their child in the study.

Instrumentation

Instrumentation was defined by Golafshani (2003) as a device constructed by the researcher for standardized administration according to predetermined procedures and includes surveys, types of interview questions, questionnaires, and observation forms. Instruments increase the reliability of the research when the results of a study can be reproduced using similar methodology (Joppe, 2000, as cited in Golafshani, 2003). Researchers use multiple instruments

within a study in order to corroborate evidence through triangulation and provide validity to the findings (Creswell, 2013).

Semistructured interviews. According to Yin (2014), "interviews are an essential source of case study evidence because most case studies are about human affairs or actions" (p. 113). In this case study, semistructured interviews served best to answer the research questions. With semistructured interviews, the researcher has the ability to combine predefined questions with "the open-ended-exploration of an unstructured interview" (Wilson, 2013, p. 24). The interviewer had the ability to guide the interview while at the same time read the interviewee and further explored emerging topics (Wilson, 2013). This study included both open-ended and closed-ended questions to fulfill the research purpose. Semistructured interviews allow for a researcher to understand the culture and gather information on complex issues through probing and clarification of answers (Wilson, 2013). Semistructured interviews were flexible in length. According to Robson (2002), he recommended arranging semistructured interviews to last from half an hour to two hours. For the purpose of this study, all interviews were held in a neutral location (such as the library) and lasted approximately 30–60 minutes. The interviews were recorded with a digital sound recorder which allowed for transcription to be easier. Transcription was conducted using NVivo transcription software and then corrections were made by the researcher to ensure accuracy.

As with any instrumentation there are strengths and weaknesses. With semistructured interviews Wilson (2013) defined the following strengths:

- May uncover previously unknown issues (in contrast to a structured interview).
- Address complex topics through probes and clarification.

- Ensure that articular points are covered with each participant and also allow users and interviewers to raise additional concerns and issues.
- Provide a mechanism for redirecting conversations that digress to far from the main topic.
- Provide some flexibility for interviewers and also allows some broad comparisons across interviews.
- Require less training time than unstructured interviews because the interviewer has a set of specific questions available as a starting point.
- Can be conducted by an outside consulting company because there is a base set of questions. (p. 26)

Semistructured interviews allowed the researcher to manipulate the interview in a manner which delve deeper into the academic perceptions of students and motivation. However, the flexibility provided by semistructured interviews is also met with weaknesses including inadequate probing questions, time consuming (particularly transcribing), and bias.

Observations. An observational protocol was used during the classroom observations. The observational protocol for this case study was adapted from Creswell (2013) and was defined as "a predesigned form used to record information collected during an observation or interview" (p. 168). A predesigned form allowed the researcher the opportunity to organize thoughts and information, as well as concluding ideas and information (Creswell, 2013). The protocol contained a header with information about the observational session, a descriptive notes section, a box around the observer's summary, a visual sketch of the setting, and a reflective notes section (Creswell, 2013). Observations served as another form of data to be used as triangulation and provided the researcher with another perspective of a student's academic

experiences (Creswell, 2013; Yin, 2014). The researcher was able to observe if there were any changes in student motivation and behavior due to the difference in the environment of the classroom (dual credit vs. high school classroom). Observations were conducted in a dual credit 11th grade biology classroom and environmental sustainability classroom located at the ECHS. This allowed the researcher to gather data on classroom setting.

Artifacts. Artifacts served as an unobtrusive method for collecting data on human behaviors (Savenye & Robinson, 2004). For this study, artifacts were collected during the interview process. According to Webb, Campbell, Schwartz, and Sechrest (1966), physical traces of behavior can also be recorded and analyzed and include types of wear and tear appearing on objects or in settings naturally. Collection of artifacts helped the researcher develop a broader perspective with regards to students' academic experiences, beyond that which could be derived from interviews and observations (Savenye & Robinson, 2004). During the interview, physical traces of behaviors were recorded and analyzed. According to Savenye and Robinson (2004), "artifacts that may help to illuminate research questions include textbooks and other instructional materials, such as media materials; memos, letters, and now e-mail records . . . and personal logs kept by subjects" (p. 1058). Participants were asked to bring in photos, t-shirts, assignments or any memento they had from a specific academic experience the participant considered meaningful. Analysis of these mementos gave the researcher a deeper understanding of how certain experiences impacted student motivation and engagement.

The active involvement of the research participant in checking and confirming the results helped to reduce researcher bias and support the credibility of this study (Birt, Scott, Cavers, Campbell, & Walter, 2016). To minimize researcher bias, member checking was implemented in this study. Member checking of synthesized analyzed data served to "explore whether results

have resonance with the participants' experience" (p. 1805). Participants were encouraged to participate in the member checking. The method of member checking used for this study was an adaptation of a sequenced five-step process described by Birt et al. (2016) as synthesized member checking (SMC; see Appendix A). SMC added credibility to the findings by enabling participants to add comments "which are then searched for confirmation or disconfirming resonance with the analyzed study data" (p. 1806). SMC interviews were located in the ECHS library either before school or afterschool and lasted between 30 and 60 minutes. The SMC interviews involved the participant looking through a synthesized summary of interview data quotes and answering the following questions:

- Does this match your experience?
- Do you want to change anything?
- Do you want to add anything?

Participants were also provided with a copy of the interview for their own records. Responses were cross referenced with existing codes and integrated with new findings.

Data Collection

For this case study, data was collected through three separate, yet distinctive sources: (a) personal semistructured interviews, (b) observations, and (c) artifacts. The use of semistructured interviews, observations and artifacts assisted in addressing the research questions of the study through the analysis of themes which were central for understanding the case (Creswell, 2013; Savenye & Robinson, 2004; Yin, 2014). Previous qualitative research implemented the use of interviews as a primary method of data collection in the conducted case studies (Howely,A, Howley, M., Howley, C., & Duncan, 2013; Ongaga, 2010; Thompson & Ongaga, 2011). According to Tracy (2013), "interviews elucidate subjectively lived experiences and viewpoints

from the respondents' perspective" (p. 132). Data collected through semistructured interviews assisted the researcher in exploring how academic experiences engaged and motivated students to achieve academically. Through the active processes of interviews, the researcher had the ability to know others (Fontana & Frey, 2005) and according to Creswell (2013), the semistructured interviews allowed the researcher more freedom of discussion, identification and exploration of themes that surfaced during the interview. For this case study, semistructured interviews allowed the researcher to identify and explore how ECHS students perceive academic experiences as meaningful and the influence on academic motivation and engagement.

The implementation of observations and artifacts has also been used by researchers as a method of data collection in case study designs (Ongaga, 2010; Lehman, Wortman & Williams, 1987; Morton et al., 1982; Wright, Wintemute & Rivara,1999). Observations and artifacts provided the researcher with relevant behaviors or environmental conditions related to the anticipated issue or phenomenon. Classroom observations were conducted in an 11th grade dual credit biology and environmental sustainability course on the ECHS campus. Observations conducted for this study addressed the relevance of classroom environment to student engagement and motivation. The data collected through classroom observations informed the researcher if classroom setting (a type of academic experience) had any influence on the motivation of student performance. The artifacts collected during the interview gave the researcher insights as to what made certain academic experiences meaningful to students. The artifacts ranged from pictures, t-shirts, pins, or journals students acquired during academic fieldtrips or from guest speakers.

In order to gain access to the case study site, permission was obtained from the school district to which the ECHS is part of. The researcher first contacted the district's director of

Human Resource Department through email. The email stated the interest of the case study site and the nature of the study. No formal documentation was requested from the district other than the submission of the questionnaire which was used for the study. A meeting was then held between the researcher and the HR director in order to ensure the research met district guidelines and standards. All interview questions, parent and student consent forms were also approved by the district before any research was conducted. Before data collection begun parents were also informed of the study and consent forms obtained from them as well. A consent-to-participate form (see Appendix B) was sent home for students wishing to participate to acquire consent from parents or legal guardian. Following parental consent, students were also required to sign a minor assent form (see Appendix C). Consent forms were kept separate from data collected through observations and interviews.

Personal semistructured interviews. Semistructured personal interviews were conducted in a neutral location such as the school library or a library study room. Interviews were scheduled after school, in order to not interrupt classroom instruction. The goal of the interview was to prompt students to share significant elements of their academic experiences and perceptions. In case study research, the focus was "particularization not generalization" (Stake, 1995, p. 8). Participants were asked to share the different academic experiences they've encountered while attending the ECHS and to share what made those experiences meaningful to them and how those experiences had motivated them to perform academically.

Approximately eight to 10 students were to participate in this research study and were interviewed for 30–60 minutes and recorded with the use of a digital recorder. DiCicco-Bloom and Crabtree (2006) and Seidman (2013) recommended between 30 to 90-minute format for semistructured interviews, which give the participant enough time to reconstruct their experience

put it into context and reflect on its meaning. During any point in the interview the participant was able to refuse to answer any question or stop at any time with no risk of recourse. Due to the small size of the ECHS and status as a fairly new program, all interviewees already knew the interviewer and had already established a rapport. No current students (of the researcher's) were interviewed as part of this study. The interview resembled a casual conversation between student and researcher. As Ritchie, Lewis, and Elam (2003) discussed, a useful general principle applied to conducting interviews was to ease participants gently into the interview. All interviews were recorded from start to finish with the use of a digital recorder.

The researcher began each interview with a casual introduction, followed by sharing the purpose of the study. All interviews were initiated with the same demographic request for the participant to state their age, grade, college major and approximate number of academic experiences attended. This request was followed by a question, -can you describe learning experiences, such as fieldtrips, guest speakers, or classroom settings that you participated in that were interesting? As the interview unfolded, the researcher attempted "not to take any leading position but was a listener who gently directed the conversation to cover the main themes if necessary" (Aira, Kauhanen, Larivaara & Rautio, 2003, p. 271). Using a semistructured interview process also gave the interviewer an opportunity to ask follow-up questions for more depth and clarification when needed (Aira et al., 2003). Each semistructured interview was conducted to address the research questions presented in Appendix D.

Observations. To strengthen the validity of conclusions reached, observations also served as an additional data source. According to Angrosino (2007), observations allowed for the noting of a phenomenon in the field setting through the use of five senses (touch, sight, hearing, smell, and taste) of an observer, with the use of an instrument and recording for scientific

purposes. For this study, researcher observations were conducted as nonparticipator/observer. In this role the researcher observed and took field notes from a distance without direct involvement with the activity or participants.

The goal of the observations was to explore if classroom environment (dual credit vs. 'regular' high school) made a difference in engaging and motivating students to achieve academically. For example, did students feel a need to increase performance when taking a dual credit course compared to a regular high school course. The researcher observed teacher–student interaction and behavior during each class. During the observations, an observational protocol (see Appendix E) was used for recording information. Before beginning an observation, both teachers were asked for permission to have the researcher observe their classroom. According to district policy no consent is needed if the instructor has agreed to allow the observer in the classroom and classroom instruction is not disrupted. Based on the nature of the study, only those dealing with sensitive topics, such as drugs or abuse, require parent consent. Classroom observations do not require student assent forms as long as all information in the study is de-identified. The purpose for the study was discussed with the professional. A total of two observations occurred, one in each classroom. The observations lasted approximately 35 minutes. Upon completion of observations the researcher left the classroom quietly and later thanked the teacher.

Observations were conducted during a dual credit Biology class and Environmental Sustainability class located at the ECHS. The two classes were science–related and provided the researcher with insight into any differences in student behavior and motivation based on classroom setting. Observing and then analyzing the data gathered from a student's behavior, in terms of how class participation and engagement, differs in one classroom to the other formed an

understanding of how academic experiences are perceived as meaningful and how such experiences influenced student engagement and motivation. While the dual credit biology class was located at the ECHS, it was taught by a high school teacher and not an instructor from the college. The environmental sustainability class was a regular high school class.

Artifacts. Triangulation involved the use of multiple data sources. The collection of artifacts was conducted through the identification of four activities provided by Goetz and LeCompte (1984): "locating artifacts, identifying the material, analyzing it, and evaluating it" (p. 155). Artifacts were collected from students during the interview. Participants were instructed to bring any object they found meaningful from their academic experiences. Examples of artifacts given to participants were photographs, t-shirts, a purchased item, written reflection about the experience, or a classroom assignment. The final question of the interview requested the participant to describe why they chose the artifact and its significance.

Member checking was conducted through the use of the SMC process (see Appendix A). Birt et al. (2016) used the SMC process in a semistructured, in–depth interview study. Participants involved in the interviews were also asked for approval to participate in SMC. Participants reserved the right to refuse to participate in this process with no recourse. Member checking occurred within a period of 3–6 weeks after the interviews had taken place. The location was at the school library before or after school. The purpose of the member check was to "explore whether results have resonance with the participants' experience" (Birt et al., 2016, p. 1805). Participants were able to review a prepared synthesized summary and interview data quotes, after which they were asked to comment and answer questions about whether the analysis matched their experience, make changes, or add information. Upon completion of the SMC participants received a copy for their records. The researcher then added written responses

to the data set and cross reference with existing codes. New data was then integrated or used to clarify findings.

Identification of Attributes

Attributes in a study "represent how an individual or individuals in an organization feel, behave, or think "(Creswell, 2012, p. 113). In qualitative research attributes were expressed as constructs and stated in an abstract, general manner (Yin, 2016). This study formed an understanding of how ECHS students perceive academic experiences as meaningful and the influence of academic experiences on academic motivation and engagement. The examination of data collected through observations, interviews, and artifacts on academic experiences allowed for the formation of an understanding of the influence experiences have on a student's academic motivation and engagement. The researcher focused on the following academic experiences:

- Field trips involved the actual transportation of students to another location for academic purposes, such as a museum, park, or business.
- Guest speakers at the ECHS ranged from experts in any of the STEM fields that either physically made presentations to students, to online webinars with professionals in the classroom.
- Classroom setting experiences involved changes in location, such as a class at the high school campus compared to taking a course at the college campus.

The range of academic experiences served as an attribute to the formation of academic perceptions and motivation.

Data Analysis Procedures

According to Creswell (2013) data analysis "consists of preparing and organizing the data for analysis, then reducing the data into themes through a process of coding and condensing the

codes, and finally the data" (p. 180). For this study, semistructured interviews and observational field notes were coded electronically through the use of NVivo software. Saldaña (2009) identified participant activities, perceptions, tangible documents, and the researcher's own reflective data and observer's comments in the field notes were substantive material for coding. All data was examined through the use of descriptive coding. NVivo 12 software "efficiently stores, organizes, manages, and reconfigures your date to enable human analytic reflection" (Saldaña, 2013, p. 28). Descriptive coding was "useful when you have different types of data gathered for one study, such as interview transcripts, field notes, and documents" (Saldaña, 2011, p. 104). The data collected in the study was uploaded to NVivo 12. This study used descriptive coding to analyze the semi structured interviews and classroom observations. The implementation of descriptive coding helped the researcher develop a more general picture of the data and also make a meaningful interpretation.

In order to prepare the data for analysis, after the completion of each interview, notes and additional thoughts or questions regarding the interview were handwritten. Interviews were then transcribed from the audio file by being uploaded to NVivo Transcription. NVivo Transcription enabled the researcher to make amendments, notes and tag speakers through a specialized editor and directly import the transcribed file into the NVivo 12 software. The transcripts from each interview were then assigned a pseudonym to protect the privacy of the participants. Interviews were coded in order to provide the link between data and ideas (Saldaña, 2009). All transcripts were coded and analyzed electronically through the use of NVivo 12 software (Saldaña, 2009). During the coding process the following general list of questions by Emerson, Fretz, and Shaw (1995) were considered:

- What are people doing? What are they trying to accomplish?

- How, exactly, do they do this? What specific means and/or strategies do they use?
- How do members talk about, characterize, and understand what is going on?
- What assumptions are they making?
- What do I see going on here? What did I learn from these notes?
- Why did I include them? (p. 146)

Throughout the coding process, member checking was also used by consulting the participants themselves during analysis to validate findings as this increased the trustworthiness of the data. Member checking interviews were scheduled with participants who chose to participate. Due to the collection of interviews and observations, descriptive coding allowed the researcher to cluster codes into similar categories to detect patterns such as frequency, interrelationship, and initial work for grounded theory development (Saldaña, 2011). This study relied on the analysis of academic experiences and why students viewed such experiences as meaningful and their influence on academic motivation and achievement. When coding the data, the researcher looked for descriptors concerning meaningful experiences, interest, motivation, and academic achievement (Saldaña, 2013). This allowed the researcher to identify emerging themes which allowed for the data to be synthesized and analyzed (Saldaña, 2013). The findings provided administrators and teachers with an understanding of which academic experiences will best help improve students' academic motivation and engagement.

Limitations and Delimitations of the Research Design

Case studies involve the collection of multiple sources of information to investigate a real-life case or multiple cases over time (Creswell, 2013). According to Creswell (2013) and Yin (2014) a case study approach has many benefits, such as understanding complex social phenomena and retaining a holistic and real-world perspective. Particularly for this study, a case

study approach allowed for the researcher to examine the perceptions held by ECHS students and uncover themes about which academic experiences benefited academic motivation and engagement. While case study research has its benefits, a case study also has limitations.

Limitations. Limitations which arise with a case study is that analysis and interpretation become very time consuming due to the volume of data collected (Anderson, 2010). Time constraint was a variable affecting the decisions made by the researcher (Ritchie, Lewis, & Elam, 2003), for this reason the researcher reduced the number of participants from 15–20 to 8–10. According to Ritchie, Lewis, and Elam (2003), as the study develops, sample sizes diminish if unnecessary data is collected that does not aid the purpose of the study. The researcher established boundaries in order to make the amount of time spent on data analysis and interpretations reasonable. Qualitative research is labor intensive, and the analysis of large samples can be time consuming and impractical (Ritchie et al., 2003).

Strauss and Corbin (1998) discussed saturation as being achieved "when no new information seems to emerge during coding, that is, when no new properties, dimensions, conditions, actions/interactions, or consequences are seen in the data" (p. 136). Factors influencing saturation in qualitative studies are outlined by Ritchie et al. (2003):

> The heterogeneity of the population; the number of selection criteria; the extent to which 'nesting' of criteria is needed; groups of special interest that require intensive study; multiple samples within one study; types of data collection methods use; and the budget and resources available. (p. 84)

The resources available for this study were a primary factor in saturation of the sample size. The smaller sample size permitted the researcher to perform more in-depth examination of the data (Saldaña, 2011). The ability to conduct a more in-depth examination, gave the

researcher the ability to explore student perceptions and academic motivation regarding academic experiences.

Limitations with regard to observations conducted during this study were keeping track of recording quotes and field notes. Creswell (2013) discussed the challenges with observations included: remembering to take field notes, accurate recording of quotes, and funneling observations from broad picture to narrower one in time and becoming overwhelmed with information at the site. For the researcher, this was the first-time conducting observations. Specific behavior that the researcher looked for was class routine, student engagement, discussions, and student participation. To increase the efficiency of taking field notes and quoting, prior observations were conducted to allow the research opportunity to practice.

As with observations, interviews also had their limitations. Creswell (2003) defined the limitations of interviews as follows: filtration of information through the students, researcher bias, and the inability of people to be equally articulate and perceptive. During the interview process it proved valuable for the researcher to pay close attention to a participant's behavior and take note of the manner in which questions were answered.

Delimitations. A delimitation of this study was the grade level from which participants were chosen. The majority of the students were upperclassmen in their junior and senior year. The small school population in terms of both faculty and students, limits the students who could participate in the study. Freshmen have not yet taken college courses and were therefore not included in the study. Half of the sophomore class were students in the researcher's class and were therefore also excluded from the study.

Denscombe (2010) discussed the "interviewer effect" in which different factors influenced the amount of information participants were willing to reveal in an interview. The

reason behind the interviewee, in this case the student, may limit the amount or type of information shared with the researcher can be a number of things. The participant may have felt speaking ill of the school or academic experiences may affect them in some manner or the participant may have though that they can only say positive information about their experiences. The key here was to form a trusting relationship between the interviewer and interviewee, so that questions were answered honestly. The use of interviews and observations gave the researcher the ability to conduct an in-depth examination of participants' academic perspective based on academic experiences provided by the ECHS and their influence on academic motivation and engagement. Examining the data collected allowed for the formation of an understanding of which academic experiences participants perceived as valuable and influential to their academic careers, which may help administrators and teachers decide which academic experiences to provide for students.

Validation

According to Creswell (2013), validation was to be employed through accepted strategies to document the accuracy of a study. Creswell (2013) and Creswell and Miller (2000) focused on the following eight strategies to establish validation of a study: prolonged engagement and persistent observation, triangulation, peer review or debriefing, negative case analysis, clarifying researcher bias, member check, rich, thick description, and external audits. For this study, triangulation was used as the main validation strategy. In triangulation, researchers "corroborate evidence from different sources to shed light on a theme or perspective" (Creswell, 2013, p. 251). For this study, the researcher examined and coded both interviews and field observations, along with the notes taken on artifacts, in order to provide validity to the findings. The researcher also implemented member checking by taking the preliminary data analyses back to participants

and allowed them to judge the accuracy and credibility of the account (Creswell, 2013). According to Stake (1995), participants were allowed to examine rough drafts and to provide alternative language, "critical observations or interpretations" (p. 115). This study implemented member checking to decrease researcher bias and increase validity. Validity was defined as "how accurately the account represents participants' realities of the social phenomena and is credible to them" (Schwandt, 1997, as cited in Creswell & Miller, 2000).

Credibility. A researcher may choose to establish credibility and validity of the study through triangulation. Creswell (2013) defined triangulation as a process involving the corroboration of evidence from different sources to reveal a theme or perspective. This study made use of triangulation to provide validity to the findings. The interviews, observations, and artifacts served as different sources of data to provide corroborating evidence. According to Patton (2002) and Mathison (1988), triangulation strengthens a study through the combination of different kinds of methods in order to control bias and establish valid propositions. Data triangulation increased the scope, depth and consistency in methodological proceedings and therefore provided a more solid foundation for findings (Flick, 2014). Interviews and observations were triangulated through the process of coding.

Dependability. The nature of qualitative studies does not enable a study to be easily replicated due to the variations between individuals and contexts (Petty, Thomson, & Stew, 2012). Yilmaz (2013) stated dependability is comparable to reliability and is achieved when consistency over time exist in the process of the study across different researchers and different methods. According to Shenton (2004), to ensure the dependability of a study a thorough understanding of (a) the research design and its implementation, (b) the operational detail of data gathering, and (c) reflective appraisal of the project should be reported. Dependability allows for

a qualitative study to be repeated and possibly achieve the same or similar results (Shenton, 2004).

Expected Findings

The purpose of this study was to form an understanding of how ECHS students perceived their academic experiences as meaningful and how such experiences influence academic motivation and engagement. Past qualitative studies conducted by Edmunds et al. (2013), Kaniuka and Vickers (2010), and McDonald and Farrell (2012), focused on the success of ECHSs and the perceptions of faculty with relation to student success. This study anticipated to fill in the gap as to which academic experiences impacted students the most in their academic career. Understanding how students perceived their academic experiences as meaningful lead to the ability of ECHS teachers and administrators to provide students with academic experiences which academically motivate and engage students to continue in the rigorous program. The researcher expected to uncover how academic experiences influence student engagement and motivate them to achieve academically. It was also expected that students taking courses on the college campus and dual credit courses, would put forth more effort in the classroom and would be more motivated than students attending courses at the high school campus. The researcher also expected for guest speakers to have served as motivators and interest students in fields they have not previously considered.

Ethical Issues of the Study

According to Creswell (2013), ethical issues arise during several phases of the research process and therefore it is important to examine issues that arise and plan for those issues the researcher already anticipates. The researcher began by seeking approval from Concordia University's Institutional Review Board (IRB) before any data collection could start. For this

study, the anticipated ethical issues involved local site permission, parental consent, student assent, and confidentiality. While waiting for IRB approval, the researcher contacted the Executive Director of Human Resources for the district by email in order to gain access to the site. The proper procedure for gaining access to the study site was important in order to avoid ethical issues due to the participants being minors at the public school. The email asked for permission to conduct the study at the ECHS in the district and informed the director of the purpose for the study as well as methodology. Following the email, the director met with the researcher in order to ask clarifying questions about the study. The researcher was also instructed to email all interview questions to the director for approval prior to implementation.

In order to address the issue of using a minor for academic research, the researcher informed the parents of the study in which their child would be asked to participate, and a parental consent form was not needed for this study. District policy allowed for the parents to be informed of the study but does not require a consent form (for the district), due to the nature of the study (STEM Early College High School, 2018). According to Yin (2014), because case studies are about human affairs there is a need to protect human subjects. Vulnerable populations, such as children, require the researcher to be sensitive to their needs in order to be ethical (Creswell, 2013). Obtaining appropriate consent and informing participants of options was a method of addressing the needs of a vulnerable population. Parents were given the option for their child to not participate or withdraw from the study without the fear of repercussion. Informing participants that there were no repercussions for withdrawing or lack of participation to avoid pressuring participants into participating (Creswell, 2013). A student assent form was required and was collected from the student. In both the informational letter to parents and student assent form, participants and parents were informed of their right to withdraw from the

study at any time without fear of repercussions. Parents were also informed of their right to not have their student participate.

In order to avoid issues of confidentiality, the researcher collected all student assent forms and placed them in a folder contained in a locked file cabinet, which was not easy to access by others. All field notes and interview notes did not contain personal identifiers, but instead were assigned a pseudonym. Transcripts were also assigned the corresponding pseudonym. All notes and transcripts were secured in a locked file cabinet located within a locked storage room. All electronic data such as digital recordings of interviews, transcripts, and data uploaded to NVivo software was maintained in the researcher's personal desktop computer at home. The computer was only accessed by the researcher and did have a digital password in order to gain access to any programs. All data, including electronic and researcher notes were to be destroyed at the completion of the study.

Conflict of interest. Due to this study relying on interviews and observations, two main ethical issues were the researcher/participant relationship and the researcher's subjective interpretations (Creswell, 2013; Ramos, 1989). The researcher is employed at an ECHS and therefore already had experience with students who attended ECHSs. Students were informed of the purpose of the study and any questions were answered prior to beginning the interview. The researcher remained aware of their background as a teacher and bracketed feelings and biases. The researcher's own understanding of ECHSs were suspended in order to cultivate curiosity (Creswell, 2013).

Chapter 3 Summary

The purpose of this instrumental case study was to form an understanding of how ECHS students perceived their academic experiences as meaningful and how academic experiences

influenced academic motivation and engagement. Interviews and observations were coded and triangulated in order to address the research question. The interviews and observations conducted in this single case study revealed why academic experiences are meaningful to students and how they influenced student academic motivation. Through the implementation of cognitive motivational theories, the researcher analyzed the data gathered and determined how academic experiences motivated students to perform academically. The benefits of this study were to provide faculty and staff of the ECHS with insight as to which academic experiences provided students with the greatest academic outcomes.

Chapter 4: Data Analysis and Results

The purpose of this qualitative instrumental case study was to ECHS students' perceptions of their academic experiences and how those experiences influence their academic motivation and engagement. The study was conducted at an ECHS located in Texas. The research site is one of four high schools with similar demographic composition as the larger comprehensive high schools in the district. The semistructured interview questions, classroom observations, and artifacts were focused on answering two primary research questions and two additional questions, which support the primary questions. This chapter includes a description of the sample, the processes used to interview, record, and gather data, results of data analyses, and findings of the study.

Research Questions

The study was guided by the following research questions:

RQ_1. How do ECHS students perceive their academic experiences?

RQ_2. How do ECHS students understand their academic experiences as meaningful?

Two additional research questions were asked that supported the central research questions:

RQ_3. How do the academic experiences of ECHS students influence academic motivation and engagement?

RQ_4. How do the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement?

The ECHS research site's current enrollment is approximately 360 students (TEA, 2019b). Through the immersion of students into college courses the ECHS model has aimed to better prepare students for higher education courses (Edmunds et al., 2012; Edmunds et al., 2016; Lieberman, 2004). By understanding how ECHS students perceive their academic experiences as

meaningful and how such experiences influence their academic motivation and engagement, additional support can be provided to help students increase student academic achievement and completion of the ECHS program.

The application of a cognitive motivational framework was used to guide the qualitative case study. The framework was grounded on expectancy-value theory, self-efficacy, and goal orientation theory. The interviews and artifacts gave participants the opportunity to describe personal academic experiences and how such experiences motivated (influenced) them. According to Baxter and Jack (2008), an instrumental case study is designed around an established theory permitting the researcher the opportunity to gain a holistic understanding of a single issue. The implementation of an instrumental case study allowed the researcher to answer the research questions through analysis of data collected from semistructured interviews, artifacts, and classroom observations.

Description of the Sample

Thirteen students enrolled in a Texas ECHS volunteered to participate in this study, and while all 13 students returned the consent forms, two were unable to participate due to conflicts in their schedule. In order to avoid disturbing instructional time, recruitment occurred during an advisory period. The advisory period on campus gives the students the opportunity to seek help with classwork or read silently. No instruction is delivered during this period; instead it is reserved for the dissemination of information and is only 30 minutes long. Recruitment consisted of the researcher visiting eight advisory classes that consisted of only 10th- through 12th- grade students. During recruitment participants were informed of the purpose of the study and any questions from participants were addressed. Consent forms and parental permission forms were given to interested students and the researcher requested for forms to be turned in by the end of

the end of the upcoming week. As students returned the consent and parental permission forms, the researcher scheduled the interviews during a period of two weeks following the requested due date for the forms to be turned in. All 11 participants were able to return 3 weeks following their interview to conduct member checking.

The sample size consisted of six male and five female participants between the ages of 16–18, and all brought artifacts to the interview. Six of the of the participants were pursuing bachelor's degrees in engineering, two in computer science, one in biology, one in environmental science and one in journalism. Seven participants were 11th graders and four were 12th graders, who spent most of the school day on the college campus, due to being enrolled in 3–4 college classes and between 1–2 high school courses. Table 1 provides a detailed description of each participant and the artifact brought to the interview (pseudonyms were used in order to maintain confidentiality):

Table 1

Study Participants

Name	Grade level/ # College courses	Description
AA-01	12th 4 college courses	AA-01 is a 17-year-old, pursuing a degree in computer science. As an artifact they brought in his drive team badge from a robotics competition.
EC-02	11th 3 college courses	EC-02 is a 16-year-old, planning to major in engineering after high school. They are unsure if they will focus on electrical or civil engineering after graduating high school.
PP-03	11th 3 college courses	PP-03 is a 16-year-old, planning to major in petroleum engineering after high school.
AM-04	12th 4 college courses	AM-04 is an 18-year-old, pursuing a degree in computer science.
RA-05	11th 3 college courses	RA-05 is a 16-year-old, planning to major in engineering. They are not sure if their focus will be on mechanical or civil engineering.

Table 1 (continued)

Name	Grade level/ # College courses	Description
MA-06	12th 4 college courses	MA-06 is an 18-year-old, pursuing a degree in biology. Environmental sustainability is a possible focus for further studies.
CJ-07	12th 4 college courses	CJ-06 is a 17-year-old, pursuing a degree in journalism. The courses taken while attending high school focused on a biology major because journalism was not an option.
OS-08	11th 3 college courses	OS-08 is a 16-year-old, planning to major in mechatronics, which is a combination of mechanical and electrical engineering.
SC-09	11th 3 college courses	SC-09 is a17 year old, planning to major in engineering. They are still not sure what field of engineering to focus on but enjoys building robots.
TT-10	11th 3 college courses	TT-10 is a 16-year-old, who has chosen to major in engineering for his associate degree but is unsure what he will measure once he has graduated from high school.
VS-11	11th 3 college courses	VS-11 is a 16-year-old, who during the interview stated their major as science in hopes of becoming an astronaut. When he attended the member checking interview, he stated he now wanted to pursue a degree in environmental science.

Two classroom observations were conducted. The first classroom observation was conducted in an 11th grade environmental sustainability high school classroom which consisted of 18 students. The observation lasted approximately 35 minutes during which the researcher focused on the interaction between the female teacher and the student's engagement on the assignment. The classroom was a combination classroom and lab room in which 12 smaller tables were in the center of the room forming six groups and 4-larger lab tables were bolted to the floor at both sides of the room. Students were seated in pairs or groups of three and located throughout all tables in the room. The students were conducting a lab on genetically modified corn. The teacher walked around the room to answer questions and asked probing questions

about the material. All students were engaged and working on the lab. Students, as well as teacher, were wearing aprons, gloves, and safety goggles.

The second classroom observation was conducted in a dual credit biology classroom with the same layout as the environmental sustainability classroom. The class consisted of 15 students, two of whom were 12th graders and the remainder were 11th graders. Students sat in the smaller tables in the center of the room in groups of four and one group of three. The observation lasted approximately 35 minutes. Students and teacher were wearing an apron, gloves, and safety goggles. The class was conducting fetal pig dissections. All students were engaged and participating in the activity. Students were standing around the organism and were taking turns while dissecting the fetal pig to find different organs and discuss their function with one another and the teacher as well. Throughout the entire observation the teacher continuously made her way around the room. Notes were taken using an observational protocol (see Appendix E).

Research Methodology and Analysis

For this qualitative case study, an instrumental case study approach was implemented to achieve the study's purpose. The purpose of this study was to gain an understanding of how the experiences of ECHS students influence academic motivation and engagement. The implementation of an instrumental case study allowed for the researcher to ground the study on cognitive theories of motivation. According to Stake (1995), an instrumental case study allows the researcher to focus on a phenomenon instead of the case itself and allows the researcher to either develop a new theory or use existing theories to ground the study. Data was collected through semistructured interviews, classroom observations, and collection of artifacts.

Coding. The process of data analysis consisted of preparing and organizing the data, and the use of coding and condensing codes to reduce data into themes (Creswell, 2013**)**. Following the semistructured interviews, the recordings were transcribed by the researcher with the use of NVivo transcription. The use of NVivo transcription helped minimize the time it would take to manually transcribe all the interview recordings. Each of the recordings was uploaded into the software, and once the transcript was ready the researcher went through and made any corrections to the transcript where the software had not correctly transcribed the conversation. Coding was conducted using NVivo 12 software. Transcripts, field notes, and interview notes were uploaded to the software in order to begin coding.

Collected data was first coded using descriptive coding. According to Saldaña (2013), descriptive coding summarizes the basic topic of the qualitative data and is appropriate for all qualitative studies. Descriptive coding gave the researcher the ability to categorize data in order to gain an organizational grasp of the study. During the coding process the researcher referenced a copy of the research questions, theoretical framework and the goals of the study. According to Auerbach and Silverstein (2003), having these items in front of you will help the researcher maintain focus with coding decisions. For each participant three types of data were collected: interview transcript, interview notes, and notes on artifacts. Table 2 provides an overview of the artifacts brought by every participant to the interview:

Table 2

Artifacts

Name	Artifact	Description
AA-01	Drive team badge	The drive team badge was earned during a robotics competition. The participants participation in robotics was a large part of his high school experience. The badge was earned when the team advanced to a national competition. Participant proudly speaks of his accomplishments during his time in robotics.
EC-02	Keychain	Participant bought in a Seattle Space Needle keychain. The keychain was bought while site seeing Seattle. The participant was granted this opportunity after her Marine Advanced Technology Education (MATE) robotics team advanced to the international competition. The keychain reminds her of everything she was able to experience during her participation in robotics for the past three years. The Seattle trip was the farthest away from home she had ever been.
PP-03	10 pins	The 10 custom pins were collected by the participant during a Project Lead the Way (PLTW) conference in Florida. During the conference the participant along with three other students presented a project that was completed during the PLTW engineering course they took at the high school. During her time at the conference the participant collected each one of the pins from other groups of students as they presented their projects. This trip allowed for her to network and meet students with similar interest as her.
AM-04	Photographs	One picture was of the participants drive team badges collected over his four years in robotics. The second picture was of his robotics team. The pins and the pictures remind him of the relationships he formed through his participation in robotics. The large amount of time and the traveling allowed for him to form a tight knit group of friends.

Table 2 (continued)

Name	Artifact	Description
RA-05	Patch	The rectangular patch has the image of a dam and an orange fish with "B" in white lettering. Above the dam in orange lettering is the word "MATE" and in white lettering "ROV COMPETITION". The patch was given to the participant during his attendance to the robotics competition in Seattle. This was the first time the participant had been out of state. For him, being able to attend the competition reinforced the payoff of all the hard work and time that was invested in creating a remotely operated vehicle.
MA-06	Journal and Photograph	The field journal was from a previous dual credit biology course. The journal was used when as a class, the participant was taken on nature walks to study the foliage surrounding the school. The journal helped her better understand specific concepts in the course. She would like to keep collecting pictures and notes of her surroundings. The group picture was of the participant and four friends at a college visit. The picture reminds her of how through the trip she was able to bond and get closer to her friends.
CJ-07	Name tag	The name tag was from a Leadership Experience and Development (LEAD) conference in Chicago. The participant gained a sense of ownership by planning and fundraising so that she and a group of students could attend the conference. At the conference she was able to learn about the school days of students around the country and network with these students. She also learned leadership skills to improve school culture and community.
OS-08	Participation Trophy	The small trophy was given to the participant during the participation in FIRST Tech Challenge (FTC) robotics competition. This is the first robotics competition the participant attended. Even though her team did not win, this competition was a steppingstone towards her continued interest and participation in other robotics competitions.

Table 2 (Continued)

Name	Artifact	Description
SC-09	T-shirt	The shirt was a team t-shirt obtained from the participants participation on a FIRST Robotics Competition (FRC). Participating in FRC motivated the student to do well in school and learn to better manage his time. He also formed closer relationships with his teammates.
TT-10	Photograph	The participant chose to bring a photograph of himself with a group of 15 other students on a boat. The photograph was taken during a Science Club fieldtrip to Port Aransas. During the fieldtrip the students were taken on a small research boat that is used by the local university to conduct field work. The fieldtrip allowed for the participant to study local organisms in the ocean. This was significant to the student because if solidified his interest in science.
VS-11	Photograph	The photograph is of the participants best friend and himself on a fieldtrip. The participant brought in this photo because through his high school career his friendship with this individual has strengthened. They help each other out and help each other deal with the stress that comes from taking college courses. Friendship is important to the participant.

In order to increase the validity of the results the classroom observational field notes were collected from the two classrooms mentioned before. After having coded all participant data, classroom observation field notes were coded through descriptive coding as well. Through further analysis of the data, the researcher examined codes to find emerging patterns and to gain a basic idea of the perceptions held by ECHS students about their academic experiences. All data was coded to produce a set of preliminary codes by coding line-by-line. The codes which emerged during data analysis focused on the identification of descriptors of meaningful experiences, interest, motivation, and academic achievement. The codes then aided the researcher in identifying emerging themes which help fulfill the research purpose. Following the

initial set of codes, codes were organized based on their relationship to one another to form categories. During the categorization process subthemes emerged. Subthemes were then organized in order to detect overarching themes within the data. Upon analysis of the subthemes, the researcher organized the subthemes into categories of emergent themes. Subthemes were categorized based on how they related to each other. The first set of codes, emergent themes, and subthemes are found in Table 3.

Table 3

Codes, Emergent themes, and subthemes

Emergent themes	Subthemes	Codes
Theme 1: Relationships	• Positive relationships • Individualized attention • College transition • Helping others	Teacher support Engagement College vs high school courses Influence School culture Product Support Teaching styles Volunteer opportunities Community involvement
Theme 2: Experiences	• Speakers • College campus visits • Relatable guest speakers • Meaningful experiences • Interest	College Campus visits Exposure Internship Personal interest Reinforcement Vicarious experience Relevance

Table 3 (continued)

Emergent themes	Subthemes	Codes
Theme 3: Self-efficacy	• Self interest • Satisfaction • Perspective • Environment • Motivation	Application College courses College requirement Conference Disengagement Disposition Outlook Performance accomplishments Personal satisfaction Perspective Academic achievement

Member checking. The implementation of SMC minimizes researcher bias, by allowing the active involvement of participants in reviewing and confirming the results to support the credibility of the study (Birt, Scott, Cavers, Campbell & Walter, 2016). Through the SMC process (see Appendix A) participants were able to review a prepared synthesized summary and interview data quotes to which they were able to comment and answer questions, i.e. member checking, about whether the analysis matched their experience. Member checking was conducted with all interview participants to ensure the validity and accuracy of transcriptions. Participants were contacted through email and scheduled for the member checking follow-up in the same location as the original interviews. An adaptation of Birt et al.'s (2016) five-step process, SMC was used. During the SMC- interview participants were given copies of their interview transcript along with a synthesized summary of interview data quotes. Participants were asked to review the documents and answer the following questions:

- Does this match your experience?
- Do you want to change anything?
- Do you want to add anything?

All participants except for one agreed with their transcripts and did not change or add any information. That one participant made changes to their transcript due to recently changing their college major. During the interview process the participant had stated their major as environmental sustainability but had soon after the interview changed their mind to environmental science. Following the completion of member checking interviews the researcher returned to the data and analyzed the codes to search for emerging themes.

Summary of the Findings

According to Saldaña (2003), "a theme is an outcome of coding, categorization, and analytic reflection . . . it identifies what a unit of data is about and/or what it means" (p.139). After codes were generated the researcher went back through them and began thematic analysis. The preliminary themes gathered from the collected data, as noted in Table 4, were then further analyzed and formed three overarching themes to produce a coherent narrative (Saldaña, 2003). The overarching themes were the outcome of thematic analysis. The process of thematic analysis consisted of analyzing for "meaning condensation," followed by weaving together themes for "meaning interpretation" to "explain why something happened or what something means" (Rubin & Rubin, 1995, p. 57). Thematic analysis produced three overarching themes listed in Table 4.

Table 4

Overarching Themes

Theme	Supporting themes
Meaningful experiences generate supportive relationships.	• Positive relationships • Personalized support • Transition to college • Volunteer opportunities
Meaningful experiences are created through vicarious learning.	• Guest speakers from similar backgrounds • Campus visits with college students • Guest speakers with relevant information
Meaningful experiences enhance self-efficacy	• Personal interest • Satisfaction • Create a change in perspective

A key principle to ensure the credibility of the responses for the interview was the establishment of trust with participants and the follow-up member checking process. Member checking allowed for participants to feel confident that their statements and responses were not misconstrued or misunderstood. Triangulation of interviews, artifacts, and classroom observations were utilized to increase the validity of the study. The semistructured interview produced a rich narrative for the researcher to answer the research questions. Before concluding the interview, participants were asked to elaborate on why they had chosen that specific artifact to share with the researcher. Participant description about the artifact, along with researcher notes concerning the artifact were coded. Classroom observations were also coded and included in the data triangulation, as noted in Table 5. The artifacts and classroom observations further supported the narrative derived from the interview data.

Table 5

Data Triangulation

Individual Interviews	Artifacts	Classroom Observations
Themes: ○ Individualized Support ○ Extra classroom support ○ Student-teacher relationships ○ Personal interest ○ Vicarious learning ○ Volunteer opportunities ○ Mentorships ○ Guest speakers ○ Disposition ○ Personal interest/satisfaction ○ Campus visits ○ Robotics competitions	Themes: ○ Campus visits ○ Conferences ○ Personal interest ○ Robotics competitions ○ New relationships ○ New perspective ○ Motivation ○ Campus Culture	Themes: ○ Student-teacher relationship ○ Personal interest ○ Small group ○ Extra support ○ Content ○ Curiosity ○ Disposition ○ Classroom culture

Presentation of Data and Results

The following section presents the data and results gathered after data analysis. The data was collected from interview questions, observations and artifacts. Three major theoretical constructs emerged from the data to support the research questions: (a) meaningful experiences generate supportive relationships, (b) meaningful experiences are created through vicarious learning, and (c) meaningful experiences enhance self-efficacy.

Theme 1: Meaningful Experiences Generate Supportive Relationships

This study focused on understanding the perceptions of ECHS students regarding academic experiences and the influence on academic motivation and engagement. Participants indicated that the academic experiences such as small classes, volunteer opportunities, and extra support increase academic engagement and motivation through the formation of supportive

relationships. As participant AA-01 indicated, “the small classes taken on (high school) campus, give teachers the chance to really get to know us and offer us individualized help.” Participants MA-06, CJ-06, PP-03, and VS-11 mentioned the same point, indicating that participants value the relationships formed between teachers and students on a small campus. Another participant, AM-04 stated, “Even though I wasn’t a good student when I first started, the fact that teachers meet with me and my mom and they wanted me to do better, helped me to see that I needed to find motivation.” For participant AM-04 the goal to succeed academically was driven by motivation as a direct result of the parent conference displaying goal orientation theory. According to Ames (1992), the focus of goal orientation theory is based on motivation being a manifestation of student goal pursuit rather than innate traits. For participant AM-04 and several others, motivation was influenced by the academic experiences and goals set by the teachers who had established relationships with students.

Positive relationships. Analysis of the data produced the sub theme of positive relationships. Participant interviews, artifact notes and classroom observations revealed the impact of positive relationships in increase student academic motivation and engagement. In both the biology and environmental sustainability classroom the researcher observed the good rapport the teacher had with the students. The biology students were genuinely interested in the activity (fetal pig dissection). The teacher moved about the room asking questions and conversing with the students to further their interest in the topic which demonstrated a mutual attentiveness.

In the environmental sustainability class the students were working either in pairs or a small group to complete a lab on genetically modified corn. The students were immersed in the lab and asking the teacher what her thoughts were on certain points. The teacher had established

a relationship, as evidenced by questions asked by students in regards to the teachers' perspective on GMOs, in which the students felt comfortable asking the teacher about her own perspective on the content. This allowed for students to take her answer into consideration to construct their own perspective and process the content being learned throughout the lab. Both classroom observations displayed a student-teacher relationship based on mutual respect that encouraged the immersion of the students to process what they are learning.

Data collected from the artifacts highlighted the importance of relationships to the participants. TT-10, EC-02, CJ-07, PP-03, and AM-04 shared participant VS-11's thoughts when discussing the importance of their artifact. VS-11 gleefully stated,

> I choose a picture of my friend and I because I think for me, his friendship helped me get though some tough times in school. Without him I probably would have given up and left the school, but he pushed me and helped me when I need it and I try to do the same for him now. A lot of times as individuals we tend to value the things we have but forget about the people in our lives that helped get us were we are. My friend did this for me.

VS-11 also noted that the relationship formed with teachers were also critical to the improvement of his attitude towards school. Another participant, SC-09, proudly explained how he brought a t-shirt because it "it was at this competition that I learned a lot about my teammates, and we became like best friends." Almost all participants in one way or another shared that the artifact they brought in reminded them of the friendships they had formed while obtaining the artifact. For PP-03 the pins represent a trip that allowed her to form new friendships with students around the country and to strengthen her relationship with her peers that attend the trip.

CJ-07 discussed the importance of social interaction with her peers. She described how attending the ECHS was not her initial choice but once she started, she liked how small it was

and the ease of getting to know her classmates. She emphasized, as she raised her voice, the need for "connection rather than just solely academics" in 9th and 10th grade would have helped her and some of the classmates that had left the program. According to her and MA-06, TT-10, and VS-11 the school focused on academics and robotics. This created a school culture grounded on the importance of academics and one extra-curricular activity (Robotics). Robotics allowed for those students to form close relationships but ignored the rest of the student body who does not participate in robotics. Six of the participants who brought in artifacts related to robotics, discussed how through attendance of robotics competitions enabled them "to get to know" their peers. CJ-07 stated, "We have a tendency to stick with our own groups, but it's good to get to know the underclassmen." While those students who do not participate in robotics are given other opportunities to strengthen peer relationships among students in their grade level, there was still a need for social integration between grade levels. MA-06, TT-10, along with CJ-07 shared, during the interview, a feeling of exclusion because the high school "is so much about robotics, that if you don't like it (robotics) then you're forgotten." The three participants discussed feelings of "isolation," due to not being part of robotics. For these participants the formation and strengthening of positive relationships came from their classroom interactions or through fieldtrips. Participant MA-06 brought in a picture of her friends at a college visit, highlighting how the field trip brought them "closer together" and solidified their friendship.

The ECHS in this study has presented opportunities for the formation of a positive school culture focused on academics and robotics, but there is a lack of social interaction between grade levels. SC-09 explained that robotics gave him the opportunity to "get to know kids in 9th and 10th grade that otherwise, I would not have ever talked to." During the interview, PP-03 discussed the desire for "mentorship opportunities for the upper-class men." Three other

participants, CJ-07, AM-04, and OS-08, also mentioned how they "would have liked to mentored freshmen." The same participants indicated a feeling of empathy towards under-classmen because of how "stressful" and difficult it was to "get used to being in a school that demands way more that in middle school" as stated by AM-04. By pairing underclassmen with a mentor, would create supportive relationships to aid students in navigating through the program.

Personalized support. Participants described the difficulty of the ECHS courses and college courses. All participants attributed their academic success to the support received from both the high school and college faculty and staff. PP-03, MA-06, CJ-07 and TT-10 mentioned how "difficult" and "stressful" their college physics class was and expressed how "grateful" they were to receive support from their former high school physics teacher. TT-10 explained that "I couldn't go into the tutoring center because I don't know them and it's scary" but the relationship previously established with a high school teacher allowed for the participant to receive support. The two participants majoring in computer science also mentioned receiving support from their high school teacher for their college programming courses.

Participant EC-02 exclaimed, "I like how even for my high school classes I can go ask any other teacher if they can help me." For this participant the formation of a supportive student-teacher relationship allowed for her to seek help from a high school teacher. EC-02 described feeling "comfortable enough" to ask her high school teacher to "explain content" she did not understand from the college course. Participants OS-08, SC-09, and VS-11 also mentioned if their current teacher "does not explain something so that I can understand" as stated by RA-05, they often have another teacher explain the material. Those participants who are involved in robotics describe the importance of their coaches (who are the science and engineering teachers

on the high school campus sponsoring the robotics teams) in “mentoring” and aiding in “pushing me to do better” academically as well.

During classroom observations the researcher was able to observe the teacher in both classrooms making her way from one group to the next in a period of about 35 min. The researcher observed that the small class size allowed both teachers to visit with each student and ask questions which increased the depth of knowledge about the content with all students in the classroom. In the biology classroom the teacher was able to go from one group to the next several times and ask questions that kept the students engaged in the dissection and the conversation among students going. In the environmental sustainability classroom, the teacher went from one group to another asking students to reflect on the impact of GMOs in our diet. The ability of the teacher to interact with each student in their class is made possible by the small class size.

Transition to college. A key component of ECHSs is the immersion of high school students in college courses. For all participants the transition from high school to college was difficult. As OS-08 stated, “Being in a college course at a college campus is a reality check that it’s not high school and the professors are not as lenient as our high school teachers.” All participants verbalized the differences between high school courses and college courses, but the support received from teachers, counselors, and administrators made the transition much less difficult. VS-11 explained that “our 9th and 10th grade teachers taught us skills that we need to be successful in our college classes.” All participants also mentioned that when struggling with college courses and “having a hard time” with a professor, they know they can ask faculty and administration for help as to how to approach a professor.

AA-01, EC-02, AM-04, MA-06, OS-08, SC-09, and VS-11 agreed high school teachers not only focused on content but also taught them soft skills. AA-01 explained,

> I hated taking notes and even the AVID class we took freshman year, but then when I started my college course I was like 'so this is why we did it in class.' I learned the value of the skills I considered pointless in my high school courses and it made it easier for me to be successful in my college course.

Those participants involved in robotics mentioned the skills learned in robotics and how their participation, as stated by AA-01, "taught me how to manage my time." RA-05 stated "you can't just focus on robotics. You also have to remember to also make time for your schoolwork." Participants who brought in artifacts obtained during a robotics competition discussed how in order to attend the competitions the participant needed to prioritize and not procrastinate to ensure their grades would not keep them from attending. According to these participants, failure to do well academically resulted in the inability to attend the competitions. Attending the robotics competitions served as motivation to succeed academically. As participant AA-01 mentioned, "I wanted to do well in my college courses to make sure I could attend the competitions."

While attendance to the competitions increased motivation, academic success was achieved through the skills learned throughout their high school academic career. In both classrooms the researcher observed the implementation of skills for academic success. Students worked cooperatively with students in their groups to complete the task. In the environmental science course, the students self-advocated and chose roles that played to their strengths. Instead of arguing with their group members about which role each member would be assigned, the students discussed each role and then assigned the role based on who would perform it better. In

the biology classroom students demonstrated time management by noting the time and making sure to not spend too much time on one organ in order to complete the dissection. In both classrooms' students were implementing skills that could be applied in their college courses as well.

Volunteer opportunities. The ECHS at which this study was conducted encouraged students to participate in volunteering opportunities. TT-10 stated "I enjoyed when we volunteered at a nursing home on a Saturday for Science Club." It was through the participants' participation in this experience that he had the opportunity to "get to know the underclassmen better." Another participant, CJ-07 mentioned how volunteering experiences not only "made me feel good about helping others, but I was able to bond with my peers." The volunteering opportunities allowed for participants to give back to the community but also improve the relationship with peers. AM-04 recalls a volunteering experience at a marathon in which he was able to "talk to kids from our school but had never talked to". The six out of the 11 students who mentioned volunteer experiences discussed meeting students from their campus who were in different grades and forming new friendships with them. Volunteer experiences not only allow for students to give back to the community but also give participants an opportunity to network with others who are not necessarily in their grade level. For those participants performing volunteer activities was another method of meeting students from campus who they do not daily interact with.

Student-teacher relationships were not the only supportive relationships formed by participants. Fieldtrips, robotics competitions, and volunteer opportunities are academic experiences that provided participants with the ability to form positive, supportive relationships with other students. Eight of the 11 participants discussed how attending robotics competitions

out of town gave them the opportunity to "bond" with classmates, strengthen friendships and form new friendships. These relationships increased academic motivation and engagement because participants now had formed a support system in which not only adults helped but the students themselves encouraged one another.

Theme 2: Meaningful Experiences are Created Through Vicarious Learning

According to Bandura (1965, as cited in Hoover & Giambatista, 2009), vicarious learning is defined as the process in which an individual learns through seeing and/or hearing a situation. The focus of the second theme generated from the data focused on the purpose of the study to understand how the perceptions held by ECHS students influence academic motivation and engagement. Guest speakers and campus visits provided participants of vicarious learning to occur.

Guest speakers from similar backgrounds. For all participants, guest speakers which made the greatest impact on their academic perceptions were speakers who came from similar backgrounds as the participants. Nine participants discussed guest speakers who aided them in changing their own mindset about their own capabilities (self-efficacy), after hearing how these individuals shared similar childhoods and struggled in school. Participants indicated interest increased about what speakers were discussing when a speaker "faces the same challenges" participants are currently undertaking. OS-08 stated,

> I find it more interesting and pay attention to speakers who have overcome similar challenges as me. I think it's because I can relate to what they are saying, and I want to know how they overcame them so that maybe I can do the same. It's like why do I want to hear someone who is successful but didn't go through the stuff I went through. Their speeches become irrelevant to me and so then I don't really pay attention.

Most participants mentioned how they are more likely to be interested in what a guest speaker has to say if they come from similar backgrounds because it makes the "speaker more real." Identifying with a guest speaker places value in what the speaker must be saying.

Learning that despite the challenges the guest speakers faced they were able to still succeed and continue their education, formed a connection between the speaker and the participant. After attending a session with a guest speaker, nine participants now demonstrated expectancy-value theory in which they now set higher educational goals based on their expectancy to succeed at obtaining a college degree. This is demonstrated by participant VS-11, who stated, "Seeing that the speaker came from a similar background as me and that they were able to do it. Why can't I?"

Campus visits with college students. College campus visit also provided participants with vicarious learning experiences. The participants were specific in stating that not all campus visits were meaningful. Those visits that provided them with a meaningful experience were the ones in which college students where actively on campus and not just providing tours. Participant RA-05 specified, "a campus tour that truly motivated me was one were we went on campus and there were students in the engineering lab. We got to see them actually working on projects and putting things together." Observing that college students do not just spend the day in a classroom helped enhance the campus visit for participants AM-04, RA-05, MA-06, CJ-07, OS-08 and TT-10. MA-06 explained that during the visit to the campus on the photograph she brought in as her artifact she "enjoyed visiting the science building because I was able to see students in a science lab."

Furthermore, all participants discussed how campus visits aided to establish a desire to succeed academically in order to attend college. This is a demonstration of goal orientation

theory. McCollum and Kajs (2009) stated, "goal orientation theory explicates the *why* of an individual's goals" (p. 4). Goal orientations are based on a collection of beliefs held by the student about set short and long-term goals (McCollum & Kajs, 2009). For all participants in this study the goal is to attend college, and the how is by succeeding academically. For participants, their observations while on the campus visits not only helped them set a goal but also allowed for them to feel capable of accomplishing that goal. The college visits allowed for participant to "see how engaged" college students were while in labs and classrooms. Participant TT-10 explained that during a visit what caught his attention were the projects students had created, and that made him think "I want to be able to create something like that." Participants TT-10, RA-05, OS-08, SC-09, AM-04, and MA-06 mentioned the impact college visits had on their perceptions regarding college and their own ability to attend college. These participants spoke about the same concept as RA-05, who stated "seeing students like me being successful" on the college campus helped participants set goals that they believed they could achieve.

Participants TT-10, RA-05, OS-08, SC-09, AM-04, and MA-06 began or continued to pursue their higher educational goals due to the increase motivation from visiting college campuses. Participants RA-05, OS-08 SC-09, AM-04, and MA-06 benefited the most from visiting a specific area of interest on the campus. Students focused on engineering majors benefited from their visit to engineering labs as EC-02 mentions, "when I saw all of the equipment at one of the college visits and the students using them, I knew that one day I wanted that to be me." Another participant, OS-08, explained that "following a college student around the campus is boring, what really gets me interested is when I can go to their engineering lab and see the projects that actual college students are working on." Most participants, AM-04, PP-03, AM-04, RA-05, MA-06, OS-08, SC-09, and TT-10, shared RA-05 sentiment about college

campus visits which simply had a college student taking them on a tour was “boring” and “it would have been better if actual college students were there. ”

Guest speaker with relevant information. During the classroom observation in the environmental sustainability classroom one student mentioned how tedious it was to run the electrophoresis gels for the corn. Electrophoresis is a technique used to separate charged molecules such as DNA, RNA, and proteins according to size (Yourgenome, 2017). During the observations the researcher noticed the difficulty the students were having loading the samples onto the electrophoresis gel. This sparked a discussion among part of the class about “this is how the lady that spoke to us last week, must feel” and the importance of her career. The students had attended a skype session with a speaker who was a research scientist in molecular biology and was conducting a study using electrophoresis. During the sessions the speaker discussed her research. Similar to how students valued college visits that addressed their own interest, guest speakers hold more value to students when they provide relevant information. PP-03 and CJ-07 both discussed how speaker who presented “information about what I am interested in” is more likely to influence them than other speakers. Ten out of the 11 participants agreed there is a need to bring speakers who “interest me,” meaning who are in fields that interest the participant. MA-06 stated,

> A speaker who really stood out to me even though they were not in a field I am interested in was a speaker who discussed momentum with us. This was the topic we were studying in class and she even had us do demonstrations in the classroom and she showed us some demonstrations as well.

Another participant, OS-08, mentioned an impactful guest speaker to her was a police officer due to the officer discussing a “real life lesson.” TT-10 and RA-05 both brought up the

point that guest speakers can "talk all they want" but "I listen when it is relevant to me." Participants viewed guest speakers as relevant when the speaker offered information that was important to participants. Those guest speakers that offered a different perspective on already established views, or information to better understanding the topic of interest where most memorable for participants.

Theme 3: Meaningful Experiences Enhances Self-efficacy

Self-efficacy is defined as an individual's belief in his or her own capability (Bandura, 1997). The data analysis, of this study, indicates participants' self-efficacy was linked to personal interest, attaining self-satisfaction, and changes in perspective. According to Kudo and Mori (2015), four sources that shape self-efficacy are: an individual's past performances, vicarious learning, social persuasions, and physiological and affective states. The data analysis, of this study, revealed a participant's self-efficacy was influenced by past performances, completion of the task and the praise that came from performing the task. An individual's judgment of self-efficacy may change depending on how the experiences of the individual are processed (Bandura, 1997). By focusing on the academic experiences of ECHS students the researcher seeks to uncover the experiences that most influence student academic motivation and engagement. This section will present the data linking the sources which affected self-efficacy for participants.

Create a change in perspective. Six participants indicated new academic experiences such as volunteering, labs, or career inventories, which create a change in perspective influencing the participant's self-efficacy. The career survey introduced the participant VS-11 to more options and created a change in perspective. The same participant also stated, "After learning that maybe I was good at other things I became more motivated and engaged in the class

because now I had something to look forward to." The experience created a change in goals for the participant and in order to reach the goal, academic motivation and engagement also increased. The information gathered from the career inventory about participant VS-11's interest allowed for the individual to form a goal (based on a potential career) and research what was required to meet that goal. The participant mentioned "my grades have gotten better and I'm more focused on school." For this participant the career inventory allowed for the individual to recognize their personal attributes and the impact of their potential success in different careers. Another participant, AA-01 indicated

> A negative experience I had was in math class. I always though math was easy and that I was good at it but then I took a math class with a teacher that I did not like how he taught. From this I learned that maybe math is just not for me and so I began to explore other interest.

Experiences do not only have to be ones in which the individual experiences success in order to positively influence self-efficacy (Zulkosky, 2009). For participant AA-01, struggling in a math course led him to pursue other interest and eventually the major he wants to pursue. According to this participant, his previous math courses "were easy" and he "was good at math." Based on his past experiences with math, participant AA-01 interpreted the negative experience positively. Instead of letting the experience negatively affect his self-efficacy, the experience became a trigger leading him to a newfound interest. Participants RA-05 and CJ-07 also struggled with a dual credit math course which led them to "hate the subject" but once both took the class again with a different teacher, the participants realized the "it's not that I hated math but that I couldn't learn how the teacher taught." For these participants, the experience influenced their efficacy negatively and led them to believe they were not proficient in math. Participants

RA-05 and CJ-07 had to attempt the course again in order to regain their confidence in the ability to succeed in math.

Self-satisfaction. According to Bandura (1997), an individual's self-efficacy is shaped by the experiences one encounters and influences the perceptions of an individual's capability and expectations. Furthermore, Bandura (1997) links obtaining a certain outcome (i.e. self-satisfaction), with the ability to execute specific task successfully. Participant TT-10 explained "I like the challenge from my engineering classes. Sometimes in that class it was trial and error, but then when we finally got something to work it was worth it." The self-satisfaction that came from finally achieving the desired results was motivation for the participant to continue trying despite being met with failure. Participants AA-01 and AM-04 expressed a similar experience regarding the computer programming courses they took. Both participants shared that programming is "like a puzzle" which they find "challenging" and "eager to solve." For these participants the challenge presented from programming became a motivator to completing the task. The 8 participants, who were actively involved in robotics, overall stated the challenges they faced while at the ECHS motivated them to succeed. These same participants mentioned how the satisfaction they receive from "putting a robot together," even after multiple failures is motivation "to complete the task." Eight of the 11 participants participated in robotics and had prior experiences in which the robot did not work on the first time, and so their self-efficacy was not affected because they knew eventually, they would succeed at the task.

According to Bandura (1997) and Kudo and Mori (2015) praise is a form of social persuasion which may increase self-efficacy. While observing the biology classroom one group of students called the teacher over to inform her that the group had found the bladder. After being praised by the teacher and answering a few questions correctly, the group eagerly returned

to search for other organs in hopes of having the teacher praise them. For this group of students, as well as the rest of the class, the praise they received from the teacher served to satisfy their achievements and motivate them to continue their work. In the environmental sustainability course, the self-satisfaction came from the student's ability to critically think and complete the lab. As the participants spoke about their artifacts, AA-01, AM-04, RA-05 and OS-08, each express the satisfaction that came from "being a part of the team" and competing. Making it to competition for these participants enhanced their self-efficacy.

Personal interest. All participants also discussed the importance of academic experiences to be linked to an individual's personal interest and satisfaction. Academic experiences such as internships, where participants can go directly into the field, allowed participants to learn what it is they are interested in. Participant PP-03 stated,

> One experience I did not like but was glad I did was when we went to a science lab at a college to conduct some experiments. I learned that not only was I not good at using the tools, but that working in a lab just wasn't for me. This experience allowed for me to look into engineering and realize that it's what I like to do and I'm good at it, especially the math part.

Such academic experiences aid students in having a better understanding of their capabilities. The discontent of being in a lab and working there influenced the participant PP-03's physiological and affective states, which is a source of self-efficacy according to Bandura (1997). The negative affectivity influenced the participant to consider a different career choice. The physiological and affective states of students regarding certain experiences may lead them to set attainable goals that increase motivation and engagement (Kudo & Mori, 2015). Many of the questions raised by the students in the biology classroom tied back to human physiology. The

academic motivation and engagement of students was based on their personal interest to learn more about their own bodies.

Chapter 4 Summary

This chapter provided a description of the sample for this qualitative case study, a description of research methodology and analysis, a summary of the findings and the presentation of the data and results. Participants at the research site provided a rich narrative about how meaningful experiences are perceived by students. The first theme focuses on the supportive relationships that are generated through meaningful experiences. Interview data, artifacts, and classroom observations provided a description of the value of supportive relationships to participants. The data also supports that guest speakers and college campus visits have the capacity to encourage student motivation and engagement through vicarious learning. The self-efficacy of participants increased due to experiences that promoted personal interest, participant satisfaction and created a change in perspective. In chapter 5, the researcher will present an analysis of the findings and discuss the relationship of the findings to the literature from Chapter 2.

Chapter 5: Discussion and Conclusion

The purpose of this study was to gain an understanding of which academic experiences ECHS students perceived as meaningful and how such experiences influenced academic motivation and engagement. It is the researcher's expectation that by understanding which academic experiences were the most meaningful to ECHS students, that the study site may provide focused academic experiences to enhance academic motivation and engagement to its students. The motivation for this study originated from the researcher's professional interest in the topic, since the last 11 years of her career are in education and six of those have been at an ECHS. Her position at an ECHS has allowed her opportunity to observe the challenges faced by underrepresented students year after year and recognize that several students leave the program without ever completing their associate degree. If the goal of the ECHS model is to ensure that all underrepresented students, who enter the program, are provided with the tools necessary to achieve a college degree (Jobs for the Future, 2008), the researcher of the current study believes there is a need to examine those academic experiences perceived by students as most meaningful and impactful to their academic motivation and engagement. This instrumental case study applied cognitive theories of motivation to form an understanding of academic experiences perceived by students as meaningful and how those experiences influenced academic motivation and engagement.

Chapter 4 presented the data gathered from the various collection methods and the overarching themes which emerged through data analysis. The results presented in the previous chapter gave insight as to which experiences are perceived as meaningful to students and helped motivate and engage students academically. Chapter 5 will present a summary of the results along with a discussion of how those results answer the research questions which guided this

study. This section will then be followed by a discussion of the findings in relation to previous literature and theory. Then present the limitations, implications of results for practice, policies and theory. Finally, this chapter will provide recommendations for further research geared towards the experiences of ECHS students in order to increase program retention and increase academic motivation and engagement.

Summary of the Results

This study sought to understand the perceptions held by students regarding their personal academic experiences as meaningful and the influence of such experiences on their academic motivation and engagement. This led the researcher to determine the most applicable data collection methods were semistructured interviews, artifacts, and classroom observations. The data analysis was guided by the following research questions:

RQ_1. How do ECHS students perceive their academic experiences?

RQ_2. How do ECHS students understand their academic experiences as meaningful?

Two additional research questions were asked that supported the central research questions:

RQ_3. How do the academic experiences of ECHS students influence academic motivation and engagement?

RQ_4. How do the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement?

According to Alexander, Entwisle, and Horsey (1997), positive and constructive experiences in a student's educational career are critical to a student's academic success. In order to increase the number of students who complete the ECHS program, administrators and teachers need to understand the perceptions held by students so that the appropriate academic experiences may be provided to students to increase academic motivation and engagement. The significance

of this research is to evaluate which academic experiences are perceived as meaningful to ECHS students and may increase academic motivation and engagement. If ECHS students are provided with the appropriate academic experiences that increase motivation and engagement, changes to individual's self-efficacy or goal orientation may occur resulting in program completion.

RQ_1. The first research question focused on how ECHS students perceived their academic experiences. Through analysis of the data gathered from various data collection methods three overarching themes emerged: (a) meaningful experiences generate supportive relationships, (b) meaningful experiences are created through vicarious learning, and (c) meaningful experiences enhance self-efficacy. For participants, the academic experiences were perceived as meaningful when experiences were relevant to the individuals own life experience. Participants shared positive experiences, as well as challenges faced while attending the ECHS. Over all participants perceived their experiences positively. Participants made reference to the small size of the ECHS campus compared to the comprehensive high schools in the district, referring to the small class sizes and student population, and the numerous fieldtrips, robotics competitions, campus visits, and speakers that were made available to them while at the ECHS. The results also indicated negative perspectives were held by four out of the 11 participants who did not participate in robotics. These four participants shared the same sentiment expressed by CJ-07,

> It feels like this school revolves around robotics. There is always money for robotics and when other clubs want to do something, we have to fundraise for our money. But when robotics needs something there it is. It's like they run the school. It's always robotics this and robotics that. Forget about what the rest of do.

For these four participants, not all their ECHS experiences were positively perceived, because of their lack of participation in robotics they experienced feelings of isolation. The results gathered from the artifacts revealed the participants perceived relationships as an important part of their academic experience. For participants, the relationships formed throughout their academic career helped shaped influence their academic experiences positively. Many of the participants brought in artifacts they received at an event they attended from the school and discussed the "friendships" and "new people" they were able to meet through the experience. Overall, ECHS students perceived their academic experiences as positive.

RQ2. The second research question is concerned with how ECHS students understand their academic experiences as meaningful. The results indicate the academic experiences which were perceived as meaningful to students were those which created a personal connection, gave purpose, and resonated with participants. Nine participants discussed guest speakers with who they were able to form a personal connection with, resulting in a change in their own mindset about their own capabilities (self-efficacy). The personal connection came from the participants' ability to understand the guest speaker in relation to their own life. This is further supported by OS-08's statement,

> I find it more interesting and pay attention to speakers who have overcome similar challenges as me. I think it's because I can relate to what they are saying, and I want to know how they overcame them so that maybe I can do the same. It's like why do I want to hear someone who is successful but didn't go through the stuff I went through. Their speeches become irrelevant to me and so then I don't really pay attention.

Participants also understood those academic experiences which gave them a sense of direction or purpose as meaningful. Campus visits for some participants gave students a sense of

direction to set towards goals. Participant RA-05 specified, “a campus tour that truly motivated me was one were we went on campus and there were students in the engineering lab. We got to see them actually working on projects and putting things together.” For 6 of the 11 participants the college visits were perceived as meaningful and generated a sense of direction for them to establish a goal and work toward attending college.

Volunteer opportunities were also viewed by participants as meaningful academic experiences. Volunteer opportunities resonated with participants not only because of the relationships they were able to form but because as CJ-07 mentions volunteering “made me feel good about helping others”. Volunteer opportunities give students the ability to experience something beyond their individual selves. It is knowing that what you are doing is not for you but to help other that resonates with participants and makes the experiences meaningful.

RQ3. The third research questions which guided this study asked how the academic experiences of ECHS students influenced academic motivation and engagement. Participant responses indicated academic experiences were not always positive. For one participant, AA-01, failing a math course led to a reduced belief in self-efficacy, even though once having an inflated sense of confidence in the subject. After re-taking the course, the participant realized math could be challenging but if they set their mind to it, they could pass the course. Participant AM-04 discussed the enjoyment that came from coding and how the challenge produced satisfaction in a computer science course. For this participant the academic experiences, from the same computer science course, positively influence academic motivation and engagement. During the classroom observations, the data revealed teacher praise increased student self-efficacy and promoted student engagement. Students eagerly called the teacher over so that she may in turn ask them questions and they may answer correctly. For these students the praise they received from the

teacher served to increase academic motivation. For four of the 11 participants, who participated in robotics, academic motivation and engagement was positively influenced through their competition experiences. Each of these participants brought in artifacts which they linked to making sure they "passed" all classes in order to attend competition. According to participants, in order to attend the robotics competitions, the participants had to be in good academic standing.

For most participants challenges were overcome with the support of student-teacher and peer relationships. Participants shared during semistructured interviews the importance of the different relationships they had formed during their academic career at the ECHS. For participant AM-04 it was a parent conference were teachers shared how much they valued and believed in him that helped increase academic motivation. Participant VS-11 expressed the vital importance of his relationship with his best friend in ensuring he continued in the ECHS program. All participants discussed the importance of either peer or faculty relationships in academically motivating and engaging them.

RQ4. The final question guiding this study asked how the academic experiences including field trips, guest speakers, and classroom setting motivate students and encourage (or influence) achievement. Participant MA-06 reported the academic experiences which encouraged the participant the most to achieve academically were guest speakers. For this participant, one guest speaker resonated with her specifically because the guest speaker worked in the participant's career interest. Learning about what the speaker had to overcome and the educational path encouraged this participant to set and achieve academic goals. The results also indicate that fieldtrips, such as those to the industry or workforce provide participants with vicarious leaning experience. Participant PP-03 recalled visiting a lab:

watching what they actually did in the lab and how they had to catalog everything, and make sure to follow procedures. It was then that I realized, working in the lab was not for me. So instead I decided to focus on engineering and work really hard to make sure I understood and mastered all my math classes.

For participant PP-03 watching the individual perform their job, allowed for them to vicariously place themselves in that position and realize this career was not for them. Furthermore, this participant career goals changed, leading to further encouragement to achieve academically in mathematics.

The results indicate that if self-satisfaction is increased during academic experiences, the academic experiences may motivate and encourage achievement. For participant TT-10 an engineering class provided the participant with a challenge described as, "the class it was trial and error, but then when we finally got something to work it was worth it." The satisfaction achieved after multiple failures and finally resulting in success, resulted in motivation and encouraged achievement. Other participants described similar experiences in which challenging class activities or tasks motivated and encouraged them to persist until they achieved the task(s).

Overall, the results indicate that participants perceive their academic experiences as meaningful when those experiences lead to personal connection, gave a sense of direction, and resonated with the participant. Even negative academic experiences may positively influence the academic motivation and engagement of ECHS students. The experiences of participants indicated the challenges faced by participants were not enough to hinder motivation. Instead challenges served to encourage and influence achievement. The next section presents a discussion and interpretation of the results.

Discussion of the Results

The instrumentation used for this case study were semistructured interviews, artifacts, and observations. A case study methodology was determined the most appropriate by the researcher in fulfilling the purpose of this study to gain a holistic understanding of the perceptions held by ECHS students regarding their academic experiences within a cognitive theory of motivational framework (Baxter & Jack, 2008; Stake, 1995; Wiebe et al., 2010). Eleven participants completed an individual semistructured interview, followed by questions related to their artifact. All participants returned for member checking interview in which only one participant made a minor change to the transcript (changed their major). Classroom observations were conducted in a biology and environmental classroom lasting approximately 35 minutes. The interviews, artifacts, and observations provided the results of the current study.

Interpretation of results. While most of the academic experiences discussed by the participants were positive, there were some experiences the participants perceived as either not having any influence or a negative influence on their motivation and engagement. For example, one participant discussed failing the math course and reevaluating if math was a possible major or not. Or the college campus visits which were tours in which there was not interaction or vicarious learning occurring for participants. These academic experiences, for participants, had no influence on academic motivation or engagement. According to the results, the academic experiences which participants perceived as the most meaningful were experiences which were relevant, provided a personal connection, and purposeful. The results of this study indicated three main findings: 1) ECHS student perceive their academic experiences as positively impacting their academic career 2) the academic experiences of ECHS students are essential in shaping their educational identity, and 3) in order for academic experiences to influence academic

motivation and engagement, experience should target student interest or allow for vicarious learning to occur.

Finding #1. Results the first finding yielded was in response to the perceptions help by participants about their academic experiences. Every participant in this study perceived their academic experiences as positively impacting their academic career. For participants' specific experiences such as visiting a lab, failing courses, relevant guest speakers allowed for them to reevaluate goals or set new goals and increase motivation to reach these goals. While failing courses may negatively impact a student's academic career and even decrease self-efficacy, if students have formed supportive relationships that guide and encourage students to achieve failure may have a positive impact on a student. For example, four participants discussed struggling with either failing a course or the challenges of being at the ECHS, but through the appropriate teacher or peer support, these participants were able to increase their self-efficacy and continue in the program.

While the results indicated participants held positive perceptions about their academic experiences. Several (4 out of the 11) participants expressed feelings of isolation and exclusion throughout their high school career. These participants held the perception that the campus highly regarded robotics and that most of their activities centered around robotics. The participants expressed the need for other clubs such as: garden club, drama club, anime club, science club, and so on. While the ECHS model is unable to accommodate sports and music programs, the campus can still provide student with other extra-curricular activities to help students who do not wish to participate in robotics feel included.

Finding #2. The second finding the results yielded is that the academic experiences of ECHS students are essential in shaping their educational identity. At the beginning of the study

this was not an anticipated result. The researcher had focused on the experiences and the perceptions that the concept of educational identity was not considered. After coding and data analysis, the results indicated that the academic experiences of participants were also linked to the formation of their educational identity. Participants remained at the ECHS despite the challenges because the academic experiences helped not only increase self-efficacy, motivation, engagement, but also aided the student in creating a positive postsecondary educational identity. One participant specifically recalled wanting to leave the program and return to the comprehensive high school but remained after a teacher-parent conference which allowed for the participant to feel supported. From then on, the participant self-efficacy increased, this resulted in increased motivation, which in return lead to him forming a positive educational identity about his ability to attend and complete college. Providing students with academic experiences which promote a positive postsecondary educational identity early on in their ECHS career may help in retaining students who want to leave the program before completion.

Finding #3. The final finding of this study was for academic experiences to influence academic motivation and engagement, the experience should target student interest or allow for vicarious learning to occur. The results of this study indicate that not all guest speakers, college visits, field trips, or volunteer opportunities influence student academic motivation and engagement. For academic experiences to truly influence academic motivation and engagement, experiences must be tailored with the participant (student) in mind. For example, the participants in this study explained that the guest speakers who academically motivated and engaged them the most were those whom the participants were able to form a personal connection and understand the speaker in relation to their life in general. For speakers to create a vicarious

learning experience for students, a speaker has a similar background to the student, and the student can relate to the lived experience of the speaker.

College visits, field trips and volunteer opportunities must be purposeful, coherent, and significant. It is important the value of the academic experience is understood by the administrator or teacher planning the event but the student who is participating. It is the student who must place purpose and significance on the experience. For example, volunteering at an animal shelter may hold value to a student who has a goal of becoming a veterinarian but not to a student who does not like animals. The results indicate administrators and teachers must know their student interest in order to provide appropriate academic experiences that will positively influence academic motivation and engagement.

Discussion of the Results in Relation to the Literature

Numerous researchers have conducted studies tracking the success achieved from implementation of the ECHS model to prepare underrepresented high school students through college and career readiness (Beall, 2016; Berger et al., 2010; Curry, 2013; Edmunds et al., 2012; Edmunds et al., 2016; Kanuika & Vickers, 2010; Miller, Fleming, & Reed, 2013; Muñoz et al., 2014; Pitchford-Nicholas, 2015; Thompson & Onganga, 2011; Wolk, 2005). Therefore, the focus of this study was not to add to the plethora of knowledge about the success experienced by ECHS students, but instead analyze the academic experiences provided to ECHS students and which experiences added value to the academic motivation and engagement of the students' academic career. From the beginning of the study the researcher understood the results would be difficult to generalize due to selected methodology being a single case study. While the results may not be generalized, the results are still a valuable source of information to the study site and similar campus with similar demographics to the one at which the study was conducted and thus

transferability is possible. The central intent of the findings is to present administrators and teachers with possible academic experiences which may be implemented at the ECHS to increase academic motivation and engagement in students.

Theory. During the primary years of a students' educational career poor academic preparation may leave students unprepared and unmotivated for the challenges of high school (Balfanz et al., 2010; Heck & Mahoe, 2006; Long et al., 2007; Schaefer & Rivera, 2016). In order to service underrepresented students and prepare them for success in a higher education institution, students attending ECHSs are immersed into college courses and provided with appropriate support to succeed academically (Edmunds et al., 2012; Edmunds et al., 2016; Lieberman, 2004). Cognitive theories of motivation grounded this study in order to gain a better understanding of academic experiences perceived as meaningful by participants and which may have impacted their academic performance. The results of this current study indicated negative and positive academic experiences may influence motivation and engagement positively when students receive supportive relationships and personalized support.

Expectancy-value theory, self-efficacy, and goal orientation theory formed the framework of this study. Roberts (2012) discussed inquiry into cognitive motivational theories may aid in understanding relationships between students' academic perceptions and motivation and engagement. According to researchers, students enter school, where they begin to discover what achievement means, and it is a student's individual experiences that influence innate organizational tendencies to grow, integration of self, desire to self-motivate, and set academic goals (Alaie, 2011; Markland, Ryan, Tobin, & Rollnick, 2005; Ryan 2005; Ryan & Deci, 2000; Zimmerman et al., 1992). Expectancy-value theory aided in analyzing which experiences participants perceived valuable and rewarding and, henceforth the perceived value of the

experience resulted in increased motivation (Kini & Hobson, 2004; Tolefson, 2000; Van den Broeck et al., 2009). Participants discussed how through the influence of guest speakers they were able to form goals and gain a sense of direction which provided them with motivation.

Bandura (1997) defined self-efficacy as belief in one's capability to attain certain accomplishments. According to Schunk and Pajares (2005) self-efficacy expectancies may change when encountered with different experiences are encountered. For participants of this study, many of them were faced with failure in a course, but this did not negatively impact their self-efficacy, instead it fueled them to try again with a different professor and succeed. For some of the participants in this study, the academic experiences allowed for their goal orientations to change. In goal orientation theory motivation drives goal pursuit rather than innate traits (Ames, 1992; Midgley et al., 2001; Pintrich, 2000). This study analyzed data collected regarding ECHS students' academic experiences in relation to the value placed by students on the experience (meaningful), the students' own self-efficacy, and goal orientations. The findings indicated the ECHS provided the participants with individualized support and supportive relationships to positively impact the self-efficacy of students and goal orientations, but not all experiences provided the same impact.

Significance. According to Jobs for the Future (2008), the core principles of ECHSs are the commitment to serve underrepresented students in higher education through a "comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion" (p. 2). Demographically ECHSs should be similar to the surrounding traditional high schools and the main goal is to ensure students attending these ECHSs are attending and graduating with a college degree (Jobs for the Future, 2013, Jobs for the Future, 2008). According to Jobs for the Future (2013), the rate of ECHS

students enrolling in college after graduation from high school is 76% compare to the national rate of 68%. While the ECHS model has accomplished to increase the rate of underrepresented students attending college, it has failed to meet one of its primary goal, which is to ensure all students enrolled in the ECHS attend college (Jobs for the Future, 2008).

Seminal literature. After an extensive review of ECHS literature, the researcher decided the focus of the current study. Numerous studies demonstrated the correlation between the ECHS experience and academic success, linking program implementation with student outcomes (Berger et al., 2010; Curry, 2013; Edmunds et al., 2016; Edmunds et al., 2010; Edmunds et al., 2013; Hall, 2013; Kaniuka & Vickers, 2010; Muñoz et al., 2014). A gap of knowledge existed in providing further details as to how and what factors influenced the success of ECHS students. Therefore, the researcher decided to focus the study on which academic experiences ECHS students perceived as meaningful and the influence of such experiences on academic engagement and motivation. Since this study began new literature has been published by the American Institutes for Research (AIR, 2019), Adams, Williams, and Lewis (2020), Duncheon (2020), and Gilson, and Matthews (2019), which continues to confirm the existing body of knowledge and also slowly include ECHS administrator, teacher, and student perceptions in an attempt to fill the gap in research.

Methodology. Instrumental case studies allow the researcher the opportunity to gain a holistic understanding of a single issue in which the study is designed around an established theory (Baxter & Jack, 2008; Stake, 1995; Wiebe et al., 2010). The current study was designed to gain a holistic understanding of ECHS students perceive their experiences as meaningful and how collectively, student experiences relate to and influence academic engagement and motivation within a cognitive theory of motivational framework. An instrumental case study was

the best methodology of addressing the purpose of the study. The case study consisted of 11 participants who attended an ECHS in Texas. Participants were chosen through purposive sampling based on preselected criteria in order to answer the research questions. The instrumentation used in this case study was semistructured interviews, artifacts, and classroom observations. Interviews, notes, and observation field notes were coded through a descriptive coding process in order to derive overarching themes. In order to increase validity and credibility member-checking and triangulation of the data was conducted by the researcher.

Limitations

From the beginning of this study, the researcher had identified a limitations of this study would be the participants inability to "have equal ability to provide detailed accounts of what they have been through and what they feel" (Taylor, Bogdan, & DeVault, 2015, p. 109). To account for this the research chose a semistructured interview technique, which allowed for probing questions and clarification. Despite having this flexibility, throughout the interview the researcher was able to sense some hesitation from the participants to speak negatively of the campus or the teachers. In order to receive an honest response from the participants the researcher reassured the participant all information would remain confidential and anything they shared would not be traced back to them or the personnel they discussed.

Another limitation inherent to qualitative studies is the assumption that participants provided honest responses about their academic experiences during the interview (Hathaway, 1995). Participants were asked to not only answer interview questions but also discuss their artifact so that it may be included in the interview transcript and coded as well. If participant responses to questions or artifact descriptions were dishonest the results of the study could be

compromised. The researcher of this study had to operate under the assumption that all participate responses were honest and sincere.

A final limitation is the small sample size. This study included 11 participants on one ECHS campus. All participants had close relationship with the researcher due to the small size do the campus. Even though some of the participants may have struggled their first year at the ECHS campus, they were all top of their class and high achieving students by their 11th grade year of high school. It would have been interesting to have interviewed students who were lower performing students and who may still be struggling at completing their high school requirements.

Implications of the Results for Practice, Policy, and Theory

The intent of the current study was to form an understanding of how ECHS students perceived their academic experiences as meaningful and how such experiences influenced academic motivation and engagement. The researcher intended to inform future research in the area of student retention within the ECHS program. By examining the academic experiences perceived to be the most meaningful and impactful to participants' academic motivation and engagement, individuals working with ECHS students may be able to provide experiences better tailored to influence student achievement. The results of this study led to the identification of a few implication for practice, policy, and theory. This study provides a means for administrators and faculty to provide ECHS students with academic experiences that may encourage achievement and increase the likelihood of program completion.

Practice implications. In practice, this study presents the implication that academic experiences cannot be blanketed for an entire grade level of even a class. Instead, administrators and faculty must first know a student's interest and have some background on the student, in

order to provide appropriate academic experiences early in the ECHS program. While it may be typical for all students in the same grade level to attend a field trip or have the guest speaker visit the whole grade level, students may benefit from field trips or guest speakers in smaller groups which are geared toward their personal interest. If instead administrators could coordinate to have different speakers visit on the same day and have students sign up or have field trips to a variety of different locations and not just geared to one subject. This would require planning but exposing students to different types of field trips (such as: art museum, botanical garden, science museum, architecture, engineering), allows for students to learn about themselves and what they may or may not like. Participants in this study expressed how certain academic experiences (whether a class, field trip, or speaker) allowed for them to reflect and rethink career options and possible majors.

The implications for the classroom are for teachers to form supportive relationships with their students. As supported and confirmed in previous studies, supportive relationships are vital for students to succeed through the rigorous curriculum and challenges ECHS students face (Alaie, 2011; Berger et al., 2010; Berger et al., 2014). Participants revealed the importance of nurturing, supportive relationships in encouraging and academically motivating them to succeed academically. The participants also noted the teacher-student relationships were not the only type to encourage students academically. Supportive relationships with administrators were also valued by participants and influential in academically motivating students.

Policy implications. The ECHS model is one of many existing programs that provide students with the opportunity to earn college credit while still in high school (Zinth, 2016). Current model policy dictates ECHSs needs to ready students to enter the workforce upon program completion or after completion of 4-year degree (Zinth, 2016). This would imply that

by the time a student reaches their senior year of high school they must already be certain of what they want to do. This requires for administers to ensure students have been provided with the appropriate support throughout their academic high school career in order to make the best decision for their future.

Theoretical implications. This study was grounded within a framework of cognitive theories of motivation. The primary attributes from the literature driving this research was expectancy-value theory, self-efficacy, and goal orientation theory. The three attributes of cognitive theories of motivation allowed for the results to be analyzed with the context how their perceptions on academic experiences influenced motivation. The findings indicated negative and positive academic experiences can influence self-efficacy. Theory dictates self-efficacy is shaped by the challenges we face and our belief in one's capability to succeed (Bandura, 1997; Schunk & Pajares, 2005; Tollefson, 2000). While persistent failure often may lead to low self-efficacy, the results indicated through the formation of supportive relationships, students are able to overcome challenges and increase self-efficacy.

The researcher expected for the academic experiences of ECHS students to be positively perceived by students and for such experiences to influence academic motivation and engagement. The unexpected finding of this study included evidence of the academic experiences warranting the most impact to students are those which help create and define a student's educational identity. Educational researchers are cognizant and have explored the role school culture has on the different aspects of identity development of adolescents (Faircloth, 2009; Lannegrand-Willems & Bosma, 2006; McLeod & Yates, 2006; Rich & Schachter, 2012; Wardekker & Miedema, 2001). A theoretical implication arising from the results is for ECHSs to implement social developmental goals for students and not only academic goals. Integrated into

the college going culture of the school, students should also be given the opportunity to develop their educational identity positively. Through positive identity formation, students will be more confident about their ability to cope with identity-related challenges they may face in the future (Rich & Schachter, 2012).

The intent of this study was to provide an understanding of how ECHS students perceived their academic experiences as meaningful and how such experiences influenced academic motivation and engagement. Implications for practice, policy, and theory were discussed in this section. The next section contains recommendations for further research.

Recommendations for Further Research

This study focused on the perceptions held by ECHS students regarding their academic experiences and the influence of those experiences on academic motivation and engagement. This study provides insight into the academic experiences which warrant the most value to ECHS student and encourage academic motivation. In order to achieve the objectives of the study the researcher decided on a single site case study methodology and used three methods of data collection: semistructured interviews, artifacts, and observations. This section will provide recommendations for further research.

For this study, an instrumental, single site case study allowed the researcher to facilitate the understanding of the phenomenon through the implementations of cognitive theories of motivation (Grady, 2010). A limitation of case study methodology is that the findings may not be generalized (Yin, 2014), because of this a recommendation for further research is the implementation of a mixed methods approach. Using a mixed methods approach would allow the researcher to gather qualitative and quantitative data, “integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research

problems" (Creswell, 2017). Through the implementation of a mixed methods approach researchers may achieve findings which may be generalized. Mixed methods also draws on different forms of data that may be collected and allow for researchers to for a clearer understanding of specific academic experiences which encourage student achievement.

Another recommendation to consider would be the implementation of a longitudinal research study. A longitudinal research study allows for the evaluation of a group of individuals possessing common characteristics (American Psychological Association, 2018). A longitudinal study could be implemented which follows ECHS students after graduation from the ECHS for a period of two or more years to inquire if their areas of interest (college majors) remained consistent. The study may also probe how their attendance at the ECHS affected their decisions to change, or not, their areas of interest.

Another recommendation for further research is increasing the sample size. Due to the limit amount of time and the participants' busy schedule only 11 participants participated in the study. Another sample population which could have been included in the study could have been students who left the program during 9th and 10th grade. These students were not able to overcome the challenge of the ECHS program and could provide researchers with valuable insights into what could have helped them succeed in the program.

A limitation acknowledged by the researcher regarding the current study was the participants' hesitation to speak negatively of the ECHS campus or teachers. In order to eliminate this limitation a recommendation is for the researcher to not have any affiliation with the study site. The researcher not having any affiliation with the study site also eliminates any researcher bias, increasing the credibility of the results. A final recommendation for further research is to conduct research focused on the link between educational identity and the

academic experiences of ECHS students. The results revealed that supportive relationships, vicarious learning, and self-efficacy aid in shaping a student's educational identity. Further research is needed to identify which academic experiences or school climate may provide students with forming a positive college going educational identity. The recommendations addressed in this section for further research may provide a broader range of information to aid in the success of ECHS students.

Conclusion

The basic premise of ECHS model is to provide underrepresented students with dual credit enrollment at no cost, offer rigorous instruction, and increase academic achievement through both academic and social support services to increase college readiness (Alaie, 2011; Curry, 2013; Edmunds et al., 2012; Edmunds et al., 2016; Muñoz, Fischetti, & Prather, 2014). This instrumental case study sought to understand how ECHS students perceived their academic experiences as meaningful and how such experiences influenced academic motivation and engagement. Review of the previous literature demonstrates the success ECHSs experience in regards to student achievement, attendance, graduation rates, and college entrance, but reveal a gap in examination of the experiences of ECHS students and influences of students' perceptions on motivation and engagement (Alaie, 2011; Berger et al., 2014; Edmunds et al., 2012; Jobs for the Future, 2013; Muñoz et al., 2014; Schaefer, & Rivers, 2016). It was this gap in literature that helped determine the nature of the current study.

This study focused on how academic experiences of ECHS students were perceived as meaningful in order to gain a deeper understanding of how certain academic experiences encourage or influence academic motivation and engagement. This study explored academic experiences such as: college campus visits, guest speakers, classroom activities, robotics

competitions, and field trips. The three overarching themes which emerged from the data were: meaningful experiences generate supportive relationships, meaningful experiences are created through vicarious learning, and meaningful experiences enhance self-efficacy. The findings indicate all participants at the study site were faced with both positive and negative academic experiences. The findings revealed academic experiences are perceived as meaningful to students when the experience provides them with relevancy, personal connection, satisfaction, purpose, sense of direction towards the formation of goals, and provide an experience beyond their individual selves. An unexpected finding was the identification of the influence of supportive relationships, self-efficacy, and vicarious learning on the shaping of a student's educational identity.

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Appendix A: Five-Step Synthesized Member Checking (SMC) Process

1. Prepare synthesized summary from emerging themes along with interview data quotes which represent the themes.
2. Check with participants if they are willing to participate in SMC and schedule SMC interview located in the ECHS library.
3. Conduct SMC interview with participants, allowing or them to read and comment on report.
4. Gather and code responses and added data.
5. Integrate findings.

Adapted from Birt et al. (2016)

Appendix B: Parent/Guardian Informed Consent

Concordia University–Portland Institutional Review Board
Approved: February 12, 2018; will Expire: February 12, 2019

Research Study Title:	Understanding the Influence of Academic Experiences on the Academic Motivation and Engagement of Early College High School Students
Principal Investigator:	Gabriela Gomez
Research Institution:	Concordia University−Portland
Faculty Advisor:	Dr. Brianna Parsons

Your child is invited to participate in a research study being conducted by Gabriela Gomez. The purpose of this case study is to examine understand the perspectives of ECHS students on educational experiences and factors influencing motivation.

Information
If you agree to allow your student to participate in this study, your student will be asked to respond to questions in a personal interview format. Questions asked during the interview will be regarding educational experiences such as field trips, guest speakers, and classroom environment. Interviews will be held on campus and will not interrupt classroom time. Interviews are expected to last between 30 to 60 minutes. Observations will also be made during educational experiences to validate data gathered during interviews. A second interview is also optional and the student will be asked to review information collected during the first, primary interview.

Risks
There are no foreseeable risks to participating in this study.

Benefits
Your child will receive no direct benefit from participation in this study, but his/her participation may help us better understand which educational experiences are beneficial to student motivation and help to increase student achievement.

Right to Refuse or Withdraw
Following your consent, participation of your child in this study remains voluntary. Your child will also be asked to provide assent to participate and may refuse even if you consent. Your child can also refuse to answer any questions and may withdraw from the study at any time without penalty.

Confidential Data Collection
No identifying information will be included in the data your child provides. Your signed consent form, and their assent form, will be kept separate from the data, and nobody will be able to link their responses to them. Interviews will be recorded. Recordings will be deleted immediately following transcription and member-checking. All other study-related materials will be kept securely for 3 years from the study conclusion, and then be destroyed.

Contact
If you have any questions about this study, you may call Gabriela Gomez at [contact information redacted]. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch (email obranch@cu-portland.educ or call 503-493-6390).

Consent
I have read and understand the above information. I voluntarily agree to the participation of my child in this study. I will receive a copy of this consent form for my information.

_____ _____
Parent/Legal Guardian Signature **Date**

Name of Child _____

Appendix C: Minor Assent Form

We are performing a study to examine how the educational experiences (such as field trips, guest speakers, and classroom environment) of student's influence engagement, motivation and academic achievement. The study is focused on the educational experiences of early college high school students attending your school.

If you agree to be in a part of the study, you will be asked some questions about the different educational experiences you have been a part of. For example, you may be asked how attending a specific field trip helped motivate you. You can ask questions about this study at any time. If you decide at any time not to finish, you can ask us to stop, and there is no penalty for doing so.

The questions asked are only about what you think. There are no right or wrong answers because this is not a test. No one will be able to trace any responses back to you.
If you sign this paper, it means that you have read this and that you want to be in the study. If you do not want to be in the study, do not sign this paper. Being in the study is up to you, and no one will be upset if you do not sign this paper or if you change your mind later.

Your signatures: _____ Date_____

Your printed name: _____ Date_____

Investigator name: _____ Date_____

Investigator Signature: _____ Date_____

Appendix D: Example Semistructured Interview Questions

1. Please state your age, grade, major, and approximate number of academic experiences?
2. Can you describe learning experiences that you have participated in that were interesting?
3. What made this experience meaningful to you?
4. Do you think this experience influenced how engaged and motivated you are academically?
5. Describe the most interesting class period that you have encountered at the school?
6. How was the learning experience interesting?
7. Can you describe any learning experiences that you have participated in that impacted you negatively?
8. How did the meaningful experience influence you academically?
9. Have any of the learning experiences at school influenced you to either rethink your future studies or helped you pick a career path? If so, what about that learning experience caused this?
10. What about these experiences do you feel motivate you to do better academically?
11. What do you feel make an educational experience meaningful?
12. Are there any academic experiences you think would encourage you to do better in your classes?
13. How would you describe the characteristics of a meaningful learning experience?
14. Do you think taking a course at the college campus or at the high school makes a difference? Why?
15. How have your academic viewpoints changed from before entering the ECHS to now? What has brought about those changes?

16. Why did you choose this memento (artifact) to share? What makes it significant to you?

Appendix E: Observational Protocol

Length of Activity:	
Descriptive Notes	Reflective Notes

Appendix F: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously- researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does "fraudulent" mean?

"Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.

What is "unauthorized" assistance?

"Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

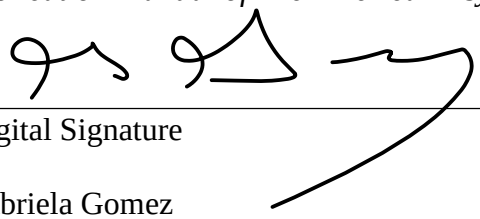
- Use of unauthorized notes or another's work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work (Continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.

2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*.



Digital Signature

Gabriela Gomez

Name (Typed)

March 23, 2020

Date