SECONDARY STUDENT EXPERIENCES WITH MANDATORY ENROLLMENT IN NORTH CAROLINA VIRTUAL PUBLIC SCHOOL COURSES: A HERMENEUTICAL PHENOMENOLOGICAL STUDY

by

Damion O. Lewis

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this hermeneutical phenomenological study was to describe secondary student experiences within mandatorily assigned online courses using the North Carolina Virtual Public Schools (NCVPS) platform. Bandura's (1986) social cognitive theory provided a lens to explore this phenomenon. Specifically, the study was guided by the central research question: What are the experiences of secondary students who are required to take online courses using NCVPS? Student participants were selected from two low-performing high schools in northeastern North Carolina. Data collection consisted of semi-structured interviews, focus groups, and document analysis. Accordingly, data was analyzed through the process of immersion: continually reading, reflecting, and interpreting data, in addition, NVivo 11 was used to assist the aforementioned processes and aid coding efforts. Appropriate methods outlined by van Manen (1990) were followed to ensure alignment with the hermeneutical style of phenomenology. The results of the study revealed what secondary students experience while participating in a mandatory NCVPS course vary depending on specific course, content, and perceived personal learning style; moreover, student levels of internet self-efficacy are not a strong determinant as to whether those experiences will be wholly positive or negative nor is their acclimation to technology a determining factor for how a student might perceive online learning. Students revealed concerns regarding presence of the online instructor as well as perceived support. Students acknowledged favorable perceived value of the required, school-based course facilitator. In addition, students noted increased dependency on various learning strategies in order to successfully perform in their assigned courses.

Keywords: hermeneutics, online learning, NCVPS, phenomenology, virtual school,

Dedication

I would like to dedicate my dissertation to those closest to me — my friends and family.

This process and journey has been one of the most challenging, yet rewarding experiences. I am thankful that God sent the right people into my life, who offered encouragement and support as I complained, whined, and at times, struggled to complete this process. Thank you for understanding my absences (as numerous as some of them were) and not making me feel guilty for needing that time to complete my studies.

I have always been reminded by my family that I was an intelligent man. I have always been encouraged to go beyond my limits. For that, I am thankful. To my grandparents, I pray that you can be proud of this accomplishment and the various roles you played in ensuring I made it to this point. To my dearly departed mother-in-law, this accomplishment is dedicated to your commitment to education and the legacy you have left behind. To my sister, thank you for being the best sister I could ever ask for. To my parents, this work is dedicated to the work ethic you both instilled in me. I love you both.

To my husband, Donald, you have been right there with me as I began and completed this process. Thank you for understanding and supporting me. Thank you for allowing me to withdraw and retreat, whether that was while riding in the car together while traveling, during family gatherings, or on vacation. You have been my rock, even when you didn't know it.

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During my educational journey, there have been so many people, who in their own way, are responsible for me completing this dissertation. First, I must acknowledge God and his means of directing my life. Even when I thought I was lost, he had clearly devised the path that I was destined to walk. To my fellow scholars. You may not know how much it helped to have you listen to me when I needed a sounding board or when you allowed me to listen to you. I truly treasure the bonds we have forged and the commitment to our respective studies. To my dissertation chair, Dr. Pannone, and committee members, Dr. McLemore, and Dr. Silver, thank you for your leadership and direction during this process. I am so honored to have completed this process with each of you in my corner. Finally, I must acknowledge Dr. Snipes. Thank you for allowing your educational testimony to shape mine. I thank God for you.

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List of Abbreviations

Adequate Yearly Progress (AYP)

Advanced Placement (AP)

Central Research Question (CRQ)

Computer Aided Qualitative Data Analysis Software (CAQDAS)

Course Management System (CMS)

District and School Transformation (DST)

Information and Communications Technology (ICT)

Institutional Review Board (IRB)

Internet Self-efficacy (ISE)

Learning Management System (LMS)

No Child Left Behind (NCLB)

North Carolina Connections Academy (NCCA)

North Carolina Department of Public Instruction (NCDPI)

North Carolina Virtual Academy (NCVA)

North Carolina Virtual Public School (NCVPS)

Pedagogy and Content Knowledge (PCK)

Socioeconomic Status (SES)

Starlight County Schools (SCS)

Sub-Questions (SQ)

Substitution Augmentation Modification Redefinition Model (SAMR)

Technology and Content Knowledge (TCK)

Technological Pedagogical Content Knowledge (TPACK)

Virtual High School (VHS)

CHAPTER ONE: INTRODUCTION

Overview

Online learning has been found to be a viable method to provide learners at the secondary, post-secondary, and subsequent levels increased access to learning (Barbour, 2014). However, current research remains lacking in regard to explicating secondary student experiences with online learning; moreover, there is no current research noting these experiences with the North Carolina Virtual Public School (NCVPS) platform and the recently instated mandatory enrollment policy for low performing school districts. For this study, Bandura's (1986) social cognitive theory will be used to explore and describe the lived, learning experiences of students impacted by the aforementioned enrollment shift. In doing so, new discourse within the research gap will be presented as well as insight into the needs of secondary students participating in required NCVPS courses.

This chapter provides an introduction of the current research study, which describes the experiences of secondary students participating in required NCVPS courses. The subsections within this chapter include the background for the study, situation to self (explication), problem statement, purpose statement, significance of this study, research questions, research plan, delimitations and limitations of the study, as well as a summary.

Background

This section provides insight into the historical, social, and theoretical underpinnings of this research. Historically, educational research has highlighted the tumultuous environment wherein change is constant. Within those changes, online learning has been developed as a result of the current shifts in education. Yet, these shifts have been impacted by a myriad of elements

within the social context of the research setting. Thus, theoretical implications relative to self-efficacy are explored and explicated.

Historical

The educational environment exists within a climate of shifting paradigms. The belief that technology would act as the sole agent of change is supported heavily by paradigms born of the digital native and digital immigrant discussion. Prensky (2001a, 2001b) expressed the notion that students as digital natives learn differently and are very comfortable using technology. Within the former line of thinking, research was never clear that such a presupposition held merit, which led to a later deviation in this idea by its own creator (Prensky, 2009). Perhaps stemming from that line of thinking was the shift to utilize online or virtual learning platforms. Prior research has acknowledged secondary student achievement and positive learning outcomes within an online or virtual learning environment (Castaño-Muñoz, Duart, & Sancho-Vinuesa, 2014; Means, Toyama, Murphy, & Baki, 2013; Oliver, Osborne, & Brady, 2009). However, studies such as these have often derived their results from student participant pools comprised of advanced, higher-achieving students (Barbour, 2014; Johnston & Barbour, 2013). Additionally, lapses in this body of research have been noted in regard to the specific learning experiences of secondary students (Cavanaugh, Barbour, & Clark, 2009; Harvey, Greer, Basham & Hu, 2014). The experiences of secondary students participating in an online course are increasingly a concern as more states have moved toward the use of virtual schools as a means to supplement teacher shortages (Dwinal, 2015; Picciano & Seamman, 2009). This is the crux of the current research study's problem as it relates to the use of NCVPS within the Starlight County (pseudonym) School (SCS) district in North Carolina.

Although NCVPS has been available to students since 2007, only recently has it been used under a mandatory enrollment policy in SCS. This stemmed from the effects of the landmark case of *Leandro v. North Carolina* (1997) that surmised that some students within the state had been robbed of their basic right to a sound education. A consent order issued in 2009 led to the mandate that SCS must enroll "any high school student" in an NCVPS course required for graduation when and if there were no licensed teacher available to teach the course (Cobey, 2015; Consent Order, 2009).

Social

The use of NCVPS in this manner is problematic due to the contributing factors of high poverty, low academic performance, and disparity of access to technology in schools compared with access in students' homes. The most recent US Census data noted that 23.5% of all residents in Starlight County were living in poverty; furthermore, the median household income was $32,834, which is below the most recent Census data average of $49,445 (US Census Bureau, 2010). Thus, it may be inferred that access to computers outside of school is limited. Research has also linked student performance to technology access at home (Battle, 1999; Fiorini, 2010; Vigdor, Ladd, & Martinez, 2014). This is further evidenced by Fairle and London (2012), who revealed negative effects for students who lack adequate access to technology at home as evidenced by their limited aptitude for using computers to complete academic schoolwork.

Theoretical

The previously noted concern regarding student access to technology and acclimation supports exploration of secondary student experiences with online learning using the self-efficacy strand of Bandura's (1986) social cognitive theory. In particular, self-efficacy

explicates how the level of confidence one perceives when presented with myriad tasks is derived from personal beliefs. A high sense of self-efficacy may be evidenced by an individual's continued aspirations for success when faced with difficult challenges as opposed to those with low self-efficacy who are more likely to yield in the face of perceived, difficult challenges (Bandura, 1986; Pajares, 1996; Schunk, 1991). Although there is a great deal of technology available to students in the Starlight County School district, the level of accessibility may be negligible as that students' individual levels of self-efficacy are not inextricably linked to availability and access at school (North Carolina Department of Public Instruction, 2015). In other words, research has not proven that more access to technology automatically increases a person's motivation or self-efficacy; moreover, it continues to raise questions when low levels of access in a student's home is different from what is available at school. This remains arguable when considerations are made regarding the likelihood that access in students' homes, according to current data, is seriously limited (US Census Bureau, 2010).

The state board's decision to place students in NCVPS courses is one that was intended to benefit the student. This resolution operated on the presupposition that students would be placed within a prime environment for educational success wherein they would be afforded the opportunity to work with teachers outside of the district that are less likely to be jaded by the tumultuous environment of a district in transition. This decision was further corroborated by research regarding online learning that indicated that there is little difference between course offerings for face-to-face learning versus online formats (Lou, Bernard, & Abrami, 2006; Means, Toyama, Murphy, Bakia, & Jones, 2009). Yet, this research focused primarily on online learning for post-secondary students. It also did not acknowledge the limits posed by student choice that

was noted to impact student perception of learning during initial and future virtual experiences (Lueken, Ritter, & Beck, 2015; Roblyer, 1999).

This research study sought to explore the essence of secondary students' learning experiences in a mandatorily assigned NCVPS course in order to better understand how students experience this new enrollment process and subsequent learning. Therefore, a phenomenological approach was best suited for this task (Creswell, 2013). As an extension of phenomenology, hermeneutics has also been included because it provides an additional layer for interpretation to uncover elements within participants' experiences that may be veiled or hidden (van Manen, 1990).

Situation to Self

This section explicates my personal connections to the current research study. I will discuss my background, both personal and professional. I will also articulate the motivation behind the current research study by revealing the connecting points drawn from my expectations, beliefs, and values while noting their implications to the research to be conducted.

My motivation for conducting this study began with the research site: Starlight County. As a product of this small, rural county in North Carolina, I learned from a young age that education would provide me with the skills to not only leave the county but also ensure that I could live a fuller life beyond the constraints of my meager upbringing. Upon graduating and enrolling in college, I quickly learned that my K-12 education had been adequate at best; however, I was clearly behind many of the students participating in the same courses. I would soon come to acknowledge the serious deficiencies present in my home district's educational system. In part, this is why I developed a passion for education.

I worked as an educator within the state of North Carolina for 13 years. Prior to becoming an instructional coach, I worked as an instructor at the secondary level. During this time, I devoted my career to ensuring that I was preparing my students for future careers and life. Sadly, while I was working across the state in a more affluent school district, my home school district continued to decline. After consistently underperforming on state assessments, the district was relegated to the lowest rank in the state. The State Department of Education soon intervened. In May of 2009, a team was created to provide additional support and service to the struggling district. It was during the 2012-2013 school year, just a few years after turnaround efforts began that I applied for a position and was hired to join a team of consultants to support improved student learning outcomes in my former district. By 2013, conditions were improving and measurable growth had been made in the district, yet there was more work to do. From 2013 to 2016, I worked with my team and the school district to raise the district from the lowest rank; however, problems such as poor teacher retention and numerous unfilled vacancies continued to exist (North Carolina Department of Public Instruction, 2015).

The state of North Carolina's decision to force students in Starlight County to take online courses is one that I personally find interesting. I wondered how students would handle yet another education initiative that stems from the struggle to provide learners with one of the most basic, essential educational elements: a teacher. Due to shifting assignments, I am no longer directly serving or supporting teachers and students in SCS. It goes without saying that I yearn to see improvements continue in the district as I see myself in every student I come in limited contact with. Since this study was framed by a setting wherein the state has sought to provide an equitable education to students in the district, I desired to explore and describe secondary student

experiences in a manner that may lead to further improvements to this educational model that is proposed to continue.

In summary, for the current research study I must acknowledge several personal, philosophical assumptions. These assumptions explicate my beliefs and the intended aims for this research and coincide with qualitative approaches to research as noted in Creswell (2013).

Ontologically, I view reality as one that is constructed individually. Therefore, there is no single view. I will report the existence of the multiple realities of the participants experiencing the noted phenomenon (Creswell, 2013).

Epistemologically, it was my aim to lessen the distance between the student participants and myself. By that, I have no direct exposure to NCVPS courses or the teachers. It was my goal to firmly plant myself within the learning environment wherein the secondary student experiences are derived. This is interesting as that students are taking courses online, yet they are assigned a physical class and location at their respective schools to complete the course.

My axiological values are clearly defined from my previous experience as a learner in the district wherein the research sites are. As a youth matriculating through the Starlight County School system, I had no idea of the struggle of the district to provide a sound, basic education for me. I was unaware of the extent to how my education may have been lacking in comparison with other students across the state and nation. As the son of two high school graduates who were themselves blue-collar workers, I did not understand the extent to which I was behind other students. Although there were multiple instructors who did their best to provide me with the essential skills to be successful at the next level, there were multiple factors beyond their control constituted by the environment. Based on these experiences, I find the introduction methods for

this initiative interesting as well as how it has been delivered to students within an environment that remains tumultuous.

Methodologically, I have provided context for the study and the accompanying site. Due to limited exposure to student learning in this manner, I allowed the study to lead to shifts in questions based on field experiences (Creswell, 2013).

Beyond the previously noted philosophical assumptions, the research paradigm aligns with social constructivism. Vygotsky (1978) asserted that learning takes place socially; moreover, each individual is affected by the numerous elements at play within his or her environment. These experiences impact an individual much in the way that culture shapes one's thought processes, actions and to an extent, beliefs. The students in Starlight County are no exception in this regard. Their experiences and knowledge have been shaped by the culture of a district in transition. For many, the effects of *Leandro v. North Carolina* (1997) have permeated their educational matriculation. Beyond social constructivism, through the use of the hermeneutical phenomenological approach, my goal was to fully explore and describe secondary students' lived, learning experiences in mandatory online courses. To construct meaning, I relied heavily on my personal background and experiences (Creswell, 2013). My goal was to make sense of what participants shared.

Problem Statement

The following section articulates the problem of focus upon which the current research study is derived. By utilizing information relative to the specific setting, as well as historical and current research, the problem statement is formulated here.

The current research study attempts to explicate the experiences of secondary students' learning experiences in a mandatorily-assigned NCVPS online course. The study was

formulated from the foundational history of a rural school district that has been in transition for more than a decade (*Leandro v. North Carolina*, 1997; *Moonlight County School Board v. North Carolina*, 2004; McFarland & Preston, 2010). Although there is evidence of student performance growth during the last three school years**,** there remains a concern that students have not been receiving all elements of a sound, basic education (*Moonlight County School Board v. North Carolina,* 2004; North Carolina Department of Public Instruction, 2013, 2014, 2015; Sims, 2015). The district has consistently lacked a sufficient number of highly-qualified teachers, and the use of online courses using the NCVPS platform has been identified as a remedy (Consent Order, 2009). However, current research pertaining to secondary student experiences is limited (Bakia, Shear, Toyama, & Lasseter, 2012; Barbour, 2010; Cavanaugh et al., 2009; Kim, Park, & Cozart, 2014). This is further explicated by the fact that research in regard to secondary students' experiences with mandatorily enrolled courses using NCVPS is non-existent. The problem is that there is no research pertaining to the experiences of secondary students participating in mandatory NCVPS courses.

Purpose Statement

The purpose of this hermeneutical phenomenological study was to describe the specific learning experiences of secondary students assigned to required virtual courses utilizing the NCVPS platform. In this research, specific learning experiences were expressed as participating in an online, NCVPS course without the option to take a traditional, face-to-face version. The theory guiding this study was Bandura's (1986) social cognitive theory, which at its core introduced the discussion of self-efficacy beliefs. The theory provided a lens to explicate the specific experiences of secondary students while acknowledging their self-assessed level of Internet self-efficacy. The explication of their shared experiences helped to explore the

experiences of those who may invariably have the greatest predicted difficulty with an online course in comparison to those who may be at ease learning online (Chien, 2012; Mullins & Sabherwal, 2014).

Significance of Study

The current research study and its significance is clearly punctuated by means of practical, empirical, and theoretical implication. Here I address the practicality of this research whereby student voice is essential yet sorely lacking. Empirical and theoretical significance will also be addressed on account of it speaking to the research gap. It will also highlight the current research study's attempt to add new discourse within the gap.

Practical

Introducing technology into a given setting and establishing expectations for a revolution is not a new concept. Cuban (2001) expressed the sentiment that instructors have been caught between remaining true to the established, traditional curriculum while moving forward to integrate the best practices, skills, and technologies available. It remains questionable whether a revolution has occurred within the educational realm. What is clear is that there has been an attempt to fully integrate technology; moreover, researchers have sought to thoroughly investigate this educational initiative (Hew & Brush, 2007; Morris, Ramsay, & Chauhan, 2012; Ng, 2012; Waycott, Bennett, Dalgarno, & Gray, 2010; Xiaoqing, Yuankun, & Xiofeng, 2012). Yet, this discourse is largely devoid of explication of student experience. At the most basic level, this study is significant due to its attempt to provide students a platform whereby their voices can be heard. The attempt to share their direct experiences with an online course has the potential to impact multiple elements to include: course assignment methods, course setup, student support measures, and technology impact on learning. The study will likewise provide

another layer of data regarding student-learning outcomes in a district that is rife with quantitative data based on standardized test performance. Thus, an additional layer provided by student experience data provided insight well beyond what has been collected from the normal quantitative data.

Empirical

At the time, Taylor (2001) noted that online learning had progressed toward building on the growing "features of the internet" (p. 2). If this was the case, it is likely the cause for the continual rise in online learning adoption and use in the United States, which increased by 43% between the academic school years of 2005-2006 and 2007-2008 (Picciano & Seaman 2007, 2009). More recently, the same research group cited a particular increase from just over 25% to 40% specifically in regard to schools offering online courses due to a lack of certified teachers (Picciano, Seaman, Shea, & Swan, 2012). These increases are possibly the result of empirical evidence that has documented the continued trends in online learning. Research has documented the notion that there was little difference between online versus traditional format course effectiveness (Cavanaugh, 2001; Zhao, Lei, Yan, & Tan, 2005); however, the findings of these studies were later questioned by Means, Toyama, Murphy, and Baki (2013) whose meta-analysis study determined that traditional, face-to-face courses held a performance advantage over fully online courses. Studies of this nature are as prevalent as those exploring specific student learning (Drysdale, Graham, Spring, & Halverson, 2013); technology (Kim & Bonk, 2006; Klein, Noe, & Wong, 2006) and interaction (Aspden & Helm, 2004; Drysdale et al., 2013). Still, there remains an empirical gap regarding secondary student experiences in online courses. This is especially true for research within the niche that has explored the NCVPS platform. Along

these lines there is a need to explore student-learning experiences with mandatory enrollment within NCVPS.

Theoretical

On the theoretical level, this study has several significant implications. To a smaller degree, this study has the potential to influence the discussion pertaining to digital wisdom, digital fluency, and other recent topical trends in technology integration. In particular, the reference to Prensky's (2009) digital wisdom theory and the older but more ubiquitous digital natives and digital immigrants' theory (Prensky 2001a, 2001b) offers this study a contentious point for exploration. The noted theory presupposes a level of knowledge and wisdom that is increased through the use of an application of digital technology; furthermore, the theory asserted plainly that this was quite possibly the natural shift for individuals whose lives have increasingly been encroached by increasing levels of technology. The current research study has the potential to impact discourse relative to the ideas and motives behind selecting and effectively integrating technology in a manner that is not only beneficial for learners but meets the goals of those who have implemented and assigned the programs. However, in reflecting back to the use of Bandura's (1986) social cognitive theory as well as Internet self-efficacy, this study has the potential to refute claims regarding supposed connections between digital wisdom and an individual's acclimation to technology for different purposes. Research is clear that individuals' perception of technology varies greatly depending on what technologies are used, for what purposes, and in what context. Thus, descriptions of student experiences in a technology rich environment with a fully online course despite acknowledging a low level of Internet self-efficacy may yield data to improve practices for other students with low Internet

self-efficacy. The potential to strengthen practices for those students at the opposite end of the spectrum who acknowledge high levels of internet self-efficacy is also a possibility.

Research Questions

The following research questions were designed for the purpose of aiding in the collection of data regarding student experiences with mandatory enrollment in an online course using NCVPS. A central research question and five subsequent sub-questions (SQ) were utilized. For each of the following questions, corresponding research has been cited in order to further substantiate the question, outline its purpose in regard to the overall study, and consistently ground the study in existing literature.

Central Research Question

What are the experiences of secondary students who are required to take online courses using NCVPS? This question was designed to act as the crux of the research study. Students' experiences were identified as an area for exploration to aid efforts to explicate on behalf of secondary students participating in NCVPS courses. This question was selected as a means to frame the core of the current research alongside research that has preceded this study (Dikkers, Whiteside, & Lewis, 2013; Oliver, Brady, Patel, & Townsend, 2009; Watson, Murin, Vashaw, Gemin, & Rapp, 2011).

SQ1: How do secondary students describe their experiences with learning within an NCVPS course? This sub question was selected to aid efforts to highlight learning experiences within an online environment. The question acknowledges that despite existing research pertaining to the involvement of students in NCVPS courses, there remains a gap regarding student experiences. Previous research has noted positive perception of NCVPS by students (Oliver, Osborne, Patel, & Kleiman, 2009) as well as increased student autonomy (Dikkers et al.,

2013). Still other studies provide information regarding student achievement (Watson et al., 2011). Yet, these studies were not focused on the exploration of experiences based on mandatory enrollment.

SQ2: How do secondary students describe the Learning Management System used for their NCVPS course? Due to the manner by which students access their online course and subsequently, the learning that takes place, this question was chosen to focus upon the point of access for the course. Barriers have the potential to impede an individual's use of technology (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur & Sendurur, 2012). Consequently, a barrier may be overcome or considered a nonfactor in one's perception of its use (Anthony & Clark, 2011). This question focuses on the potential barrier presented by the specific Learning Management System (LMS) utilized for students' course. There is evidence that how students access online learning may impact perceived learning or affect levels of motivation depending on factors relative to use (Corbeil & Valdes-Corbeil, 2013; Unal & Unal, 2014).

SQ3: What learning strategies do secondary students employ during their NCVPS course? Students taking online courses must rely more heavily on their own methods of motivation. An example of this are self-regulated learning strategies. The notion of self-regulation is directly correlated to not only motivation but also acknowledges the depth of a learner's participation in their own learning (Bandura, 1986; Zimmerman et al., 2009). It was previously cited that a learner's ability to self-regulate was positively related to satisfaction in an online course (Artino, 2007). This was further corroborated by Puzzifero (2008) based on a study of students participating in an online course at the college level. This question was chosen as a directed attempt to discern what self-regulated learning strategies secondary students who are participating in mandatory classes in NCVPS employ. As the study's intended participant

pool was comprised of some individuals with low Internet self-efficacy, the question of their motivation during the course is extremely relevant.

SQ4: What value do secondary students attribute to technology in regard to learning? The aim of this question was to add to the layer of understanding regarding participants' personal value of technology. Values (and to an extent beliefs) shape one's perceptions of technology as well as provide reasoning to support how and why they use it (Ottenbreit-Leftwhich, Glazewski, Newby, & Ertmer, 2010). The question was designed to address the basis of the learning experience of students within a technology rich, learning environment. Of further question was whether an expressed lower value for technology correlated with a particular type of student learning experience.

SQ5: How do secondary students experience technology for learning in their homes during enrollment in a mandatory NCVPS course? This question followed precedent from emerging studies that revealed different modes and levels of use of myriad technologies in the home and educational setting (Baytak, Tarman, & Ayas, 2011). A question of one's acclimation at home provides insight into how an individual is accustomed to the use of technology in the home setting. Moreover, this question attempted to speak to students' access and use of technology for learning at home while enrolled in a mandatory NCVPS course. Of interest was whether student explications were interrelated to levels of Internet self-efficacy, use of technology for learning purposes, or noted as assistive to their work in the course.

Definitions

The following definitions were derived from key words, phrases and terms that were pivotal to the current research study. Included here are definitions supported by research and documented in regard to their inclusion in the study.

1. *Blended learning* - Blended learning is a method of instruction whereby techniques for disseminating and acquiring information consist of both actions completed in online and face-to-face. Blended learning is described as simple and complex due to variations to include limited integration of technology to more complex modes (Garrison & Kanuka, 2004). NCVPS offers courses completely online; however, courses are also offered that incorporate facets of face-to-face instruction within the traditional school model.
2. *Hermeneutics* - Hermeneutics is the branch of phenomenology that ascribes to the process of explicating the lived experiences of individuals without the need to transcend. Instead, the researcher attempts to reveal the experiences while fully acknowledging the inevitable biases of the researcher (Kafle, 2011). The goal is therefore to interpret such experiences (van Manen, 1990).
3. *Online learning* - Online learning is used to describe learning opportunities designed, built, and executed using platforms accessed on the world-wide web (Harasim, 2000). The term is used often to describe online education and distance learning. Despite nuances, they all reference a "subset of learning in general" (Anderson, 2008, p. 47), albeit learning that is completed through and on the world-wide web.
4. *NCVPS* - NCVPS is the abbreviation for North Carolina's public online virtual school consortium. Accordingly, the consortium provides learning opportunities to students in North Carolina by leveraging state and various national resources to include other state virtual schools and private education platforms (North Carolina Virtual Public Schools, 2015).
5. *Virtual High School* - The term virtual high school was originally used to describe the original consortium of schools which developed and delivered online courses dating back

to 1996 (Donlevy, 2003). Here, virtual high school described the current consortiums used by and supported at the state level to deliver online and blended learning opportunities.

Summary

This chapter provided an overview of the current research study and articulated a need for it based on the gap in the body of existing research. The need to explore the experiences of secondary students participating in mandatorily assigned NCVPS courses was also articulated. The unique setting was briefly noted as well as the circumstances pertaining to the forced enrollment policy for students in online courses using the NCVPS platform within the research setting. Furthermore, this was noted as a phenomenon that had not been explored. An accompanying literature review is provided in Chapter Two and a detailed explication of the research methodology is addressed in Chapter Three.

CHAPTER TWO: LITERATURE REVIEW

Overview

The current research study sought to describe the specific learning experiences of secondary students who are mandatorily assigned to virtual courses using the North Carolina Virtual Public Schools (NCVPS) platform. This study attempted to address the multilayered problem of students' subjection to online courses despite a research gap relative to the explication of students' experiences with online learning. Chapter Two explicates the pertinent literature pertaining to this study. Specifically, the theoretical framework as well as relevant, current, and historical literature is discussed. The social cognitive theory, or more appropriately, self-efficacy, is referenced and discussed in juxtaposition to the body of research pertaining to online learning, NCVPS, student perceptions of technology, technology barriers, and general technology acclimation. This study used self-efficacy, a strand of the social cognitive theory, as a lens to guide the exploration of secondary student experiences with mandatory enrollment within an NCVPS course.

Theoretical Framework

The following section speaks to the theoretical framework which provided a critical lens to aid the research process and eventually the data collection and analysis phases. Bandura's (1986) social cognitive theory as well as the concept of self-efficacy are discussed here. Information is presented regarding the branch of self-efficacy relative to computer technology: internet self-efficacy.

How individuals acquire knowledge has been thoroughly researched and expressed by a myriad of theories. Of those, Bandura's (1986) social cognitive theory asserted that individuals develop knowledge specifically through observations of others; moreover, as others complete or

model actions, they provide knowledge that allows others to replicate them. Essentially, whatever outcomes are borne of said actions observed and replicated lead to growth and development. In other words, they acquire knowledge. At the core of the actions is the element noted as self-efficacy.

Self-efficacy deals particularly with the base motivation that one will be able to "successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p. 193). An individual with high self-efficacy will exhibit a higher level of motivation than someone with low self-efficacy based on the notion that increased motivation (i. e., self-efficacy) provides the individual with the ability to handle situations (Bandura, 1977). This motivation, which governs one's level of confidence to complete a given task, is not equal. Individuals are likely to express varying degrees of self-efficacy expectations based on magnitude, generality, and strength, which in turn affect performance. In this way, individuals' self-efficacy may shift based on perceived difficulty of a given task, motivation within the confines of set parameters based on different situations, and one's ability to cope regardless of whether an experience is not deemed positive.

Methods for coping may also be achieved by the process of self-regulation. Self-regulation denotes the degree by which students are active participants in their own learning. Such students direct their own efforts for learning with little to no reliance on others (Barnard-Brak, Lan & Paton, 2010; Zimmerman, 1989). Self-regulation hinges on one's ability to be proactive as opposed to reactive when confronted with challenges. Of note was the link cited between the use of self-regulated learning strategies and positive learning experiences by students who have been able to employ them (Artino, 2007; Puzzifero, 2008). The applicable connection to self-efficacy here is implied by one's ability to exert a modicum of control over

events that affect them (Bandura, 1994). This is perhaps why self-efficacy has been deconstructed further to describe one's perceived level of control or motivation to handle various situations. Furthermore, despite the implied connection between self-regulation and self-efficacy, it remains questionable as to whether they are both linked to overall student performance when considerations are made for both (Puzzifero, 2008).

Computer and Internet Self-Efficacy

The concept of computer self-efficacy, like the notation, is expressly concerned with one's perceived level of control regarding actions and experiences that require the use of computers. The degree to which one's ability to use a computer, moreover their desire to use it, is summarized by computer self-efficacy (Celik & Yesilyurt, 2013; Compeau & Higgins, 1995). Computer self-efficacy provides a critical lens for exploration of secondary student experiences with an online learning course, which was largely explored using a web connected, personal computer device. Of interest was the specific exploration of students while recognizing their exhibited levels of Internet self-efficacy. Internet self-efficacy (ISE) speaks to the beliefs that an individual has regarding what he or she can accomplish in the online realm now and in the future (Eastin & LaRose, 2000). Although prior research has noted a link between computer self-efficacy, attitude toward technology, computer anxiety, and general attitude toward the application of educational endeavors that are dependent on technology, it is questionable as to what these individuals experience since computer self-efficacy has not been explored in this manner regarding this online program or within this setting (Celik & Yesilyurt, 2013). This too is true for Internet self-efficacy.

In their original study, Eastin and LaRose (2000) explained that "people who have little confidence in their ability to use the internet, who are dissatisfied with their internet skills or who

are uncomfortable using the internet may be said to have weak self-efficacy beliefs" (para. 2). They went on to express the relationship of ISE to use of the Internet to complete a given set of tasks. They determined that as they predicted, there was a strong, positive correlation between ISE and previous internet experiences and outcome expectancies (Eastin & LaRose, 2000). In contrast, there was a strong, negative correlation with ISE and Internet stress and self-disparagement. Interestingly, the notation of Internet stressors included accessing the Internet and access (service interruptions, disruptions, etc.) or problems with the computer itself.

Of note, students' self-efficacy has been cited as a critical predictor of potential success with self-directed learning (Roblyer, Davis, Mills, Marshall, & Pape, 2008). Students' expectations, even in the online realm, are largely crafted by their experiences with traditional, face-to-face educational opportunities; moreover, when individuals lack any direct experience with online learning they may rely on information communicated by their peers, or they may resort to constructing expectations based on their learning needs (Forrester & Parkinson, 2006). Despite studies that highlight high levels of need based on student expectations of teachers, self-efficacy remains a vital determinate of not only what but how students experience learning in an online environment.

Related Literature

The literature that has been read, reviewed, and utilized is discussed here as it relates to the proposed study. The current body of research that specifically addresses areas within the proposed research will be noted. Areas of focus will include: online learning, student perceptions of technology, virtual high schools, North Carolina Virtual Public Schools (NVPS), technology barriers as well as research and information pertaining to education in Starlight County.

There exists a research gap in regard to the experiences of secondary students participating in online courses. This gap is widened further when one acknowledges the research dedicated specifically to NCVPS; however, the research that does exists has attempted to elucidate myriad elements. They include research concerning the following: student perceptions of technology, online learning, North Carolina Virtual Public Schools, other state virtual school platforms, and technology barriers. In addition, literature focusing on the history of education in Starlight County will provide another layer of information to frame this study. These noted areas provided information relative to the myriad layers that first illuminate secondary students and their varied perceptions of technology. Moreover, research focused specifically on general online learning as well as the relative subsections of this broad area of research. To better focus the study and accordingly align it, research that specifically discussed NCVPS is included as it will provide a clearer understanding of what is already known regarding this online learning platform as well as what previous researchers have noted as requiring further study. To add further depth, research specifically highlighting other state implemented virtual school platforms will also be included to highlight trends and where possible similar instances to occurrences in the documented literature pertaining to NCVPS. Discourse pertaining to technology barriers will be explored and included in the synthesis to increase support toward the discussion of those things that may hinder students' online learning. Finally, exploration of the available literature documenting the interesting history of education in Starlight County will also be included to ensure that a frame to understand the unique characteristics of the district and further validate the study. What follows is a synthesis of the existing information derived from the research focus areas.

Online Learning

The attempt to bridge learning for 21st-century learners has led to the development of a core set of tenets that includes the use of critical thinking, creativity, communication, and collaboration (Blair, 2012). To further extend this initiative, there has been a dedicated call to successfully integrate technology for 21st-century learners. Although it is true that technology has been previously added to the traditional, educational setting, it is also true that much of this technology has been underutilized to maximize learning (Cuban, 2001; Ifenthaler & Schweinbenz, 2013; Swallow, 2015; Warschauer, 2011). This line of research does not cite specifically the introduction and use of online or virtual learning platforms. To continue, prior research has explored the experiences of those involved in secondary online learning, yet the participants examined were adults such as teachers and administrators (Barbour & Reeves, 2009; Borup, Graham, & Drysdale, 2014; Cavanaugh et al., 2009; Hawkins, Barbour, & Graham, 2012). It may be inferred that this is in part due to the ease by which researchers may access adults for the purpose of studies; however, it does change the fact that research pertaining to students is limited by comparison.

Despite the limitations regarding what has been explored within current research pertaining to online learning, a further concern is the questionable amount of specific studies available. Some researchers have gone so far as to note simply that there is a small amount of published research concerned with online learning available (Barbour, 2010; Cavanaugh et al., 2009; DiPietro, Ferdig, Preston, & Black, 2008). For instance, Barbour and Reeves (2009) expressed that there is a deficit in regard to rigorous studies focused on online learning; moreover, there is only a fraction of the research dedicated to exploring online learning that has placed attention primarily towards the secondary level (Rice, 2006). What is currently in

abundance within the pool of online learning research are studies focused on evaluation, research reports as well as a cavalcade of studies derived from masters and doctoral students' culminating theses and dissertations (Barbour & Reeves, 2009). The irony presented here is that online learning has been in existence in the United States for two decades, so it would seem likely that there would be far more valid research dedicated to exploring it. Barbour (2010) noted "While K-12 online learning has been practiced in the United States for almost two decades, the amount of published research in this area is quite limited" (p. 12).

More recent studies have begun to fill the large gap with a focus on the experiences of K-12 students participating in online learning. Harvey et al. (2014) employed quantitative measures to explore student (N = 140) social interactions, reactions to learning online, and involvement with other extracurricular activities. The descriptive statistics revealed that most of the study's participants not only liked taking online classes, they also expressed that they could "keep up with their online core courses" (Harvey et al., 2014, p. 17). A healthy level of interaction between teachers and students was also cited (Harvey et al., 2014). The researchers once again noted the apparent gaps in the research pertaining to K-12 students to include students with disabilities. They went far enough to explicate that the existing literature "left much to be desired" (Harvey et al., 2014, p. 25). Again, although this is only one example of a recent study, and its noted focus, driven by recommendations of Cavanaugh et al. (2009) is a reminder of the gap's existence. This gap impacts the subset of research dedicated to exploring NCVPS.

Online learning, in its current incarnation, has transformed greatly since its inception. As a by-product of older forms of distance education, online learning encompasses multiple models wherein learning is completed by an individual in part or entirely by one who accesses learning

materials and coursework electronically. In its infancy, distance education grew through the development of correspondence courses. Instruction in this manner was ushered in by shorthand teachers. One of such teachers, Caleb Phillips, provided students with the opportunity to learn shorthand through weekly lessons utilizing lessons delivered via the mail in 1728 (Bower & Hardy, 2004). This system of instruction was pushed further in 1833 by correspondence composition courses offered through a university in Sweden (Bower & Hardy, 2004; Holmberg, 1995). The system of correspondence courses was revolutionized again by Sir Isaac Pitman, whose shorthand lessons by postcard would lead to the eventual development of a system of colleges utilizing this method of instruction that did not require face-to-face interactions (Bower & Hardy, 2004; Mahnegar, 2012; Phillips, 1998). As much as these forms of distance education were shaped by the development of formal printing and publishing, other technologies such as telephone, satellite, and eventually fiber-optic systems would further mold distance education (Bower & Hardy, 2004; Simonson, Smaldino, Albright, & Zvacek, 2000).

The evolution of distance education that would eventually lead to the development of online learning may be directly attributed to the rapid expansion of various technologies and their implementation toward transforming the delivery of instruction (Cuban, 2001). This has been a continued practice whereby the revolutionary technologies of their time are tapped to extend education to better reach a new generation of students. It follows that the increased levels of connectivity afforded by the world-wide web and its unification of communication and myriad other medias (print, audio, and video) are responsible for the currently acceptable incarnation of the virtual classroom, which includes those accessed onsite and at a distance (Bower & Hardy, 2004; Matthews, 1999; Sims & Kigotho, 2013).

Picciano et al. (2012) noted a substantial increase in the number of students

taking online or blended learning courses growing from 700,000 in 2007 to more than one million in 2009. Though the indicated rise is noteworthy, Watson, Pape, Murin, Gemin, and Vashaw (2014) more recently revealed that the total number of students participating in online schools is "no more than 16% of the total U. S. K-12 student population" (p. 5). To put this in perspective, that accounts for about 8,780,160 students of the total 2014 enrollment of 54,876,000 (Center for Education Reform, 2016). By comparison, the most recent data, also documented in 2014, noted that 2,524,030 students enrolled in post-secondary institutions were taking at least one of their courses at distance; moreover, 1,382,872 took all of their classes online (Allen, Seaman, Poulin, & Straut, 2016). This total does not account for the varied methods for implementing online schools and/or courses, nor does it acknowledge the noted gaps between schools, districts, and states as it pertains to online learning, especially at the secondary level.

At the secondary level, students have access to online courses that range from advanced to recovery courses. Students may be given entry to courses that extend academically beyond what is available in their current school. They may also have the opportunity to repeat courses wherein they have been unsuccessful (Watson et al., 2014). Further variance is noted by available courses stemming from full-time, online school programs; single and multiple district-only programs; consortium online programs; post-secondary programs; and state virtual schools (Watson et al., 2011). The state of North Carolina, where this study took place, primarily offers supplemental online learning to most of its high schools, to some middle schools, and to no elementary schools (Watson et al., 2011, 2014).

The question is what then has led to the dramatic rise in online learning amongst secondary schools. The answer may be simply noted by evidence that recognized that online

learning has the potential to "provide more flexible access to content and instruction at any time, from any place" (Means et al., 2013, p. 1). Some of the earliest discussions of online learning agreed that online learning, or virtual high schools, would offer schools the ability to expand the curriculum in their given schools while remaining cost effective (Donlevy, 2003). These benefits have been further ratified by consistent data that the use of online learning or blended programs does not differ substantially when one explores student proficiency. Multiple researchers noted that students who take online courses perform just as well or better than their counterparts taking traditional, face-to-face classes of the same type (Barbour, 2014; Johnston & Barbour, 2013). Further evidence may be noted by older studies stemming from the earliest research pertaining to the then burgeoning online educational environment that identified either parity or superior results for student achievement when comparing online and traditional formats (Barbour & Mulcahy, 2008; Cavanaugh, Gillan, Bosnick, Hess, & Scott, 2005; Means et al., 2009). Many of these studies made no attempt to differentiate between the achievements of students participating in standard courses as many noted studies focused on the early adopters who were increasingly identified as high achieving. Furthermore, studies involved herein were far more likely to reference students living above the poverty line and included little representation from minority populations (Barbour, 2009).

Of the wealth of literature that has covered the history of online learning in the United States, a great percentage focused on high school students taking Advanced Placement or other honors courses to include those for college credit and elective courses. There is little discourse, however, provided for students taking traditional, standard courses. It would seem that the earliest online opportunities were simply those for the highest achieving students; what is more, these students were provided the opportunity to take the courses at their own discretion. The

precedent for mandatory enrollment in online courses has only recently been alluded to in the literature by noting the availability of online courses due to unavailable instructors (Watson et al., 2014). It may therefore be inferred that per the literature, the idea of mandatory enrollment within online courses is a part of a shifting paradigm.

Although there is great potential to further increase the application of online learning, questions regarding equitable access remain. Rauh (2011) explicated that online learning is a toll good. By that, online learning is dependent on rights to access, which are consequently driven by money and various other financial factors. As with any toll, there is a price that must be paid if one is to be provided access. Those without sound financial support are less likely to be able to pay the toll or to participate at the same levels as students from low-income homes and neighborhoods (Hansen & Reich, 2015; Stich & Reeves, 2017). In addition, implications of student access are further questioned as to whether this has any bearing on the school environment. Publicly-funded schools have a duty to provide students with the essential tools to be productive in their educational endeavors, which has been the basis of several court cases such as *Leandro v. North Carolina* (Horwitz, 2004). In those cases, it was determined that states had to do more to provide an equitable education to all students. This includes the provisioning of tools for which technology would be included as essential in the 21st-century classroom.

The question is introduced regarding increased access to online learning programs as problematic since they may ignore inherent barriers faced by at-risk students. Essentially, the at-risk population was noted to be more likely to drop an online course. This rate increased as the students' poverty level increased. This same group was also less likely to self-select an online course. Student motivation was noted for alignment with factors to include: technical abilities, technology use beyond academics, and negative perception of delayed gratification (Deimann &

Bastiaens, 2010; Kuttan & Peters, 2006; Muir-Herzig, 2004). Another concern highlighted in regard to at-risk students and online learning stems directly from inadequate technology abilities more readily exhibited by high poverty and minority students (Kuttan & Peters, 2006). Perhaps the lack of skills is a direct influence of the ways in which the technology is implemented and used within their environment. Students from higher income educational environments are tasked to complete more complex, technology rich assignments such as running simulations or modeling whereas students at the other end complete more remedial activities (Hansen & Reich, 2015). The use of online learning tools and technology may be directly attributed here to performance desires by the respective groups, and according to research, students in high poverty schools are more likely to need support (Barajas, Philipsen, & Brooks-Gunn, 2008; Noguera, 2010; Ullucci & Howard, 2015; Welton & Williams, 2015). Thus, the remedial use of technology or online learning tools is likely.

Student Perceptions of Technology

Previous research pertaining to student perceptions of technology is unclear. The existing research eerily mirrors the notation of Tolstoy (1974) who explained, "We can only know that we know nothing."(p. 299). In this regard, there exists a great deal of disparity regarding students' perceptions of technology (Ertmer et al., 2012; Humble-Thaden, 2011; Hundley & Shyles, 2010; Margaryan, Littlejohn, & Vojt, 2011; Morris et al., 2012; Ng, 2012; Sanchez, Salinas, Contreras, & Meyer, 2011). On the one hand, research explicates the positive perception of technology by students (Humble-Thaden, 2011; Keengwe & Bhargava, 2014c), while in other documented scenarios technology is cited for negatively impacting students (Armstrong, 2011; Barbour, Grzebyk, & Eye, 2014; Bluestein & Kim, 2016; Vernon, Barber, & Modecki, 2015).

This disparity is highlighted by Humble-Thaden (2011), whose discourse provided evidence that students, surprisingly, perceive technology use in the classroom positively. The study revealed that the use of mobile device technology for educative purposes within the secondary atmosphere was not only perceived positively, it also increased students' comfort with communicating through indirect means of communication. This corresponds with research citing positive perception of mobile device technology for improving student engagement within a given environment (Keengwe & Bhargava, 2014). Hence, there is evidence that students perceive technology positively when used for educational purposes; however, given the type of technology, this may vary (Ng, 2012).

As diverse as the student population is, so too are ideas regarding the types of technology used. It is evidenced that students' perceptions of devices (mobile phones, personal computing devices and video game consoles) reveal disparate ideas of applicability and varying degrees of positive perception (Brito, 2012; Hundley & Shyles, 2010; Ng, 2012). Despite expressing high awareness for technologies even beyond those they personally owned, students noted that such devices were critical for use in socializing; moreover, they were aware of risks that coincided with the use of such devices for social purposes (Brito 2012; Bolton et al., 2013; Hundley & Shyles, 2010). Incidentally, students may express a high level of knowledge of devices and use them extensively at home; however, it is not clear that this form of technology use impacts use of technology for learning (Bennett, Maton, & Kervin, 2008; Salomon & Kolikant, 2016). These discoveries do not necessarily acknowledge students' perception or use of technology for purely educational purposes.

When used for strictly educative purposes, research highlights that some students feel comfortable using information in their attempt to acquire new information; moreover, they noted

overwhelmingly positive views of communications tools used outside of school (Canole, Laat, Dillon, & Darby, 2008). Students also expressed that these same tools could be utilized within the classroom; however, their desire to do so was moderate. It is noted that the inclusion of technology in the classroom continues to rise substantially, yet students may question its use if technology is only being utilized for the sake of adding technology. Students essentially desire to increase the level of purposeful use of said technologies (Jones & Shao, 2011). This becomes increasingly important to ascertain how one's experiences with technology have impacted the value they attribute to it (Hundley & Shyles, 2010).

Technology integration may be surmised as the implementation of computers along with other digital devices (Hew & Brush, 2007), tablet devices (Morris et al., 2012), and a myriad of other information and communication technologies (ICT) used by both students and teachers (Ng, 2012; Waycott et al., 2010; Xiaoqing et al., 2012). Online learning would also be noted as a construct due to its dependence on the use of aforementioned devices and technologies. Questionable here is how technology has been integrated within the educational environment as it may be linked to how students not only perceive technology for learning, but it also may predict the value students attribute to it. Two of such integration models are the Technological Pedagogical Content Knowledge (TPACK) and the Substitution Augmentation Modification Redefinition Model (SAMR) models.

TPACK model. At the heart of TPACK exists the complex interplay of three primary forms of knowledge: Content Knowledge, Pedagogy Knowledge, and Technology Knowledge. Content knowledge is best expressed by what teachers know and desire to share with those they serve (Mishra & Koehler, 2006). This includes concepts, theories, ideas, organizational frameworks, knowledge of evidence, and proof. Pedagogy knowledge focused on what teachers

know to be true regarding how knowledge is not only shared but also the core processes and methods of teaching and learning (Mishra & Koehler, 2006). Technology knowledge is concerned with the understanding of technology, tools, and resources and is exemplified by truly having an understanding regarding when technology can assist or impede work (Mishra & Koehler, 2006). Each of the aforementioned forms of knowledge are not isolated; moreover, the TPACK model focuses on the many points by which these forms intersect with one another.

The previously noted points of intersection are used to explicate the interplay or transformation that occurs between at least two of the knowledges. For example, Pedagogy and Content knowledge (PCK) is expressed by an instructor's use of both forms of knowledge to tailor specific learning for students based on needs but with respect to the content itself and how it will be delivered. Another point of conversion is noted by Technology and Content knowledge (TCK). A difference is highlighted here as the instructor acknowledges and fully understand the transformative nature of technology and its interplay with content and furthermore, understanding how they each impact the other. The third combination or rather point of intersection between technology and pedagogy knowledge focuses on how teaching and learning can shift depending on how a technology is used in a way.

The combined TPACK model is overwhelmingly dependent on the unification of all elements for supporting and driving student learning. Essentially, it is a solution to the problem created by failed attempts to successfully blend technology with learning (Mishra & Koehler, 2006). It provides a basis for effective teaching with technology, which requires a firm understanding of the interplay between technology, pedagogy, and content knowledges.

There does exist a subsect of research that has been dedicated to the impact of the TPACK framework on educators in the traditional classroom setting as well as those teaching

online courses. Of concern is whether it is possible to measure or equitably compare the three knowledges of technology, pedagogy, and content. Archambault and Barnett (2010) reported that participants' (*N*=596) responses to a 24-item survey were telling of participants' failure to "distinguish" among the three constructs within the framework. Participants recognized their existence yet there was no clear manner by which the researchers could determine whether the constructs are existent beyond where all three are interconnected (Archambualt & Barnett, 2010). This difficulty highlighted here is reminiscent of preceding discussions questioning the validity of the constructs of pedagogical content knowledge, which consequently are combined with the construct of technology here (Segall, 2004). Accordingly, these are some of the reasons cited for the fallibility of the framework to be used exclusively (Angeli & Valanides, 2009; Graham, Cox, & Velasquez, 2009). Hence, the TPACK model and others such as SAMR provide limited distinctions regarding the integration of technology into the educational environment.

SAMR model. Whereas the TPACK framework is expressed by the integration of technology by exploring the points by which various constructs of knowledge intersect, the SAMR model more modestly is concerned with how technology is used for instruction. The model relies on a hierarchy by which technology is used in either the lower sphere that includes substitution and augmentation or the higher sphere that includes modification and redefinition. Puentedura (2006) explained that the lower spheres offer some form of enhancement to the learning task, while the higher sphere lends itself to transformation of the learning task. The different areas are defined as follows: Substitution: Technology acts as a direct tool substitute with no functional change in the task. Augmentation: Technology acts as a direct tool substitute with functional improvement. Modification: Technology allows for significant task redesign.

Redefinition: Technology allows for the creation of new tasks that were previously inconceivable (Puentedura, 2006).

In the learning environment, this may be expressed clearly by the shift from enhancement to transformation. For example, students could essentially use a pen and a sheet of paper to write an essay; however, the use of a computer and basic word processing software to type the same essay only substitutes the pen and paper for a computer. This is evidence of substitution since no transformation in the task truly takes place. Conversely, if students were to write the very same essay using Microsoft Word, some enhancement occurs whereby now students have access to grammar tools, spell check, assistance with formats etc., which shifts the task into the area of augmentation. Taking the task into the sphere of transformation, the use of a web-connected device with the inclusion of Microsoft Outlook or other software would provide a means for the student to instantly share their writings with others; moreover, the connection to the web allows for increased productivity assistance to incorporate images or other data that may not have been accessible otherwise. This would be defined by modification. The final area of redefinition would occur with a fully integrated Office 365 subscription and use of Microsoft Word 2016 whereby the student could develop their essay in tandem with the instructor who has constant access to the document, can see and provide comments and/or feedback in real-time and without the need to have it sent to them.

The potential link between SAMR and online learning is clear in that this method of instruction is entirely dependent on how technology is integrated into the learning environment. The model noted that the simple act of inclusion does not necessarily lend itself to improvement. As such, it is possible that the implementation may range "from the more mundane replacement to the transformative despite the same intended use" (McKnight et al., 2016).

Both TPACK and SAMR exemplify shifts in describing the ways in which various technologies may be used in the educational setting. One such example of successful integration of digital devices was noted by Hutchison, Beschorner, and Schmidt-Crawford (2012), who described the use of iPads for improving literacy instruction. The study noted successful introduction of literacy skills and improved 21st-century skill sets based on their use of iPad devices for instruction. This contrasted slightly with Ng's (2012) findings that students' attitudes toward the use of ICT for learning before and after a course were more positive despite a lack of familiarity with technologies. In this sense, there was a shift in students' attitudes and consequently perceptions of technology. This provides opportunity for expanse in areas wherein students may encounter technology in a manner that they are not accustomed. After all, research is clear that technology use in a student's home may explain potential problems with technology integration elsewhere.

This study sought to explore secondary student experiences with a type of online learning; therefore, acknowledging how this model may potentially impact students, there is a need to explore prior research pertaining use of technology by students in their home environment. As the social cognitive theory posits, individuals essentially gain predictive knowledge leading to motivation for completing action by witnessing models in their environment (Bandura, 1986). This is doubly true of what occurs with models in their home environment. Of the limited research regarding students' use of technology at home; it was noted that it is integrated to varying degrees within the home where usage and access differ (Ng, 2012; Soujah, 2014; Xiaoqing et al., 2012). While many students have numerous devices at their disposal, at home they may only be used for entertainment. Conversely, the technologies may be

relegated for different uses due to a lack of available Internet access, for which many of the devices require (Davis, 2015).

Virtual High Schools

Virtual high schools' roots may be traced as far back to the development of correspondence courses that would eventually transform to programs offered by universities to students at a distance. As technology transformed and allowed it, virtual platforms that increased the reach of universities would become the model for distance education for students at the secondary levels (Collins & Halverson, 2009). In the earlier transition periods it was noted that online learning was attracting increased attention from individuals, school districts, higher education providers, and for-profit companies (Donlevy, 2003). This mirrored evidence from that same period noted by Princiotta and Bielick (2006) that 41% of students participating in home schooling programs did so through distance learning. At that time, there were high school virtual programs offered in at least 12 states; moreover, there were cyber charter schools in 30 states (Donlevy, 2003). Seven years later it was documented that there were virtual school programs in 48 states including the District of Columbia (Watson, Murin, Vashaw, Gemin, & Rapp, 2010). Data published in 2015 taken from the 2013-2014 school year revealed increasing enrollment year after year (Miron & Gulosino, 2015). It was noted that as recently as 2014 that 12 states passed laws pertaining to technology and its use for educating students (Bleiberg & West, 2014; Chingos & Schwerdt, 2014). Thus, it may be inferred that the trend is likely to continue as more schools seek virtual offerings to supplement course offerings in their schools.

The first virtual high school, Hudson Public Schools of Massachusetts, began operating with funds received from the Federal Technology Innovation Challenge Grant in 1996 (Donlevy, 2003; Zucker, 2005). At the time, the intended goal was to build an online high school as a

consortium of participating schools providing access to learning 24 hours a day, seven days a week. The offering of courses in this manner lead to the development of a network of schools offering access to courses for students online at school and within their homes. Courses at the onset were largely focused toward providing advanced students additional learning opportunities beyond offerings in their physical surroundings. This has transitioned as courses now include online versions of standard curriculum courses as well as those for credit recovery. Despite the growth of virtual schools and their increased role in the educational setting, much remains to be explored regarding their overall impact (Chingos & Schwerdt, 2014).

Despite the focus of this proposed research and its focus on NCVPS, the state is also home to two other virtual educational institutions: North Carolina Connections Academy (NCCA) and North Carolina Virtual Academy (NCVA). Approved in February of 2015, both are designated as virtual charter schools. Although they may seem to be similar to NCVPS, there exist a milieu of differences. Unlike NCVPS, both NCCA and NCVA are operated by private companies, Pearson and K12, respectively. Furthermore, students participating in these programs cannot do so while attending traditional, state-funded schools and must therefore take all of their courses online. In addition, by not utilizing resources in traditional schools, students do not have access to class facilitators that some NCVPS students have access to. NCCA in particular noted that parents serve as learning coaches for students participating in its courses. Both schools offer courses including: comprehensive, honors, and advanced placement (AP) courses. By design, both NCCA and NCVA are options for online learning that are entirely voluntary. However, there remains questions regarding virtual charter schools or perhaps rather the organizations running both NCCA and NCVA.

According to research, schools like NCCA and NCVA continue to be questioned regarding their true value as opposed to blended and traditional models. Barbour (2015) noted the shift to online is often lauded as the best practice due to often inflated results from older studies rife with smaller, homogenous student groups. These groups are more likely to include selective, high achieving students (Barbour, 2015; Molnar et al., 2013). This is compounded by research explicating effectiveness, which is also limited (Barbour, 2015). Of further concern, documented reports and research regarding fully online charter schools across the nation revealed lower student performance (Colorado Department of Education, 2006; R; Zimmerman et al., 2009). Also troubling were published reports from states such as Arizona wherein audits revealed higher percentages of senior student drop outs of 25% as opposed to the state average of 3% (Office of the Legislative Auditor, 2011). In Utah, virtual school options operated by Pearson and K12 both performed poorly. Utah Virtual Academy obtained a performance measure grade of C while Utah Virtual Academy received an F (Utah State Office of Education, 2014). Barbour (2015) noted the information available raises questions regarding the level of services being provided by non-profit and for profit online virtual schools. Yet, these challenges cannot fully erode evidence that virtual schools are afforded credible advantages and disadvantages.

Advantages. Virtual high school platforms have been cited for numerous advantages that they offer to schools and students. First of which that is commonly cited are additional course offerings (Cavanaugh, 2001; Chingos & Schwerdt, 2014; Donlevy, 2003; Freedman, Darrow, Watson & Lorenzo, 2002; Miron & Gulosino, 2015; Wood, 2005; Zucker 2005). Donlevy (2004) expressed that “small schools and rural schools may realize special benefits by being able to offer a broad range of courses typically available in larger schools and districts with

considerable resources" (p. 120). This was noted again by Wood (2005) who explained that this is also advantageous as it assists schools with considerable gaps in their academic offerings for courses that they could not provide otherwise. Beyond offering of courses, this method of expansion is done so at reduced costs for schools and districts compared to offerings that would be dependent on face-to-face delivery. Fortunately, increased access is also noted in regard to better teachers. An extended advantage of a virtual education platform is its dependence on a teacher base beyond that available in the student's state, district, or school. The goal of providing students an equitable education begins with ensuring that students have a highly-qualified, certified teacher. This is noted concern for courses with hard to employ positions in science and math (Barbour & Mulcahy, 2006; Cavanaugh et al., 2009; Lips, 2010). As the educational leaders in this environment, highly-qualified, certified teachers ensure that the overall quality of the learning is improved (Barbour, 2011; Berge & Clark, 2005; Fulton, 2002; Elbaum & Tinker, 1997; Tinker & Haavind, 1997). Essentially, this is a noted strength of the virtual school model (Barbour & Reeves, 2009). Other advantages of virtual schools have been cited as providing students with additional choice (Berge & Clark, 2005; Fulton, 2002; Hassell & Terrell, 2004; Lips, 2010; Zucker, 2005) and increasing student learning outcomes (Berge & Clark, 2005; Zucker & Kozma, 2003).

Disadvantages. Despite the noted advantages of virtual high school platforms, some research has been critical (Christensen, Horn, & Staker, 2013; Donlevy, 2003; Ekmekci, 2013; Layton & Brown, 2011; Roblyer & Marshall, 2003; Sheridan & Kelly, 2010; Zucker & Kozma, 2003). Notations have been provided regarding limited personal contact between students and their instructors and concerns regarding social and emotional support. Other problems have been noted in regard to areas that are dependent on the student alone. Students reading abilities are

called into question as there have been links established between ability and motivation. A student with lower abilities may lack the motivation required for accomplishing tasks within a virtual environment wherein supports require the student to seek them out (Barbour, Siko, Sumara, & Simuel-Everage, 2012; Zucker & Kozma, 2003). Motivation is also noted at the root of the challenge revealed by Donlevy (2003), who explained that some students find it difficult "to maintain a high level of daily involvement in VHS courses" (p. 121). A connection here may be linked to the possibility of frustration as students with limited abilities who struggle to participate daily in a virtual environment and are eventually faced with a problem and lack the knowledge find a solution. This is exacerbated without a high level of technical support (Roblyer & Marshall, 2003).

North Carolina Virtual Public Schools

NCVPS was established by the North Carolina General Assembly under Session Law 2006-66. The general assembly asserted that NCVPS would operate under the State Board of Education and would also hold administrative offices within the state's Department of Public Instruction (S. L. 2006-66). Moreover, section 7.16(b) called for the consolidation of "all e-learning opportunities offered by State-funded entities to public school students" (General Assembly of North Carolina, S. L. 2006-66). NCVPS began operating and providing state funded learning opportunities at no cost to students in North Carolina beginning in 2007 (Oliver, Osborne, Patel, & Kleiman, 2009). Its initial offerings were geared toward increasing course offerings for students that "their local schools may not have offered" (Banks, Bodkin, & Heissel, p. 1, 2011). In the early stages, courses were only offered to high school students before eventually being offered to middle school students (North Carolina Virtual Public School, 2016a). The organization goals are formed directly under the state board as focused toward

producing globally competitive students, being lead by 21st-century professionals, inciting innovation in North Carolina's public schools, governing and supporting 21st century systems, and assisting with maintaining students who will be both healthy and responsible (North Carolina Virtual Public School, 2016a).

Since its inception, NCVPS has steadily increased its enrollment. Beginning in 2007, enrollment has increased from 17,326 to 58,003 reported in 2015 (North Carolina Virtual Public Schools, 2015). A further report concluded that over a period of two school years, students participating in NCVPS courses strongly agreed by a ratio of 97% that courses were satisfactory as measured by skills learned, technology literacy, and information literacy (Oliver, Brady, Patel, & Townsend, 2009). This measure of increased satisfaction coincided with reach of the NCVPS platform as a viable option to students in underserved areas. According to Banks, Bodkin and Heissel (2011), these students were more likely to be minorities; furthermore, gradual work by NCVPS was completed to address fewer course offerings which resulted in increased availability. In particular, within one of the most underserved districts, Starlight County, available course offerings led to increased enrollment from 87 students in 2007 to 846 in 2016 (North Carolina Virtual Public Schools, 2015).

To reach the previously noted goals, courses relying on the NCVPS platform were designed to be led by teachers who are certified by the state of North Carolina (North Carolina Virtual Public School, 2016a). All coursework must adhere to the North Carolina Common Core Standards and the North Carolina Essential standards. Courses were designed to use both synchronous and asynchronous tools (Banks et al., 2011). Students are afforded the opportunity to interact with course instructors using a variety of tools such as their computers and mobile

devices to send instant messages, make direct phone calls, or send text messages (Banks et al., 2011). In addition, NCVPS utilized a systematic process to ensure course quality.

Before courses can be delivered to students, NCVPS utilizes a uniformed vendor approval process. Vendors are designated as third party organizations who provide content for purchase to the state of North Carolina to be used across the state and offered to learners (Lourcey, 2016). The minimum requirements for approval coincided with standards set by the International Association for K-12 Online Learning as well as those set by the Southern Regional Educational Board (SREB). The two measures used to evaluate learning products are course quality and teacher quality. A metric used to evaluate both areas include 52 review items covering five standards for course quality and 62 review items covering 10 standards for teacher quality. Paramount to this process was the alignment to the North Carolina state standards and ensuring that all teachers leading instruction were highly qualified and certified by the state (Lourcey, 2016). The processes established by the vendor approval process were designated to ensure that NCVPS complied with the NC General Assembly S.L. 2011-145 and SBE Policy # GCS-M-001 (North Carolina Virtual Public School, 2016h). Both statutes were written to establish precedent for virtual learning opportunities provided to students in the state.

At the onset, courses were managed using the Blackboard learning management system (Oliver, Brady, Patel, & Townsend, 2009). The initial offerings from NCVPS fell under four subgroups: credit recovery, general studies, accelerated, and honors (Oliver, Brady, Patel, & Townsend, 2009). Moreover, courses cover "math, science, language, history, politics, arts, etc." (Oliver, Brady, Patel, & Townsend, 2009, p. 38). A recent expansion led to the development of course offerings designed to support enrollment for students participating in an Occupational Course of Study (OCS) program (North Carolina Virtual Public Schools, 2016d). NCVPS

followed precedent established by states that preceded it such as Florida, wherein enrollment at the time made it one of the largest state-run virtual schools (Watson, 2005). The creation of NCVPS and other K-12 online schools is indicative of the paradigm shift in education that focuses attention toward the integration of online models for learning (Harasim, 2000). NCVPS has a large presence amongst other online school platforms operated at the state level as it is identified as the second largest in the country (Marshburn, 2015).

Early adopting students noted satisfaction with their Advanced Placement courses and expressed positive sentiments for the rich quality of their course offerings (Oliver, Osborne, Patel, Holcomb, & Kleiman, 2008). Recent data trends continue to reveal high level of student achievement in NCVPS courses and North Carolina End of Course Assessments; exams that are completed by all students regardless of traditional or online course participation (North Carolina Virtual Public School, 2015). The data does not, however, account for recent changes by the North Carolina State Board in regard to students in Starlight County, North Carolina.

Community and connectedness has been explored and discussed in regard to myriad online learning platforms. This is also true of NCVPS. Specifically, it is noted that despite the asynchronous nature, teachers attempted to make connections with their students by building communities, using multiple communication tools including social media, using student-driven forums, and encouraging continued communication with one another (Dikkers et al., 2013). Essentially, community within online and NCVPS courses has been explored (Blazer, 2009; Ingerham, 2012; Ouzts, 2006); moreover, this line of research assisted with the building of solutions for at-risk students, who due to prior academic performance, are statistically in jeopardy of not meeting minimum, expected growth. In that regard, the development of community must shift beyond building to ensure that such students perceive some support from

their online community due to the likelihood that they may be more likely to struggle with being responsible for their own learning (Barbour & Siko, 2012; Lewis, Whiteside, Dikkers, 2014). The likelihood of this group of students to drop out increases with those who have experienced "low achievement" (Lewis et al., 2014). Students operating in the proposed setting for this study are more likely to be labeled as at-risk. The low composite performance scores evidence this further (North Carolina Department of Public Instruction, 2015). Thus, community building is a vital element of online and consequently, NCVPS success.

An element that rests within perceived sense of community is most assuredly the level by which participants experience interactions with others in their course and program. Online learning may be expressed as isolating when there are not steps taken to ensure that there are healthy connections made between participants, instructors, and their peers (Bollinger & Inan, 2012; Christensen, Horn, & Johnson, 2011; Dikkers et al., 2013; Vonderwell, 2003). It is critical for it to be supported by a strong pedagogy that merges "active, authentic learning activities, as well as opportunities for interaction among students and between teacher and student" (Ingerham, 2012, p. 66). Students in NCVPS courses can take their courses online wherever they have access to the web and have use of a working device; however, the usual model of implementation involves a course section assigned during the regular school day. Thus, community may be developed through interactions that occur within this setting, which exists beyond the online realm. Ingerham (2012) noted that students' level of interaction during an NCVPS course included a combination of both off-task and on-task interactions between students, the course facilitator (not the NCVPS teacher), and other web-based sites unrelated to their studies. In some instances, these interactions were marked as occurring "simultaneously" with other interactions in the same setting. Alternatively, there were numerous distractions

noted, but it is unclear if these were the distractions perceived by student participants. In addition, evidence gathered by Dikkers et al. (2013) explicated the importance of connectedness as cultivated by the course instructor. A recommendation is made regarding supports for instructors; however, no mention is made of the other adults that impact student learning experiences in NCVPS courses: facilitators.

The facilitator role is one that is clearly outlined by NCVPS. Facilitators may include but not be limited to an adult in a school lab, parent for home-schooled learner, learning specialist in alternative or hospital setting, partner in blended programs, or certified teacher. According to the North Carolina Virtual Public Schools (2016c) Lab Facilitator Guide, these are variations that help describe who may be the individual beyond the NCVPS teacher that directly supports the learner participating in the course. This structure may inadvertently complicate learning settings wherein students have explicated their desire to instructed by teachers and not be guided by course moderators (Oliver, Osborne, & Brady, 2009). NCVPS is clear that only the NCVPS teacher provides instruction. The facilitators main responsibilities are therefore to act as a liaison between the NCVPS teacher, parents, and school administration; monitor student progress; provide encouragement to students; conference with students individually as needed; advocate on behalf of both students and NCVPS teacher; guide students through the process of independently working through their course; provide forms of intervention when applicable; and create a lab that is conducive to welcoming and supporting students (North Carolina Virtual Public Schools, 2016c). There are, however, no clear parameters that define non-negotiables for every lab facilitator in every setting. This was a concern highlighted by the recommendation that NCVPS provide the means to better ensure cohesion amongst the varied learning setting and various lab facilitators (Oliver, Osborne, & Brady, 2009).

The idea of what students perceive in regard to participation or work within research specifically focused on NCVPS is limited. Oliver, Kellog, & Patel (2012) provided insight here that revealed that students felt a sense of isolation due to a lack of in-school support for their foreign language course. Students also expressed desire for increased face-to-face interactions to supplement the online coursework (Oliver, Kellog, & Patel, 2012). The study called for increased teacher and student interaction as well as future research that could invariably lead to improved methods for teacher training in regard to online language courses (Oliver, Kellogg, & Patel, 2012).

The size of NCVPS has not seemed to impact the literature that focuses specifically on the platform alone. Although there are studies that reference NCVPS, much of what is available is burgeoning research completed by other students for doctoral studies. Hence, to answer the previously noted question regarding the literature that speaks directly to NCVPS, the gap in the literature is widened further.

Technology Barriers

Just as there are numerous ways in which technology may be integrated within the educational environment, this conversely attributes to the existence of barriers, which may impact one's experiences. Technology barriers may be considered a minor nuisance or they can shift an individual's perception of technology (Anthony & Clark, 2011). The literature is clear that there are a multitude of barriers. Individuals may be impeded by access to technology, skills or a lack of skills to use technology effectively, and questionable degrees of support (Ciftci & Kurt, 2012; Williams, Crittenden, Keo, & McCarty, 2012). Within this spectrum, barriers of access may also be expressed by the concept of the digital divide, which has been discussed in

regard to generational differences of perception (Baytak et al., 2011) and those stemming from disparate access that is usually correlated with socioeconomic status (SES).

There are varying levels that categorize those who have technology as opposed to those who do not. This is expressed in the literature as the concept of the top-level digital divide (Hargittai, 2002; Livingstone & Helsper, 2007; Selwyn, 2004; Silver, 2014). The second-level digital divide expresses differences in how technologies are used as well as beliefs regarding how they should be utilized (Reinhart, Thomas, & Toriskie, 2011). What is revealed here is the possibility that a lack of understanding regarding the duality of technology to serve both educative and entertainment purposes may potentially create friction when individuals are given the task to use technology differently from what they are accustomed (Kassam, Iding, & Hogenbirk., 2013; Richtel, 2012). This notation highlights the dilemma of determining the true role of technology, especially in the educational setting (Anthony & Clark, 2011; Keengwe & Akyeampong, 2010; Inan & Lowther, 2010). Within the realm of online learning, any question of the intended use or different interpretation of a given role for certain technologies creates a barrier that may impede students taking online courses and using technology constantly.

Research is clear that there are many barriers that may impede an individual's use of technology or ability to integrate it for educative or personal use. However, there is not a declaration of a single, universal barrier. The uniqueness of various technologies such as online learning platforms, devices for access, and learning management systems are not dependent on unique, individualized characteristics and are instead depicted and experienced differently by everyone (Anthony & Clark, 2011).

Students may experience barriers directly relative to online learning. Students taking online courses have noted to have impediments caused by a lack of support, administrative

issues, lack of social interaction, academic skills, technical skills, motivation, time and support, cost and access to the Internet, and technical problems (Hartnett, 2012; Hartnett, George, & Dron, 2011; Lee, Srinivasan, Trail, Lewis, & Lopez, 2011; Muilenburg & Berge 2005). Variance in LMS has also been cited as a general barrier to student access and acclimation to learning within an online environment, which includes usability and methods for facilitating social interactions (Corbeil & Valdes-Corbeil, 2013). It is also true that questions pertaining to the implementation models for multiple LMS has segmented structures among online learning platforms in such a manner that recommendations have been made for further investigation pertaining to discussing their potential impacts (Coates, James, & Baldwin, 2005). Unal and Unal (2014) expanded here noting that the potential for LMS or Course Management Systems (CMS) to ease accessibility and help "learners achieve their goals" (p. 120). Their explication conversely revealed alternative CMS platforms lend themselves toward overcoming barriers inherit to online learning while others exacerbate difficulties experienced by learners. It may be inferred that these few barriers, like those generally noted, are indicative of the current educational environment as well as noted research.

Education in Starlight County Schools

Leandro. Stemming from the decision of *Leandro v. North Carolina* (1997), North Carolina recommitted to ensuring that students, especially those in the less affluent, rural communities, would receive equal educational opportunities and consistent funding for their large at-risk population. *Leandro v. North Carolina* (1997) surmised that some students within the state had been robbed of the basic right to a sound education; moreover, it was determined that the state had not done enough to improve education within the lowest performing schools (Packard, 1997; McFarland & Preston, 2010; Horwitz, 2004). The decision was the result of a

1994 lawsuit brought against the state by parents and eventually school districts for five districts in North Carolina. These districts were Moonlight, Starlight Sunlight, Daylight and Twilight (pseudonyms). Along with the lead plaintiffs, the Leandro family argued that their school districts had been ill-funded; moreover, their students had been underserved. The high-profile case acted as the catalyst to other districts joining the case. It was eventually decreed that every child in the state had a right under the state's constitution to be afforded the "opportunity to receive a sound basic education" (*Leandro v. North Carolina*, 1997). However, the *Leandro v. North Carolina* (1997) decision would not quell the educational turmoil.

Leandro II. Despite renewed focus on the noted districts and a renewed commitment to the districts named in the case, a continuation in the form of *Moonlight County Board of Education v. North Carolina* would extend the conversation about providing a sound, basic education to students in North Carolina (*Moonlight County School Board v. North Carolina*, 2004). Three memorandums were issued in October of 2000 that spoke directly to the state's discovery that the educational delivery system in place was sufficient when measured against the desire for a sound basic education as noted in the original Leandro case. The first memorandum established a baseline for student grade level performance, designated as Level III or higher as measured within the state's testing guidelines. This measure would become a determinant as to whether an individual student had received a sound, basic education. The second memorandum established protocols for quality Pre-K programs for at-risk students. The third memorandum determined that poor performance by students was the result of a lack of coordinated, effective educational strategy (*Moonlight County School Board v. North Carolina*, 2004). The six core principals are summarized as follows from *Moonlight County School Board v. North Carolina* (2004):

(1) All children have an equal opportunity to receive a sound basic education.

(2) Sound, basic education is qualitatively defined and an appropriate educational strategy to provide children with the opportunity to receive a sound basic education is required.

(3) In the event that children are not provided equal opportunity to a sound basic education, the programs must be changed.

(4) In the event that funding is not sufficient, more funding must be appropriated.

(5) Funds must first be used for the purpose of providing children with equal opportunity to a sound, basic education.

(6) In the event of a deficit in the sound, basic education component, funds used for other programs, not part of the sound, basic education, must be reallocated and applied to the sound, basic education program until deficit in programs is abolished.

With these policies in place, a renewed partnership was formed with the state, the North Carolina Department of Public Instruction, and the school districts to ensure that the state's constitution was upheld; moreover, work was completed to fulfill the aim of providing every child with a sound, basic education. This aim was not met in every school district. By 2009, a consent order was issued to one school district. The consent order functioned much in the same fashion as a court order, in this case, an order by the state Superior Court, who had previously been given governance over Leandro proceedings by that state Supreme Court. The presiding official, Judge Manning, decreed that the district in question had committed "academic genocide" (as cited in McFarland, 2010). This district was Starlight County Schools (SCS).

Consent order. The Consent Order (2009) was a direct response by the state to what it determined were worsening conditions in the Starlight County School district. At the time, seven

of its then 16 schools were rated as low performing. Over the course of two consecutive school years (2006-2007 and 2007-2008), Starlight County Schools had been identified as low performing under North Carolina general statutes (Consent Order, 2009). This was recognized as a trend that had been continuing for four years as no schools were making the required Adequately Yearly Progress (AYP) as mandated by No Child Left Behind (No Child Left Behind Act of 2001 [NCLB], 2001). Of further note was the state's observation that the district's board of education "could benefit from direction and assistance from the State Board of education" (Consent Order, 2009, p. 3). This lead to the creation of a plan, a follow-up mandate, and subsequent approval by the district to ensure turnaround measures were met (Consent Order, 2009).

Starlight County Schools shares commonalities with other low performing school districts in North Carolina. McFarland and Preston (2010) noted that the disparaging percentages of a myriad of characteristics and outcomes for students in these districts. For instance, the performance composite, graduation rate, attendance rate, enrollment, and percentage of licensed teachers fall below all high schools in the state (McFarland & Preston, 2010). These students are also subject to higher rates of suspension and are more likely to be categorized as being eligible for free or reduced lunch (McFarland & Preston, 2010). The schools themselves are comprised of student populations that are more than 50% non-white (McFarland & Preston, 2010). Starlight County Schools, like other turnaround schools, have been charged with transforming learning for their students in their district despite facing serious challenges. It was in the face of these challenges that measurable growth was obtained. From 2013-2015 the district's Annual Measure Objective percentage increased from 48% in the 2013-2014 school year to 55% in the 2014-2015 school year (NC Report Card, 2014, 2015). These

were the targets developed by the state to adhere to mandates of AYP dictated by NCLB (2001). This transition to progress was, however, confounded by other factors that led to the introduction of more mandates.

Even with the continued, measurable growth exhibited in the district, a different concern arose. The State Board determined that there were some questions regarding the district's school board; moreover, a new form of measures was taken to align with sanctions already in place (Sims, 2015). A letter was sent directly to the school board wherein its was noted that they and the district were "unable or unwilling to make sound financial decisions in order to sustain a finically viable school district" (Cobey, 2015, p. 1). The State Board introduced two additional sanctions to circumvent what the State Superintendent of Education used to describe the district school board: "dysfunctional" (as cited in Sims, 2015). The first of three new mandates extended additional control over the district budget. The second mandate covered hiring decisions, which would now mandate NCDPI oversight. The third and final mandate decreed that "SCS staff shall enroll any high school student in the North Carolina Virtual Public School (NCVPS) for any course required for graduation for which a licensed teacher has not been hired" (Cobey, 2015, p. 2). The mandate also included provisions for middle school for any course lacking a licensed teacher (Cobey, 2015). Essentially, NCVPS would be used to fill the cracks left by a lack of highly-qualified teachers in the district.

Summary

The aim of this chapter was to present information pertaining to the theoretical framework as well as relevant literature on the proposed topic. The topic itself is dependent on the multifaceted structure of online learning. Research relative to student perceptions was introduced and discussed. Additionally, abundant research concerned primarily with online

learning was discussed separately from research focused on the online learning platform, NCVPS. Finally, research concerning technology barriers was discussed. The themes in the literature here of technology perception, online learning, NCVPS, and technology barriers form the foundation for the current research study. Furthermore, the inclusion of the self-efficacy strand of the social cognitive theory will ensure an exploration of secondary student experiences that is not only grounded in current literature but also adds to the gap created by a lack of NCVPS-specific literature and literature concerned with secondary student experiences.

CHAPTER THREE: METHODS

Overview

The purpose of this hermeneutical phenomenological study was to describe the experiences of students assigned to courses utilizing the North Carolina Virtual Public School (NCVPS) platform. A total of 12 participants were selected to include six students from Azul High School and Arrow High School (pseudonyms), respectively; however, final participants resulted in a total of 10. Data was collected from two separate semi-structured interviews, one focus group interview, and document analysis. This chapter identifies the current research study's specific design, research questions, setting, participants, data collection methods, and procedures for analysis.

Design

The specific research design as well as explication of its selection for the purpose of this study are noted here. Where possible, critical research is used to document the design.

This study was qualitative in nature. A qualitative approach was appropriate to collect data that will attempt to complete the process of meaning making (Patton, 2015). Moreover, it was the best approach to understand a phenomenon, in this case, students' experiences learning in an online course.

Phenomenology was chosen due to its focus toward elucidating the lived experiences of research participants. The participants were residents, living and learning within the Starlight County Schools district. They had also experienced the multitude of changes as the district has attempted to transition. The phenomenon here, participation in a required NCVPS course, was yet another sign of transition that students experienced. To capture how this has been experienced requires an approach based on description. For that, phenomenologists seek to

describe the lived experiences of participants. Thus, the goal here was to give student participants a platform wherein their voices could be heard while bringing to the surface deep issues that had yet to be formally expressed or described (Lester, 1999). To justly describe these experiences, hermeneutics was critical.

The hermeneutical style of phenomenology was key here as it is contained within the "attempt to somehow capture a certain phenomenon of life in a linguistic description that is both holistic and analytical, evocative and precise, unique and universal, powerful and sensitive" (van Manen, 1990, p. 39). Unlike the transcendental phenomenological approach, hermeneutics does not ascribe to the stance that the descriptions of human experiences require the act of transcendence, which in turn provide the means to illuminate reality (Kafle, 2011). What is emphasized by this approach are pure descriptions of the lived experiences of individuals that are devoid of the researcher's own biases, knowledge, and experiences. Conversely, hermeneutics does not attempt to transcend or bracket those elements inherit to the researcher. By its very nature, the hermeneutic style calls for describing the lived experiences of individuals by interpreting them. The process of interpretation allows for illumination of specific details or aspects that would essentially only be described using the transcendental approach. This study was concerned with both the concreteness and essential nature formed by participants' experiences with learning in an NCVPS course wherein their enrollment was mandatory, specifically in regard to participants' computer self-efficacy. The aim was to interpret the stories shared by participants regarding their experiences.

The intended population of students was comprised of teenagers who did not always not share experiences in a direct and straightforward manner that could be understood by those who may not be abreast to their multimodal methods of communication. Additionally, the very rural

Starlight County district contained its own unique colloquialisms and vernacular that may be more impactful if critical translation is allowed in a manner conducive to recounting students' shared experiences. In order to accomplish this, I relied heavily on personal knowledge acquired as a former resident of the district. By that, I was educated in the Starlight County School district and have a clear understanding of the myriad traits inherited to those who live and are educated in this setting. To this end, the hermeneutic approach was the best fit.

Research Questions

The central research question (CRQ) that guided the current study as well as applicable sub-questions (SQ) are again identified here.

CRQ: What are the experiences of secondary students within mandatorily assigned NCVPS courses?

SQ1: How do secondary students describe their experiences with learning within an NCVPS course?

SQ2: How do secondary students describe the Learning Management System used for their NCVPS course?

SQ3: What learning strategies do secondary students employ during their NCVPS course?

SQ5: What value do secondary students attribute to technology in regard to learning?

SQ6: How do secondary students experience technology for learning in their homes during enrollment in a mandatory NCVPS course?

Setting

The setting for the current research study is identified here. Moreover, information is provided in an attempt to provide a well-rounded description of the area wherein individual

participants live as well as elements that may impact the experiences they share during the study. Appropriate demographic, economic, geographic, and some historical information is also shared.

Starlight County is a small, rural county geographically situated in the northeastern region of the state. According to the most recent Census data, the population of the county is noted as 54,691(US Census, 2010). Demographically, the population is 40% White, 53.2% Black or African American, 4% American Indian, 0.8% Asian, 0.1% Native Hawaiian and Pacific Islander, 1.2% two or more races, and 2.7% Hispanic or Latino (US Census, 2010). The county is accounted for by total miles. Economically, the per capita income was noted as $18,728 with a median household income of $32,834; moreover, the percentage of individuals living in poverty was noted as 23.5% (US Census, 2010). Although these figures are representative of the entire county, they are not representative of each individual school district. Despite its size, Starlight County is home to three distinct school districts. This study focused directly on the Starlight County Schools district (SCS).

The current research study was completed within Starlight County, North Carolina. Specifically, two schools within the SCS served as hosts: Arrow High School and Azul High School (pseudonyms). SCS currently serves approximately 933 students. The district was formerly named with others in the *Leandro v. North Carolina* case of 1997. Until recently, SCS has been consistently ranked as the lowest performing district in the state (North Carolina Department of Public Instruction, 2015). It has operated under state mandates with additional support provided by the District and School Transformation (DST) division of the North Carolina Department of Public Instruction (NCDPI). The district has a higher than state average for teacher turnover; at the high school level the most recent data noted 29% as opposed to the state's 16% (North Carolina Department of Public Instruction, 2015). Of the high school

teachers documented in the most recent data, only 52% are identified as highly qualified, which is less than the state average of 95%. The largest group of high school teachers in the district is designated as inexperienced with less than three years of teaching experience. Coincidentally, the district boasts technology availability that exceeds student enrollment. According to the NC Report Card (North Carolina Department of Public Instruction, 2015), the district currently has a technology penetration rate of .86. In comparison, the state average penetration rate is noted as 1.2., which means that the number of available devices exceeds the number of students (North Carolina Department of Public Instruction, 2015). In this case, at least one computer is available to each student across the district.

Starlight County Schools is truly a unique school district. Its rural location, struggling academic performance, adherence to state board of education mandates, and extremely high teacher turnover rate are but a few of the elements which made this a prime location to conduct a study of this nature. The question pertaining to how students were experiencing learning within a given environment remained a committed focus for this study. This form of inquiry that explored how secondary students are experiencing the increasing shift to online courses was essential to continue the discussion of the student experience and provide focus toward the limited research regarding this population's online learning experiences. In addition, the aforementioned factors pertaining to Starlight County Schools provided reasoning for the state board's newest mandate regarding mandatory enrollment for middle and high school students who lack a highly-qualified, certified teacher in courses required for graduation. The high percentage of available technology was also a factor that added to the value of selecting this district and its high schools. The two schools, Arrow and Azul High, are rural in nature with largely similar demographic and socioeconomic makeups.

Arrow High School

Arrow High School serves 320 students. The demographic population is noted as 0% American Indian, 0% Asian, 89% African American, 4.68% Hispanic/Latino, 0% Hawaiian/Pacific Islander, 0.31% two or more races, and 1.25% White.72.8% of the students are eligible for participation in the free and reduced lunch rate program. Technology access at the school includes laptop computers, desktop computer labs, SMART boards in every classroom, student response devices, unlocked Wi-Fi, and available e-book devices. Arrow High School has implemented a c laptop program that provides laptop access and use to each student within the school. Students are provided the option to take devices home, pending parental consent and deposit fee of $20. The school's specific technology penetration rate is 1.34 (North Carolina Department of Public Instruction, 2015). Arrow High School's technology penetration is slightly above the state's rate of 1.2 (North Carolina Department of Public Instruction, 2015). However, it is unclear whether the rates noted for Arrow High School acknowledge the one-to-one program.

Azul High School

Azul High School serves 444 students. The demographic population is noted as Azul High School's demographic population consists of 6.75% American Indian, 0% Asian, 88% African American, 2.25% Hispanic/Latino, 0.2% Hawaiian/Pacific Islander, 1.5% two or more races, and 3.6% White. 61.03% of the students are eligible for participation in the free and reduced lunch rate program. Technology access at the school includes laptop computers, desktop computer labs, SMARTboards in every classroom, student response devices, unlocked Wi-Fi, and available e-book devices. The school's specific technology penetration rate is 0.8 (North Carolina Department of Public Instruction, 2015).

Participants

The participants for the current research study are discussed here. Information is also provided regarding the number of intended participants as well as reasoning with accompanying research to support decisions made.

The purpose of this hermeneutical phenomenological study was to collect, analyze, and interpret data pertaining to participants' learning experiences in a mandatorily-assigned NCVPS course. To best explore this phenomenon, a total of 16 participants were sought (eight students from each high school). A total of 18 students showed interest to participate; however, the final number at the beginning of the study who fit the study parameters was 13. During the final phase of data collection, two students withdrew from the school resulting in a final participant count of 11. The number of participants adhered to what Creswell (2013) noted as ranges of three to four or 10 to 15 participants. It also adhered to the parameters defined by Patton (2015) who plainly noted that "There are no rules for sample size in qualitative inquiry" (p. 311). Patton went on to remind that the size of the sample should be more focused toward usefulness, credibility, and simply what can be done within the given time and resources allotted for a study (Patton, 2015). This more closely aligns with the explications of van Manen (1990) whose stance regarding phenomenological research leans toward purposefulness and less toward procedural rigidity. Thus, the number of participants were deemed purposeful here to acquire an equal number of students from a limited subgroup of the student population comprised of those participating in mandatory online courses. Both participant groups were selected purposefully using a combination of convenience and criterion sampling methods. The use of a convenience sampling technique was utilized to ease concerns regarding access, time, and available resources (Creswell, 2013). Additionally, the use of criterion sampling was leveraged to increase the

quality of the study by narrowing the participant pool to only include those who fit within the given criterion (Creswell, 2013).

All student participants were selected based on their fit within a set criterion. Originally, only secondary students who were enrolled within an NCVPS course with a low level of internet self-efficacy were selected; however, the pool was widened to allow students of low, middle, and high levels of self-assessed internet self-efficacy. Although steps were taken to select at minimum two participants at each grade level ranging from nine to 12 as well as across gender spectrums, this was not possible. An initial survey (see Appendix F) was provided to participants in order to collect pertinent demographic information to include: age, ethnicity, registered grade level, and course enrolled. Again, this served as a means toward ensuring maximum variation within the participant pool. All student participants were provided a form to obtain assent and parental consent (see Appendix C). Interested participants who did not submit the correct paperwork were noted as ineligible and removed from the participant group.

Procedures

This section documents the procedures that were completed during the study. Where applicable, appropriate research that was used to support decisions regarding the development of the noted procedures is also included.

Pilot Study

A pilot study was conducted prior to the initial phase of the full study. During an initial meeting, students were provided information regarding the study parameters. Students received a printed copy of the demographics questionnaire, assent, and parental consent forms (see Appendices C, D, and E). Students were asked to complete the Internet Self-Efficacy Survey (see Appendix G). Based on the parameters for the study, three students participated in the two

individual interviews and one focus group interview. Students completed all parts of the pilot study over the course of three weeks during the summer. Participants were pooled from the Upward Bound Summer Bridge program conducted at Saint Augustine's University who coincidentally were former students from Starlight County who had recently graduated in the spring. Results of the pilot study from the small participant pool revealed a unifying theme regarding perceived instructor presence. Participants revealed a strong concern regarding their pending transition to college due to what they perceived as less than desirable learning outcomes during their online classes. This notion contrasted with students' exclamation of high achievement in their respective online courses. The pilot study provided insight regarding potential questions students might have regarding understanding some of the interview questions or potential clarification that would be needed.

Formal Study

During the initial phase, a request was made to meet with each NCVPS course at each school site. During the meetings, the research project was described and each student was provided a printed, personal copy of the recruitment letter (see Appendix B). Based on student interest, I disbursed personal, printed copies of the demographics and parental consent forms to students (see Appendices C and F). Students were reminded that their participation was entirely voluntary. The exact parameters of the study to include number of interviews, observations, focus groups, and documents for analysis were briefly summarized to provide an overview for these students. A return date and ensuing follow-up was scheduled at that time.

During the follow-up, all potential participants submitted their signed copies of the required consent and assent forms and completed the Internet Self-Efficacy survey (see Appendix G) during a single meeting at each respective school site. After participants completed

the survey, I privately calculated the Internet self-efficacy levels for each student and determined eligibility to continue the study. Potential participants scoring 24 or less (66%) were included in the initial pool. Due to limited number of available students, additional participants were made eligible regardless of Internet self-efficacy score. Participants were selected based on the criterion that they were: (a) participating in a required NCVPS (A course they did not have a choice in taking using traditional face-to-face methods) and (b) students had completed the Internet self-efficacy survey to acknowledge a self-assessed measure of self-efficacy.

Afterwards, all potential participants were notified of their status as either participating in the study or placement as an alternate. Participants received confirmation of their participation and discourse regarding initial interview (see Appendix D). Participants who were not selected received a letter notifying them that they had been selected as a potential alternate (see Appendix E). All collected and signed forms for individuals selected were scanned and uploaded to a secure, password-protected Google drive. The hard copy files were store in a locked file cabinet to ensure security. For alternate participants, their files were held until the completion of the study and subsequently destroyed as no alternates requested their submitted documents (see Appendix E).

Data was collected in phases beginning with the initial interview (beginning of semester). A follow-up focus group interview (mid-year) and a final interview (end-of-course) were completed. Document analysis of submissions to NCVPS was completed on an ongoing basis during the study. Two days were set aside for each round of interviews as well as for the two separate days for each focus group meeting. Interviews and focus group meetings were conducted in a multipurpose, private classroom at Azul High School and within an unused spaced within the media center at Arrow High School.

The Researcher's Role

My role as the principal researcher for this study is discussed here. In particular, supporting research as well as personal information is provided to frame my role as the researcher. The aim here is to clearly place myself within the aforementioned role by carefully noting my own positive experiences as an educator integrating technology in the classroom.

It is noted that within qualitative research, the actual researcher is the most vital or key instrument (Creswell, 2013). In order to adequately fulfill the aims of this research this notation is paramount. To fully explore and interpret the experiences of participants, I must position myself in the world of the participants and attempt to share those situations experienced (van Manen, 1990). As the researcher, I offer explication of my own experiences and knowledge in order to reveal a personal point of reference for this study; however, my aim is not an attempt to bracket or transcend.

Currently I work as an instructional coach with the North Carolina Department of Public Instruction. Specifically, I am responsible for working with and alongside instructors in low-performing schools across the state. Through the use of responsive coaching, I help teachers reflect on and strengthen their current practices. In addition, I lead professional learning for teachers and selected school staff groups to include teaching pedagogy, data reflection, student engagement, and technology integration. I have worked in this role for the last three years. Prior to that, I worked as a secondary English Language Arts instructor.

I began teaching in 2004. With an earned Bachelor of Arts (BA) in English with a concentration in news media, I originally pursued a teaching position. My earliest intention was that this would job would act as a convenient placeholder until a more appropriate job became available. My early intentions were to teach while attending graduate school part-time at North

Carolina State University for Communications. My plan remained in place until 2006. At that time, I secured a job in communications and resigned from my teaching post. I returned two months later after deciding I truly had a passion for teaching and I wanted to pursue a career in education. Upon returning, I worked hard to improve my teaching abilities. As a lateral-entry instructor, I had not received formal training to teach; however, through hard work and dedication, I soon found myself becoming the teacher I wanted to be.

I attempted to make lessons engaging by using a myriad of methods to revamp the traditional secondary English curriculum. I heavily exercised the use of burgeoning digital tools to include laptops, web-based software, PC games, and e-texts. I was impressed by the impact it had on my students and their performance. It was at that time I began partnering with the school's technology facilitator to become the tester for application of any new devices or technology for learning. After leaving and transferring to a new school, I continued to refine my teaching practices by leaning heavily on applicable technology. I became one of the first teachers to become Apple iOS certified and provided with access to a class set of iPads to use exclusively with my students.

These shifts made in my career parallel with changes in my personal life. By that, I transitioned to my first completely online Master's degree program at East Carolina University. Although I had some experience with online learning during my undergraduate years, I had yet to complete an entire program in this manner. The way in which courses were made available to students, with all materials and resources, was something that I attempted to emulate in my own classes.

Recognizing the success of my students using mobile devices and a myriad of other web-based tools, I began to further integrate them within my class. The culmination of this was my

development of a Blackboard course companion. Using this learning management system, I was able to better facilitate learning for the secondary students I served. To do so, I relied on making course documents, resources, and tools available to my students and guiding them through the process of using them in conjunction with what I was using in the traditional classroom setting. The tool also provided increased opportunities for students who missed class to remain abreast of what was occurring and not feel the need to request for missed assignments or documents. Eventually, I transferred my course materials to Edmodo as I attempted to utilize a learning management system that mimicked social media. Again, taking such steps I noted that my students were encouraged more to become more self-sufficient and be responsible for their learning; however, they understood that this was only one layer within their blended learning environment. Essentially, I was always available physically in my traditional classroom setting.

Therefore, it must be made clear that my own experiences are ones framed from largely positive experiences with technology in both my personal, professional, and student life. I place a high value on technology for its ability to not only entertain but also offer new and inventive ways to complete tasks. I find technology and the advent of online learning increases opportunities to learn within parameters wherein one has more control of what and how they learn.

Data Collection

The aim of the current research study is to explicate the learning experiences of students with self-acknowledged levels of computer self-efficacy that have been mandatorily assigned to an NCVPS course. In order to do so, four key data collection methods were used to obtain evidence of the essence of the lived experiences of participants (van Manen, 1990). I collected applicable, lived-experience material through an initial questionnaire and survey, interviews,

observations, focus groups, and document analysis. Prior to beginning the study, all interview questions were vetted by professional scholars in the field and adjustments were made to ensure questions were not only appropriate but sufficiently designed to acquire the necessary information to answer the proposed research questions of this study. It was suggested that the wording of questions was considered in order to ensure applicability and understandability to secondary students. Overall, the questions were deemed sufficient for the purpose clarified in the proposal.

Questionnaire and Surveys

To begin, a demographics questionnaire that I created was provided to secondary students currently enrolled in a required NCVPS course (see Appendix F). The basic questionnaire collected demographic information from all participants in order to add an initial layer of data for each student. A supplement to the survey included a questionnaire utilizing the Internet Self-Efficacy scale (ISE) (see Appendix G) (Eastin & LaRose, 2000). The ISE specifically includes 8 items for which participants will be asked to respond by providing a score of 1-5 per item using a Likert type scale measure wherein: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree. ISE score ranges are from 8 to 40. For the purpose of this study, a low Internet self-efficacy score was identified as any score of 26 or less (66%).

Interviews

Two interviews were conducted with each participant. The initial interview allowed me to become more familiar with each participant and their current, general experiences in school as well as briefly ascertaining information regarding participants' perception of their new online course. The final interviews were conducted during the final grading period. At that time, participants were asked to share experiences and reflect on their initial experiences. All

interviews followed a semi-structured format (Creswell, 2013; Patton, 2015). The questions utilized for the interview were phrased in a manner to solicit responses that allowed the participants to share their lived experiences during a mandatorily-enrolled NCVPS course. All questions were open-ended.

Interviews were scheduled for each school setting within a 10-day (two week) window. This ensured flexibility in scheduling. An empty, multipurpose classroom was utilized at Azul High School for all interviews while an empty space in the media center was used at Arrow High School. Interviews were blocked for 30 minutes. All student participants completed interviews during the class period when they were participating in their online class. All interviews were audio recorded using a digital voice recorder as the primary device and an Apple iPhone as a secondary, backup device. Audio transmissions were submitted and subsequently transcribed by Franklin Square Transcriptions of Chapel Hill, NC. The interview questions were as follows:

Initial interview questions.

(1) At this point in your school career, how would you say you learn best? (Provide examples if needed to include: By doing, By listening, By reading, etc.,) *Possible probe*: Explain why you prefer to learn in that manner? Has that always been your preference?

(2) Describe for me the best class (online or otherwise) you have taken from middle school to now. *Possible probe*: What made that learning experience so memorable? What elements (things) in that class made it unique? Was it simply the teacher or a combination of things (request for full explanation)?

(3) Tell me about your prior knowledge of online courses. *Possible probe*: Have you taken a course before? Have you witnessed anyone in your home take online courses?

(4) Take me back to when you first received your schedule and found out you were taking a course online. Describe how you felt? *Possible probe*: Can you explain that fully for me? How did you react? Why do you think you responded that way?

(5) Describe for me a typical day in your (student's class name) NCVPS course. *Possible probe*: Has this routine been consistent? Are there any ongoing challenges so far (i.e. things not working such as the computer or website; access to site down, limited computer access time)?

(6) So far, what do you like least about this online course? *Possible probe*: (Depending on participant response) Has this been ongoing? How have other students in the class handled this?

(7) Tell me about what you enjoy the most about this online course so far.

(8) How confident are you that you will be successful in this type of online course? *Possible probe*: Do foresee performing extremely well? What would keep you from excelling? What would ensure you continue to do well?

(9) Tell me what it has been like being a student in Starlight County? *Possible probe*: What other districts do you have knowledge of? Have you attended other school districts as a student? Did your parents attend school in this district? Is this the first time you didn't have a teacher or a long-term substitute?

(10) Tell me about how you have used technology in your classes at school? *Possible probe*: How has it added to your learning? What types of technology do you usually use here?

(11) Talk to me about having the option to use technology in any of your classes versus not using technology in your classes. *Possible probe:* Does it make a difference in what and how you learn? How so?

(12) Describe for me how you use technology at home. *Possible probe*: Do you use it for homework? How often? Do many of your assignments require it or is it usually a personal choice?

(13) Describe for me your personal view of technology? *Possible probe:* Does it increase your satisfaction with completing a task? Does it make it easier or more difficult? How so?

(14) Talk to me about the Canvas Learning Management System and how you use it during your NCVPS course? *Possible probe:* Were you familiar with it before starting this class? Do any of your other teachers use it in your traditional classes? Was there any training to show you how to use the tools within the system?

(15) Tell me about your experience with the NCVPS Peer Tutoring Center. *Possible probe:* Have you had the opportunity to use its services? How did you learn about it? Describe for me how it has influenced your learning in your online class.

Questions 1-2 were designed to gain knowledge of student experiences to determine if they aligned to what has been noted in the research regarding students' learning in online classes juxtaposed with traditional classes (Barbour, 2014; Barbour & Mulcahy, 2008; Cavanaugh et al., 2005; Johnston & Barbour, 2013;). These questions were used to illuminate possible differences or similarities noted in the research. Question 3 directly relates to discourse regarding students' prior knowledge of online learning. Self-efficacy, the lens used here, is directly reflective of individuals acquired knowledge and motivation acquired by witnessing others (Bandura, 1986).

Specifically, this was an attempt to learn if participants' prior knowledge aligned with their noted levels of Internet self-efficacy. Questions 4-9 were aligned to NCVPS research that has discussed course environment, interactions, and community (Blazer, 2009; Ingerham, 2012; Ouzts, 2006). For instance, Ingerham (2012) discussed the environment in which students participated in an Algebra I course using NCVPS and noted that students spent most of their time working alone and engaging in off-task behaviors such as accessing other websites that were not related to their coursework. Elements such as student interaction and physical course environment were noted as concerns for students participating in online courses (Abrami, Bernard, Bures, Borokhovski, & Tamim, 2011). Questions 10, 11 and 13 were concerned with student perceptions of technology. As the students' courses were accessed in a virtual environment using myriad tech tools, it was questionable if students' prior experience with technology for learning had any impact on their experiences; moreover, the concern pertained to whether students attributed any value to its use (Cuban, 2001; Ifenthaler & Schweinbenz, 2013; Swallow, 2015). Question 12 attempted to go further to gain knowledge of home use of technology for learning based on what had been noted in previous discourse (Ng, 2012; Soujah, 2014, Xiaoqing et al., 2012). Finally, Question 14 was concerned with setting up a later discussion relative to potential impacts of the LMS used for online courses (Corbeil & Valdes-Corbeil, 2013; Unal & Unal, 2014).

Final interview questions.

(1) When you first started this course, you explained (Recall response from question 3 in first interview). Based on what you shared then, how would you describe what you know about online learning now? *Possible probe*: What personal experience has reshaped your thinking?

(2) Heading towards the final exam, explain how prepared you feel? *Possible probe*: Why do you feel that way? Why don't you feel prepared? Do you feel like that about your other, traditional classes?

(3) Making it to this point in the course, how has it changed the way you think about how you learn? *Possible probe*: Would you say it has made you a better student? How so? Do you still have the same preferences for learning?

(4) What advice would you offer one of your peers who might have to take one of these classes? *Possible probe*: Why would you offer that advice above anything else?

(5) Tell me whether you think you learned just as much in this class as your regular classes? *Possible probe*: What made this experience so different or similar?

(6) Based on what was discussed during the focus group meeting about working on the course at home, how has that changed for you? *Possible probe*: Do you think how working on the course at home could have impacted your learning? Did it?

(7) Talk to me about your role as a learner in this course compared with your regular classes? *Possible probe*: Do you find that you have more control? Less? Consistent with traditional classes?

Question 1 here correlated with Question 3 in the initial interview. Therefore, the question aligned with the discourse relative to self-efficacy (Bandura, 1986). Questions 2-5 and 7 were related to research pertaining to traditional courses versus online courses and the few differences between students taking courses through either format (Barbour, 2014; Johnston & Barbour, 2013). Question 6 was directly related to Question 10 from the first interview. Additionally, the research focused on how technology in the home was used as a means to corroborate or refute findings (Ng, 2012; Soujah, 2014; Xiaoqing et al., 2012).

Focus Group Interviews

The use of focus group interviews was used to provide an additional means of collecting data within the proposed study. Focus groups served two primary purposes. Foremost, the focus groups aided efforts to critically deal with irregularities present in traditional interview forms (Creswell, 2013). Secondly, the focus group method was used for its potential to assist with closing gaps in shared experiences that stem from ambiguous participant responses, which could have been numerous due to use of student participants of varying ages who were not "accustomed to on-on-one inquiries" (Patton, 2015, p. 475). Beyond the noted primary purposes, the focus groups created an opportunity to foster new insights from participants and encouraged them to express more information regarding their lived experiences. Students who had been more reserved during the one-on-one interviews had the opportunity to provide responses in a setting amongst their peers.

There was one focus group for each set of participants at each high school. Additional probes were used during the focus groups. These questions were framed from information gathered during the initial interview. Additionally, at the beginning of the focus group session, participants were asked to read the article: "Virtual Schools Bring Real Concerns About Quality" (see Appendix I). Afterwards, students participated in a discussion facilitated using the National School Reform "Making Meaning" protocol (see Appendix G).

Focus group interview questions.

(1) Let's talk about how things are going in your NCVPS courses. What has been your greatest triumph thus far? *Possible probe*: Do you find that you are doing better in your course? Has anyone else experienced what (another participant) shared?

(2) At the opposite end of the spectrum, how would you describe your greatest difficulty?

(3) How are you all being supported in your online classes? *Possible probe*: From the school? Administration? Classroom Facilitator? Other students? Your family?

(4) How is this course different from the other courses you are taking? *Possible probe*: Do you feel like you get the same types of support?

(5) What is it like interacting with a teacher you can't physically see every day? *Possible probe*: Is it hard to contact them? How often do you find yourself asking them for help? Is this similar to what you are experiencing in your regular classes?

(6) What would you say about the devices the school has made available for you take your class? *Possible probe*: What are the specific types of devices (desktops, laptops, tablet devices)? How do these compare with your personal devices?

(7) Talk to me about using the computer and other devices for your NCVPS course versus how you are using a computer and other devices outside of class. *Possible probe*: Is there a difference in the experience? Does taking a course using technology or devices make you appreciate the device more? What about the learning experience, does it change for you?

(8) What steps are you taking to make sure you are successful in this course? *Possible probe*: Do you participate in any form of tutoring or academic support program? How often are you requesting assistance from other teachers at school?

(9) At the midway point of your course, explain for me your biggest complaint with NCVPS courses. *Possible probe*: do you feel that way because you didn't have a choice in enrolling for this course?

(10) Tell me, what does feedback look like in your NCVPS course? *Possible probe*: How is it similar to or different from your other classes?

(11) At this point in your course, talk to me about being required to use technology every day to complete assignments. *Possible probe*: Does it make a difference? Do you find the experience better? Why so?

(12) Describe for me your usual interactions with the classroom facilitator. *Possible* probe: Would you note them as potential resource aiding you in your class? Have you had more than one facilitator for the same course? Does the facilitator offer you instructional support? How so?

Document Analysis

In order to ensure that data is collected and examined from all areas relative to this study, document analysis was utilized. A collection of pertinent artifacts was culled and subsequently analyzed for themes relative to data collected directly from participants. Collection took place using digital access to resources from district and state websites. Additional artifacts were accessed from publicly accessible sources to include: newspapers, news websites, or other documents freely available within the school environment. Patton (2015) noted documents and documentation might be referred to as "material culture" (p. 376). In this particular setting and for the purpose of this study, material culture included public documents from the school district, NCVPS, the state board of education, and the North Carolina Department of Public Instruction (NCDPI). Retrievable documents that could potentially breach confidentiality were excluded from the study.

Data Analysis

The current research study was dependent upon the completion of formal data analysis. Beyond the process of organizing collected data and using the software program NVivo 11(v.7.5.17) for assistance, strict adherence to the hermeneutic cycle provided the opportunity to

complete analysis. Laverty (2008) noted that unlike transcendental phenomenology, hermeneutical phenomenological data analysis is fluid and does not restrict itself to depending only on a set list of analysis procedures. This stance was further ratified by van Manen (1990) in his explication that phenomenology hinges on the power of the essence of the experiences of others who are the focus of a given study. Moreover, the researcher's immersion into the explication of those experiences (data) takes place through the continuous processes of reading, reflecting, and interpreting. These processes are not a one-time occurrence. Instead, the researcher completes the processes continually while working through the captured experiences. For the purpose to adhere to guidelines, the collected experiences will be denoted as data for the purpose of model research description. Appropriate descriptions follow pertaining to the steps completed to organize, read and describe, reflect upon, and interpret the data.

Organizing Data

To best facilitate observation notes and electronic correspondence, a password-protected Google drive account and corresponding folders were created. Folders including information for each participant were established. Additionally, folders were made for the focus group interviews and document analysis. All text-based information was transcribed and uploaded to Google Docs and placed in a corresponding Google drive folder. A private company, Franklin Square Transcriptions of Chapel Hill, was employed to complete all transcriptions. A secure file cabinet was selected and housed within my home to store hard copies of documents to include: consent forms, video equipment, audio recording equipment, and an external hard drive for backup of data.

Reading and Describing

I read and examined applicable data using NVivo 11 software. NVivo 11 is an existing Computer Aided Qualitative Data Analysis Software (CAQDAS) that is designed to aid productivity and assist in the qualitative analysis process (Creswell, 2013; Patton, 2015; Zamawe, 2015). I used the software, to aid my data organization efforts as well as for its ability to assist with annotations and notetaking where it was appropriate (Creswell, 2013). According to van Manen (1990), this step in the research process requires one to be mindful of language, both ordinary and other, as well as examining for features of an individuals' life story. Initial reading provided the means to form initial codes, that is, explore the experiences of individuals for recurring themes or what van Manen (1990) notes as the "structures of experiences" (p. 77). No a priori codes were used; instead codes were developed inductively. The attempt to develop a storyline that chronicled the experiences of secondary students was conducted without relying solely on what had been established regarding their experiences. The aim was to allow participants' stories to dictate those codes and follow precedent for what emerged through analysis (Stuckey, 2015; van Manen, 1990). Emergent codes compensated for the lack of research pertaining to student experiences with mandatory enrollment in an NCVPS. Again, these processes were dynamic and depended heavily on what occurred during the study itself. This was done in order to ensure a level of openness regarding things that could not be foreseen until the study began (van Manen, 1990).

Reflection

Within this research, I have described the essence of the phenomenon as exhibited within the experiences shared by participants (van Manen, 1990). Again, due to the nature of hermeneutics, this particular process was greatly shaped by discoveries as they were made. My

goal was to "effect a more direct contact with the experience as lived" (van Manen, 1990, p. 78). To be successful here, I sought to fix the experiences shared by individuals participating in the study by again returning to the step of structuring meaning of their lived experiences that have been shared (van Manen 1990). Reflection here is also noted for its impact on my role as the researcher. Careful reflection assisted me here as I was tasked with immersing myself within the shared experiences of participants while openly acknowledging my personal biases and assumptions to begin the stage of interpreting. I also created and maintained a reflective journal (see Appendix L).

Interpretation

In an attempt to interpret the data, I worked to develop the essence within the shared lived experiences of participants by following an inductive process by which information is first allowed to take shape as naturally as it can (van Manen, 1990). This process hinged on the aforementioned critical process of reflecting. It was posited by van Manen (2007) that interpretation is dependent on the ability to acknowledge aspects of others' lived experiences as not occurring within a vacuum. It was noted that the "interpretability of primal impressionable life is already in some sense given by its own givens" (van Manen, 2007, p. 16). Essentially, reflection on the world in which a shared experience is derived must occur. Consequently, this includes my prior experiences as well as those of participants. After reading and reflecting on the experiences of individuals (collected data), I began the process of interpretation. Due to the cyclical nature of the hermeneutic cycle, interpretation occurred at multiple times and stages as I completed multiple readings followed by reflection and the incorporation of further knowledge from applicable, additional data.

Trustworthiness

By following the precedent set forth by van Manen (1990), this study sought to establish levels of trustworthiness by focusing on orientation, strength, richness, and depth as the major quality concerns. This process was used to ensure the quality of the study by establishing credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985). van Manen (1990) expressed hermeneutic phenomenology as more akin to the act of considering texts that explicate the specific lived experiences or stories of participants. Additionally, these processes aligned with requirements of credibility, dependability, confirmability, and transferability, which are discussed here.

Credibility

In order to ensure credibility, the processes aligned to orientation were utilized as well as other procedures noted here. The goal here stemmed from what van Manen (1990) explicated as attempting to understand what the experience is like for the participants being studied. In this manner, orienting is concerned with how I have approached "this experience with a certain interest" (van Manen, 1990, p. 40). I made no reservations about my own knowledge of the setting and my own ties to the learning experiences of students there. Acknowledgement here provided another means of laying bare my own position, beliefs, and interest regarding this topic of research. Documentation of this occurred through the use of the reflective journal (see Appendix K).

In order to acquire appropriate levels of strength for this study, I worked to reveal the "core intention of the understanding of the inherent meanings as expressed by the research participants through their stories" (Laverty, 2008, p. 23). To accomplish this, appropriate member checks were used. All participants' responses collected were subject to this process

(Creswell, 2013; Patton, 2015). Member checks were requested by allowing participants to review the transcriptions of the interviews and their responses from the focus group interviews. No feedback or questions were provided from respondents regarding their responses.

Dependability and Confirmability

To ensure an appropriate measure of dependability, I clearly articulated and described the procedures for the study. Patton (2015) noted that this step relies on a researcher's ability to use process that are logical, traceable, and documented. In that regard, I provided notation using an audit trail (see Appendix L). Additionally, the logic for any noted procedures were explained and corroborated where appropriate by previous research. Dependability was established through the use of a peer review who provided a level of external checks to my documentation and writing (Creswell, 2013; Lincoln & Guba, 1985; Merriam, 1988).

The process of triangulation was utilized to "make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence" (Creswell, 2013, p. 251). To achieve this goal, I used the experiences shared and collected from participants as basis to gain an understanding of the phenomena previously noted by their participation in a required NCVPS course. An initial interview was followed by a focus group interview and final individual interview. Each juncture allowed me to draw connections between the participants and corroborate the identified themes. The information provided in participants' responses during interviews and reflections were compared with applicable research and similar studies. Thus, each interview provided a deeper layer of information to better understand the phenomena. Beyond the three points provided by the interviews, document analysis served the purpose of providing another layer of information regarding the phenomena as noted in documents from the state education department, the school district, individual school sites as well as NCVPS. Hence,

the use of varying evidence from multiple interviews and document analysis provided the means to triangulate research findings, render validity, and strengthen the overall study.

To further establish confirmability, my personal biases have been acknowledged (Creswell, 2013). The hermeneutic style noted acknowledgement of bias as simply a method for moving the researcher closer in line with the participants instead of ordering the researcher to transcend (van Manen, 1990). Thus, notation of my experiences as a high school English teacher and instructional coach and my views of online learning were documented. To this end, a reflective journal was employed (see Appendix L). It allowed me to document personal views, thoughts, and myriad recollections as they occurred throughout the study. However, these did not serve the purpose of transcending; instead this process attempted to aid confirmability.

Transferability

Rich, thick descriptions of the experiences shared by participants occurred. Appropriate levels of richness were evident in the interpretation within the research. In order to ensure adequate levels of richness, the use of the hermeneutic cycle was employed to ensure that collected data was analyzed fully to provide optimal interpretation. Use of the aforementioned cycle allowed the development of stages of interpretation that "allow patterns to emerge" (Laverty, 2008, p. 23). Here the act of becoming involved in the world of the participants also aided the process. Thus, there was a reliance on what Kafle (2011) explained as researcher depth.

Researcher depth is explained by Kafle (2011), as the ability to "penetrate down and express the best intentions of the participants" (p. 196). This measure of rigor is pivotal to ensuring that the hermeneutic cycle has not only been employed, but that it has been successful. To provide justice to the experiences of the participants, care was taken to be a true listener in

order to authentically recount and write what had been disclosed (van Manen, 1990). Thus, the act of writing aided transference. It also ensured that there were appropriate levels of sensitivity to accurately illuminate the collection of participants' experiences (van Manen, 1990).

Ethical Considerations

The current research study made every attempt to ensure that all ethical considerations were made. This section will describe the steps that were taken pertaining to privacy, participant choice, data storage and security, and access to information. Each of the areas addressed here are methods meant to ensure the participant was protected during all phases of the study.

The study formally began with all potential participants receiving information regarding the study as well as a formal form of student assent and parental consent (see Appendix C). This provided an opportunity to remind student participants that their participation was strictly voluntary; moreover, it provided each student participant with a full description of the study. Additionally, it provided notification to parents regarding their child's potential participation and provided them with the right to consent or deny their right to participate. Thus, by using the child assent and parental consent form, any questions or concerns that arose from student participants or their parents were appropriately attended to. Students who elected and were chosen to participate had their privacy protected through the use of pseudonyms. Accordingly, pseudonyms were used for the two research sites to further aid participant anonymity and site confidentiality.

During the study, participants were reminded of the study's purpose. It was also important here to make sure that any initial questions or new concerns were clearly addressed. Completion of such actions aided my ability to build rapport and establish trust with participants (Creswell, 2013). All data remained subject to member checks upon collection. At any time,

participants were allowed access, by request, to review the information that they have shared. The electronic data itself was stored on a password-protected account and corresponding backup drive. Physical documents or files have been secured using a locked cabinet accessible only to the researcher.

All direct correspondence received from participant data was reported using appropriate APA guidelines and noted verbatim. The study was conducted by adhering to all IRB protocols, procedures, and policies in order to ensure the protection of participants as well as ensure the validity and integrity of the study was maintained.

Summary

In order to best fulfill the aims of this research, this methods chapter provided a description of the study and further justification for the choice to pursue a hermeneutical phenomenological study. The elements within the study to include the potential participants, reasoning for selection, and research site were explicated fully. In addition, an overview was provided of the steps taken to formally complete the study by providing specific methods of data collection and analysis. Corresponding steps that were put in place to ensure trustworthiness, as well as ethical considerations, were all addressed. The methods provided align with those noted by Creswell (2013) in regard to completing a phenomenological study; moreover, these methods were blended with processes that align with the hermeneutical approach as discussed by van Manen (1990).

CHAPTER FOUR: FINDINGS

Overview

The purpose of this phenomenological study was to describe the experiences of secondary students participating in mandatory NCVPS courses. Chapter Four presents the study participants and accompanying descriptions. In addition, this chapter details the gleamed experiences of students derived from two, separate interviews as well as a focus group session. Using processes aligned with the hermeneutical phenomenological approach, the data shared has been carefully read and analyzed accordingly. The data revealed common themes supported by the shared narratives of the research study participants.

Participants

Harvey

Harvey is an 11th grade student at Arrow High School. He has only attended schools in Starlight county and has limited knowledge of surrounding school districts. His most memorable learning experiences were derived from his previous science and history courses. Harvey acknowledged that conducting experiments and "learning how the body works" helped shape his fondness of science. He noted, "learning about how America came to be" helped refine his appreciation of history. Harvey's professed, preferred learning style is hands-on. He acknowledged that it does not translate well to learning within an NCVPS course. Prior to taking an online course, Harvey had no experience with it. Thus, upon learning that he was assigned an NCVPS course his initial reaction was, "I don't like think I'm gonna do better." Since beginning the course, Harvey bluntly noted that the thing that he liked least about the class was, "not having a teacher." Despite his misgivings with an NCVPS course, Harvey explained that "[this course] is not so hard." Furthermore, its nature as an online course allows him to constantly

have access to and use technology, which he shared, "makes [life] a little more easier." Interestingly, Harvey's feelings regarding technology did not directly align to his overall feelings about his NCVPS course. Consequently, Harvey's disdain may be better linked to his self-assessed Internet Self-Efficacy (ISE) score of 20, which designated a low confidence level in regard to the use of the Internet to complete certain tasks.

Monica

Monica is a 10th grade student at Azul High School. She professes to be a hands-on learner that has transitioned from a largely visual learning style. She noted favorable learning experiences in her previous courses based solely on their content. She noted that unlike the online course she is taking now, face-to-face courses allow "[you] to learn in different ways." Although this is her first experience with an online course, Monica has witnessed one of her parents take classes online and acknowledged facing similar experiences. She explained, "Like you gotta sign up for different stuff. Make sure that this is right, you gotta make sure you turn it in on time. You gotta do everything." Perhaps this may account for her optimism upon learning that she would be taking an online course. Monica shared that her first thoughts were, "it [online learning] was something different. I might as well try something different." Despite the earlier optimism, Monica explained that she struggles with the depth required to self-evaluate and often the struggle of having to discover solutions on her own. Monica shared, "if you have a problem that you can't solve, you gotta find a way to get it out by yourself." This was exacerbated by the perceived difficulty with the equipment (computers and Internet access) at her school site. Monica is unique due to her experience as a student within a neighboring school district. However, she noted little perceived differences in her learning experiences and acknowledged that this is the first time she has not had a teacher for a course she was required to take. As a

self-proclaimed proficient user of technology, Monica explained that technology, "makes it better, cause like everything is online now." Surprisingly, Monica's ISE of 26 denotes a lower confidence level regarding use and application of Internet tools, which contrasts somewhat with her own personal declarations regarding technology and internet use.

Cora

Cora is a 10th grade student at Arrow High School. Cora does not in particular care for her NCVPS course due to a conflict with the way information is presented in the course as opposed to her preference to take in information visually as noted by her response that, "I'm a visual learner." Cora had limited experience with NCVPS due to knowledge gained from observing a sibling taking a course. Upon learning that she would be in an NCVPS course, Cora shared that she was "kind of mad, but I had to do it." She professed her frustration with the course largely due to the content: math. Moreover, it was her belief that this format was responsible for increasing the course's difficulty. Cora remained positive that her use of strategies and resources would help her be successful with the course. Despite enjoying technology and not having experienced any technology related barriers during her class, Cora was clear in her exclamation that "technology makes learning more fun." This notion, however, does not apply to the use of technology in Cora's NCVPS course. Instead, her desire is to have a face-to-face teacher. Cora shared that she has always had a teacher until recently when NCVPS courses have become the norm at her school. Cora's ISE score of 25 acknowledges a low level of self-efficacy using the internet.

Maxton

Maxton is a 10th grade student at Azul High School. He is in the 10th grade. He is currently participating in Success 101. Maxton shared that his preferred learning style is fluid

due to its shifts over time. Most recently, Maxton acknowledged a preference for hands-on learning experiences he described wherein he can "do it while actually learning it." Maxton's most memorable learning experiences utilized this manner of instruction to which he praised the input of the instructor who was able to spend time condensing information and making it approachable. Conversely, this has not been his experience in online learning. Maxton disliked what he perceived to be as a nonexistent instructor and delayed feedback in the online course environment. Despite his trepidations pertaining to assignment deadlines, he does enjoy that he can set his own pace within those deadlines. Through his educational careers, Maxton has always had an instructor for his courses, some of which have been long-term substitutes. He has only been a student in Starlight county. Interestingly, Maxton noted that he is accustomed to the use of the Internet and tools; however, his ISE notes a level of 25, which revealed a low level of Internet self-efficacy.

Carver

Carver is an 11th grade student at Arrow High School. He is currently participating in a math course online. Prior to being a participant in an online course, Carver revealed a limited knowledge base regarding online learning; moreover, he originally feared learning in this manner. Carver shared that his first thought was, "I'm about to flunk math." This was based, in part, on his personal preference for learning through hands-on methods. Carver also indicated his appreciation for impactful teachers who he cited as core resources for his success in previous courses. Carver was optimistic as it pertained to his potential to succeed in the course, which may be linked to his motivation to simply excel. He stated, "I'm just gone find my way." This may also be likened to his acclimation to and use of technology for which he finds increased satisfaction from its use as well as his attestation that technology helps him with learning. As a

student who has only experienced learning in Starlight county, Carver can only recount one experience of not having a teacher in a course. Carver explained:

> One time in eighth grade. I don't know if this counts or not. But we had a teacher she wasn't there half the semester, but like a quarter of the semester. And then she left. Another teacher came and she wasn't really a teacher. She just assigned us work that the other teachers gave us.

Thus, Carver was clear in his determination to pass his online course despite his wishes that a face-to-face teacher could be provided.

Audrey

Audrey is a 12th grade student at Azul High School. She shared that she regularly uses the Internet and generally feels comfortable doing so. Audrey shared plainly that her preferred learning style may be surmised by having the option to work independently. Audrey noted that "I can get it by myself." Thus, Audrey's comfort with online learning is accounted for. As a student currently taking Success 101, she is comfortable; however, this online environment contrasts with Audrey's most memorable learning experiences in a prior course that stemmed from the strong sense of community formed by the students in the course. In comparison, Audrey expressed that her current course sentiments were, "we don't really bond with the people." Audrey affirmed that experiencing online courses has been a transition marked by her experiences in 10th grade during the only time wherein she recalled that she did not have a teacher. Her positive view of technology and belief that it increases her satisfaction with completing tasks may be linked to her high ISE score of 35.

Carl

Carl is an 11th grade student at Arrow High School. Of note is his extremely high ISE of 40. It could be inferred that online learning would be a natural fit for him; however, according to Carl, he shared that "I hate it." Carl noted that his most impressionable learning experiences were based on his perceived impact from good instructors. Thus, in a course where it seemed to him that he could not readily interact with a teacher, he felt disconnected. Carl explained the instructor's absence and added, "She don't grade our work. She's not good." Despite having overall favorable views of technology, this has not translated to a fondness for online learning. Specifically, Carl noted that the online structure does not fulfill his preference for learning face-to-face, nor does it provide the means to cultivate, in his opinion, cooperative learning.

Marcus

Marcus is a student at Azul High School. He is an 11th grade student currently participating in a math course online. Marcus noted that he is dependent on teacher support during class, especially when an instructor can, as he shared, "support [him] through whatever." Marcus' educational experiences have all taken place within the Starlight county school district. Marcus shared that his perception of technology as helpful. He expressed, "I'd rather have technology than learn from a book." Despite his favorable view of technology, Marcus acknowledged a low ISE of 24.

Nick

Nick is a student at Arrow High School. He is currently taking an online math course using the NCVPS platform. His personal preference for learning depends on the course his is taking, but he acknowledged that he would best describe it as hands-on. Nick recalled fun memories of prior math classes prior to tackling the subject in an online environment. He

admitted that during previous classes, "I was actually learning and learning was fun." Prior to the NCVPS experience, Nick had not experienced online learning directly, nor had he observed anyone take a course online. Thus, his initial reactions to the online course format were filled with trepidations of difficulty and anxiety caused by what he described in his statement that, "It's basically harder online. Because you basically teach yourself." Nick has only experience learning as a student in Starlight county; moreover, prior to the advent of the use of NCVPS in his school, he has always had a teacher for all of his courses. He attested that the thing he likes least about online learning is not having a teacher. Nick's ISE revealed a score of 24, which contrasts slightly with his noted, prevalent use of the Internet and Internet technologies.

Evan

Evan is an 11th grade student at Arrow High School. He is currently taking a math class on NCVPS, which is in direct conflict with his professed preference for face-to-face learning. Due to a lack of prior knowledge regarding NCVPS or online learning, his initial thoughts were filled with a concern that caused him to panic. Evan recounted his initial thoughts were, "Oh man, I hope that this is nothing that I'm not gonna be able to do." However, that mindset has begun to shift. Evan explained that he is confident he will perform well in his class. Evan does not enjoy the fact that grading may be slower than what he is accustomed to in his traditional classes and different from what he has experienced as a student in a neighboring district's charter school environment. Despite being an avid user of technology, Nick noted limited use of technology for the purpose of learning. He questioned it use due to the potential for it to disconnect people as he explained that, "people start losing verbal conversations and just start to text." In spite of his concerns pertaining to technology, he noted increased personal satisfaction

from using it to complete a task. This is directly correlated with his high ISE score of 40 which acknowledges higher levels of efficacy using the Internet and completing tasks in that manner.

Robert

Robert is a 10th grade student at Azul High School. He recognized that his educational success is dependent upon the teachers he has had in the past. Robert shared that his learning preference is akin to direct, one-on-one support from a teacher as he described as "a teacher [who] can break it down to me and like show me step by step and then just go over it [content] a couple of times." Robert was very open about his academic performance over the years that has, at times, declined. He noted that shift as leading to his dependence on having a strong teacher. His most memorable learning experiences were documented in courses wherein the instructor was able to provide a great deal of one-on-one attention to his needs. Prior to taking an online course, Robert noted that he had some knowledge of what online learning looked like:

> Yea my aunt had taken an online course for her to finish college. I think it was like the Phoenix University I think. And my cousins were helping her on like her math and stuff like that. She'll be up like late at night just like typing her papers and then like reading stuff.

Upon first learning that he would be taking an online course, Robert explained, "it was like a little shock, but it wasn't like really that serious." Continuing to persevere in spite of his shock, Robert expressed confidence in his ability to be successful in the course, especially since he is allowed to use technology at his discretion. Robert's ISE was self-assessed low at a score of 24.

Table 1

Student Participant Information Noting their Pseudonym, School, Gender, Age, Ethnicity, Grade Level and Online Course Subject

Pseudonym	School	Gender	Age	Grade	ISE	Subject
Harvey	Arrow	M	16	11	20	Math
Monica	Azul	F	15	10	26	Math
Cora	Arrow	F	16	11	25	Math
Maxton	Azul	M	15	10	25	Elective
Carver	Arrow	M	16	11	31	Math
Audrey	Azul	F	17	12	35	Elective
Carl	Arrow	M	16	11	40	Math
Marcus	Azul	M	17	11	24	Math
Nick	Arrow	M	16	11	24	Math
Evan	Arrow	M	17	11	40	Math
Robert	Azul	M	16	10	24	Math

Note. Six elective courses are required in fulfillment of NC graduation requirements.

Participant Summary

The participants in the study ranged from ages 15-17 years old. Accordingly, the participant pool includes students in grades 9-12. Due to scheduling shifts within the district, a greater number of students within the pool were 11th graders. Participants were either participating in an NCVPS math course or an NCVPS Success 101 course. Eight males and three females completed the study. Sixty-three percent of participants ISE score fell at or below 26, the cut-off for the factors used to determine low ISE within the study (see Table 1). The remaining 37 percent of participants scores were noted higher. Consequently, participants overwhelmingly cited their disdain for online courses yet remained optimistic regarding their

academic performance within their respective classes despite the variance in their Internet self-efficacy scores.

Results

Theme Development

In order to effectively describe the experiences of students participating in mandatory NCVPS courses, data analysis was conducted by utilizing formal processes akin to qualitative research. Data points were culled from the initial interview, focus group sessions, and final interviews. In addition, several documents specific to NCVPS and its use in the state were also collected. Data from the interviews and focus group sessions were transcribed and printed. Time was devoted first to becoming familiar with the research data by manually reading and rereading printed transcripts by hand to develop initial. Codes were developed inductively. Multiple readings uncovered multiple layers of meaning. van Manen (1990) noted that the "meaning or essence of a phenomenon is never simple or one-dimensional" (p. 78). During the initial readings the following themes emerged: (1) student learning experiences, (2) NCVPS program structures, (3) student perception of technology, and (4) student attitude toward online learning. Subsequent readings were completed with the aid of the NVivo 11 software.

Transcripts were uploaded to NVivo 11 and steps were taken to categorize individual participant responses to aid the next rounds of reading and coding. The NVivo 11 software provided the means to further explore and organize the aforementioned themes by (1) compartmentalizing abstract descriptors into corresponding subthemes and (2) combining and eliminating areas of overlap (see Table 2). Results of the organization of themes and subthemes were documented using the system-generated hierarchal map (see Figure 1).

Table 2

Data Analysis Coding

Code	Sources	References
Student Learning Experiences	23	258
Achievement	15	16
Learning Style & Strategies	20	91
Comparison to Face-to-Face Courses	13	69
Learning Perceptions	29	82
NCVPS Structures	23	271
Teacher Impact vs Facilitator Impact	17	149
Course Pacing & Grading	20	68
Learning Management System (LMS)	13	32
Student Use of Technology	23	171
Varied Perceptions of Technology	12	20
Technology for Learning	15	39
Technology Use at Home	23	49
Student Attitudes	21	138
Prior & Post Knowledge of Online Courses	20	59
Sense of Connectedness	11	30

Note. Use of aggregate child nodes for all themes and accompanying sub-themes

The aforementioned themes and sub-themes emerged gradually as I attempted to acquire a deeper meaning of the phenomena experienced by students (van Manen, 1990). To do so meant attempting to place myself within the roles of each participant by using their recounted experiences to understand what it meant to be a student within this specific setting, during this specific time, and experience learning in this manner. Gradually clusters of meaning were formed that would take the form of the noted themes. Exploration of each theme and sub-theme

provided the means to explicate the experiences of students participating in a required NCVPS course.

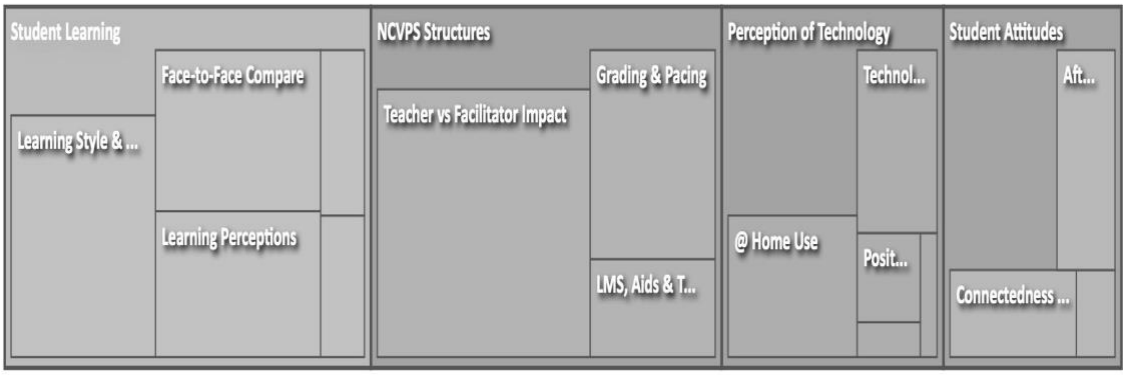

Figure 1. Hierarchy chart of themes: 1. Student Learning (Student Learning Experiences), 2. NCVPS Structures; 3. Perception of Technology (Student use of Technology), 4. Student Attitudes and corresponding subthemes.

Theme One: Student Learning

The rich, thick descriptions provided by participants provided a clear indication of their varied learning experiences within their respective NCVPS courses. Beginning with the initial interviews, participant responses were tracked as subsequent interviews, and focus group sessions were used to gain the clarity needed to paint a picture of the facets of learning in this environment. The sub-themes of perceived learning emerged which were: *achievement, learning strategies, challenges/barriers, comparison with face-to-face classes,* and *learning experiences*.

Achievement. All 11 students revealed that just like their counterparts elsewhere, they were concerned about their success in the course just as much as they were concerned regarding the amount of knowledge they could gain during the course. Despite some trepidations at the beginning of the course, some participants were confident in their ability to be successful. Robert

shared, “I feel pretty confident because [the course material] get into detail on how you do stuff and make sure that you know how to do it cause they give you a tutorial before you go to the test. So I feel pretty confident that I can like pass it.”

This notion of optimism was present amongst others such as Monica. She said, “So eight out of a scale of one to 10.” Optimism was also present for Audrey, whose remarks were dripping with the waters of confidence as she explained, “I feel like I’m prepared because I mean the course is basically easy.” Of note was the difference amongst the participants taking the required elective course juxtaposed with those taking the required math course. Due to the content and subject matter, more students taking a math course online were reluctant to acknowledge full confidence in regard to achievement. Evan shared, “Well I don’t doubt myself. I feel 50% confident. I won’t say 100. Cause I don’t wanna, you know, put myself down, for, you know setting me up for failure or anything like that.” His responses were very similar to Harvey. Although he was not outright fearful regarding his potential success, Harvey remained reserved in his personal assessment as he noted, “Not very confident. Well I aint gone say I’m not very confident. Well I’m a little confident that I’m gone pass.”

This contrasted somewhat with students like Nick who predicted at the beginning of the class his expected low probability for success in the course. He explained, “I feel like- like if I was to take a test right now, I would not pass.” An interesting revelation revealed by students’ shared experiences were their final responses nearing the end of their courses. Overall, students in math continued to lack confidence, particularly as it pertained to their performance on the final exam which would impact their final grade.

Speaking directly to the final exam, Harvey remarked:

> I'm thinking it's going to drop my grade for the exam when I finish it, instead of me getting a high grade, because there's going to be more stuff I don't know that's probably worth more points and I won't know it.

Harvey's statement brought to the surface a similar stance from students that their higher daily grade would be impacted by lower performance on the final exam. Hence, over the duration of the course by their notation, students had begun to develop skills to ensure their success in the course with the expectation that they would likely struggle with the exam. Although it would seem that the use and development of multiple learning strategies would be the reason for the noted discrepancy between the two expected measures of student success. Conversely, students participating in the elective course continued to remain optimistic regarding their performance as exemplified by Maxton. He said, "I feel confident, mainly because I feel that I know most of the material that should be on the test, and what's supposed to be on it."

Learning style and strategies. Online learning lends itself well to myriad styles of learning. For that reason, students were asked to share their preferred learning styles to which they overwhelmingly responded with descriptors opposing methods afforded to an online platform. Fifty percent of all students responded that they preferred some type of kinesthetic learning (see Table 3). Some students noted that their preference had developed from prior, interactive learning experiences such as Maxton who shared, "Mainly through actually doing hands on, hands-on work like labs in science." Others like Harvey expressed that hands-on learning experiences were accentuated by the presence of their instructors. He said, "I learn better hands on with somebody actually telling me."

The notation of the desire to have guidance from an instructor peppered the responses of other students. An example of this was Evan, who despite acknowledging a preference for visual

learning explained, “Um, to be honest, I learn best by being taught- teaching it to me. So, I’m like a visual learner. Then I have to do it on hands.” This expression was similar to Cora who also shared, “I’m a visual learner. I learn best when you write it down and you teaching it when I’m hearing you say it. That’s how I learn.” It was here that students’ desire to have a teacher was linked to what they had determined as a key component to how they learned; moreover, students were apt to include references to their learning style in concert with their need for guidance and support: a teacher. An example of this was captured in Carver’s explication:

> I say hands on and like- well really the way I learn best is like when we take Cornell notes. That really helps, Cornell notes but then when the teacher is teaching at the same time. I like that and then maybe give us-like when the teacher teach us something and then like we understand or if we don’t understand she just give us an assignment after that we do it.

Despite the increased preference for learning styles that were not readily applicable to an online educational environment, a few students’ preferences aligned. Audrey was clear in her assertion that, “I would rather have my own little space and focus versus being in the classroom and sitting in a group.” Of all the student responses regarding their preferred learning style, she was the only student to outright express a preference for the online environment, especially due to the independence she felt it afforded her. She shared, “In my online class, I’m more focused versus being in my other classes.” Such sentiments shared by the students changed little over the duration of the course; only one student noted a shift in their preference. That student, Maxton, expressed that there had been a minor shift for him. He said,

> Now I'd say it's kind of auditory, through listening and seeing it, because instead of hearing others talk about it, I could look at it myself and see what was going on and kind of refer back to what I've heard before.

Thus, the majority of students revealed learning styles that were not readily compatible with an online learning format.

Table 3

Student Learning Styles

Pseudonym	Learning Style	Descriptor
Harvey	hands-on	kinesthetic
Monica	visual/hands-on	visual (Spatial)/kinesthetic
Cora	visual	visual
Maxton	hands-on	(physical)kinesthetic
Carver	hands-on	Kinesthetic
Audrey	independent	solitary(intrapersonal)
Carl	face-to-face/cooperative	face-to-face/solitary (interpersonal)
Marcus	face-to-face	face-to-face
Nick	hands-on	(physical)kinesthetic
Evan	face-to-face	face-to-face
Robert	face-to-face	face-to-face

Note. *Learning styles self-identified by students.*

It became apparent that students, despite some of their inhibitions regarding an online course, were motivated to be successful in obtaining a passing grade. As previously discussed, students shared a sense of dread regarding their potential to pass the culminating exam for the respective courses; however, they were very optimistic that their overall achievement would result in them passing their online course. Based upon their responses, it became clear that students would rely upon numerous learning strategies to perhaps reconcile the turbulent drafts

of their incompatible learning styles as they lashed against the structures of online learning. For some, the strategies amounted simply to external web tools by which they could access to level the playing field. One resource stood out in particular amongst students participating in math NCVPS courses: Mathway.

Carl noted bluntly,

> Mathway is the help- the way to help you get through some of the problems that you don't know how to do. I have to use Mathway for all my problems because I don't know how to do none of the math work. Everybody's on Mathway.

Other students like Cora affirmed its use while also recognizing it was also a crutch. She disapprovingly noted, "So I just like use Mathway but I'm trying to like stop using that and use my head, but it's kind of hard." A universal tool, Mathway was referenced numerous times by participants over the course of the study. Furthermore, knowledge of its use was noted by participants as one of their key strategies for working through their course.

Beyond a heavy reliance on Mathway as resource, participants were honest regarding their reliance on other strategies. For some this amounted to the basic use of the web to help them when they found themselves in need of immediate assistance. Carver noted, "I could still do it online cause you know I got Google. I'll try to search the answers." He was also quick to add, "Or they give us notes, I'll read that. I can function with a teacher or without a teacher." His expression captured the resourcefulness of students whose responses revealed a strong sensation that they were alone; moreover, they would need to figure out for themselves how to make peace with their placement in an online learning environment. For example, Cora recounted her course facilitator's attempts to aid her that sometimes resulted in confusion, but

she utilized other adults who could assist her. She shared, "My stepdad, he's really good at math and he'll help me solve it out step by step."

An additional layer of student ingenuity was noted by the individual self-regulating strategies participants relied on to help them remain focused toward achievement. Students could agree that flexibility in their online learning course environments on their respective campus allowed them extended privileges to include the use of music applications, headphones, peer collaboration, etc. For Marcus, he stated plainly, "plug in some headphones, listen to music, and just go to work." Maxton expanded upon the notion and revealed that this simple technique ensured his attention remained fixed on the coursework and not his peers. He said, "if I got my headphones in, listening to music and doing my work, I'm gonna be focused. I aint gone hear what you saying so it can keep me focused. But yeah, without headphones, I'm a loose screw." Of note again here was the affirmation of students who had felt that they were alone in their online courses. Yet they had developed methods of not only aiding their attempts in the course, they also developed skills to keep manage themselves: self-regulation strategies.

Comparison to face-to-face courses. One element that was revealed by all 11 students was their perception of not having a full-fledged teacher; furthermore, the idea was introduced that this was one of the larger concerns regarding their experiences in the online course versus their other face-to-face (traditional) courses. Hence, students' responses noted stark differences between their online and traditional classes. Surprisingly over the duration of the study, two students became aware of subtle differences in the two course formats and were able to acknowledge how in those instances, the online environment could serve their educational aims better.

Near the beginning of the semester, students like Evan clearly identified superior learning results in their traditional classes. He was firm in his response, "I would have to say my best learning that I ever liked was face to face teaching." Evan went on to highlight a specific issue with the manner in which his perception of grading was different for his online course as opposed to his traditional courses. "To be honest with you, the grading takes a little longer to get up. Once you have a high score and you do something wrong, it brings the grade down. So, it's hard to keep your grade up," he explained. Other students echoed positive sentiments for their traditional classes in contrast to their current online courses. For example, Nick described:

> I feel better prepared in the other classes (traditional) because when we have a problem with something, we've got a teacher right there and we just ask the teacher, but it's hard trying to communicate with the teacher online and it's just (he pauses) -- it's just different.

Robert explained a difference as well by summarizing what he perceived as direct support in his traditional classes. He expressed:

> I feel more confident in those classes. I've actually got my teacher there to help me work on it and then break it down and then get to understanding more if I have a problem with it, but in there (online) I just got a computer and you can't really ask the computer to help you break down. It's just like it's there. You've got to learn it off that.

Based on participant responses, many shared the notion that the learning within the traditional courses provided a great deal more depth. Harvey explained, "I learn more in my regular face-to-face classes." He added, "they go more in-depth." For Carl, the experiences were akin to the differences between night and day. He resorted with a "matter of fact" tone to say, "Face to face class I learn a lot every day. Online you learn nothing." The idea that more learning was taking

place within the traditional classes may likely be traced back to the aforementioned notions regarding the perceived difference of the instructor who students acknowledged with a stronger sense of presence. Moreover, there was an increased sense of direction for learning tasks. Cora provided an example specifically for her traditional English course versus her online math course. She noted,

> Yes, its different. I'd say English, because like in English, she'll show us step by step of how to do this, and in math they give us instructions, but it don't always be like the instructions that we need. Like sometimes they're wrong.

At the opposite end of the spectrum, a few student participants had somewhat favorable views of their online course in comparison with their traditional classes. Remaining outspoken throughout most of the study, Audrey noted superior organization of the online course as opposed to her traditional courses. She said, "in my other classes they jam stuff together in like one week." Audrey went on to indicate strong pacing structures that vary between her traditional an online course. She provided the example:

> It's actually different because even though our face-to-face teacher, they give us a course syllabus, but they go all over the syllabus. They don't actually stay on one point or they go off topic somehow and then they be like at the end when it's time for the exam, they try to get back on topic versus in our online class, it be like this is what you're going to do from the time you're in here until the time you get out.

Marcus also noted favorable views of his online course in comparison to the traditional courses in which he was enrolled. For the most part, Marcus seemed to enjoy not having his online teacher physically in his presence. He looked straight ahead as he said, "I ain't got a teacher yelling in my face every five minutes." His notation of dread of teacher retaliation within

traditional classes is something that came to the surface slightly during the focus group session. There he provided an almost uniform list to signify his feelings regarding his experiences in traditional classes. He said:

> Some of them (traditional teachers) may try to talk to you and reason with you about your work. Some of them just kick you out every day. You drop your pencil, you're out! Depends on like if you have that bond with your teacher or not. Whether she is willing to help you or not.

Based on the extreme variance amongst the participants and their respective traditional courses, there was a small semblance of what appeared to be appreciation for some elements of the online course regarding the monitoring and updating of grades; however, as it related to their specific learning, the majority of students perceived improved learning as a result of having access to an instructor.

Learning perceptions. The crux of this particular study was specifically how students were experiencing learning within a mandatory NCVPS regard. To that end, student responses were captured to help paint a picture of what they perceived during their individual experiences. Again, students' responses diverged greatly depending on areas of their course, content, governing policies, and procedures. While some students noted positive experiences, others could more clearly articulate things that could be noted as negative. In addition, there were also those responses that were surprisingly neutral.

Students were clear that for some, learning within an NCVPS course was a positive learning experience. For instance, students recounted positive learning dictated in part by the freedom afforded to them as learners. Robert shared that during his online courses that he relished the idea of being on the computer. He said, "Just being on the computer. I can listen to

my music while I'm doing it so it won't just be like so boring." This self-regulation strategy has been cited before from other students and helps shed light on the positively perceived form of independence afforded to students taking online courses. Even when students were not happy with taking an online course, they were appreciative of some of the perks and extended freedom they were afforded. Audrey shared the sentiment in connection with the systems of control within the required elective course in which she was a participant. She noted:

> I was able to use technology as a resource and if I didn't know something, I was able to look it up versus waiting on a teacher to actually come to your desk and she's helping with other students or another teacher comes to her room and she's distracted with her so it was more convenient because I can get better information in that class versus in the classroom.

For her, the ability to have direct control over her learning regardless of other factors was of extreme importance; moreover, her response revealed other students and teachers could be labeled as distractors. A similar stance was noted by Marcus who shared his excitement regarding passing a math class. Marcus said, "This is the first year I started passing. This is the first year I ever passed a math class." Marcus had previously acknowledged that he struggled in his traditional classes to not only remain focused but to have a peaceful relationship with his classroom instructor. However, the online environment allowed him to participate in learning with an instructor who was miles away and would not or could not reprimand him for actions he noted other teachers were quick to discipline students for. In that same vein, Monica shared that the ease of content helped form her favorable learning experiences views in her online class. She put it simply, "I like that --(pauses to think) it's something easy you can go to. I mean it's not—(rephrases) it's not hard but it's easy at the same time." Beyond some perceived difficulty

regarding the content, Monica found the learning to be accessible. Her declaration including references to hard and easy reveal some idea that she found the work challenging but within the scope of her ability. However, all students did not share warm feelings regarding their learning online.

Participants who did not favor the experience of learning online provided reasoning to support views of the kind. Just as their peers who had positive things to say, there were those who were clearly indicated that online learning was less than desirable for them. Robert vented:

> Um, it feels kind of boring. I feel like they could do something to it to make it like a little more interesting. (Collects his thoughts) --Like if you get all the questions right you have a game at the end or - like really catch your audience, make you want to do it more.

For Robert, it seemed that a lack of engagement seriously limited his online learning experience. Whereas his traditional courses could offer more dynamic engagement opportunities, this had not been the case for his online math course. Carl struggled to settle on just one negative things to say about his online course as he searched for the best way to describe the experience. He first stated, "hate." He continued, "[I'm] stuck hard, because the work is hard and frustrating." He finished with an astute simile to better explain what he felt like learning in an online environment:

> It's like a baby trying to drive a car. He don't know how to do it so he not gone be able to do it. So that's why it's frustrating. It's something you can't do but they still trying to make you do it. You not gone be able to know how to do it if you don't have no teacher teaching you that. You just can't have somebody do work, and work not tell them how to do it. It's not gonna be successful for you.

The idea that there was no one who could assist students pervaded their recollections of learning online. Nick similarly shared feelings of isolation. He said:

> When we're doing it's like the questions, the questions that they're asking, we don't know the answer to because you don't have nobody teaching the material. So, it's just like you're basically just going through it, you're teaching yourself, and you just keep retrying the quizzes and all that.

To add to the difficulty, Nick explained that he was not ready for the final exam for his course. He added, "Hmm. Not prepared at all. Like I said, we did have to teach ourselves, but there's a lot that I don't know." Thus, the previously noted strategies that students employed may have helped them to navigate the course; however, the majority of students noted negatively that they were ill prepared to prove their understanding of a course wherein they had done all they could to simply remain afloat. This contrasted slightly with a select few students who felt their learning could not be identified as purely positive or negative. Monica remained neutral in her stance. She explained, "I feel that I could pass, but then again I don't know if I could pass. It's like in the middle." Robert shared Monica's views as he revealed, "I mean, give myself about a 50/50. I'm not really sure because they don't really teach you a lot. They don't teach you how you want to be taught, but they do kind of like teach you a little bit." Again, students' responses varied which may have been linked to the differences among students and the individual challenges they faced in their attempt to complete their online course.

Participants referenced multiple issues they had which they perceived to have impacted their successful learning in their online courses. While some students noted challenges beyond their control, others acknowledged that some challenges were either of their own creation or worsened by their inhibitions. For example, Robert noted that on some occasions he could not

access materials properly while at school. He said, "Um, some days like the Internet, the Internet would be really slow and I couldn't get in." Evan agreed to similar issues accessing his course as he noted, "Oh yes! The Internet." Despite some technical difficulties, the greatest perceived barrier to student learning was self-control.

For Audrey, the problem of control resulted in her not adhering to the course schedule as well as she should. She affirmed that her difficulty simply was, "procrastinating." Her fellow scholar, Monica, shared that while she did not procrastinate, she struggled with distractions. She snapped, almost irritatingly "[I] get distracted. I can get thrown off easily." In agreement, Maxton explained his own problems with distractions especially those from electronic devices. He explained, "My phone for one, when people text me." Carl revealed that sometimes the distractions inevitably lead to his complete distraction from learning properly. He said, "Then it be like the whole week. And then I get behind on my work and I just be like oh well. It'll get done some way." During the focus groups, others explained that the barrier they faced were questions that they felt ill equipped to answer. They shared, "I'll skip right past those. I don't do those."

Theme Two: NCVPS Structures

North Carolina Virtual Public Schools was designed as a viable alternative to traditional instruction providing online learning opportunities to students in North Carolina. Unlike other online programs available in the state, it is wholly governed and run by the state. Due to its unique construction, it provides opportunities for learning that can be embedded within site-based schools throughout the state as well as to students completing learning entirely online. During the course of the study, participants shared information pertaining to NCVPS and its

myriad structures. Specifically, this theme and accompanying sub-themes provided an additional layer to help explain student experiences.

Teacher impact versus facilitator impact. A large element revealed through participant experiences was their perception of the course instructor in comparison to the course facilitator. A constant for 10 of the 11 student participants was the idea that by taking an online course that they did not truly have a teacher. In many instances, those students referenced their facilitator as their teacher; even when prompted regarding their online instructor, students struggled to draw personal connections similar to the ones they had with traditional instructors.

From early during the study, participants' responses revealed low levels of teacher presence. Carver simply noted that he didn't like online courses because of what he noted, "The fact that [there's] no teacher." His peer, Cora, noted that the students spent time working together to be successful; however, she rebutted, "but we need a teacher." These types of responses were numerous; students seemingly had disavowed knowledge of the very real teacher whom they knew taught their course. To reiterate Nick's sentiment, his area of greatest difficulty was explained as, "not having a teacher." Yet during the conversation, it became clearer that this feeling bordered on a level of resentment. By that, resentment that surfaced as students noted attempts by their instructor to reach out to them that they felt were not enough. Marcus shared, "I don't talk to my teacher. I don't [think] I need to talk to her." Evan's explication added to the sentiment that it was possible that there was something deeper at the core regarding their limited connections and interactions with their online instructor. He said, "She'll text sometimes. I don't text her back no more. She ask me how I'm doing. Like I ain't got nothing to do with that. What you gonna ask me that for?" Although it seemed that there were requests being made by the teacher to connect with students, it seemed that the students

found the contact disingenuous. During one of the focus group sessions, it was revealed that all students had received the exact same message, which to them provided the indication that the messages being sent were simply a formality. Evan read the message from his mobile device. It read, "How was your day? If I don't hear from you I will call you this weekend. Especially let me know what you need help with." When asked if the follow-up occurred, no student could clearly indicate that they had consistent follow-up and feedback from their instructor. Again, these occurrences exacerbated the disconnect between students and their instructor. For them, it was merely a representative not connected to them and their academic success or achievement.

Inconsistencies regarding feedback from the online instructors was also a limiting factor. According to Carver, "She just be asking crazy questions, so I don't text her back. But then sometimes she will text me about work. I'll text her back about that. But when I submit old stuff, she don't' grade it." The complicated relationship between students and their receipt of feedback drew few parallels. While Carver explicated little feedback, Audrey sometimes received a different from of feedback. She shared:

> Let me tell you. She sent me a whole paragraph saying you can do it. You can do it. Just try to get it back on time. I'll give you extra time and you know what I tell her? For what I do, chile I do what I want to. She just straight up sent me the answers back.

This contrasted with Evan who said, "She don't send me nothing. She just tell me what's right or wrong. What I need to fix." Of note is the declaration from North Carolina Virtual Public School (2016f) regarding feedback which detailed:

> Teachers grade each student's assignments with positive, specific, and directive feedback which offers the student enrichment (if mastery is reached), a real-world connection (at

> least once per module), and support for any gaps in learning. One way to show students how much they are valued is in the type of feedback that teachers give them. Our feedback that we give students on each assignment really separates us even further from other online courses. (para. 8)

In spite of the noted aim of NCVPS, students' responses in this research setting spoke otherwise. Soon the sentiment surfaced from students again that to them, their instructor was not really concerned with their success and well-being. Monica's difficulty with feedback was that it seemed to be geared as more of a directive to parents instead of directly to her: "She just text my momma and tell her I'm failing. That's it." It is likely here that the noted communication with parents was geared toward meeting North Carolina Virutal Public School's (2016f) goal to communicate effectively by using "every interaction with both students and stakeholders to build relationships" (para. 6).

Based on participants' responses, it could be inferred that the level of communication afforded to the online environment was not enough for students. When speaking about successful course interactions, students were clear in what they perceived to be support from an instructor. When speaking about previously successful course interactions, Evan explained:

> My [former] teacher Ms. James (pseudonym). I just thank her a lot. She gave us new ways to learn and if we didn't understand something she would go over it. And if I still didn't understand it, I would see her after school and she'd teach it to me better and I understand it. I'd go home and do some practicing. I could come back to school and say hey Ms. James (pseudonym), I learned a better way and thank you for helping me.

This was different from what students experienced within their online courses, but the questioned remained as to whether this type of support was impossible. Students were accustomed to more

immediate feedback that could help them. Online however, there was a large variance in feedback. Carl noted that feedback for him was never received in the same manner. He said,

> Some days it'll be a week and then it'll be like two days, the quickest I ever got it--(pauses to recollect) maybe probably about two hours. But that was too late for me because fourth block, two hours, that would be over.

It was clear that students craved direct support. Support that was specific to their individual needs. For instance, Carver provided a description of a recent classroom instructor who, in his opinion, provided a safe and encouraging place for learning. He said:

> I think I would say Ms. Myrtle (pseudonym) from last year. It was something about Ms. Myrtle (pseudonym). She knew exactly how to teach. She like--(pauses), she'll go up and teach, we'll do the same thing. [First, we would] write it down but then we'll do hands on work. We'll do projects. We- we just did a lot and then like lab and stuff like that. I learned a lot in her class. I still got the notes. And I still think like dang, why did Ms. Myrtle leave?

It was clear that there was some form of contact taking place and some attempt to provide feedback and support. For example, Cora put it plainly, "she'll call us sometimes. She'll call us." The support which may have been designed to be supportive was not received in that manner. This perception contrasted to a great extent with that perceived regarding the course facilitator.

Integral to the structure of NCVPS is the use of the course lab facilitator. NCVPS (2016d) explained that the facilitator roles along with the critical roles of the e-learning advisor, parent, and NCVPS teacher form a team whose goal is to ensure students successfully complete their online courses. Accordingly, the lab facilitator role is designed to act as an intermediary

between the students and their NCVPS instructor; moreover, they may also intercede in regard to parental interactions. With the numerous recollections of negative experiences by students pertaining to their NCVPS, students seemed to almost universally agree that their lab facilitator had impacted them positively.

Students revealed that the facilitator had been their point of entry for many of the resources available to them within their NCVPS courses. In regard to elements such as the peer tutoring center and the setup and flow for their courses, students attributed a great deal of knowledge to the lab facilitator. Nick explained that in many instances he recounted his assistance received as simply, "Mrs. Winterbottom (pseudonym), she told us about it." His exclamations were seconded by Carver who provided more detail. He said, "Mrs. Winterbottom (pseudonym) she try her best to help us. She aint go to school for math. She don't know everything about it, but she try her best to help us when she can." Similarly, Marcus noted that his facilitator was also a great support for him as he attempted to progress during his online course. He shared, "Well, my administrator (facilitator), she helps me a lot, she really helps me, looks out for me in life. I just know she got my back and she going to help me make it through." For Cora, she was simply thankful for the guidance she was receiving from her lab facilitator who she explained, "Mrs. Winterbottom (pseudonym), she support us. She do all she can and she helps us a lot." Harvey added, "like Mrs. Winterbottom (pseudonym). She try her best to teach it." Hence, students constantly reminded that their lab facilitator had attempted to impart information to them that was beyond their background of teaching/scope. Yet, the accolades students heaped on their facilitator were not grounded in simply having an adult who simply allowed them to do as they please.

In particular, students acknowledged that the facilitators they favored more provided structures to include firm rules about what they could or should not do in class. An example of this came from Cora who explained that she was not allowed to use her mobile phone for unapproved purposes in class. She explained, "I can't use my phone in class though. Mrs. Winterbottom don't let me use that." Similarities could be drawn regarding the same facilitator from Carl. He said, "Cause she aint gone let me get off track or nothing. She make sure I'm always on track."

Students also acknowledged their lab facilitators for creating opportunities for learning by assisting with the development of peer networks in their courses. Audrey shared,

> Mrs. Snow, she'll ask the whole class like do they have it. So, say if I need help with modules, she'll be like 'do anybody have this, that, and that?' And then like somebody who got it, [they will] go over there and cooperate(help) with them.

Yet, just as there was some variance amongst participants regarding their teachers, there existed a limited range of negative ideas regarding some course facilitators.

Evan was quick to share remarks regarding some of the differences between his facilitator and the second facilitator who Nick was assigned to mid-way through the semester. Although he had originally been a student in the lab facilitated by Mrs. Winterbottom, due to spacing issues and additional enrollments, some students were moved to another section wherein temporarily, they had to deal with multiple facilitators, some of which the students identified as substitutes. Evan snapped, "If you have a facilitator like he (Nick) got one, I'll have a 20(grade/percent) in there man." Thus, his exclamations regarding the resourcefulness and support of the course facilitator had changed by the end of the study. He expressed the idea that he and his peers were largely left to their own devices in the presence of other facilitators.

Unlike the firm and fair environment students had recounted with Mrs. Winterbottom, the environment was slightly different with the new facilitators. Nick explained, "It aint like she just make sure we doing our work. She just sit down. If we wanna get on YouTube, we get on YouTube." This was a stark contrast with students in the same setting, taking class at the same time in a different lab, such as Evan who explained:

> I understand sometimes I wanna watch a video. With Mrs. Winterbottom, she be like, you need to get on the business. So, put your phones up and all that and that helps me get on task. And if YouTube distracting you, she'll just take your headphones away.

One of the routine habits declared by the facilitator's guide noted that the individual in charge of the lab should "monitor students throughout class time" (North Carolina Virtual Public School [NCVPS] NCVPS, 2016c). Therefore, despite the requirements that had seemingly been set forth by NCVPS, it was clear that student experiences were not universal. In particular, NCVPS (2016c) provided detailed description regarding how ongoing support could and should be handled at the school level as indicated by the goal to "teach students how to be successful in an online environment. Meet with students in small groups to discuss individual courses as needed" (*Support Throughout the Semester*). While it was clear that this had been occurring within the research site, it was also clear that this was not the norm for all participants.

Consequently, student responses were clear that there was a difference between their perceptions of the NCVPS instructors and lab facilitators. While there was some recognition of course instructors attempt to connect with students, their attempts were largely unsuccessful. To students, their personal feelings were that they did not feel as if they had a teacher. Furthermore, extreme levels of disconnect were acknowledged. Conversely, students felt stronger connections with their lab facilitator, who despite lacking knowledge relative to their respective courses, they

were more of a resource than their actual teacher. Although there were limited instances noted regarding negative experiences with temporary lab facilitators, students overwhelmingly continued to crave that personal connection that the facilitators could provide in comparison to NCVPS instructors who could not make those same connections.

Course Pacing & Grading. As with any educational system, one of the sub-themes that was revealed in relation to the NCVPS structure was student explication of their experiences with the pacing of courses and grading policies and procedures for their courses. Students were well aware of assignment schedules and accompanying due dates; however, they revealed that for many, the speed at which material was covered was extremely quick. Thus, a relationship seemed to develop whereby students acknowledged the impact of pacing on their grades during the online courses.

Audrey provided background for a typical day in her online class. She was clear that there was a routine that had been established in her course. She noted:

> A typical day in Success 101, you view your notes and then you do like your 'check your knowledge quiz' and you send her your score in and then you do a practice assignment where it might be a discussion or something that's gonna test your knowledge about what you learned based off your notes or like what lesson we're gonna learn. And then you do another assignment where that could be like a mini quiz or just a something that's dealing with the lesson: an actual assignment.

This coincides with NCVPS (2016g) suggestions for establishing a routine for students who should be aware that each school was considered a work day and directed students to "log in everyday Monday through Friday" (para. 10). Students were well aware of what was expected of them upon entering their assigned space for their online course. Monica noted how she

operated on a daily basis. She shared, "[I] go in, look at the activities you haven't done already, you go through it (complete the assignments, you might take notes on it, and then you submit it." Another student, Harvey, simplified his daily work through his explication that,

> No, other than the roll call she (lab facilitator) does when we get in there. We just go straight in there, sit down, and get to working because she says that we work from bell to bell. So, we get in there and work until the bell.

Maxton underscored this point as he posited, "a typical day would be going in, logging in and seeing what we have to do and what we've already done, go through the lesson, and do whatever's in the lesson as classwork." Thus, it seemed safe to infer students' astute knowledge of the processes and procedures for completing tasks in their online courses. However, their understanding of these elements would clarify what students would share regarding the pace for learning tasks.

Participants were quick to reveal that online courses may offer some forms of flexibility over their traditional courses. Yet, the online course would hold more stringent rules in the form of deadlines and due dates. For Harvey, he noted his ability to seemingly work at his own pace, but he soon referenced the limits of what he could and could not do if he wanted to submit work. He said, "I can't say you can turn it in on your own time because it's a pacing thing. You have to- (pauses) you have to turn it in. Like it's certain things you have to be turn-in bi-weekly." Therefore, the difficulty with pacing surfaced in multiple forms. The most prevalent: deadlines. According to Maxton,

> The deadlines. That they like kind of sneak up on you. Like you'll get a week's worth of work due on a Friday and when you start on Monday, it's like it'll take a little bit more time to get through it and get it done.

Nick underscored this point as he articulated, "it's basically like you've got this module. You've got to do this module by this date." The careful interplay between assigned work and deadlines was the most widely acknowledged pacing issue. Students emphasized the swift pace of the course. Yet, many of their responses flowed back to the deadlines which seemed to appear out of nowhere. Robert offered his view on this situation. He proffered:

> When you start it, it's like they're telling you that they're expecting you to be at point Z before the end of the course. You could be at point Z before the end of the course, you know what I'm saying, if you just focused on it (coursework) instead of just going on at your own pace, but they expect you to be at a certain place by a certain date and stuff and then you don't really get as much time to understand it yourself, instead of just going at a regular pace in the classroom.

His response exemplified again the distinction between what students had come to expect when learning. As Robert indicated, traditional classes followed what most students considered to be a regular pace. The pacing in the traditional classes was in a sense more dynamic. By that, the instructor could readily adjust the flow of the materials. Yet, online the flow and pace were established from the onset; moreover, any disruption on the part of the student to that flow would result in poor grades.

Nick touted the lesson he learned about grading in the NCVPS system. He asserted, "It was like I've got to do all of this in a week or I'll have a lot of zeroes. And it taught me that once you get them and don't keep up with what you're doing in this module, it's just tough." Harvey repeated a similar observation as he stressed:

> It's a late policy where they take 10 points off or 20 points, depending how long. I mean, with the face-to-face teacher, I would say they could give you more time to complete

> your assignment but with the online class it's like you've got to turn it in when it's being turned in or it's just going to be counted late.

While students like Audrey accounted for student control and each individual's ability to regulate their actions to meet deadlines and to adhere to the grading policies, she indicated it was easier to acknowledge than to abide. She pointed out:

> The course work is due every Friday and that's kind of hard for us students because Friday we are like, I don't want to do anything. Being in that class [NCVPS], it made me do work from Monday through Thursday without procrastinating and that way I can have free time on Fridays instead of just cramming just on Friday trying to do it.

Consequently, all of the students did not possess the same self-awareness regarding their actions in their NCVPS courses. Like Carl, for some students the speed at which the online course moved was too much for them. He simplified his feelings in his declaration, "It moves too fast. It moves way too fast." He added, "You have to do probably 10, 11, 12 assignments in less than a week. And they're not small assignments, they are some you have to do like 12 questions to them, and they're just too many to do in a week." The drive to achieve became a motivating factor for students, who like the Audrey, recognized methods to ensure that they could better manage what was to them, an impossible situation. For instance, Cora shared, "I gotta a log onto NCVPS and like the modules that I don't know how to do, I skip those and I just do the ones that I know how to do." While Carver acknowledged, "I look at my notes. I get that module and that lesson down pat and then I just take all the assignments, quizzes, and post assessments." It became clearer that despite their complaints, students' experiences with grading and the pacing led to their improved understanding of their own abilities and need to self-regulate and manage their actions accordingly. Evan shared his realization. He insisted that while participating in an

online course, “You gotta start working on your other assignments because they due too. You can’t just go back in there and plug in all them little zeros that you got. You gotta work on your other assignments.”

Learning management system. The final construct referenced by students through their experiences was information pertaining to the Learning Management System (LMS) used on the NCVPS platform. All students cited the use of the Canvas learning platform. However, there was some limited prompting that students required to understand the difference between what LMS they were using and NCVPS.

Nick asserted, “I didn’t know the difference.” On the other hand, Audrey, who had earlier acknowledged a higher ISE noted her questions with the system due to prior knowledge of another LMS: Moodle. She stated, “I was like what is Canvas. I’m not used to Canvas. I’m used to Moodle. I had to actually watch the videos to learn how to navigate it.” Audrey revealed prior experience with previous teachers utilizing the Moodle platform. She summarized, “It’s pretty easy after you do the getting started unit and learn how to navigate it.” Of note was the documentation from NCVPS. An open tutorial module acknowledged, “NCVPS has used a number of learning management systems. We have used Blackboard, Moodle, and now Canvas. Many school districts use Canvas as well.” All students used Canvas during the current research study. Like Audrey, students largely noted efficient use of Canvas and knew how to find resources, tools, course materials, etc. Maxton expressed his appreciation for the versatility in the system. He acknowledged:

> I use it mainly to see what we have to do throughout the week and doing small tasks like replying to other people’s posts or helping them (other students) through peer tutoring to see if they need help in certain areas or if they can help me in those areas.

This was different from Cora. Cora had linked the use of Canvas with NCVPS. In other words, for her, there was little difference from the LMS and the NCVPS platform due to the fact that she was forced to use Canvas to connect with the NCVPS coursework and materials. She stated, "I don't really like Canvas like that. I think it's harder up there than it is in like regular classes. It's really hard on there. I try my best but it's hard." The exclamation here regarding the difficulty likely referred to the course content and not necessarily the means through which the course was accessed.

Students had little difficulty explaining how Canvas worked or how they could retrieve materials required for learning. The students provided great detail regarding finding their notes, assignments, due dates, contact descriptors, etc. For example, Carver shared,

> I like how the teacher can give us notes and then give us links and stuff and then she gives us a lot of ways to learn something. Like if you don't understand this, she put at least four or five links.

This was similar to Harvey who also articulated his experience finding materials in Canvas. He shared:

> You log in and then it's like the little menu thing on the side. You can go to the dashboard. There's where you scroll down and then you click on your math class and then what I do is you go to [my] grades. You can see your grades but you can also click on your assignments from there too and that'll help you keep track of like what you're doing. If you have any questions for the online teacher it's a little bar right there with messages. You can just go message her and ask her a question about anything and she'll respond. She also has our phone number, email, and she has our parents' information too. So it's other ways I can contact her.

Harvey's explication offered the ideal experience shared by most of his peers; however, just as with other elements revealed during the study, a few outliers existed. For Carl, his discontent with the online nature of the course had caused him to simply omit a level of concern or dedicate extreme attention towards the LMS. For him, the LMS was the course and due to its online nature, he did not like it. He said, "I just don't know. It's just cause its online. It's just cause it was online and I didn't have a teacher. So it don't matter if it was Plato, or Canvas, or not. I still wouldn't like it. It's hard online." Again, Carl's negative feelings were directly correlated with the online nature itself and not the delivery method as he notes the alternative platform of Plato and the system he was using in his NCVPS course, Canvas.

As the central hub for accessing their NCVPS course, students noted an overall favorable view of the Canvas system. They spoke in detail regarding its use and understood how to find materials required for them to complete their course. Interestingly, students acknowledged the communication tools available for their use that were also embedded in the system. However, it can be inferred that the management of the course and the system had little bearing on their perception of online learning.

Theme Three: Student Use of Technology

Discussion of an online learning environment must also include, to some degree, a discussion of technology; moreover, the use of technology for learning. In order to best capture the relationship between participants and technology, information was gleamed in an attempt to elucidate further. Students' responses varied widely in regard to technology. In particular, students' perceptions were not clearly defined or universal as they shifted depending on use of certain tools, varied within different contexts, and changed in response to forms of application. In addition, technology for the purpose of learning provided an entirely different context for

many students, yet those same participants' experiences did not parallel one another. This held true for application of technology within the confines of the students' home as well.

Varied perceptions of technology. Although it would not seem that technology would equate to an abstract construct, based on the interpretations by students, their myriad views revealed multiple ideas pertaining to what they considered to be technology as well as its use. Students began by expressing what particular technologies they were familiar with using. They cited tools ranging from those for entertainment to those they attributed use directly within the confines of school. Nick described his use of technology at home which included, "I use my cellphone, watch TV and play the[video] game sometimes." At school he shared, "we use computers and the smartboards and we use our cell phones sometimes." This was similar amongst students who cited physical tools and various programs or software when noting technologies that they were accustomed to using either at home or during instruction at school.

Robert noted,

> Sometimes we'll use ours phones in class to look up [information]- go to the school web page and then like get our assignment from there. Or if we are in reading, we'll do that little game website, what's it called, (pauses) um- Kahoot.

Although he offered educative purposes for his use at school, at home he mentioned, "I play- either play my [video] game or just be on my phone on Instagram or something. Or I play 2k (video game) or something at home." Others, like Audrey stated primary reliance on computers. She pointed out, "I use the computer a lot… use like Microsoft Word, Google Docs, Gmail." At home, Audrey promoted further technology use. She recounted, "I use the Internet a lot to like get online, look up colleges, or log into my class, or being on my phone (pauses)- I use technology a lot at home." Consequently, students seemed to have access to computers, mobile

phone devices, calculators, video game consoles, dedicated Internet access, and myriad software types to include those for personal and educative uses. It was natural that their general perceptions of technology were favorable.

Considering the placement of technology in the lives of participants, they championed its use, in nearly all forms for completing multiple tasks or achieving various goals. For Evan, technology was something that he desired to have constant access to and use in all environments. He noted, "To be honest, I would love to use technology in every class but the way the rule is with that we have to stick to it." Regarding the rules, Evan explicated that technology was allowed in some settings and in others it was restricted. However, his preference for using it did not waver. His sentiment was echoed by Carl who said, "I'll use the technology to make [completing] it (tasks) quicker. It's helpful and it just helps you in life, period." Cora also acknowledged a favorable view for the application of technology to the completion of tasks. She attested, "My personal view of technology is that it makes it easier and more fun." Students held the belief that especially in consideration of learning, technology was an essential aid.

Carver supported this stance. He concluded, "it's just a helpful thing. I'm just glad we got it. Without it, I'm have to do a whole lot of listening, a whole lot of learning." Carver then made a lateral shift as he stated, "I think I'll be a lot smarter if we didn't have technology." The statement here brought to the surface a nuance regarding the use and application of technology. Despite its placement as something to be considered helpful and supportive to completing both educational and other tasks, students acknowledged limits for its use.

Although they had been keen to cite positive positions for technology, there did exist some limits and fears regarding its use. Harvey touted the potential for technology to be disruptive. He shared:

> I like technology. I like it. But it's like a lot of bad things they say about it too. They say you can't sleep with your phone in the bed by your head or something like that. So, I don't do that. I put my phone on the floor when I go to bed. And then I like it because we have been so used to technology now I don't think we would know what to do without it.

This cautious fear regarding technology was expressed in multiple degrees amongst participants. Their views highlighted both positive and negative presuppositions that changed depending on the exact tool used for a given purpose and within a given context; moreover, students could clearly articulate their personal stance yet seemed unaware of the conflicting relationship they had with technology. Carl underscored this point as he maintained:

> If we couldn't use technology, I know for a fact I'll be failing my math. Science it's kind of common sense. So, you can learn that and we have a teacher [for that class]. So, I can learn – I can do that. And electrical trade I can do that without technology. But math, without a computer or a calculator, I wouldn't get no questions right.

Further, middling arguments were clarified by Monica who noted the positive use of technology for communication even within the educational setting. After having to think about her personal feelings for technology she said, "I use my phone and the computer. I [also] get to use email. So basically, all my work come through my email. So that's basically a good a good way to use it." She then asserted, "It's like in the middle." The idea of neither being able to fully affirm or deny the strength of technology within given parameters might have been the result of a lingering sentiment shared by Evan. He insisted, "[It] make you wish you never had computers. Cause if we aint have computers, then we'll have teachers." Such a poignant remark helped capture the essence of students' difficult relationship with technology. While noting areas highlighted by extreme positive notions, an internal pause remained present. It is likely that this internal pause

was the result of the conflict most students had with asserting learning in the technology-bound arena of NCVPS. Thus, the positive and negative views of technology shared by students were warranted.

Technology for learning. The shared experiences of students provided additional information connecting ideas relative to technology when used for the purpose of learning. Students expressed the application of learning tools, aids, and software as a significant factor in their learning. As previously noted, these sentiments were not always positive. Notwithstanding that, participants' views aided the process of fleshing out the educational experiences of students in the NCVPS program.

When factored for learning, students articulated the use of technology to increase learning, provide aid, and increase engagement. Clear examples were provided for when technology increased their ability to learn; however, the reasons they offered were not consistent. Audrey shared:

> Let's take English for example. Like you have something in English that you don't quite understand but you can't use the Internet so it's like you got to actually like use the context clues and break it down and actually try to figure out what it means. Versus being in a class where you can. Like if you don't know what it means you can look it up.

Maxton explained that similarly, "reading through the book, it'll give you the same information as opposed to doing it on the internet, it'll give you more through Google, Bing, sites like that." Maxton's reply here provided evidence of students' appreciation for the assistive nature of technology, especially regarding independent learning.

In spite of a higher degree of preference for traditional learning formats, students noted the increased learning autonomy afforded through the use of various tech. Nonetheless, this use of technology for some came with caveats. Harvey stated,

> I get more freedom to use my phone because it helps me more. [If] I could connect my phone to the screen and do like that and it give me the step-by-step about how they did it, but we can't take them out in class.

The allowance of certain forms of technology for learning was a point of contention. By that, depending on school, course, and administrator, students cited some limitations to the use of technology, especially the use of mobile phones.

Even supposing the use of a mobile device for learning, students did not fully acknowledge its use within the educational environment strictly for learning. By that, students expressed use of mobile phones sometimes as a distraction. Evan noted that sometimes the use of mobile devices was for "listening to music or watching movies." By extension, computers presented the same problem. Robert highlighted the problem with computers as well, declaring the limited impact of technology in that regard. He said, "I just need motivation. The computer does not give me no kind of motivation. It just make me get distracted even more." Yet these distractions diverge from thoughts by students who explained increased engagement through the use of certain tools and software. On one hand, the notation of engaging tools like Kahoot contrasts with references of distracting tools. This further highlighted the tumultuous relationship with technology. Specifically, Kahoot is a website and subsequent tool that provides the means for the gamification of activities and lessons within a school. Thus, students like Robert noted, "Yeah we use Kahoot. We use our cell phones and all that." This provided an

example of approved use of a mobile device and the use of engaging software for learning. However, these descriptions were not mentioned in connection to NCVPS.

To clarify, students shared positive perceptions for technology; however, there was some difference amongst students given the use of certain tools in different contexts. Students noted both desired use of technology as well as referencing instances wherein technology impeded their learning experience. Of note, students drew limited connections to NCVPS except when noting technology used as a supplement to learning such as the use of web resources, assistive devices and the like that helped students complete their given assignments. Beyond that connection, students seemed to disregard the fact that NCVPS was a learning platform, housed online and grounded in technology. Again, it can be inferred that once again, students did not readily correlate the same sentiments for technology universally in both personal and educative uses.

Technology use at home. Based on prior research, it was determined that there were some noted differences between students use of technology within their homes versus their use of technology within schools. In addition, the research setting data had provided enough detail to infer that there would potentially be some differences between technology available to students at home as opposed to what was available at school. Students revealed that they do regularly use technology at home; moreover, their use of technology at home varied. While some students acknowledged limited use for academic purposes, others explicated primarily engagement and entertainment use of technology within their homes. All students noted some form of technology use at home for their NCVPS course; however, the specific tools used varied. Overall, the most recent census data did not wholly align to the experiences shared by participants within their own homes.

Students explained that at home, technology was important as they worked on their homework assignments, especially any work they needed to complete for NCVPS. According to Nick, it was previously noted how he used his mobile phone at home as well as played video games; however, he also shared his technology use for educative purposes. He added, "Every time I have homework. Most of the time the homework is online. Like Google classrooms. Stuff like that." Robert recounted his experiences utilizing his mobile phone for learning activities at home. He mentioned,

> Yeah I use my phone for like when we- for Mrs. Snow (pseudonym) class to do our definitions, I'll use my phone for that or either for Avid when we looking up something for our projects or something like that.

Student responses seemed to lean heavily toward a preference for mobile devices such as phones and tablets; however, the use of a personal computer was not completely disregarded. To add, Monica shared, "I use it through my TV, my computer, my phone, and tablet. Most of my work is online now. So, I basically got to use my own technology." While in their homes, students seemed to not lack access to technology despite the differences in their uses. Yet, all students did not equally note the same technology resources or materials.

Despite the widespread notation of electronic video games, mobile devices, and computers, students noted variation in those devices. Students did not equally have access to the same technology at all times. Furthermore, students' access to the web varied with a few students citing access only through mobile devices due to a lack of dedicated Internet from other sources (i.e. broadband connection). Still others noted access to dedicated broadband without access to a computer. This was clear for Nick near the end of the study. He explained,

> Yeah. I can't work on it at home because I don't have a computer. I had a laptop at home. I don't have it no more. I had a laptop before and I did a lot of work at home.

This contrasted with his peer Carver who shared:

> I use my computer. If I know I got homework- we got homework Friday, (pauses)-I'll just get on the computer and then get all that done. Most of the stuff that's online, it's like Google classroom, like um, my English 3 class, we got Google classroom, we got to finish work on that. And then Plato for Spanish, we got to finish work on that. And then I'll just log onto NCVPS and get some of that done.

Overall, students noted use of technology amounted to personal choice. There was some limited notation of improved access at home such as faster Internet connections, preferential devices, and a lack of restrictions (i.e. control) regarding which devices they had a choice for using.

Theme Four: Student Attitudes

The final theme revealed by participants can be surmised simply as student attitude. In particular, students' attitudes illuminated areas relative to how students felt about certain elements. Students provided detail of prior knowledge and information they had before and after their online course. Students also shared information regarding their feelings of connectedness perceived while participating in an online NCVPS course.

Prior and post knowledge of online courses. Indicative of students' experiences were the attitudes revealed regarding being online learners. To explain, the nuanced explications of students pertaining to how they specifically felt at the beginning of their online learning assignment and their general feelings at the end of the course. Notations were provided that for some showed marginal differences directly correlated with the online learning environment.

More information was provided by participants that revealed an increased self-awareness about their individual learning and potential skills they had developed during their course.

At the onset of the study, students provided details regarding their prior core knowledge of NCVPS as well as any general notions of what online learning truly entailed. Most students revealed a limited base of prior knowledge. Monica shared plainly, "I never took like online courses. This my first time taking it." However, she added that what little knowledge she had stemmed from what she remembered regarding her mother taking an online course before. From what she gathered, there were a few areas wherein she knew she had to pay attention to, especially in regard to assignments. She said, "Like you gotta sign up for different stuff. Make sure this right, you gotta make sure you turn it in on time." Audrey also shared her prior knowledge which coincidentally, was based on what her mom had experienced as well. She remarked:

> My prior knowledge [was] based on experiencing what my mother does. Basically, you can work at your own pace or whatever or like it's like nothing like being in a classroom where you have an actual teacher like breaking it down to you. It's basically like a self-discipline thing. That's what I got out of it.

It seemed that students who did not have a prior base to pull from devised their own understandings based on what information they had access to. In particular, students like Maxton drew connections to having to use the computer and the fact that the teacher would communicate with them electronically. He shared how his views quickly shifted. He stated:

> [I thought] that it was mainly used in the computer but I didn't think we had to like do PowerPoints and send them to our teacher. Or documents and stuff like that. I thought it

> was just to when you submit you go straight to them instead of having to do it on a separate slide or a separate document.

For Maxton, online work involved more assignments and tasks that were in some respect, similar to his traditional, face-to-face classes. This was similar to what was shared by Carver. He explained, "I aint know much. I thought we just gone like do multiple choice and then just read notes, and then more multiple choice over and over, but now that I see it's pretty simple." Marcus echoed a similar sentiment as he also shared, "I aint really know much, I thought it was gonna be easy but it was a little bit more difficult than I thought." Students recounted early on that online learning was in some regards a paradox. It was exactly what they thought it was and it was everything that they thought it was not. For students with some prior base of knowledge, their expectations were affirmed to a degree as they learned more details about what was involved in an online environment. By the end of their courses, many students were able to share a fuller view of what online learning was with greater detail, while others noted that their end views simply clarified what they originally thought.

At the beginning of his online course, Maxton noted the assignment structures that were similar to his traditional courses. By the end of the study, he explained,

> It gives a way to take your time and make sure you know what is being taught, as opposed to going through the lesson and changing every week. You can go back and see what you missed or what you need to catch up on.

For him, online learning structures were more transparent. He was now capable of better understanding how he was performing and could readily track his progress and if needed, return to earlier assignments and activities to help him improve his knowledge regarding certain

materials. Marcus noted that online learning had improved his overall disposition regarding learning. He said:

> I took a more liking to it than I usually did. I usually couldn't stand math at all, but it's like I'm okay with doing it, as long as I'm just getting it out of the way and passing, getting my grades and stuff. I realized I could do it on my own time, whenever I just feel like it at home or something.

On the other hand, Cora explained that her original ideas about online learning did not change greatly. She surmised, "It's still the same." Her response was not too different from Carl who said, "I still hate it. It made me feel like I'm not great in math no more." Although there were fewer students who acknowledged a favorable end of course sentiments regarding online learning, students had ironically become more self-aware in the process. It was not necessarily clear if students had knowingly come to such realizations.

An increased sense of self-awareness was indicative of student responses. Some participants were able to articulate strengths they had developed, while others noted preferences that they now had in regard to learning, others still explicated a new level of confidence in participating in alternative learning environments. This was evidenced especially well with Marcus. Marcus had previously cited negative interactions with teachers in his traditional classes. He also noted that online learning would likely have not been his first choice for learning. However, by the end of the study he explained, "I realized I could do it on my own time, whenever I just feel like it at home or something." Whereas his success had been limited in other learning environments, his success in an online format had increased his confidence in his learning abilities. He added, "It showed me how much potential I got. It showed me how much potential I really got." A shift in what he could and could not accomplish had been achieved.

This positive sense of self-awareness pervaded the response shared by Cora who now felt that she could be successful with online learning courses and was more knowledgeable of her needs to support that at levels beyond college. She stated, "I think I'd choose the online course. But still I'd get tutored, I mean I'd get help from the professor." Cora's notation here ran parallels to her peer, Nick. Despite both not preferring online originally, they both had learned something about themselves. Nick confirmed, "It's definitely teaching me how to work on my own. That's pretty much it." Though offering a point of finality in his response, Nick's sentiment still expressed a sense of growth. Robert also shared his growth that had occurred. In regard to his development as a result of online learning, he said:

> It mostly pushed me a lot, like it's mostly making me – (collects thought) letting me know I can do stuff before my due date and certain stuff has a due date and I have to get it in before then or it's not going to count, and it always try to say teach me stuff in a more advanced way quicker, like at a quicker pace, so that I can learn stuff faster, but yeah.

Students acquired a host of skills that they were able to describe, including skills that they would readily apply in other learning environments at the secondary level and beyond. For Audrey, she had improved her pacing. She explained, "we're learning like how to pace yourself- actually take in the information and focus and don't procrastinate and study the skills that you're being taught because you're going to see it again on the test."

Although student responses seemed to exude a bitterness regarding the online learning format for which they had been assigned, students' attitudes prior to fully participating in an online course and afterwards brought to the surface a glimmer of transformation. Students revealed the myriad developments in their thinking regarding online learning; furthermore,

students' responses also described the improved levels of self-awareness that had been the result of their time taking courses in this manner.

Sense of connectedness. Learning and participating online has been noted to be a potentially isolating experience (Oliver, Kellog, & Patel, 2012). Students' experiences revealed the existence of connections between students taking courses together. As such, students noted that despite questionable access to their instructor, 99% of them could depend on dedicated support from their course facilitator; moreover, they could also count on their peers for support to ensure that they would be successful in their respective online courses.

Due to the perceived limited impact of their course instructor for their online courses, students were clear that beyond their course facilitator, there were a group of others they could count on for support: their peers. Students shared how often the knowledge in the course was shared amongst everyone taking the courses. This was especially true in regard to academic achievement. Evan provided a description of how this worked for him. He explicated, "They (students) usually ask other students or me for some of the quizzes that I've done [or] that I've gotten right. And they- (pauses) I, help them out so they can get that grade up too." Monica added, "They help each other out. Like I be trying to help them. If I got something right. If they need help, I try to go help them." Students seemingly recognized the power they held collectively as opposed to their individual abilities. Nick expressed how natural this process was for him and others participating in online courses. He said, "I guess basically we just rely on each other. We help each other out. So we rely on our peers to help each other out. That's it." It was without question that the connections students made with their peers in their physical space were paramount. Audrey described her feelings of other students participating her online course who were possibly in other schools. She said, "No, we don't really bond with people."

Although students could recount others taking their math or elective class online, those students were not perceived as a part of their support systems.

Harvey explained, "I got more people to help me with that because I got more friends that's doing it right [now] but I guess they get it more, but they help me now with it so I'm doing better in it." Levering the power of the collective group was critical for students. Even when it appeared that no student truly had an advantage over the other, the collective idea was still considered. This idea was forwarded by Carl who shared,

> I still love group work, because some of the students in there, they help me, and we help each other. We're in the group to help each other. So it's still basically the same thing, but they the same as me, don't know how to do it.

This dependence on each other was critical. According to Carver, "I have friends around me, so if it's something that they need to know, I got it, or something I need to know, they got it."

Again, the limited connections students had with their course instructors were overshadowed by strong interactions and connections they made in spite of. It was previously noted that participants had established strong connections with their course facilitator. Of note, were the strong connections students made with each other, yet those connections did not erase the aforementioned notion that could not be overcome. This was made clear by Cora who shared, "we work together but we need a teacher."

Research Question Responses

The current research study was designed and executed with a central research question in mind. In addition, accompanying sub-questions helped to formulate the full study to best gain an understanding of secondary students' experiences with mandatory enrollment in NCVPS courses. This section provides a final summary which details the connections made between

participants' responses and the research questions. Specifically, the aim of this section is to explicate how participants' experiences provide notable responses to the questions.

Central research question. *What are the experiences of secondary students within mandatorily-assigned NCVPS courses?* The central focus of the study revolved around the aforementioned research question. Participants' responses provided a clear and detailed story of students' experiences with the phenomena of focus: mandatory enrollment within an NCVPS course. As varied as participants were, their shared responses uncovered multiple layers that were accounted for within all the themes. Students' sentiments converged in regard to their achievement, views of the facilitator juxtaposed with the online course instructor, and connectedness with and sense of community amongst peers at their schools taking online courses. Conversely, students' shared experiences varied amongst other extremes across all explored themes. Specifically, students' perceived learning, use of technology and attributed value for technology as well as their thoughts pertaining to online learning diverged. The research data provides a clear response in that the experiences of secondary students within mandatorily assigned NCVPS courses greatly vary. Of note is the degree of difference between parts of participants' experiences within the sub-themes previously addressed. To better explain, the following information provides documentation that directly correlates the corresponding themes to the specific sub questions. Information provided highlights the aforementioned nuances and levels of variance explicated by participants' lived experiences.

Sub-question one. *How do secondary students describe their experiences with learning within an NCVPS course?* As noted, students' experiences learning within an NCVPS course vary greatly. In particular, theme one addresses this sub-question. The majority of students explicate the belief that their learning is limited by their placement within NCVPS course as

opposed to their work within their traditional, face-to-face courses. Evidence of these limitations were expressed by students like Nick who explained, "I really didn't learn much in this class. It (the class) just don't work, [I'm] not really learning." Similarly, Robert felt that the course itself was limiting because it placed much more on the student as opposed to traditional courses. He said,

> I feel like it's kind of pushing you a little too hard to be more advanced and be college-ready so fast instead of in the actual class where you can take your time, and then by the end of the course then you can feel like you actually understand what you're doing.

Harvey agreed. He reasoned, "if I had a face-to-face teacher I would be like 'could you explain this' or 'give me more details about what the specific thing on it was' or 'what I needed to work on.' I ain't got nobody to do with in math class." Further still was the difference learners noted between the two types of courses that help them describe their learning experiences. Maxton, for example, described, "It's just different not having the teachers to be face-to-face with and getting them to help me through the work." His sentiment supported information shared by others and brought to the surface a feeling of isolation. This dread that outlined many of the responses of participants helped to define "how" students describe their experiences learning. For many, the experience of learning was what they perceived to be without the aid of an instructor, despite the fact that there was an instructor for their course. Outlying responses from students like Audrey, who noted a preference for online learning, are overruled by the persistent negative thoughts pertaining to learning online; moreover, even she was not immune to having some negative perceptions as she described her learning. She shared,

> I didn't like the fact that I have to like actually look and break it down and I didn't have like a teacher at the board telling me, 'well this is how break it down.' I had to like go to other websites to and watch actual videos so I can get the problem and get it right.

This was repeated by Harvey who expressed, "Because I don't know if I can completely understand it (assingments/work) just by reading it." The recurrent belief by students that learning was more independent within an online course as indicated by theme one, which helped to address sub-question one. Therefore, it can be noted that based on the experiences of students participating in a mandatory NCVPS learning, their experiences learning could be described as isolating and further induced by fear of perceived, limited support from an instructor. Thus, their explications of their experiences were mostly negative, even amongst those who have a preference for this type of learning and regardless of the ISE score.

Sub-question two. *How do secondary students describe the Learning Management System used for their NCVPS course?* Sub-question two was clearly addressed as a component within theme two as revealed by students' experiences. Participants spoke at length about accessing their course using the Canvas learning management system (LMS); however, for some students, there was little to distinguish Canvas as the LMS and their actual NCVPS course. Nick provided evidence of this as he concluded, "I aint know the difference." This was repeated by Carl who shared, "I don't really know if there's a difference. I just – it's just cause it was online." Students tended to disregard the nature of the platform as a separate entity and denoted the course itself. For instance, Maxton explained plainly that Canvas was simply the method by which he accessed the course and completed applicable processes and procedures. He said,

> I use it mainly to see what we have to do throughout the week and doing small tasks like replying to other people's posts or helping them through peer tutoring to see if they need help in certain areas or if they can help me in those areas".

Students seemed to exhibit an air of confidence with working their way through the LMS. Students shared the ease at which they were able to log-in, access tools, complete assignments, and even support their peers. Harey shared a detailed description regarding his use of Canvas. He said:

> You log in and then it's like the little menu thing on the side. You can go to the dashboard. There's where you scroll down and then you click on your Math 3 class and then what I do is you go to your grades. You can see your grades but you can also click on your assignments from there too and that'll help you keep track of like what you're doing. . . if you have any questions for the online teacher it's a little bar right there with messages. You can just go message her and ask her a question about anything and she'll respond.

Based on his description of the processes involved with using Canvas and the myriad tools housed there, it could be inferred that course access was likely not an issue for him in meeting the requirements of the course. To that end, parallels were drawn to other students who could with similar detail describe ease of access and use of Canvas as their LMS. For example, Carver noted how the LMS provided a means for the course instructor to add and share resources applicable to their mastery of the content; moreover, the autonomy it provided for him to determine what would work best to serve his personal learning. He noted:

> I like how the teacher can give us notes and then give us links and stuff and then like she give us a lot of ways to learn something. Like if you don't understand this, she put at least

> four or five links. So, boom, I look at this one. Okay that's a lot of writing. Boom I look at this one. This example of how to do it. Boom I look at this one. It's a video of somebody talking about it.

Students had little difficulty describing the LMS, Canvas, that was used for their NCVPS course. Student responses provided details regarding processes and procedures for accessing assignments, completing assigned work, and connecting with the course instructor. It was clear from participants' experiences collected and identified within theme two that Canvas was one of the core pillars of students' NCVPS experience; so much so, that many students acknowledged that the two were inextricably connected. Furthermore, it was made clear that this would likely be the same for any LMS; moreover, any sentiment for the course would be connected with the LMS. Hence, Carl's previously noted affirmation, "it don't matter if it was Plato or not I would still wouldn't like it," helped to substantiate this claim.

Sub-question three. *What learning strategies do secondary students employ during their NCVPS course?* Students' experiences captured and collected in theme one: Student Learning, helped to provide a response to the third sub-question. Participants were clear in their articulation of strategies necessary for them to make satisfactory progress in the course; moreover, the strategies that would ease their personal reservations about participating in an NCVPS course. Students expressed a number of strategies for ensuring their success to include adhering to deadlines, remaining abreast of assignments due, intentionally focusing on the course and various tasks as well as establishing routines and procedures designed specifically for their personal needs. For example, Maxton explained the simple process by which he was able to adhere to deadlines which were noted as more critical in the NCVPS courses. He indicated, "[I] try to do my work as early as possible and if not, try to get it in when it's you know close to

when it's due or on that actual day." Audrey noted similarly, "I stay on top of my work and don't procrastinate and don't get distracted. Just get it done and then whatever I want to do afterwards, then I can just do afterwards." For her, the self-regulating act of remaining cognizant of her deadlines and electing to not procrastinate afforded her the award of additional time to complete tasks of her own choosing. On the other hand, Robert touted his procurement of control; moreover, his exertion of that control as student in his NCVPS course. He stressed:

> I just sit in the classroom and I can say I have control if she tell me to do one thing at the end I can just go ahead and do it and I can [inaudible]. And then if I'm in the classroom and I'm on a computer, then I can just have control, just sit there and focus and just worry about one thing to do on a computer.

For Evan, self-regulation amounted to the simple act as he determined of, "staying on a task." Within the realm of self-regulation, some students noted their reliance on external aids to provide them with the confidence needed to secure the grades they desired; furthermore, some of these aids were likely in response to the noted disconnect between students' preferred learning style and the core NCVPS structures (see Table 3). To circumvent certain pitfalls, participants were clear that some self-regulation strategies amount to simply seeking and obtaining the answers. Carl confirmed, "I cheat." The persistence of students to succeed in spite of difficulties inherent to their coursework helped to explain the prevalent use of previously noted websites such as Mathway, which students declared as essential to what little success they had in their NCVPS math course. This trend was also noted by students participating in the required elective course who acknowledged web searches, etc., as strategies they employed regularly during their NCVPS courses. Therefore, students' experiences revealed the creation of a host of strategies ranging from simple self-regulation to clever use of applicable tools and resources as needed.

Sub-question four. *What value do secondary students attribute to technology in regard to learning?* The collected experiences of participants as noted by theme three fully addressed sub-question four. Students provided information that clearly articulated their beliefs and consequently their values pertaining to technology in regard to learning. To begin, theme three provided notation of students' general preference for and general value of technology. Students' overwhelmingly provided positive feedback regarding technology; moreover, the general sentiment for students was summed by its normalcy in their daily lives. For students, technology was present and an expected component. Audrey described technology as she noted, "it's awesome." She went on to assert, "it increases my satisfaction." Evan agreed, as he expressed the application and use of technology at school, at home, and by his family. He attested, "yes, it (technology) makes it easier- (pauses), a lot." Monica underscored here simply, "I would prefer to use technology." Students were extremely transparent in their appreciation and desire to use technology; moreover, this sentiment opinion held true for students as it pertained to learning. Participants noted a mixture of 20th- and 21st-century technologies to include computers (laptops and desktops), graphing calculators, mobile devices (phones and tablets), and a myriad of web-based sites, tools, and apps (Kahoot, Mathway, Socrative, etc.,). The various reasons for the preference for technology for learning varied amongst students. Marcus mentioned, "I can learn more from the internet cause some of the books outdated." The act of accessing various technologies as an aid coincided with what Carver mentioned about the use of his calculator during math classes. He said:

> The calculator helped me out, so I wouldn't have to spend a lot of time solving it on paper. You gotta write on this (gestures as if at computer) and you gotta be finished with this module by Friday and all that. So, I can just put it in the calculator (gestures as if

> using calculator) and then boom, you got the answer. (repeats gesture) Put it in the calculator, boom you got the answer. So yeah it helped me a lot.

Among student participants, technology in regard to learning served heavily in the role of an aid, a means to receiving support for difficult tasks. Students noted their preference for its use; however, it was not expressed that the preference for technology was to access learning. Therefore, when comments were made such as Cora's, who voiced, "I use Socrative for my math and that works a lot. I use Socrative. I use Mathway. Those help," such comments substantiate students' responses regarding technology as primarily assistive when noted within the context of learning.

Sub-question five. *How do secondary students experience technology, for learning, in their homes during enrollment in a mandatory NCVPS course?* The final sub-question also aligns to experiences documented and shared within the theme three. Taking into account students use of technology, a sub-theme formed based on the information shared. Students revealed that technology used at home can also serve a secondary purpose of supporting learning outcomes, especially in regard to their NCVPS course. This was of course secondary to its primary use within students' homes. Carver's response highlighted what to many, was the primary purpose of technology at home: personal engagement. In explaining his primary uses of technology at home, he stated:

> [Playing] on my PlayStation on the big flat screen. Get on my phone you know. Gotta [make] calls. Yeah. Um, and I watch TV. I don't really watch TV. I just keep it on for it to be there so my room won't be quiet (background noise).

Notwithstanding the personal use of video games, mobile devices, computers, and the like, students also acknowledged the power of technology in their learning. A wealth of participant

responses served to illuminate the continued assistive nature of technology. In the case of their use within their homes, students were clear that the choice to use technology at home for the purpose of learning was strictly voluntary. Robert maintained, "Sometimes it requires me and sometimes it don't." This expression was further clarified by Evan who explained how he used technology at home for course assignments and projects. He went on conclude that his decision was usually, "[a] personal choice and sometimes it's required." His peer, Harvey, noted, "A lot of my homework don't require the Internet." Thus, with the provided time to work on their NCVPS work in class and traditional not holding technology as a paramount requirement, students did not feel that it was necessary to use technology for learning unless it served another purpose. For some students, this purpose was to create more free time during the assigned period for NCVPS at their respective schools as evidenced by Audrey's statement. She articulated, "I've been working on it more at home so I can have more downtime at school." Though for others, at home use of technology for learning served as an extension. Carver explained here that, "If I know I got homework- Friday, I'll just get on the computer and then get all that done." Again, students were keen to continue noting that this use of technology was not normally mandated by instructors; it was more often as Marcus pointed out, "Using it (technology) as a personal choice." This was done as opposed to a directive to which they were required to follow. Thus, the theme provided support to prove that while participating in a mandatory NCVPS course, students used technology for learning on a case-by-case basis. For all students, this was optional; however, some students chose to use technology aid their learning while others opted to use technology to get on course assignments or catch up on missed tasks. No students provided any indication that they had to use technology for the purpose of learning at home; moreover,

they were more inclined to cite technology for personal engagement: communication and entertainment purposes.

Summary

Secondary student participants' experiences were collected and analyzed, which revealed the development of four core themes pertaining to their participation in a mandatory NCVPS course. Each theme added respective layers which addressed the central research question of this study and accompanying sub-questions. Notably, participants revealed the extreme variance in their experiences as students within a mandatory NCVPS course. While some students grew to appreciate and desire learning utilizing that format, other students remained constant in their dismay with online learning. Students described both positive and negative experiences learning in their courses. For some, the shift to having an online teacher proved to benefit their personal progress while this format impeded the learning of others and encouraged their development of a myriad of strategies to remain afloat in the tumultuous sea of their learning. Students also acknowledged an almost universal ability to navigate and use the Canvas learning management system (LMS) for their course. Again, this was another area wherein students noted that for them, their understanding of the difference between the LMS and NCVPS did not exist; for them the LMS was the course and it would be how they described NCVPS. Finally, participants shared their overwhelmingly high value attributed to technology. This value for technology was connected to students' belief in the assistive properties of technology when pertaining to learning in addition to its use for personal engagement in all other instances. The variance noted by participants did not seem to correlate with their ISE score. Students with lower ISE scores did not largely differ from those with higher ISE scores. The percentage of outliers was small and

resulted in only one student who self-identified as having a high ISE whose behaviors and remarks were reflective of high Internet self-efficacy.

Chapter Five will conclude the study. It will provide a detailed summary of the research findings. In addition, it will explicate the findings of the study as they pertain to the theoretical framework and previously noted critical literature. It will also provide this study's implications, delimitations and limitations as well as the recommendations for future research.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this hermeneutical phenomenological study was to examine the lived learning experiences of secondary students participating in mandatory North Carolina Virtual Public Schools courses (NCVPS). Specifically, the aim of the current study attempted to capture the individual stories of students juxtaposed with their level of Internet self-efficacy (ISE). Chapter Five, as presented here, provides a summary of the study's findings, relevant research, study implications, limitations and delimitations. Furthermore, it provides recommendations for future research.

Summary of Findings

The shared experiences of participants were collected and explored in pursuit of a response to the central research question and accompanying sub-questions. The data analysis derived from two interviews (beginning & end of course), two focus group sessions (one per school site), and document analysis revealed four themes: (a) student learning experiences, (b) NCVPS structures, (c) student use of technology, (d) student attitudes. The themes and corresponding sub-themes responded to the research questions. Moreover, they provided the means to give voice to secondary students participating in mandatory NCVPS courses.

At the core of this study was the central research question. To explain, it focused on connecting the phenomena of enrollment within a mandatory NCVPS course; furthermore, it focused on the question of what secondary students' experiences were in regard to this phenomenon. As the central research question, all of the themes spoke to this question in some form. Theme one's focus toward student learning illuminated the varied learning of students as highlighted by their many nuances regarding achievement, professed learning styles, views of

traditional classes, and their varied perceptions of learning during their courses. Theme two provided an additional layer specifically revealing students' recollections of the impact of the core NCVPS structures. Theme three provided deeper understanding of students' use of technology as at the core, students' self-efficacy in regard to their Internet and technology usage would help better explain their experiences. The final theme of student attitudes helped to ground the emotions, beliefs, and strong opinions students shared as they pertained to their experiences in a mandatory NCVPS course. The subsequent sub-questions better define the minutia of each layer revealed.

Sub-question one specifically targeted the learning experiences of secondary students participating in a mandatory NCVPS course. Collected data within theme one addressed sub-question one and revealed variance amongst participants. To begin, students were clear from the onset that achievement was paramount. All participants expressed concern for their overall achievement (i.e. final grade). While students taking the mandatory elective course noted higher confidence in their performance probabilities, students in math were a bit more reserved. Some cited probabilities of 50% while others outright concluded their extreme lack of confidence. It became clearer that those who feared performing poorly had to devise strategies to supplement their learning styles that were overwhelmingly incompatible with learning online. Only three students self-identified a learning style easily applicable to online learning as they described it. This was evidenced by learning style preferences for visual and independent learning (see Table 3). In providing details about their experiences, students furthered the division between online course and traditional, face-to-face courses. Whereas their traditional courses were guided by an instructor who, as they shared, could adjust learning daily, the ill-perceived online instructor seemed to only be as helpful as the ticket agent at the gate waiting for assignment submission

like boarding passes and shuffling notes and materials as customarily as luggage. The previously-noted variation surfaced as two students, one in math and one in the elective course, noted positively their learning online in comparison to their traditional courses. Surprisingly, a third student agreed, yet his appreciation stemmed from not having a face-to-face teacher who would reprimand him for even the slightest action they deemed an offense. Each student was clear in an articulated account ranging from negative to positive depending on the course, content, desire to achieve, and degree of application to their learning style.

Sub-question two was concerned with the learning management system (LMS) used by students during their mandatory NCVPS course. Data collected and combined in theme two addressed sub-question two. The question itself was based on previous notations regarding participant experiences and possible shifts relative to the LMS used for their online course. According to some of their responses, there was no difference between the LMS and NCVPS. In particular, four students needed prompting and some clarification regarding their use of and understanding of the LMS. One student needed to be sure he understood that Canvas was a separate tool and that NCVPS was not Canvas, while another explained that for him he was simply logging into NCVPS and had not in particular thought of the platform as how he was connecting to the course. One of the students with a high ISE was included as one of the students who had not recognized the LMS as a separate element of their NCVPS course. Despite the few students who had some difficulty understanding the concept of an LMS, all students acknowledged a deep knowledge of how the LMS functioned as well as the various tools available to them. Two students cited use of other LMS platforms used in parity with their traditional courses. Consequently, those students did not affirm to a preference for either platform.

Sub-question three was specifically concerned with the strategies that students employed during their NCVPS course and was addressed by elements within theme one and by extension elements within theme four. For students, their academic achievement was paramount. Despite having to participate in an online course, students provided details of multiple strategies. The mostly widely recognized strategy by students was use of web-based resources. Students noted that when they were faced with difficulty in their courses, they utilized web searches, completed Google searches, accessed YouTube videos, and utilized other resources that they could connect with electronically. Despite use of such strategies by all students, the students participating in math acknowledged these types of strategies constantly. In particular, the web-based resource: Mathway, was cited by every student who was participating in the math course. Students noted their dependence on such tools to essentially provide them with what they perceived as a chance at succeeding in an impossible situation. Students also provided indication of self-regulating learning strategies. These control measures enacted by students included being cognizant of deadlines, adhering to deadlines, effectively managing their time, designating areas of their course whereby they could be more relaxed as well as areas wherein they should focus more, and utilizing simple methods for keeping them focused. Finally, students acknowledged their limited dependence on their peers in the course. A strong sense of community was noted by students in regard to other students taking the same courses. Students acknowledged a general awareness that this often shifted wherein at times they were providing assistance and during other times they were recipients.

Sub-question four sought to aid discovery pertaining to the value that students placed on technology in regard to learning. Data collected within theme three addressed this question. It was noted by all 11 students that they overwhelmingly placed a high value on technology and

encouraged its use. While some students were quick to cite the benefits of technology as a means to enhance and improve their learning, three students mentioned gamification associated with resources such as Kahoot. Others still articulated their application of technology to complete learning-related tasks such as writing essays, completing research, and staying in contact with their instructor and peers. All students were quick to share their desire to use technology more in their traditional courses. Yet this positive sentiment did not hold true for online learning for all students. Nine students did not attribute their generally positive sentiments for technology use for learning in relation to their NCVPS course. The only exception was the mention of technology use for the previously noted strategies students employed to ensure success. A point of contention for students that was alluded to several times was the belief that technology ensured acclimation to current learning while reliance on books and other methods were considered outdated.

Sub-question five extended directly from sub-question four and attempted to address students use of technology within their homes while participating in an NCVPS course. At home, students noted a mix of technology use for engagement and for learning. It became clear that students were accustomed to using technology in their homes as evidenced by their shared statements regarding their use of mostly mobile phones, computers, and gaming devices. Students explained that having technology at home supported their efforts with homework and increased completion of tasks that required it. However, it was also noted that use of such technology was usually optional. As it pertained to completing tasks for their NCVPS courses, students noted a stronger reliance on the time spent in their class period within their schools. Students agreed that working on NCVPS from their homes was usually for two purposes: catching up on missed/late work and as means to complete tasks early. Only one student cited

not having dedicated access to a computer at home; however, it was not clear if by their responses that all students had access to broadband at home through means outside of their wireless phones. However, one student did note that his actual home broadband speed was faster than his school access. Therefore, it became clear that students' technology use within their homes was for personal engagement first and served the purpose of aiding learning as a secondary purpose.

Discussion

The findings of the study revealed that the experiences of secondary students participating in a mandatory NCVPS course vary depending on specific course, content, and perceived personal learning style; moreover, student levels of Internet self-efficacy are not a strong determinant of those experiences nor is their acclimation to technology a determining factor for how a student might perceive online learning. The purpose of this study was to describe students' experiences in order to add to the body of existing research pertaining to secondary students and online learning. Specifically, online learning utilizing the NCVPS platform under the mandatory enrollment policy. To further explain, discussion of the study in regard to the theoretical and empirical literature that informed this study has been included.

Theoretical Literature

The theoretical presuppositions for this study rested first and foremost within the realm of self-efficacy. Self-efficacy specifically is concerned with the levels of motivation an individual has that either encourages individuals to or prohibits them from completing a given set of behaviors toward a desired outcome (Bandura, 1977). As Bandura (1977) noted, higher levels of self-efficacy are indicators of increased belief that actions will produce desired outcomes whereas low self-efficacy indicates lower levels of confidence. In concert with Bandura's social

cognitive theory's strand of self-efficacy, Internet self-efficacy (ISE) was used to develop a specific lens for exploration as it "focuses on what a person believes he or she can accomplish online now or in the future" (Eastin & LaRose, 2000, "Introduction", para. 3). In some regards, students' shared experiences aligned directly with discourse relative to self-efficacy; however, there was some documentation that completely diverges from what has been previously researched and discussed.

The study included the collected experiences of 11 students. Based on the initial ISE survey, it was noted that seven students acknowledged low ISE and the remaining four students exhibited higher levels of ISE. In particular, two students were noted by their ISE score of 40 which designated the top of the range. However, within that group, only one student expressed positive experiences participating in a mandatory NCVPS course. The remaining three students all noted their experiences as largely negative. This diverges from the notation regarding ISE which proffer that Internet self-efficacy levels correlate with comfort using the Internet; moreover, this extends to use of a personal computer which was also a required component of participation within the course (Eastin & Larose, 2000). Accordingly, Bandura (1977) explained that the amount of stress a person feels performing a task is negatively related to self-efficacy.

All students praised technology and noted high values for it. Again, this was despite the noted variance in ISE. It can be inferred that the idea of difference in task helps to explain how students with low Internet self-efficacy have few problems explaining the complexities of their LMS and can readily access tools, information, and resources when needed. In that regard, students operate on par with their high ISE peers. This also aligned to significant use of technology noted by all students for purposes of personal engagement as well as by choice to aid and support their learning. Furthermore, students were quick to note a desire for more

technology use in their traditional classes. Consequently, the online learning environment should have been the ideal environment for all students yet the variance in ISE and variance in student experiences remained. Thus, the conundrum persisted based on student experiences; two students noted a preference for online learning. Of those two students, only one exhibited high ISE. For the remaining nine students, six with low ISE and three with high ISE all concluded negative experiences and a desire to not complete another NCVPS course again. To conclude, students' experiences both affirmed portions of what is noted regarding self-efficacy and depending on the presented task, such levels of self-efficacy had no bearing on students' motivation or belief in their ability to persevere.

Self-directed learning. Previous research pertaining to self-directed learning offers explanations pertaining to a learner's ability to act as the agent of control in regard to their own learning. According to Kim, Olfman, Ryan and Eryilmaz (2014) the self-directed learning theory "focuses on learning conceptualization, design, conduct and evaluation of the effort at the at center of the learner's control" (p. 151). Researchers in the field acknowledged that in regard to online learning, self-directed learning makes plain the idea that the issue may exist with the format and systems afforded to online learning. It was noted that difficulties may arise for learners as they attempt to navigate an online course, build rapport and participate in healthy interactions with their peers as well as with their instructors (Bouhnik & Marcus, 2006; Roblyer, 1999). In regard to the current study, students were afforded the applicable levels of control noted within self-directed learning theory to include: (a) establishing learning goals, (b) locating and accessing resources, (c) adopting and executing learning activities, (d) monitoring and evaluating performance, and (e) reassessing learning strategies progress (Kim, Kim, Lee, Spector, & DeMeester, 2013). Students in the study unknowingly exhibited varying degrees of

the aforementioned levels of control; however, what remained missing that was also applicable to their self-directed learning was the students knowingly learning how to learn (Smith & Haverkamp, 1977). Essentially, discourse relative to self-directed learning is connected with adult learning theory, which would better align with andragogic approaches. Conversely, non-adult (i.e. student) learning is built on the basis of pedagogy.

Empirical

The collected experiences of students addressed elements within the existing research pertaining to online learning, NCVPS, and student perceptions of technology. As noted within the review of literature in Chapter Two, it was clear that there exists multiple layers and points of discussion relative to students operating in online environment. Included here is an explanation of how this study's data speaks to prior research.

Previous discourse pertaining to online learning has addressed a variety of topics; however, in regard to secondary students, the limited research base has given attention to areas such as student achievement, exposure to online courses, access and availability, and student retention. However, this body remains lacking (Bakia et al., 2012; Barbour, 2010; Barbour & Reeves, 2009; Kim et al., 2014; Rice, 2006). The data of this study immediately addresses and adds additional discourse within the noted literature gap. In regard to what it shares, student responses affirm the notion that online learning increases opportunities for flexible learning (Means et al., 2013). Responses from students provided evidence that they were appreciative of the ability to work on assignments both at home or at school at their discretion. Moreover, choices of working at home, at school or in tandem were sometimes noted as an attempt to ensure that students were improving their chances of performing successfully. Previous literature noted that student performance does not contrast greatly between online and traditional

courses of the same type (Barbour, 2014, Johnston & Barbour, 2013). Consequently, this may be due to the extensive use of student strategies and resources utilized by students. The current study revealed that students made no qualms about their use of web-based tools, additional materials, guides, and aids to ensure that academically they would be successful in their course. Their experiences help offer a possible explanation as to how this achievement may be occurring despite differences in the delivery of content between the two methods of dissemination for online and traditional learning courses.

Previous research that specifically focused on NCVPS is the area wherein this study readily adds. As the second largest, state0run virtual school in the country, NCVPS has continued to provide students with various core elective courses as well as advanced placement courses (Marshburn, 2015; Oliver, Osborne, Patel, Holcomb, & Kleiman, 2008). Hence, students' responses were collected from participants in a required math course as well as students taking an elective course online. In both cases, despite the mandatory enrollment, students were provided access to courses unavailable in their current schools. This corroborates earlier research pertaining to NCVPS as well as that of other virtual schools which noted online learning as a vital source for course offerings (Cavanaugh, 2001; Chingos & Schwerdt, 2014; Donlevy, 2003; Freedman et al., 2002; Oliver et al., 2008; Watson et al., 2010; Wood, 2005; Zucker 2005). It also directly affirms what Wood (2005) noted as the use of online programs as a means to fill curriculum offering gaps. Notably, the responses of students also affirmed areas noted negatively within previous research.

As a point of reference, previous research noted concerns regarding the limited personal contact between students and their instructors (Donlevy, 2003; Layton & Brown, 2011). Students throughout the course of the study continually expressed that they did not have a

teacher. Upon redirection, students acknowledged having an NCVPS teacher; however, their sense of presence was noted low if considered only by the continued expressions by students that they were alone. Students were more quickly able to attribute support to their classroom facilitator as opposed to the online teacher who they perceived graded their work and connected to them through means of formal and information electronic communication. For students, their experiences diverge from a potential benefit noted by Christensen et al. (2013) who explained that online and blended models were disruptive, yet they allowed some of the best teachers to extend their reach to more students. Despite their reach to students participating in the study, their experiences were not reflective of it. Instead students noted what they perceived to be largely broken connections with their online instructors. These connections diverged from the experiences shared regarding the bonds students made with each other during their courses.

In accordance with prior research that focused attention towards NCVPS and the development of community and sense of connectedness, the experiences collected from students acknowledged that there was a lack of connectedness with other students online (Blazer, 2009; Ingerham, 2012; Ouzts, 2006). For example, students noted access to the online peer tutoring center yet students who had sought to use the tool explained that they did not receive follow-up from other students. Students participating in the NCVPS course within the research site were likely participating with other students in their school in a course section and would not have had the ability to connect with other students online otherwise. Beyond making connections with peers, previous research focusing on students participating in NCVPS courses noted the presence of both off-task and on-task behaviors (Ingerham, 2012). This was corroborated within the study by participants who acknowledged both working alongside their peers to complete tasks as well as being cognizant of off-task behaviors to include: watching videos, talking to their peers,

listening to music, etc. However, the presence of off task behaviors was dependent largely on the presence of the course facilitator. Based on student responses, a strong course facilitator provided guidance and support; moreover, they aided the management of the classroom environment. By that, one student in particular noted his transference from one classroom to another and gaining a new facilitator. He acknowledged that with the change in facilitator came an increased freedom whereby he could commit more off-task behaviors without fear of reprimand. In the instances wherein there was a strong support system enacted by the course facilitator, it provided a point a contention in comparison to prior research that noted the inclusion of such models can complicate learning (Oliver, Osborne, & Brady, 2009).

In regard to technology barriers and issues with the learning management system (LMS), students' experiences were not indicative of many difficulties. Specifically, students noted some concerns regarding isolated instances of slow Internet connections and system-wide Internet failures. The notations of these issues were not noted by students as having a large impact on their coursework on a regular basis. This coincides with their explications which diverge from information pertaining to the digital divide. Students' notations regarding access to technology and devices at home and at school diverge from the most recent census data regarding the average salary in Starlight County of $32,834 and the increased likelihood of limited technology access for individuals in homes within this salary range (US Census, 2010). Additionally, students were cognizant of the dual nature of technology to serve their desires for personal engagement and educational tasks (Kassam et al., 2013; Richtel 2012). What was clear was student choice and their process of selecting technology based on what they perceived to be the best fit for the task at hand. This is in agreement with prior discourse noting the importance of

individualized characteristics of students as a strong determinant for technology use (Anthony & Clark, 2011).

Implications

This study was focused toward exploring the lived experiences of secondary students participating in a mandatory NCVPS course. It was discovered that students' experiences vary depending on course, content, and perceived personal learning style Based on the results of the study, implications were evident in regard to theoretical, empirical, and practical constructs.

Theoretical

Self-efficacy. As the theoretical lens applied to this current research, self-efficacy provided a means to examine students' experiences by acknowledging their base levels of motivation (Bandura, 1977; Eastin & Larose, 2001). It became clear that student levels of Internet self-efficacy were not a strong determinant of their experiences nor was their acclimation to technology a determining factor. Four of 11 participants acknowledged high levels of Internet self-efficacy (ISE). In addition, all students attributed value to technology and its use for both personal and educative purposes. However, participants varied in regard to the nuances relative to their individual perceived experiences. Only two students expressed a preference for online learning. Of the two students, only one student was identified as having a high level of Internet self-efficacy. Thus, the implications of this study in regard to self-efficacy are clear. Despite indications of motivation acknowledged by ISE, the levels of stress and self-disparagement noted by Eastin and Larose (2000) substantiate the evidence provided. Therefore, a student with high ISE could find the experience of learning online less than favorable. In fact, the motivation and ensuing belief an individual has would be relative to the exact task they are completing within an online environment.

ISW alone may be affected by individual characteristics, which could be explained as high ISE in regard to completion of one online task juxtaposed with low ISE for completing another online task. This variation is similar to the shift made by Prensky's (2001a, 2001b, 2009) discourse regarding digital natives and later developments pertaining to digital wisdom. Similarly, it was determined that the description of individuals was not so well defined as either being a digital native or immigrant. More appropriately, it was addressed that individuals are more apt to have degrees of understanding, knowledge, and acclimation to digital technology (Prenksy, 2001a, 2001b, 2009). This too is implied of Internet self-efficacy.

Empirical

Instructor presence. This study provided data for reflection regarding students' perception of their online instructor. Again, students noted the existence of their online instructor and acknowledged their role in the course; however, the general sentiment that pervaded their responses spoke to their feelings of being alone in their online course. Moreover, they were quick to cite that part of the reason that they did not prefer online learning was due to not having a teacher. It cannot be denied that instructor presence is a critical element of the online learning environment (Christensen et al., 2013; Donlevy, 2003; Ekmekci, 2013; Sheridan & Kelly, 2010). As such, it is essential that students do not vaguely acknowledge their instructor.

The explication that an instructor who is perceived to be invisible exacerbates the potential for student withdrawal (Ekmekci, 2013; Tello, 2007) Furthermore, students participating in mandatory assignment courses may not fully understand the different role of an online instructor. For them, customary electronic communication that has not been personalized runs the risk of alienating students further from their instructor (Ekmekci, 2013). Processes and

procedures may need to be explored relative to increasing practices afforded to blended learning environments that have been noted to enable rich communication and connections between teachers and students (Christensen et al., 2013; Dikkers et al., 2013). This would also serve to improve the feedback loop noted to be lacking by students.

It cannot be denied that the feedback is essential in the learning process. Students reported negatively regarding feedback during their online course. Specifically, students cited that feedback was provided; however, it was either not as timely as they would have liked or it was not specific enough to aid their learning. Although there are protocols in place regarding feedback, keen management and opportunities beyond posting of office hours may need to be explored (NCVPS, 2016e). Due to the increased variety of students participating in NCVPS courses, systems and process established prior to mandatory enrollment procedures may require adjustment to compensate for this sweeping change. An area that can be adjusted in this regard is the preparation of students for online learning.

Practical

Teaching students to learn online. Online courses provide students with increased opportunities to engage with core curriculum increasingly without the immediate aid of the instructor. However, the skills needed to be successful may not be intrinsic. A further implication of this study rests with devising methods for bridging students into their online courses. As a matter of circumstance, NCVPS does provide introductory materials and maintains onboarding procedures for students (NCVPS, 2016b). Consequently, these materials,

processes, and procedures have been devised for all NCVPS students. Yet, their development does not provide clear directives for students enrolled under the mandatory enrollment policy.

As such, other high-achieving students participating in NCVPS and other online courses have been noted previously for electing online courses (Barbour, 2015; Molnar et al., 2013). Thus, those students had some prior notion as to what they were signing up for. This completely disregards the mandatory enrollment by which students noted discovering their assignment upon admission to school for the semester. The varied population of students could potentially benefit from some form of pre-course instruction that fully acclimates students to the online course. Again, such procedures may not have been relative for the largely strong-performing, academically-sound base of students who have made up most of the population of students in NCVPS and other online programs (Barbour, 2014; Johnston & Barbour, 2013).

Facilitator support. Contrary to a previous study which determined that students were less likely to desire guidance from the course facilitator (Oliver et al., 2009), with the exception of one student, responses were clear in their high praise for their course facilitator. However, students explained that their facilitator was often ill equipped to handle content-specific assignments. Moreover, the one student who had to shift to a newly-created NCVPS classroom on his campus noted his new facilitator did not offer the same level of guidance, support, and direction that he had become accustomed to previously. With the increased possibility that students might be placed in courses under the mandatory-enrollment policy, course facilitators could benefit from increased support. During this study, students in the math course were very vocal about their facilitator's attempt to aid them and provide them with the immediate feedback they craved. It did not appear that there was a clear system in place whereby the actual course instructor was providing the teacher with assistive resources and guides to better serve the

student population. Of interest, students at one research site noted prior knowledge regarding a former course facilitator who was a retired content teacher. Essentially, the facilitator worked with students who were taking a course online that she was more than capable of supporting. Thus, there is the question of what could a blend of this model look like for populations wherein there will be numerous students enrolled in mandatory NCVPS courses. Addressing this as one of the areas of student preference may increase student acclimation to online learning (Koper, 2015).

Delimitations and Limitations

Purposeful delimitations were made over the course of the study relative to participant selection, research setting, and data collection schedule. These measures were taken in attempt to collect experiences indicative of a select group of participants as they experienced learning in NCVPS courses. Participants were selected based upon their mandatory enrollment within an NCVPS course. Students who had elected to take an NCVPS course were not included. In addition, students were asked to complete a questionnaire to obtain their ISE score. Students who were participating in a mandatory course but did not elect to complete the survey were not included in data collection activities. A final measure for students participating in online courses were students who had not experienced online learning first-hand using the NCVPS platform.

The research setting was selected based upon its adherence to the state's order, which required this form of enrollment for courses wherein there were no teachers available. The setting had two high schools and a small group that consisted of no more than 16 students was originally sought. In the essence of adequate time for both completing the research and accessing students, the research schedule was designed to coincide with the academic schedule. The request for participants took place within the first few weeks of school and the final

interview in a series of three took place in December just before students would begin preparing for final exams. These steps were taken to attempt to capture students' experiences at the beginning of their course, mid-term, and at the end of their course beyond the measures taken to purposely control the study. The research was subject to limitations to include the small population and the study's qualitative nature.

The study was limited due to the small population of students and the representation of their experiences. Although students took time to articulate what was occurring in their NCVPS course as well as their personal insights, the final number of participants included 11 students. Purposeful delimitations to designate a subsect of the population unintentionally reduced the body of experiences that could have been collected. Therfore, the scope of the study is limited to the few students who were selected to participate within a single school district in the state of North Carolina. Another limitation of having such a small group stems from the small population generally participating in the same courses and in some instances, the students were assigned the exact same course facilitator and online instructor. With the numerous courses available from NCVPS, the study is limited to represent students taking one core math course and one elective course.

The area wherein the study was limited most directly related to the qualitative nature of the study. Qualitative data is less generalizable, especially in consideration of the participant sample, which was limited in size (Creswell, 2013). The data itself is prone to what the participant shares. Although steps were taken to provide students with a level of comfort by reminding them of their anonymity, using pseudonyms, and reminders that they could safely be honest and truthful, it is possible that elements within the students' experiences could be fallible due to humanistic elements uncontrollable by research protocols alone.

Recommendations for Future Research

Based on the collected data, the themes revealed as well as the noted limitations, recommendations for future research that could potentially further explore this topic have been considered.

The current research study could potentially be replicated with a larger population of students. This would include larger districts that have, by choice, opted to use the mandatory enrollment process to provide students with access to highly qualified teachers. The inclusion of more students could perhaps better define, affirm and enhance the experiences collected here.

Similarly, much has been discussed within the current study regarding the support provided by the course facilitator juxtaposed with the online instructor. A future study could operate within parameters similar to this study and could also collect data from the course facilitators and instructors. This could potentially further explicate experiences and offer triangulation from students and the two key adult figures connected to their learning. A study of this nature would again focus specifically on stakeholders within the NCVPS community.

To continue exploring NCVPS, it is recommended that mandatory enrollment in online or NCVPS courses be explored by utilizing the self-directed learning theory (SDL) within the theoretical framework. SDL affirms the difficulties faced by many students participating in online course who struggle to manage their learning (Kim et al., 2014). Exploration of students' online learning experiences through the critical lens of SDL could illuminate specifically the various concepts relative to students' ability to take control of their learning (Kim et al., 2014). It would also offer an extended possibility to examine how students might navigate learning environments wherein due to the online structures, the instructor must facilitate a great deal more

than directly instruct. In comparison to ISE, SDL may provide a broader view of students and what they experience completing courses.

In a similar vein, future research could continue a focus toward exploring connections to efficacy; however, an exploration that only includes students with low levels of self-efficacy has the potential to draw out experiences based on those who would face the most difficulty completing an online learning program that they did not select themselves. A delimitation of this nature might also impact the aforementioned exploration utilizing the SDL theory.

Finally, a future study could include additional data collection methods. This study did not formally utilize data from classroom observations; however, students' explications noted occurrences from their respective NCVPS assigned work sites (computer labs). Taking into account both the verbal accounts as well as pertinent observational data could support a different form of triangulation to substantiate documented experiences. This would lend itself to previous research that has specifically explored this in regard to NCVPS (Ingerham, 2012).

Summary

The varied experiences of secondary students participating in mandatory NCVPS courses revealed four themes: (a) student learning experiences, (b) NCVPS structures, (c) student use of technology, (d) student attitudes. Through the collective voices of secondary student participants, it was discovered that in mandatory NCVPS courses students' experiences vary depending on course, content, and perceived personal learning style. Additionally, information relative to student levels of Internet self-efficacy were not wholly indicative of their experiences. Concerns regarding the presence of the online instructor as well as levels of perceived support were uncovered. It was also discovered that students attributed a high value toward their school-based course facilitator. Despite an overwhelmingly negative opinion regarding their mandatory

NCVPS course, all students explicated a desire to make adequate progress in their course as designated by satisfactory achievement; moreover, students acknowledged their dependency on various learning strategies to ensure success.

Currently, NCVPS continues to increase its reach in the state of North Carolina. The possibility remains that more school districts may receive directives to enroll students in courses wherein they have been unable to secure a teacher. The most recent data from the annual report revealed that enrollment has consistently increased during the past three academic school years (NCVPS, 2017). In Starlight County, this included 631 students of which 399 were participating in general education courses (NCVPS, 2017). With the increased likelihood of students participating in mandatory NCVPS courses, continued research has been recommended to ensure that both NCVPS and school districts have the knowledge and tools to better support and serve their student populations.

The reach of online learning cannot be denied. As a model of what a state-run program looks like, NCVPS has the potential to set the stage for sweeping improvements that could truly revolutionize distance learning for secondary students. The experiences of secondary students in Starlight County included in this study have provided explication of the students' determination to succeed when faced with possible obstacles. Despite their love for technology and the value they attribute to its use, their experiences continue the discussion that acknowledges the need to intentionally mold and strategically apply it in regard to learning. Nowhere is this more apparent than in the sea of online learning.

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Appendix A: IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

June 21, 2017

Damion O. Lewis
IRB Approval 2906.062117: Secondary Student Experiences with Mandatory Enrollment in North Carolina Virtual Public School Courses: A Hermeneutical Phenomenological Study

Dear Damion O. Lewis,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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Appendix B: Recruitment Letter

September 6, 2017

Dear parent of potential participant:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to describe the experiences of students assigned to courses utilizing the North Carolina Virtual Public School (NCVPS) platform and I am writing to invite your child to participate in my study.

If you are willing to allow your child to participate, he or she will be asked to participate in two individual interviews and one focus group meeting. It should take approximately 30 minutes for each interview and 45 minutes for the single focus group. Your child's name and other identifying information will be requested as part of his or her participation; however, all information will remain confidential. Such information will be utilized for documentation purposes and will not be included in the final report. As such, all student names will be substituted using pseudonyms to ensure responses secure the identity of the participant.

For your child to participate, please sign and return the consent document to your child's school.

A consent document is enclosed. The consent document contains additional information about my research, please sign the consent document and return it to your child's school.

Sincerely,

Damion O. Lewis
Doctoral Student, Liberty University
dlewis55@liberty.edu
(919) 793-6592

Appendix C: Parent/Guardian Consent Form

Secondary Student Experiences with Mandatory Enrollment in North Carolina Virtual Public School Courses: A Hermeneutical Phenomenological Study

Damion O. Lewis
Liberty University
School of Education

Your child is invited to be in a research study collecting data regarding their experiences within an NCVPS course. He or she was selected as a possible participant because of their enrollment in a required NCVPS course. Please read this form and ask any questions you may have before agreeing to allow him or her to be in the study.

Damion O. Lewis a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to gather information about the experiences of students in an NCVPS course.

Procedures: If you agree to allow your child to be in this study, I would ask him or her to do the following things:

1. Participate in two individual interviews. The interviews will take place at an agreeable time during a traditional school day. The meeting will take no longer than 30 minutes. Student responses will be audio recorded and transcribed to be included in the study.
2. Participate in a focus group with other student participants. The focus group will take place at an agreeable time during a traditional school day. The meeting will take no longer than 45 minutes. Student responses will be audio recorded and transcribed to be included in the study.

Risks and Benefits of being in the Study: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Participation in the study is entirely voluntary. Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include providing insight into the use and application of NCVPS courses. Students' shared experiences may potentially provide insight regarding how NCVPS classes are employed within the school setting.

Compensation: Your child will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify

your child. Research records will be stored securely and only the researcher will have access to the records.
However, I may share the data I collect from your child for use by the school district; if I share the data I collect about your child, I will remove any information that could identify him or her.

- In order to ensure the confidentiality of students, I will assign all participants a pseudonym and conduct the interviews in a location where others will not easily overhear the conversation.
- All physical documents will be securely stored in a locked, file cabinet in the researcher's office. Data stored electronically will be secured and protected by password. At the completion of the study, all data (physical and digital) will be destroyed after three years following the completion date.
- Audio recordings will be collected using a digital audio recorder as well as through a backup using an Apple iPad. Digital audio files will be maintained within a password protected folder on the researcher's personal computer. Only the research will have access to data. As with other data collected, a single copy of the recordings will be stored for a period not to exceed three years before they are erased.
- Due to the participation in a focus group, it must be noted that information shared by other participants cannot be regulated. However, participants will be encouraged to keep information shared during meetings confidential.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect his or her current or future relations with Liberty University. If you decide to allow your child to participate, he or she is free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If your child chooses to withdraw from the study, you or your child should contact the researcher at the email address/phone number included in the next paragraph. Should your child choose to withdraw, data collected from him or her, apart from focus group data, will be destroyed immediately and will not be included in this study. Although focus group data will not be destroyed, your child's contributions to the focus group will not be included in the study if he or she chooses to withdraw.

Contacts and Questions: The researcher conducting this study is Damion O. Lewis. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at (919) 793-6592. You may also contact the researcher's faculty advisor, Dr. Sarah J. Pannone at sjpannone@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child to participate in the study.

☐ The researcher has my permission to audio-record my child/student as part of his or her participation in this study.

_____

Signature of Minor Date

_____

Signature of Parent Date

_____

Signature of Investigator

Appendix D: Confirmation of Participation Letter

Dear Recipient,

Congratulations! You have been selected as a participant in the research study titled: Secondary Student Experiences with Mandatory Enrollment in North Carolina Virtual Public Schools Courses. Based on your responses to the initial survey and interest in participating, you will soon begin the process of providing data to be included in the study. Remember, the study will require that you participate in two individual interviews and one focus group meeting with other study participants. Your initial interview will be scheduled soon in accordance with available times approved by school administration. You will receive an appointment time a week before the planned meeting day. If for any reason you would like to reschedule, please make me aware through email at dlewis55@liberty.edu or by phone at (919) 793-6592. An alternative date and time will be provided upon request. Again, remember that your participation is entirely voluntary and you may opt out at any time.

Thank you,

Damion O. Lewis

Appendix E: Alternate Selection Letter

Dear Recipient,

You have been selected as an alternate participant in the research study titled: Secondary Student Experiences with Mandatory Enrollment in North Carolina Virtual Public Schools Courses. Based on your responses to the initial survey and interest in participating, you will remain eligible to participate in the study should another candidate space become available. At this time you will not need to do anything; however, should an alternate be needed, you will be contacted by your school email. Your parental consent and student assent forms will remain on file until the completion of the study unless you wish to remove yourself from the participant pool. If you would like to remain a potential participant please remember that the study will require that you participate in two individual interviews and one focus group meeting with other study participants. If for any reason you would like to remove yourself from the participant pool at a later time, please make me aware through email at dlewis55@liberty.edu or by phone at (919) 793-6592. Again, remember that your participation is entirely voluntary and you may opt out at any time.

Thank you,

Damion O. Lewis

Appendix F: Demographics Questionnaire

All information provided here will be used for the purpose of identification and selection of participants for the proposed research study. Your information will remain confidential. In the event, you elect to not participate in the study your information will be destroyed. Alternatively, you may request original documents to be returned to you.

1. Please provide your full name:_____

2. Select your grade level: 9th 10th 11th 12th

3. Age:_____

4. Please select the gender you identify with: Male Female

5. How often do you use the Internet (general use for any purpose)? Please circle one of the following:

Daily Weekly Monthly Occasionally Never

6. How often do you use the Internet for learning? Please circle one of the following:

Daily Weekly Monthly Occasionally Never

7. Do you have access to high-speed, broadband Internet at home? Yes No

8. Do you feel comfortable using technology (mobile devices, computers, gaming devices, etc.)? Yes No

9. Have you ever taken an online course? Yes No

10. Please provide your school email address if you agree to receiving updates regarding this questionnaire or further correspondence regarding the information you shared.

_____

Appendix G: Internet Self-Efficacy Survey (ISE)

Due to copyright restrictions, this item is not included here. It is referenced and may be accessed here: https://doi.org/10.1111/j.1083-6101.2000.tb00110.x

Appendix H: Permission to Use Internet Self-Efficacy Scale

From: larose@msu.edu
Subject: Re: Permission to use and reproduce Internet Self-Efficacy scale
Date: January 3, 2017 at 10:01 PM
To: Lewis, Damion dlewis55@liberty.edu

Permission granted. However, we have noted in recent years that a ceiling effect has been noted. If your population of interest includes experienced Internet users that will limit the utility of the scale. Quoting "Lewis, Damion" <dlewis55@liberty.edu>:

> Dr. LaRose
>
> My name is Damion O. Lewis and I currently work as an education
> consultant with the North Carolina Department of Public Instruction.
> I am currently working toward completing my dissertation through
> Liberty University. Prior to coming across the Internet self-efficacy
> scale I had selected the computer self-efficacy scale; however, I
> think that for the purpose of my study your scale will be far more
> appropriate. May I please have permission to use the Internet
> Self-Efficacy Scale and questionnaire you developed and presented in
> your research with Dr. Eastin: Internet Self-Efficacy and the
> Psychology of the Digital Divide.
>
> I am currently working toward having prospectus approved. For that
> reason I have attached a summary of my proposed study.
>
> Please get back with me when can.
>
> Thank you.
>
> Damion O. Lewis, M.A., Ed.S
> dlewis55@liberty.edu<mailto:dlewis55@liberty.edu>
>
>
>
>
>

Appendix I: NPR Interview: Virtual Schools Bring Real Concerns About Quality

Due to copyright restrictions, this item is not included here. It may be accessed from:

https://www.npr.org/templates/transcript/transcript.php?storyId=382167062

Appendix J: Making Meaning Protocol

Due to copyright restrictions, this item is not included here. It may be accessed from the protocols section housed on: https://www.nsrfharmony.org/

Appendix K: Reflective Journal

Date	Reflective Entry
March 2017	The aid of expert content researchers have expanded my views pertaining to questioning secondary students. I had not previously considered the vocabulary presented in many of my questions as slightly elevated and beyond the scope of the general high school student. The suggested changes are making me consider what other changes might be needed to ensure that the interviews are best designed to help students reveal their experiences.
April 2017	The process of defending my proposal has been completed. I was nervous in preparation; however, upon defending my proposal and the research that I have completed thus far, it affirmed my knowledge pertaining to my specific topic and the information that I have acquired. During the process my committee provided additional information and constructive questions that I will use to inform my data collection. In particular, I will spend time ensuring I am knowledgeable of any differences in students' use of different LMS. It was also suggested that I research and review a study completed in another district in North Carolina that I had not previously read.
June 2017-July 2017	I completed my pilot study. I gleamed from the study information that will help me to ensure that my eventual data collection methods will be sound. I was able to confirm that the use of the internet self-efficacy survey was easy for students to complete; however, additional descriptors may aid students in understanding the differences in responses shared ranging from Strongly Disagree to Strongly Agree. The student participants also provided feedback for interview questions and noted

	2 questions whereupon additional information may be needed to ensure the desired response. I was able to pilot the interview process with students. I recognized the need to ensure student placement during the focus group sessions for any students who are soft spoken. I also recognized that the interview questions were appropriate and that the probes were sufficient as probes as that some participants responded fully to questions without probes while others needed the prompting. Based on the pilot study, I will spend time reviewing my questions to ensure terms are consistent throughout (i.e. online learning, virtual class, etc.) to ensure full student understanding.
August 2017	I completed my initial visits with the administrators at the research sites. I responded to administrator questions and met with the classroom facilitators for NCVPS courses.
September 2017	I met with students and completed an overview of the study. During the overview, many students were interested to be able to share their experiences with mandatory online courses. After providing students with required forms and documents, I returned to complete the 1st phase of data collection. I was intrigued by some the things I heard from students. Interestingly, there were some students who noted positive experiences juxtaposed with those who were quick to remind that they would prefer face-to-face classes. In addition, there were some changes announced regarding the varied use of NCVPS courses at the research sites in conjunction with Edmentum's Plato platform.
	I began the process of completing initial reading and analysis of data from the first round of interviews after they were

October 2017	transcribed. This was certainly not an easy task. Reading a single transcript with the fidelity needed takes far longer than I imagined. I began listing initial observations and listing recurring themes to help me with the work of coding. My plan is to complete initial reads with transcripts alone before using the NVivo 11 software. I have begun steps to complete the second phase of data before the end of the month.
November 2017	The process of re-reading the initial interviews while also referencing the newly transcribed focus group interviews brought to the surface the recurring notions from students of their limited perception of their online course instructor. An incident during one of the focus group meetings lead to the discovery that all of the students had been receiving the same text messages even when there performance differed. Students seemed to note this as a sign that the course instructor was not truly focusing on their specific, individual needs. I realized too at this point, that students had grown a bit more comfortable with me. Students shared, with greater detail their experiences. I am eager to move to the last phase of data collection to capture students EOY experiences. I also want to see if there were possibly any shifts among students thinking.
December 2017	The final phase of data has been collected and I am in the process of having it transcribed. During the data collection phase, I utilized some of my newly formed cognitive coaching skills during the interviews. Specifically, I found that paraphrasing more with students lead to richer, more descriptive responses. I wonder though if some of this was the result of stronger ties between me and the participants at this point. I am struggling to

	obtain a student license for NVivo 11 as the request that I have submitted has not been fulfilled. I have begun to look towards possible alternatives.
January 2018	
	All data has been transcribed and I am essentially in the thick of attempting to write my dissertation. I have been spending a bit more time than planned making adjustments to my proposal. I have noted some areas for focus and attention, especially the area on self-efficacy. I will need to make sure that I highlight ISE better in chapter 2. As it for the transcripts, careful reading of the transcripts has lead to the development of further insights that I had originally missed. For instance, I am recognizing a connection between many of the elements that might allow to the collapse of the 7 themes that I have identified.
February 2018	
	I am now in the thick of writing chapter 4. The work to condense themes has helped tremendously. By examining many of the noted similarities and connections, I have been able to revise and now have 4 core themes. I also condensed subthemes to make the descriptions of students' experiences better able to tell a story of what they experienced. I sought and obtained IRB approval to modify my study since I was unable to secure a student license for NVivo 11. The use of NVivo 11 (new version) has helped tremendously with organizing the ideas of participants.

March 2018	I have completed formal writing of the dissertation and am now spending time making edits under the guidance of my chair, committee and research consultant. My plan is to defend my dissertation within by the end of the next month in order to be ready to participate in commencement activities.
April 2018	Completion of dissertation defense. Submission of dissertation to Liberty University Library.

Appendix L: Researcher Audit Trail

Date	Notes
January - May 2016	Draft Research Prospectus
May 2016	Research Prospectus “Mock Defense”
May 2016	Dissertation Chair Secured
June 2016 – December 2016	Edit and Transform Prospectus to Proposal
October 2016-December 2016	Committee Formation
January 2017	Committee Review & Follow-up Edits
February 2017	Consultant Review of Proposal
March 2017	Content Expert review of Study and Survey Instruments
March 2017-May 2017	Edit and Revise Proposal
June 2017	Proposal Defense
July 2017	Pilot Study Completion
August 2017	Initial contacts made with research sites
September 2017	Participants selected and Initial Interviews completed
October 2017	Initial Interviews transcribed. Second phase of data collection completed. First reading and early analysis of data.
November 2017	Focus Groups transcribed. First reading and analysis of focus group data along with initial interview data.

December 2017	Third and final phase of data collection completed. Final interviews transcribed. Continued process of reading; development of initial codes.
January 2018	Formal data analysis completed and drafting of chapters 4 and 5.
February 2018	Completion of Dissertation draft including final chapter. Submission of draft.
March 2018	Completion of edits suggested by committee. Submission of dissertation to research consultant.
April 2018	Completion of dissertation defense. Submission of dissertation to Liberty University Library.