USING A STUDENT SUCCESS COURSE AND TRANSFERRED CREDIT HOURS TO PREDICT STUDENTS' LIKELIHOOD TO RETAIN IN ONLINE HIGHER EDUCATION

by

Bailey Patricia Anderson

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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2019

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APPROVED BY:

Lisa Foster, Ph.D., Committee Chair

Alexandra Barnett, Ed.D., Committee Member

Kevin Struble, Ed.D., Committee Member

ABSTRACT

As online education permeates a larger percentage of postsecondary student attendance, higher education institutions place a greater focus on online student retention. Online learners are entering college with varied backgrounds, demographics, and prior experience, yet most institutions are not differentiating the first-year programs for their incoming students with previous college-level experience. The following research used a binomial logistic regression analysis to explore existing, archival data to determine whether college transfer credit and a student success course can predict short- or long-term online student retention. This correlational study evaluated a randomized sample of 3,000 students who took a student success course and transferred in fewer than 60 credit hours and evaluated whether the success course could predict their retention at the university for the subsequent term (short-term) or through current enrollment (long-term). Results from the quantitative study showed that both predictor variables were statistically significant as predictors of student retention, both in the short- and long-term.

Keywords: online student, retention, persistence, transfer credit, student success course

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Dedication

This manuscript is dedicated to my parents, who pushed me when I needed it, supported me even when I didn't, and provided an unending well of love. From the time I was little, both of my parents convinced me that anything was possible, but they also challenged me to set high goals and rise to achieve them. Even during minor setbacks or frustrations, my parents would remind me of who I am and of what I am capable. For that, I will be eternally grateful, and I dedicate this degree to them both.

I would also like to thank my dissertation chair and my committee. Dr. Foster, you have been a fantastic support system for me. You never made me feel ashamed when I was unable to meet a goal or was overwhelmed by work responsibilities. You'll never know how much it has meant to have you as an advocate. Dr. Barnett, your enthusiasm and encouragement was felt throughout this entire process. I know that my dissertation is a stronger product because of your efforts. Dr. Struble, thank you for continuing to push me as I started lagging. Your positive comments and snarky prompts to finish were often just the motivation that I needed. Thank you all for helping me to do this.

I would like to thank all of my friends and colleagues at Liberty University. Many of you have offered small words of encouragement throughout the past few years. Despite the busyness of work, you have extended reassurance, confidence, and inspiration when you see me in the halls or in meetings.

Finally, but most importantly, I would like to express my gratitude to my Lord and Savior Jesus Christ for the opportunity to fulfill this goal. Without His strength and love, I would have failed long ago. May God bless each of you as you strive to achieve your own dreams.

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List of Abbreviations

Analytics and Decision Support (ADS)

National Center for Education Statistics (NCES)

National Student Clearinghouse Research Center (NSCRC)

Procedural Language/Structured Query Language (PL/SQL)

Statistical Package for the Social Sciences (SPSS)

Student Success Course (SSC)

CHAPTER ONE: INTRODUCTION

Overview

Within the next few years, higher education is likely to face a retention problem that must be addressed, especially related to transfer students in online education. In order to recognize the significance of this study, one must better understand the problem that higher education is facing, as well as the solution that this study will explore. This section will provide a brief background, describe the problem, outline the purpose and significance of this research, introduce the research questions, and provide some foundational definitions.

Background

Each year, the number of students taking classes online increases significantly over the prior year (National Center for Education Statistics, 2017). Students are transitioning to online in large quantities because of the affordability, flexibility, and convenience of taking classes at a distance (Cochran, Campbell, Baker, & Leeds, 2014). Statistics show, however, that student retention rates are not maintaining their levels with the influx of online students. Instead, most institutions are seeing dramatic decreases in retention especially for online students, meaning that students are choosing to leave the university before the completion of a degree (National Student Clearinghouse Research Center, 2017). In an effort to combat the high percentage of student departure, some institutions are creating courses that are intended to ingratiate online students into the university and reduce their likelihood to depart (Kimbark, Peters, & Richardson, 2017).

Retention has always been one of the main focal points of any college or university, as the purpose of higher education is to prepare students for their future career and assist them in completing their degree program. Until recently, most retention research has focused on the

reasons why traditional students choose to leave higher education, whether from an institution or completely from the post-secondary system itself. Many studies have explored how building a community is integral in order to integrate students into the institution, whether that be with fellow students, faculty, or staff (Ganss, 2016; Roderick, 1993; Shackelford & Maxwell, 2012). In fact, research has shown that university connectedness is one of the more significant influencers on a student's decision to retain (Lane, Martin, & Henson, 2015). Similar studies described the difficulty of transitioning from living at home with family while attending high school to living with relative strangers in a dorm room while attending college-level classes (Erb, Renshaw, Short, & Pollard, 2014; Sun, Hagedorn, & Zhang, 2016). These studies point out that traditional students often struggle with the transition period from high school to college for various reasons, and these reasons may lead to a departure decision.

Online education is a relatively new phenomenon in higher education. It is difficult to state with certainty what factors influence retention in online higher education because of the lack of longitudinal data from online institutions, (Cochran, Campbell, Baker, & Leeds, 2014). For years, researchers and theorists have been developing theories, studies, and literature which explores the root cause of traditional student departure from higher education. Few studies, however, have been conducted to evaluate what characteristics consistently lead to a student retaining at an online institution. Many institutions have developed retention initiatives in order to combat the falling retention rates, including creating student success courses (SSCs), yet these programs often target incoming students instead of transfer students (Claybrooks & Taylor, 2016). Furthermore, almost no research has been done on whether student retention efforts have any positive impact on students who transfer credits into the university.

Transfer students are a highly underserved population at many institutions because they may join the university at atypical semesters or come at a different age than most traditionally-aged residential students (Whang, et al., 2017). Statistics indicate that the number of transfer students is increasing rapidly, due to the ease of transferring between universities and the availability of online education, with some statistics indicating that the number is over 35% (National Center for Education Statistics, 2017; United States Government Accountability Office, 2017). Unfortunately, recent data shows that, of students who transfer, 25% are likely to transfer again if their needs are not met (Marling, 2013). With such a high percentage of students transferring, it is imperative for university administrators to determine what intervention strategies can work for this transfer population, including whether SSCs have a positive influence on their retention.

Retention has many more implications than just to the institution, as there can be societal consequences as well. Many of the students who leave college do not attend again or take a significant break between leaving and returning (Kimbark, Peters, & Richardson, 2017). Students who drop out without completing their degree will earn less income and be qualified for lower-level positions (Mestan, 2016). Therefore, these students will have more difficulty supporting their families and progressing in their career. Dropping out of college can also have a detrimental, emotional impact on students, leaving them with a sense of failure, depression, or anxiety (Arbona, Fan, & Olvera, 2018; Respondek, Seufert, Stupnisky, & Nett, 2017; Tinto, 1993). These emotions, if left unaddressed, can culminate in self-harm or harm to others (Villatre, Marcotte, & Potvin, 2017). With these potential consequences, it is imperative to further explore the causes of student departure and the possible solutions, such as SSCs.

Tinto's (1993) theory of student departure outlines a framework that indicates the main aspects of a student's departure decision, such as the student's aggregated prior learning and academic and social integration. Although Tinto's theory was designed long before online learning was developed, there are a lot of similarities that can be found between traditional and non-traditional student departure (Croxton, 2014). The influence of students' academic history and the experience that incoming students have in their first semester at an institution are easily visible in the retention statistics for the online learning population (Netanda, Mamabolo, & Themane, 2017).

Many universities are still seeking a solution to address the decrease in retention over the past few years. For institutions with fully-online programs, the need is greater, because less longitudinal data is available to indicate what interventions have an influence on retention, as online education is still early in its existence (Ferrer, 2019). In addition, online institutions have a higher number of transfer students, who, in turn, have a high rate of departure (NSCRC, 2017). As a result of all these factors, it is imperative to determine whether there is a retention strategy that can be successful for online institutions for both their incoming and transfer populations.

Problem Statement

Over the last few years, the focus of much literature has been on the transition from high school to college (Baier, Markman, & Pernice-Duca, 2016; Bloemer, Day, & Swan, 2017; Liu & Chang, 2014). The transition period is a delicate one, as many students are seeking to acclimate to a new environment where they usually have little-to-no previous experience. Not much research has turned its focus to students who are transitioning to a new college environment but already have collegiate-level experience. Often, the needs of these students are very different.

One study that was published recently explored the persistence of students of new college students. The researchers followed a cohort of incoming, inexperienced students at a four-year institution (Claybrooks & Taylor, 2016). Their cohort was broken up into two groups: those required to enroll in a student success course in their freshman year and those who were exempt from taking the same course. The researchers found that students who were exempt from the student success course persisted at a 10% higher rate than those who took the course. Claybrooks & Taylor (2016) posit that one explanation to this might be that the exempted population entered the university with previous college experience, whether through transfer credit or conferred degrees. This result reinforces the need to further explore the efficacy of a student success course for incoming postsecondary students with prior college experience.

While Claybrooks and Taylor (2016) highlighted the need for additional research into this topic, they were not the only ones that recognized the gap in the current literature. Another group of researchers performed a similar study to evaluate the efficacy of student success courses for incoming students. Hoops, Yu, Burridge, and Wolters' (2015) research broadened the potential impact, as they explored persistence, academic achievement, engagement, and motivation for a population of students who did complete a student success course and a matching population that did not. The major difference this study found is that it was not focused on incoming or freshmen populations. Instead, the researchers used students in their final semesters or those who had reenrolled at the university. Therefore, the authors suggested that future studies explore the implications of student success courses on college students who are early in their program (Hoops, Yu, Burridge, & Wolters, 2015).

As is evidenced by the two studies mentioned above, SSCs have captured the interest of postsecondary educators and researchers, but most studies have been focused on the efficacy of

SSCs in general or for first-time college students. Unfortunately, a growing population of students enrolling in higher education institutions are transferring in credits that they earned through previous college attendance, standardized exemption tests, or dual enrollment from high school. The problem is that many students enrolling in online higher education institutions are bringing in college experience, yet these students are still being required to enroll in SSCs that are developed for students with no past credits or experience and have not been proven to demonstrably improve student retention.

Purpose Statement

The purpose of this correlational study is to determine whether successful completion of an SSC can be an accurate barometer of student persistence when coupled with the number of previously-earned credits. This study brings attention to a population of students who have been largely overlooked, which are the students who enter an online higher education institution having previously earned credit hours yet are still required to complete an SSC. The focus is on evaluating the predictor variable of student retention, which is often used interchangeably with terms like persistence, withdrawal, and attrition (Claybrooks & Taylor, 2016) but refers to a student's continued registration at that institution until the successful completion of their program.

The study considered whether the predictor variables of credit hours earned and completion of an SSC have a direct correlation to student persistence. For the purposes of this study, completion of an SSC was used in a dichotomous fashion, meaning that students either completed it successfully, earning a D or higher as per the university's minimum standards, or unsuccessfully, which factors in failing, withdrawing, or non-completion of the course. As for credit hours earned, this variable will consider any credits that were transferred into the

institution from prior college experience, dual enrollment during high school, or any credit-by-examination programs, like College Level Examination Program (CLEP). The study will determine the efficacy of SSCs for online, undergraduate students in a four-year, non-profit university for students who bring in previous experience versus those with no prior college-level experience.

Significance of the Study

Current literature is in consensus that SSCs provide value to incoming college students with little-to-no prior college experience (Kimbark, Peters, & Richardson, 2016); however, there is still some debate as to the efficacy of SSCs for students with prior college experience (Claybrooks & Taylor, 2016). Most frequently, studies are fixated on first-time, residential, freshmen students and whether an SSC increased their retention (Flanders, 2015). Other studies at four-year institutions found that academic success in an SSC had a positive impact on developmental courses, but there was no additional research into students' prior learning experience (Allen & Lester Jr., 2012).

Much research has also been done to evaluate SSCs in the community colleges, yet these studies have not yet proven that these courses help students succeed to retain long-term in college (Zeidenberg, Jenkins, & Calcagno, 2007). There have been, however, some results which show a potential positive correlation between successfully completing an SSC and retention in the community college system (Cho & Karp, 2013). Unfortunately, this research continues to highlight student success only for those students who complete the SSC within their first semester, without showing any attention to students who transferred from another institution or earned credit hours prior to beginning their program.

By bringing attention to the transfer population of students, postsecondary institutions can begin to recognize the different needs of the population of their incoming students, for both their new or experienced learners. Whether a two-year, four-year, community, public, or private college or university, all higher education organizations are seeking ways to increase retention in their first-year population (Nix, Lion, Michalak, & Christensen, 2015).

Research Questions

The research questions for this study are:

RQ1: How accurately can short-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

RQ2: How accurately can long-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

Definitions

1. *Retention* – Continuous enrollment, or degree conferral, from fall of their freshman year to fall of their sophomore year within the same postsecondary institution (Tinto, 1993; National Student Clearinghouse Research Center, 2017; Stavredes & Herder, 2014).
2. *Persistence* – Continuous enrollment, or degree conferral, from fall of their freshman year to fall of their sophomore year at two or more postsecondary institutions (Tinto, 1993; National Student Clearinghouse Research Center, 2017; Stavredes & Herder, 2014).
3. *Student Success Course (SSC)* – A course designed to introduce the student to the university and provide high-level introduction to some study strategies that will help

them be successful in their future courses (Claybrooks & Taylor, 2016; Hoops, Yu, Burridge, & Wolters, 2015).

4. *Transfer Students* – Any student that enters a university with earned college-level credits, whether from previous institutions, prior learning assessments, or dual enrollment programs (Bloemer, Day, & Swan, 2017; Ishitani & Flood, 2018).
5. *Short-Term Retention* – Continuous enrollment from the current term to the subsequent term (McComb & Lyddon, 2016; NCES, 2018).
6. *Long-Term Retention* – Continuous enrollment or degree conferral up until current term (Habley & McClanahan, 2004; NCES, 2018).

CHAPTER TWO: LITERATURE REVIEW

Overview

Much like an adolescent's transition from child to teenager is fraught with fears, uncertainties, emotional changes, and stress, so too can be a student's transition to college. Whether the student has just graduated from high school or been in the workplace for several years, the anticipatory anxiety of beginning at a new college is often still the prevalent emotion (Villatre, Marcotte, & Potvin, 2017). This can manifest in many ways, including students' resistance to creating community with other students, detrimental performance in their courses, or interest in leaving the chosen institution or withdrawing from college altogether (Simonson, Smaldino, & Zvacek, 2015). In order to mitigate this, many colleges have created Student Success Courses (SSC), which focus on teaching topics like basic writing skills, study strategies, time management, and adult learning theories (Zeidenberg, Jenkins, & Calcagno, 2007). These courses also serve to build a sense of community with fellow students, faculty members, and university staff (Allen & Lester Jr., 2012). Most higher education institutions rely on their SSCs to assist students in making those connections, which will encourage them to retain at their university, rather than departing higher education or switching schools (Hoops, Yu, Burridge, & Wolters, 2015). In this chapter, the information covered will include exploring the applicable theoretical frameworks and reviewing the literature related to the study, with the ultimate goal of explaining why this study is an important addition to the research surrounding retention in higher education.

Theoretical Framework

While there are several widely-accepted, retention-related theories, most of them reference or pattern their research after Tinto's theory of student departure (1975) or with various

adjustments to the theories made in subsequent years (Tinto, 1993). Tinto's (1993) theoretical concepts are highly cited when dealing with student retention or persistence at the postsecondary level (Stuart, Rios-Aguilar, & Deil-Amen, 2014).

Theory of Student Departure

At its most basic, the theory of student departure claims that a student's pre-entry attributes and personal commitments have a direct correlation to their likelihood to persist and that the student's experiences at the institution, academically and socially, have a significant impact on the student's retention (Tinto, 1993). While there may have been minor adjustments over the years, at its foundation, Tinto's model regarding student departure has retained its core beliefs. In the formulation of Tinto's original theory, he references the work of Arnold van Gennep, a Dutch anthropologist who studied the rites of membership in tribal societies (Tinto, 1988; van Gennep, 1960).

In his seminal work, *The Rites of Passage*, van Gennep (1960) identified three stages that become evident when exploring how groups progress from one period of their life to another. These "rites of passage" marked the evolution from the freedoms of youth to the obligations of adulthood and are referred to as *separation*, *transition*, and *incorporation* (van Gennep, 1960; Tinto, 1988). Tinto claims that these stages share many similarities to the experiences had by students as they enter higher education (Tinto, 1988).

Whether studying online or residentially, the entrance into higher education requires a separation from previous familiarities, as one embraces new relationships and communities (Liu & Chang, 2014). During the stage of separation, one may find that they interact less frequently with past associations. This is most commonly found during the conversion from high school to college. The transition period can be identified when the person begins to interact with the new

group into which he seeks membership. In the terms of an incoming college student, this is observable in how the student interacts with his faculty, advisors, fellow students, and any other available groups. Finally, incorporation occurs when the person feels that he has established himself as a member of the group. More than cursory membership, incorporation often occurs when the person becomes a contributing member. Although these students may reconnect with their previous associations, they will do so as fully incorporated members of their university community.

Van Gennep (1960) claims that these stages can be applied to more than tribal societies, as they provide a framework for any situation where one moves from a familiar situation into a new setting. Tinto added, however, that the movement from a familiar environment to a new community often led to feelings of weakness and isolation, which he correlated to Durkheim's research on suicide. Tinto claims that the period of transition aligns closely with Durkheim's theory of individual suicide, as, in both scenarios, students feel unattached to any single community and may have a sense of temporary normlessness (Tinto, 1988). Durkheim posits that the lack of connection to community norms is likely to lead to departure before the student reaches the incorporation stage. In Durkheim's research, that departure may take the form of individual suicide, yet Tinto does not automatically defer to that extreme. Instead, he recognizes that the stage between separation and incorporation, namely transition, may be the most fragile stage for some students.

Separation, according to Tinto, can be a stressful and disorienting experience for almost all students, as each student must let go of past habits and patterns of affiliation (Reynolds & Sellnow, 2015). Whether moving to a college campus, living at home and commuting to campus, or staying home and attending online, students must, at least partially, disassociate

themselves from local or previous communities in order to become participating members in the university community. A student's feelings during the stage of separation can be swayed, whether positively or negatively, by the degree of support provided by their family or local peer group (Reynolds & Sellnow, 2015).

At the postsecondary level, the period of transition is especially important because students have begun to disassociate with their previous communities but have not yet joined or fully embraced the college community. Therefore, they are in a state of purgatory and feel no true membership in either community. Some students find the transition to the college environment easier than others, as they are more equipped to cope with their feelings of detachment, normlessness, loneliness, and stress. Without support or intervention, many students do not successfully transition to the incorporation stage. Instead, the students withdraw from the school very early in the academic year, often within the first six weeks of the initial semester. Beyond their coping skills, many students depart from the university because they are not fully committed to either their educational goals or the university. Conversely, there is a subset of students that are so dedicated to their educational goals that they will retain no matter what (Simonson, Smaldino, & Zvacek, 2015). Tinto points out that it is often the individual's response to the transition stage that will ultimately lead to either the person's departure or persistence.

Finally, if a student can successfully progress through the separation and transition stages, Van Gennep (1960) states that they must then become incorporated in the college community. Tinto claims that social interactions are the core requirement to a student becoming integrated into the university, be it by students or faculty. If a student does not build relationships at the university, it is unlikely that the student can become incorporated into that

community. Unfortunately, many universities do not have intentional outreach to the students, and students are left to build their own communities (Simonson, Smaldino, & Zvacek, 2015). Those students who do not have the natural inclination to develop integrated contacts on their own may eventually leave if they are not able to establish social or intellectual membership within the university environment.

According to Tinto (1975), the value in exploring both Van Gennep's and Durkheim's writings is that they provide insight into the longitudinal nature and time sensitivity of student departure. After all, no matter the student situation, each student is moving from one community to a new community. Even in an online learning scenario where students may be many years separated from high school or previous college experiences, students are still going to recognize changes from their current situation and be entered into a new community of learners.

Tinto's theory of student departure was originally published in 1975 based on five categories with underlying constructs that may help to determine the student's likelihood to depart. It is Tinto's 1993 model of departure, however, which truly incorporates many of the longitudinal characteristics found in Van Gennep's research. In his *Conceptual Schema for Dropout from College*, Tinto (1993) explores four key segments that ultimately lead to a departure decision by the student. The segments include pre-entry attributes, goals and commitments, institutional experiences, and academic and social integration (See Figure 1).

Tinto's revised model begins with exploring a student's pre-entry attributes, including family background, skills, personal attributes, and prior schooling (Tinto, 1993). Bean (1980) adds that one must also consider the student's personal background, such as socioeconomic status. Tinto asserts that the attributes the student brings with them can impact how they will

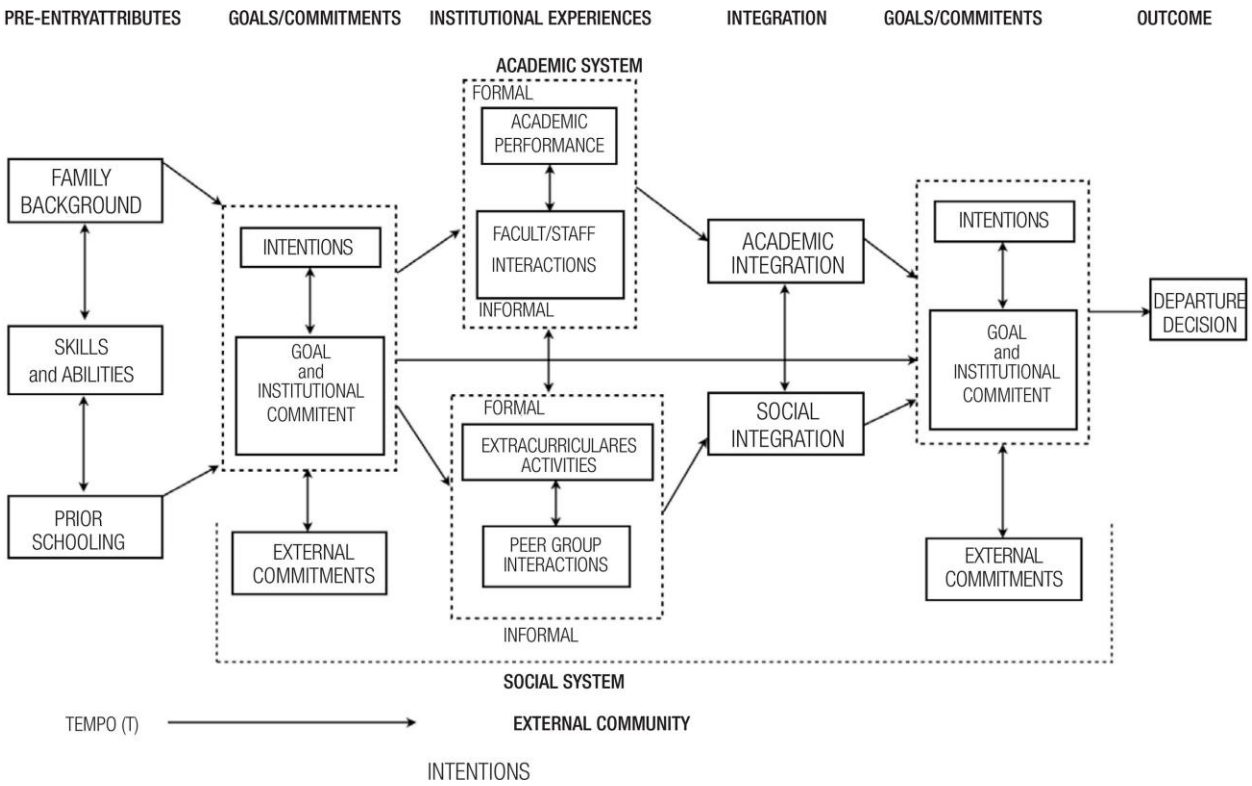

Figure 1. Tinto's longitudinal model of institutional departure.

respond to college and whether they are likely to retain (Tinto, 1988; Tinto, 1993). Because the combination of these pre-entry attributes will vary from student to student, Tinto alleges that one must consider these attributes in light of the student's goals and commitments, both internal and external, in order to truly understand the likelihood to retain within the institution (Tinto, 1993).

While the pre-entry attributes of a student have helped develop a foundation that the student brings with them into the educational environment, a student who comes in with well-defined goals are more likely to persist. If the student is entering college without a clear pathway to a positive end state, such as degree completion, then the student may not be fully committed to the degree and the result could be a departure decision (Tinto, 1993). Tinto (1975) states that it is imperative that the students declare their intentions as it relates to their goals and the institution. During this stage, the student is developing a nebulous balance between institutional

commitment and external commitments, such as familial, occupational, and personal obligations. If a student has not defined his personal goals and has no loyalty to the institution, it is likely that his external commitments will outweigh his original intentions, and the student will depart. This result seems to have a higher likelihood as it relates to online students, especially because of their disconnection from a physical campus (Simonson, Smaldino, & Zvacek, 2015).

After considering the student's pre-entry attributes and commitments, the next segment that may lead to a departure decision relates to the student's institutional experiences, namely those experiences that exist within the academic and the social systems of the institution (Tinto, 1988; Tinto, 1993). Within the academic system, the student will be influenced not just by their academic performance in terms of score but also by their intellectual development (Tinto, 1975). Their interactions with university faculty and staff are determined to be informal experiences which carry an equal impact on a student's departure decision. As it relates to the social system, Tinto indicates that the interaction between the student and their peers may occur in a formal setting, like extracurricular activities, or via informal means, such as normal peer-group interactions (Tinto, 1993). According to Tinto, if the student develops strong peer interactions within the social system, it is more likely that the person will remain in college. In the context of online students, one must also consider that online students have a more difficult time developing deep peer-to-peer and student-to-faculty relationships, which could lead to a more unpredictable departure decision (Bloemer, Day, & Swan, 2017).

The final stages of Tinto's institutional departure model suggest that a student is likely to reconsider their goals and commitments after the initial progression through the academic and social systems and before making a final departure decision (Tinto, 1993). As the student approaches the decision-making point, their experiences and perceptions will all be part of the

internal evaluation, especially as they analyze whether they want to continue their education at all, have developed relationships with personnel and peers at the institution, and have built a connection with the institution. For many students, this decision can also be influenced by external factors, including their personal commitments, professional obligations, financial solvency, and competing priorities (Tinto, 1988). These same decision influencers are mirrored by online students, but these students are often more impacted by their perception of their academic performance, feelings of connectedness, and internal motivation to succeed (Simonson, Smaldino, & Zvacek, 2015).

While Tinto's theory thoroughly articulates the characteristics concerning residential student retention and persistence, there is some debate as to whether Tinto's theory of student departure accurately reflects the attributes of the online students who choose not to retain (Rockinson-Szapkiw, Spaulding, & Spaulding, 2016). Because their transition from previous experience to online learning is not as clearly defined nor can it be consistently-applied to a student cohort, one must also dissect Tinto's ideas into smaller concepts which become applicable to online students' retention. To begin, it is important to explore Tinto's concepts of incorporation into the society of college, which discusses how students should become invested into the institution's communities, normally through fraternities, dorm experiences, or extracurricular activities, in order to develop a sense of loyalty or commitment to the institution (Tinto, 1988). These are not options for most students studying online, as students are separated by distance, personal obligations, or professional commitments. Instead, these students are forced to seek out community through their online classes, institution contact centers, or their faculty (Oliphant & Branch-Mueller, 2016). Therefore, incorporation might be considered either more important because of the difficulty in developing community or less important because

online students' priorities are different than traditional students' (Liu & Chang, 2014). To this point, it is not clear in the research as to which of these thoughts carry more weight. For many institutions, they have crafted their SSC to address this concern and attempt to build a connection between the student and the institution (Hoops, Yu, Burridge, & Wolters, 2015).

One must also evaluate the concept of external commitments as it relates to online learners, since most online students have concurrent familial and professional obligations (Simonson, Smaldino, & Zvacek, 2015). These obligations often require that the student make decisions about the priority of their goals, value of education, and practical impact of completing their degree (Tinto, 2017). While students may enter the program with the desire to retain and, ultimately, confer their degree, online students are faced with the departure decision earlier than traditional students due to the shorter length of many online courses, and their decision often has broader personal implications because of their external obligations.

Online students have many similarities to the traditional, residential student, especially during the initial integration into the institution. There are key differences, however, in these populations which should result in a deeper analysis of Tinto's theory of student departure. These dissimilarities are discussed more thoroughly in the following section of this chapter. Ultimately, it is imperative that one recognizes the differences in the online and resident populations and evaluate the true impact of pre-entry attributes – especially prior learning – and academic systems on an online student's departure decision.

Related Literature

The College Student

Until recently, the term *college student* brought with it many assumptions about the type of learner that was being referenced. It called to mind the concept of an 18-22-year-old student

that transitioned to college the year after graduating from high school (Deil-Amen, 2011). With the proliferation of programs offered completely or partially online, the definition of a college student becomes less clear and, therefore, more difficult to build curriculum, support, and services around (Lane, Martin, & Henson, 2015). Many schools have populations that cross over any group definition and display characteristics from multiple groups. An example may be the 19-year-old that has a full-time job, family, and multiple transfer credits, or the 65-year-old widowed retiree that went straight into the military after high school and never took any college credit until now. Historically, the 19-year-old would be considered a traditional college student, while the retiree would be viewed as an adult learner. Yet, do those classic definitions of student populations still apply?

Traditional college student. The commonly accepted definition of a traditional college student is someone who is studying in a residential program, lives on campus, enrolls in college immediately following high school, relies heavily on financial aid or is financially dependent on others, and completes their degree in four to five years (Kennesaw State University, 2004; Deil-Amen, 2011; NCES, 1996). Unlike fully online students, retaining residential students that are taking courses delivered online is not as problematic (Salter, 2012). The obstacles that these residential students face during the transition from high school to college are vastly different from those in the other populations. For example, many of the students are living independently for the first time, learning that decisions have consequences, and managing finances on their own (Reynolds & Sellnow, 2015). For the traditional college student, this transition period most closely aligns with Tinto's stage of separation, where students are attempting to distance themselves from their pre-college identities and embrace the new realities they are facing (Tinto, 1993).

Traditional students have their own set of stressors, as the residential environment is often a situation rife with distractions, whether that be roommates, parties, friends, or lack of private, quiet spaces to study. Each of these distractions can be managed when independent but, combined, can overwhelm students and cause strong, negative emotions to arise, including feelings of helplessness, depression, anxiety, and hopelessness (Tinto, 1993). While these emotions are present, in various levels of severity, in all students, only a third of traditional students succumb to them (National Student Clearinghouse Research Center, 2017).

Adult learner. For many years, the focus of education was on elementary, secondary, and postsecondary, as it related to traditionally-aged students. In the mid-twentieth century, however, Knowles (1970) published a seminal piece about the science of learning in adults. During his research, he contrasted the method and motivation of helping a child learn versus helping an adult (Mirriam, 2001). The term *andragogy* arose as a way to categorize the assumptions that Knowles identified, which include that adults are independent and self-directed, come with extensive and varied experiences from their lives, learn from their past experiences, have deep-seated desires to gain knowledge that is practical and applicable, and are driven from internal motivations (Clawson, 2008; Jarvis, 2010; Knowles, 1970; Mirriam, 2001). While *pedagogy*, the study of how students learn, and *andragogy* are often considered to be separate theories exclusive to their populations (elementary and secondary vs. postsecondary), Knowles indicates that these are not mutually exclusive that they the assumptions may overlap, depending on the person's individual characteristics (Jarvis, 2010; Knowles, 1979).

One of the most intriguing aspects of Knowles' theory of andragogy is the focus on the experience that the adult student brings with them into the learning environment (Jarvis, 2010). Because each adult student already has a foundation of learning on which they are building, it

becomes more important to provide a practical application to each concept introduced (Rothwell, 2008; Simonson, Smaldino, & Zvacek, 2015). Unlike students in elementary and secondary classrooms where the teacher is responsible for providing new, core concepts, the teacher of adult students needs to understand the knowledge and experience that the students already carry with them (Boettcher & Conrad, 2016). Then, professors can assist students in understanding what they don't know and the practical application of the concept. This becomes more important when one has students that both adult learners and studying in an online environment (Simonson, Smaldino, & Zvacek, 2015).

Online student. A survey of online students shows that there are a multitude of factors that impact their decision to enroll in a university, but the top three are convenience, flexible pacing, and the ability to schedule around their work obligations (Ruffalo Noel Levitz, 2016; Stavredes & Herder, 2014). The motivation behind these three factors becomes more apparent when reviewing the demographics of the population surveyed. This research evaluated over 115,000 online learners from 2012 to 2015, of which 67% were employed full-time and 61% were over the age of 35 (Ruffalo Noel Levitz, 2016). This survey seems to most closely align with the literature on the demographics of online students (Boettcher & Conrad, 2016; Stavredes & Herder, 2014).

In today's postsecondary environment, where students are distributed around the world that coalesce in a single class environment, it is valuable to evaluate assumptions about what the ideal student learning experience is like and acknowledge the paradoxes to the traditional learning environment (Salter, 2012). In most cases, students appear to be choosing the online delivery method of classes due to the convenience factor, rather than their desire to be in a technology-infused environment (Salter, 2012; Stavredes & Herder, 2014). One thing, however,

is common in online learners. They have a deep-seated desire to attend school and are often internally motivated (Lehman & Conceicao, 2013; Simonson, Smaldino, & Zvacek, 2015; Stavredes & Herder, 2014).

Online education is different from the residential experience because students each come with their own technology literacy, set of personal technology devices, and expectations of digital integration, meaning that students are anticipating technology as a heavily utilized resource in the online classroom (Salter, 2012). Online learning provides access to education where it may not have existed prior, which is expanding the opportunities for many students. Distance education has allowed learning to occur in situations where it was previously difficult, whether due to finances, geographical location, technology, or personal obligations (Simonson, Smaldino, & Zvacek, 2015).

Another benefit of distance education is that it brings together students of varied backgrounds. While traditional, residential universities purport to have diversity of students, most tend to have a high percentage of local students that match the ethnic and socioeconomic makeup of the geographical location (Kronk, 2017). Conversely, institutions with large online populations are not limited by location, age, gender, race, or educational background, which proves to be a more culturally diverse environment (Simonson, Smaldino, & Zvacek, 2015). Online learners span a wide range of ages, geographical locations, educational experiences, personal obligations, and learning needs (Cochran, Campbell, Baker, & Leeds, 2014). These students are likely to have families, full-time jobs, and internal motivators (Lehman & Conceicao, 2013).

Concerns around online student retention have grown substantially over the past few years, as online education has grown at such a significant rate. Between 2011-12 and 2015-16

academic years, there has been a 3.7% increase in students taking at least one course at a distance, as compared to the 1.3% increase of students who attend completely at a distance (National Center for Education Statistics, 2017). According to NCES' Institute of Education Sciences, the number of students taking courses at a distance is growing steadily. From fall 2014 to fall 2015, the percentage of students enrolled in any distance course grew from 27.7% to 29%, and the percentage of students enrolled only in distance courses grew nominally from 12.1% to 12.3%.

Student classification. One commonality across any college or university in the United States, whether public or private, is the presence of student classifications. This is referring to the four tiers by which all students are identified based on the number of completed credit hours. These four levels are referred to as freshman, sophomore, junior, and senior status.

While these four classifications are ubiquitous on college campuses, there still seems to be some room for interpretation when it comes to defining how many credit hours make up each category. At the University of North Dakota, for example, a student is a freshman until they have earned 23 credits, a sophomore until they have 59 credits, and a junior until they have completed 89 credits, after which they remain a senior (University of North Dakota, 2016). Northeastern University out of Boston, Massachusetts has a different approach by classifying a student as a freshman with less than 32 semester hours (SH), a sophomore with 32 – 63 SH, a junior with 64 – 95 SH, and a senior with more than 96 SH (Northeastern University, 2016). The most common definition of these levels allows that a freshman can have up to 29 credits, would become a sophomore until 60 credits are earned, and transition to junior through 90 completed credits (Ball State University, 2018; The University of Iowa, 2017; The University of Texas at Austin, 2017).

The variances across the different universities may not seem like an important distinction to students, but the application to students makes a big difference. Assuming that all courses for each referenced university represent three credit hours, students can become sophomores after completing anywhere from seven to ten classes. The concern in this is that the student maturation from seven completed courses to ten courses can be quite vast (Gahagan & Hunter, 2008). Credit hour variances, however, represent only some of the important concerns.

In today's collegiate environment, students are no longer selecting a single college and remaining there until they graduate (National Student Clearinghouse Research Center, 2017). Instead, students have a higher tendency to transfer from school to school than ever before. A recent study with the National Student Clearinghouse Research Center indicated that 342,860 students change institutions each year (Shapiro, Dundar, Wakhungu, Yuan, & Harrell, 2015). Each time a student transfers, they have the opportunity to bring over credit hours from their past universities. Therefore, a student could potentially transfer in enough credit hours to easily transition to sophomore, or even junior, status (National Alliance of Concurrent Enrollment Partnerships, n.d.; Steinmann, Pope, & Miller, 2004).

Beyond the potential issues of transferred credit, it is now becoming much more popular for students to transfer in college-level credits from their high school transcripts or to test out of general education courses (Tugend, 2017). Students are being encouraged to take a large number of Advanced Placement (AP) courses, which allow them the opportunity to test out of those courses before college (Saltarelli, 2016). Students also can choose to take Dual Credit and Dual Enrollment courses. Dual Credit courses, also known as Concurrent Enrollment (Saltarelli, 2016), are college-level high school courses that are taught by college-approved high school educators (National Alliance of Concurrent Enrollment Partnerships, n.d.). Conversely, Dual

Enrollment refers to taking high school courses and college-level courses simultaneously (Saltarelli, 2016). Over 2,800 schools are even enrolling in International Baccalaureate programs, which operates similarly to Dual Enrollment courses and offers credit-transferable diplomas to students between the ages of 3 and 19 in areas such as critical thinking and career readiness (International Baccalaureate, 2018). Finally, students also have the option to complete College Level Examination Program (CLEP) exams. Students can choose from a list of 33 CLEP exams and, if they pass, pay to transfer in the corresponding number of credits to one of the 2,900 participating colleges (College Board, 2016). All of these opportunities result in an incoming population with a higher-than-expected transfer credit balance with some students transferring in so many credits that they begin their college career at sophomore or junior status (Saltarelli, 2016).

With all of the opportunities to earn and transfer college credit prior to beginning at a university, it becomes more difficult to predict an incoming class' previous academic experience. Students are likely to be entering their first year at college with at least some higher education experience, whether via testing out or earning credits (Saltarelli, 2016). Therefore, institutions are being put into a position where they feel forced to appeal to the broader audience, rather than targeting incoming freshman with no experience. As a result, if an SSC is offered, most institutions skirt the line between too little and too much information, which results in meeting the needs of neither group (Kimbark, Peters, & Richardson, 2017).

Freshman Characteristics. Incoming students to college often represent different ages, ethnicities, locations, and socioeconomic status (Simonson, Smaldino, & Zvacek, 2015); however, there are many common goals for this group to achieve in their freshman year of study. Liu and Chang (2014) explain that it is imperative that freshmen students "achieve positive

developments in various orientations, such as intelligence and academic abilities, establishing and maintaining relationships, cultivating self-identity, determining one's career direction, maintaining physical and mental health, and establishing a life philosophy" (p. 1384). Because of the varying backgrounds of freshmen students, it is impossible to predict whether any of these skills were adequately addressed in their pre-college experiences (Simonson, Smaldino, & Zvacek, 2015; Woods, 2015). Therefore, colleges and universities are seeking to fill gaps of knowledge while appealing to a broad audience (Reynolds & Sellnow, 2015).

Freshmen students in a residential program would likely indicate that their goals are to pass their courses, make friends, and have fun, but there are many other less overt skills to conquer (Baier, Markman, & Pernice-Duca, 2016). Unfortunately, their preparation for a college experience is often obscured by opportunities during their high school years, in that high schools control the access that students are given to the preparation tools that students need to enter college (Woods, 2015). Not all high schools give broad access to the college and career counselors, who often serve as the central hub for information about which classes to take, how to apply for financial aid, which colleges to apply for, and how to make the most of the admissions requirements (Woods, 2015). The students who are better prepared for the college experience in the manner described above tend to perform better and have a higher persistence rate (Tinto, 2012).

Retention of Students in Higher Education

At many higher education conferences, university leadership meetings, and among peer institutions, retention has become a common conversation topic in the past few years. The most likely reason is due to the rapid expansion of online course offerings, as most universities offer at least some courses in the online delivery format (National Center for Education Statistics, 2017).

As the quantity of online learners increases, however, so do the consequences of that increase. Students who pursue their degree online, either partially or completely, are less likely to retain than those who study in a residential format. Some research indicates that residential students retain six- to seven-times more than online students (Gayton, 2015).

While the landscape of higher education is shifting as a result of the disruption of online education, there is some data available which reinforces that retention has been a problem in higher education for many years. Historical retention rates may not be completely reliable, due to shifting definitions of retention, but there are some concerning historical statistics on first-year retention, which state that upwards of 38% of students will not retain past their first year and 29% will leave within the second year (Tinto, 2012). There is also a significant difference when one looks at public versus private institutions. For example, some private institutions may see 90% of their students retain from first year until commencement, while some public institutions will keep less than 30% of the same population. This is the value of factoring in both retention and persistence. Many of these students will not retain at the beginning institution, but they will persist at another (National Student Clearinghouse Research Center, 2017).

Retention versus Persistence. In much research, retention and persistence are used interchangeably. Yet as the learning environment became more transient, which can mostly be attributed to the proliferation of online education, the terms became more well-defined (Stavredes & Herder, 2014). The term *retention* is used to identify students who matriculate with the institution and remain with that institution until the conferral of their degree or completion of their education (National Student Clearinghouse Research Center, 2017; Stavredes & Herder, 2014). Persistence, however, is defined by students who matriculate at one institution before transitioning to one or more institutions before conferral or completion of their education

(National Student Clearinghouse Research Center, 2017; Stavredes & Herder, 2014). The key difference is that a student may persist in their pursuit of education, but they do not retain at the originating university. For example, community college students often persist but rarely retain, as these colleges are built to serve as transfer-oriented junior college or as technical school (Steinmann, Pope, & Miller, 2004).

Impacts on Retention. It is obvious why retention is so important to an institution, as their primary focus is to recruit students, educate them, and keep them until degree conferral, especially in public institutions where this is tied to funding. The impact on the student is often overlooked, however. There are multiple consequences for the student if they do not retain at the institution or persist at all, including personal or financial.

The most significant impact is on the student's mental and emotional state. Online students already struggle with confidence, self-efficacy, and connectedness, but, after dropping out of college, those will be compounded with feelings of failure, isolation, and anxiety (Tinto, 2017). For many students, it will take years to be work up the courage to try going to college again. These negative emotions can culminate in erratic decisions, self-harm, or severe depression (Villatre, Marcotte, & Potvin, 2017). But there are more concrete implications as well, since many students who drop out have difficulty finding high-paying, full-time work (Netanda, Mamabolo, & Themane, 2017). Many times, these students end up working part-time work at minimum wage, because the jobs that they want require a bachelor's degree (Porter, 2013).

Beyond the day-to-day financial effects on the student, withdrawing from classes or leaving the university can have long-term financial implications. According to NCES (2017), 86% of all students use financial aid to finance their education. Unfortunately, federal

regulations require that institutions complete a *Return to Title IV*, which calculates how much of their federal aid was used and how much to return to the government (Department of Education, 2017). When this occurs, a student may end up having a balance at the university, which must be resolved before attempting any further coursework at that institution. On the other hand, if the student successfully completes their courses and leaves at the end of the semester, the student will have to immediately begin repaying any loans, unless enrollment at another institution occurs (Carter, 2017). While there is a small grace period, the student will be required to begin payments when the grace period elapses. If student loans are not paid on time, students' loans may be placed in a defaulted state, which will be reported to the credit bureaus. As of June 2017, there were 8.5 million federal student borrowers that had loans in default (The Institute for College Access and Success, 2017).

Themes of Retention. According to Salter (2012), there are several themes that surface when evaluating retention, including student intentions, relationship to the institution, academics, social factors, and the external environment. These share many commonalities with Tinto's theory of student departure, discussed earlier in the chapter. The theme of intention is an interesting one, as it relates to online education, because both online and residential students begin with the intent to successfully complete a degree program (Simonson, Smaldino, & Zvacek, 2015). For an online student, their intention is often minimized if obstacles are presented or the student becomes apathetic. Unlike with resident students where their intent to retain is often reinforced by the inconvenience of packing up their dorm room, the strong relationships they developed on campus, and the idea of moving away from what is familiar, online students do not have the same type of personal relationships or physical restrictions that would reinforce their intent to stay (Salter, 2012; Simonson, Smaldino, & Zvacek, 2015).

On residential campuses, developing a relationship with the institution is a natural result of being surrounded by its buildings, students, faculty, and staff. Conversely, it is exceedingly difficult for online students to feel like they are a part of a larger organization, much less develop a sense of loyalty and community to the institution (Salter, 2012). Recent research proves that university name recognition can impact a student's attitude toward the school, and, therefore, help students feel like they are more deeply connected (Ruffalo Noel Levitz, 2016). For example, a student is more likely to feel a stronger affiliation to a large, nationally-recognized, public university, such as Duke University, rather than a small, local, private college in rural Indiana (Salter, 2012). In that way, smaller, lesser-known institutions have a more difficult journey to help a student develop a relationship with them. Students who feel loyalty and satisfaction about their institution have been shown to perform better in their courses, earn higher test scores, and retain at a higher rate (Beck & Milligan, 2013).

In some situations, students may feel that an institution is not as academically rigorous or worthwhile for their goals. Adult and online learners seek out programs that are flexible around their unique life situations, provide practical information that is applicable, and will be challenging but achievable. These learners are willing to expend the effort on their education, but they need to know that the effort is not wasted and will help improve their lives (Stavredes & Herder, 2014). An interesting reality is that online students seek out an academically rigorous program, but, if it's too rigorous, they might lose self-confidence in their capability to meet the standard. Conversely, if these students don't feel like they're learning anything, it makes it easier to decide to depart, as they would rather save the money and refocus their time on family or job. In this, higher education institutions must find the delicate balance between academic rigor and what is manageable for their student populations, which becomes increasingly difficult

with an undetermined and unpredictable population of online learners (Cochran, Campbell, Baker, & Leeds, 2014).

Beyond being challenged academically, it is natural that students would want to develop personal connections at the university they've chosen to attend. Therefore, social factors can have a significant impact on how students decided whether to retain at the current institution. At the course level, students perform better and retain longer if they receive quality, frequent, and practical feedback and communication from their professor (Croxton, 2014). From a broader perspective, students also have an expectation that they will create relationships with academic advisors, university staff, faculty, and fellow students both in and out of the classroom environment. Part of this community includes a support network when the students seek out academic assistance, like tutoring and technical support (Travers, 2016). If these social or support networks are not available or easily accessible, it can exacerbate an online student's feeling of isolation, which may ultimately lead to a departure decision.

For online students especially, the external environment has a demonstrable impact on a student's intent to retain, as they are often balancing their educational goals with competing personal priorities, like work, family, and finances (Cochran, Campbell, Baker, & Leeds, 2014). As one considers the influences of these external environments, one must recognize that it is often the personal sacrifices necessary to be educationally successful which have the strongest impact on a student's likelihood to retain (Netanda, Mamabolo, & Themane, 2017). For example, a single mother may be reluctant to sacrifice dinner, homework, and bedtime rituals, while a deployed military student will be required to prioritize their limited personal and allocated internet time. Online students continually weigh their goals and intent alongside the external environment and obligations when making their departure decision.

In addition to the themes of retention that Salter (2012) identifies, one must also look to the technology and course design of the online courses. In many cases, online students are older, less technologically savvy, and less confident about education than their counterparts, as well as many years separated from their previous educational experiences. Hesitation and trepidation will be predominant emotions, as it relates to technology, which is important to note as technology drives the engine of online learning (Travers, 2016). With the use of Learning Management Systems (LMS) and content delivery technologies, an online student can become overwhelmed, frustrated, or confused quickly, and that may result in a reluctance to complete coursework or even continue to the next term (Tuapawa, 2017). Therefore, course designers must determine how to build online curriculum that meets the needs of all varietals of online learners. Many instructional design experts suggest that approaches like Universal Design for Learning (UDL) would address many of these concerns, because UDL accounts for different learning styles, disabilities, and content delivery options (Tobin, 2014).

After analyzing some of the aspects, impacts, and themes of retention, the question then becomes what the institution should do to combat this problem that seems to be increasing each year, as the number of online learners grows. Several institutions are approaching this problem from a surgical perspective, in that they are targeting the direst situations and attempting to seek out solutions for them. As the research shows, the highest need is in the online learning environment for first-year students, whether transfer or first-time (Lane, Martin, & Henson, 2015). A common solution that has arisen in to create student success courses.

Student Success Courses

Student Success Courses (SSCs) were initially developed to address the problem of first- to second-year retention that was decreasing each year, as more students have been transferring

or leaving college by the end of their first year. According to Ruffalo Noel Levitz (2016), 11% of incoming students plan on transferring, 22% wonder if college is worth all of the effort expended, and 37% cannot state that they are *not* intending to transfer. The National Student Clearinghouse (2017) states that while 73.4% of incoming students persisted at some institution, only 61.1% retained at the starting institution. Because students are no longer necessarily committed to a particular university, it becomes more integral for institutions to assist students in developing attachments to the university and see the value of higher education in order for them to retain (Lehman & Conceicao, 2013). Thus, SSCs gained in popularity, as they were thought to address both concerns.

A common misconception about SSCs is that they are, by default, a gateway course, which is a course that is a foundational, credit-baring, lower-level course (Bloemer, Day, & Swan, 2017). Gateway courses, however, typically imply any course that acts as a prerequisite to the remainder of the program, such as a lower-level Accounting course which is required prior to taking any higher-level Accounting courses. While SSCs can serve as a course which is required for students to take in their first year, they are rarely prerequisite to content-specific courses. Also, an SSC usually does not contain any program-specific content, as it is meant to assist incoming and transfer students to transition to the university (Rutschow, Cullinan, & Welbeck, 2012).

Attempting to address the growing concern of underprepared and uncommitted students, many universities leveraged SSCs so that the curriculum can be customized to increase college student success and retention (Hoops, Yu, Burridge, & Wolters, 2015). In an attempt to provide a fair starting point for students beginning in post-secondary education, many institutions are beginning to offer – and, in some cases, require – a college success course for any incoming

student. These courses focus on a breadth of topics from time management and improving study habits to financial literacy and career planning (Cho & Karp, 2013). Often, these courses also introduce the students to the university through sections on the history and current features of the institution (O'Gara, Karp, & Hughes, 2009). The research is still questionable, however, as to whether these courses are having a significant impact, especially as it relates to the broad population of students who filter through the course (DeAngelo, 2014). It is also possible that the impact of these courses is indirect or conditional, which makes their results more difficult to track or analyze (Kimbark, Peters, & Richardson, 2017). In order to have a better understanding of the value of a student success course, it is important to further explore the information presented in the curriculum and the possible long-term impact for students.

When looking at SSCs, several studies have found no direct effect on retention from freshman year to sophomore year (DeAngelo, 2014). Although, almost all of these studies have been focused on residential students and have not considered the differences in the distance-learning population. DeAngelo (2014) also states that when you look at the probability that 25% of freshman students will not return for their sophomore year, it seems plausible that the decision of whether to retain is made during the freshman year and not at the completion of the term. Looking at the results of some studies, the direct impact of student success courses on retention are not obvious or consistent; however, some studies have shown that the quality of the student success course can be a positive predictor of student persistence.

Student Success Courses (SSCs) have evolved from their original iterations. In previous years, SSCs would serve as a college orientation, freshmen seminar, or first-year experience classes that focused on degree completion, program requirements, university familiarization, and course sequencing (Hoops, Yu, Burridge, & Wolters, 2015). While student success courses

originated for residential students, there is now a demand for these courses in the online setting as the volume of students studying online has grown (Allen & Lester Jr., 2012). Most of the content mirrors the residential offering but often adds course and learning management system (LMS) navigation.

Characteristics of SSCs

While SSCs can vary based on the needs of the university or their student body, there are some common topics that are consistently found in the courses that are developed to introduce students to successful learning techniques and the services offered by the institution. The depth of and approach to each topic is likely to be crafted by the course creator in partnership with the university's academic administration, although much of the literature bypasses how SSCs are built and what is specifically covered in each course (Hatch, Mardock-Uman, Garcia, & Johnson, 2018; Karp, Raufman, Efthimiou, & Ritze, 2017).

Time management. Most educators acknowledge that time management is one of the skills that few students have mastered. Proper time management could have a positive impact on a student's educational career. In fact, some research indicates that students who manage their time appropriately are often more committed to what they are doing and believe that they are performing better because of that clarity (Basila, 2014). Conversely, multiple studies have shown that some students attribute their lack of success on underestimating the time needed to succeed in their course (Coleman, Skidmore, & Weller, 2018; Yukselturk & Bulut, 2007).

Information literacy. As information becomes more accessible through the proliferation of the internet, it has become apparent in higher education that students are having difficulties distinguishing scholarly information from the rest of the information on the internet (Klubek, 2016; Ying, 2018). Sources like Wikipedia are being viewed at the same quality as peer-

reviewed articles from qualified journals, and this is having a significant impact on students' research and writing skills (Lanning & Mallek, 2017). Beyond simply searching for, identifying, and culling through information, faculty are increasingly noting that plagiarism and academic integrity infractions are rising, as students are not properly citing original sources (Saunders, Severyn, & Caron, 2017). Institutions are leveraging SSCs in an effort to educate students on proper information literacy as well as the implications of using improper sources or inaccurately citing their research.

Study Skills. A common perception of student learning behavior is the lack of study skills sufficient to be successful in an online learning program in a higher education setting (Hatch, Mardock-Uman, Garcia, & Johnson, 2018). These skills may include, but are not limited to, note-taking, test-taking, critical thinking, and assignment planning. In most schools, the SSCs address these learning needs from a high-level, in order to assist students in determining where their current skillset lies. In many cases, it is thought that students are unaware that their skills in these areas in insufficient (Bowering, Mills, & Merritt, 2017).

Metacognitive skills. It is the responsibility of the university to set students up for success, yet many students struggle with the core metacognition skills necessary to be successful (Karp, et al., 2017). With that in mind, institutions evaluate and challenge the critical thinking and study strategies of students as they complete SSCs (Bowering, Mills, & Merritt, 2017). It is thought that many learners have not been given the opportunity for practice and reflection, which would help them to become more aware of how they approach learning

Although results from SSCs have showed that there may be a correlation to student's retention, several studies indicate that it is best paired with programs and initiatives geared towards retaining first-year students (DeAngelo, 2014). SSCs are even more successful if they

are driven by executive and academic leadership with support from the entire campus community (DeAngelo, 2014; Rutschow, Cullinan, & Welbeck, 2012). Research also shows that SSCs allow students to engage in academic activities outside of the class, which have been shown to lead to increased retention because students are connected to the academic support community (DeAngelo, 2014).

Transfer Students

A key problem that exists within the current content of SSCs is that they are developed for incoming students with little-to-no college experience (Kimbark, Peters, & Richardson, 2017). While these students do represent a substantive percentage of students that may not retain, online transfer students seem to be more transient. One study showed that online transfer students were 15% less likely to retain past the first term (Bloemer, Day, & Swan, 2017). It is unclear as to why these students are not retaining, as institutions indicate that they leave in good academic standing (Georgia Institute of Technology, 2014).

Deeper attention is being paid to transfer students, as many are concerned that they are often an underserved and overlooked population (Jacobs, 2004; McLaughlin, McLaughlin, McLaughlin, Howard, & Whalen, 2015). In many universities, transfer student retention information is aggregated with the data for first-time, full-time, degree-seeking students, but these two populations are not the same and should not be treated as such (McLaughlin, et. al, 2015). By combining the datasets, it is almost impossible to truly understand the variance in retention for transfer students versus incoming freshmen, and these two populations require different interventions in order to retain them. Unfortunately, SSCs have very little within them that caters to the transfer population (Heddy, Sinatra, Seli, Taasoobshirazi, & Mukhopadhyay, 2016).

Summary

In exploring the problem of retention in higher education, it is imperative that one recognizes the role of the first-year student experience, especially because a larger percentage of students are studying completely online and may never make it onto the residential campus, if one even exists (National Student Clearinghouse Research Center, 2017; Claybrooks & Taylor, 2016; Hoops, et. al, 2015). There is a lot known about retention, as it relates to traditional, residential, institutional experiences. Study after study focuses on the needs of the traditional, 18-to-22-year-old student who lives on campus and struggles to connect with the faculty, students, staff, and institution itself. The research also provides detailed information about how residential institutions are developing first-year interventions to assist students in developing a deeper connection with the campus. Many retention-centric theories have been developed to address these concerns and suggest possible resolutions. Whether referencing Tinto's (1993) revised theory of student departure, van Gennep's (1960) rites of passage, or Bean's (1980) theory of attrition, one can find detailed information about the precursors to student departure decisions and possible interventions to retain the students. Each of these theories, however, was crafted based on a model that has shifted significantly in the past five to ten years.

Most of the programs that have been built to address the issue of first-year retention and persistence studied either residential initiatives or incoming students to an online learning environment. In today's educational environment, there are more students than ever taking courses and entire programs online. In addition, students are no longer simply transitioning from high school directly to college with no, or a limited, gap. Today's incoming student could be a newly-graduated student with 60 credit hours, a married mother of four try to earn her degree as an example for her children, or a retiree who has always yearned for that diploma on their wall.

Each of these populations come with their own set of characteristics that may make them more-or-less inclined to retain. Therefore, universities are being tasked with developing programs and initiatives that address the needs of the variety of individuals entering their community. Unfortunately, research has not been conducted which makes a thorough analysis of whether these initiatives, such as SSCs, are effective measures to retain such diverse student populations. If one is going to truly evaluate the efficacy of SSCs, one must look, not just at course completion, but what long-term impact was there on the student's retention (Bloemer, Day, & Swan, 2017).

Minimal, if any, research has been conducted on students who transfer credit and are forced to participate in an SSC that was developed with a different population in mind. Therefore, this study will examine the impact of an SSC on online students with prior college credit, by analyzing the retention rate of these students compared to students with little-to-no college experience. The intent of this research is to determine whether students with previous postsecondary experiences are positively impacted by being required to enroll in a student success course. The study will evaluate an SSC where both populations are enrolled and have the same curriculum, and it will conclude by comparing the minimally-experienced with those with more collegiate experience

CHAPTER THREE: METHODS

Overview

This study has two primary purposes. The first is to evaluate the role of a student success course (SSC) on a student's short-term, or subsequent term, retention if the student transferred in any credit hours. Second, the study will explore the same predictor variables' role on a student's long-term retention if the student transferred in any credit hours. The methodology implemented to fulfill these purposes will be outlined in this chapter. Each aspect of the study will be described, from the design of the research to the explanation of participants, setting, and instrumentation. The chapter also will address the research questions, hypotheses, procedure, and data analysis.

Design

A binomial logistic regression design was used to evaluate whether number of credit hours transferred and the completion of a student success course can predict the retention of an online undergraduate college student. This design best befits this study because it is meant to measure the difference between two predictor, independent variables and a dichotomous, dependent, or criterion, variable, and it is assumed to be linear (Gall, Gall, & Borg, 2007). For the purposes of this study, the criterion variable is student retention, while the predictor variables are the completion of a student success course and the number of credit hours transferred.

Research Questions

The research questions for this study are:

RQ1: How accurately can short-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

RQ2: How accurately can long-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

Hypotheses

The null hypotheses for this study are:

$H_0$1: There is no significant predictive relationship between the criterion variable (short-term retention) and the predictor variables (success course completion and hours transferred) for online undergraduate students?

$H_0$2: There is no significant predictive relationship between the criterion variable (long-term retention) and the predictor variables (success course completion and hours transferred) for online undergraduate students?

Participants and Setting

The participants for this study were grouped from a list of all students who enrolled in a specific SSC at any point in the 2015-2016 academic year, which spans from fall 2015 until summer 2016. This SSC was offered at a four-year, non-profit, private university in Central Virginia. A stratified, random selection of students from the entire population who were enrolled in the online, undergraduate course were included.

The total population available is 11,404, which exceeds the minimum requirement for a medium effect size. To meet the requirement for a medium effect size, Gall, Gall, and Borg (2007) states that one must have at least 66 participants with a statistical power of 0.7 at the 0.05 alpha level. From the entire population, a sample of 3,000 students were randomly-selected and separated into the three categories, which are no experience at zero credit hours, between 1 and 30 credit hours for moderately experienced, and 31 or more credit hours for highly experienced

students. This sample was selected from the list of enrollees in an online student success course that is required for all incoming students who transfer in fewer than 60 credit hours. This introductory course is designed to teach students the basic information needed to succeed in an online education program, as well as familiarize them with the university.

Of the larger population of 11,561 students, 61% are female, 38.8% are male, and 0.2% did not disclose their gender. The ethnic origin of the population is 33.6% Caucasian, 17.2% African-American, 4.2% Hispanic-American, 0.6% Asian-American, and 41.7% did not disclose. Students in this population are broken up into several age ranges, which include 52% that are 15 – 29 years old, 35% that are 30 – 45, and 13% that are 46 and older. From this population, a random, stratified selection of students was pulled in order to account for the two predictor variables of SSC completion and credit hours transferred.

Within the sample population, the students were categorized by those who did successfully complete the SSC (N = 2178) and those that did not (N = 822). For students who did successfully complete the SSC, 62% are female, 37% are male, and 0.1% did not disclose their gender. The ethnic origin of the population is 44% Caucasian, 10% African-American, 0.5% Hispanic, and 45% did not disclose or selected multiple origins. Students are disseminated in the same age ranges, of which 51% are 16 – 29 years old, 35% are 30 – 45, and 14% are 46 and older. Of the students who did not successfully complete the SSC, 59% are female, 41% are male, and 0% are not identified. The ethnic origin of the population is 24% Caucasian, 28% African-American, 0.5% Hispanic, and 47% did not disclose or selected multiple origins. Following the same age categories, there are 51% that are 16 – 29 years old, 34% that are 30 – 45, and 15% that are 46 and older.

The study also looked at those who transferred in credit hours as a categorized, predictor variable. Transfer hours was categorized into students who transferred in no credits (N = 1091), fewer than 30 credit hours (N = 981), and more than 30 credit hours (N = 928). Students with no experience are 59% female, 41% male, and 0% did not disclose their gender. The ethnic origin of the population is 33% Caucasian, 20% African-American, 0.5% Hispanic, and 47% did not disclose or selected multiple origins. Students in this population are broken up into several age ranges, which include 53% that are 16 – 29 years old, 32% that are 30 – 45, and 15% that are 46 and older. Regarding students with between one and 30 credit hours, there are 63% are female, 36% are male, and 0.1% did not disclose their gender. The ethnic origin of the population is 34% Caucasian, 16% African-American, 0.5% Hispanic, and 49% did not disclose or selected multiple origins. Students in this population are broken up into several age ranges, which include 52% that are 16 – 29 years old, 36% that are 30 – 45, and 12% that are 46 and older. For the population of students who transferred in between 30 and 60 credit hours, the demographics showed 60% female, 40% male, and 0% undisclosed their gender. The ethnic origin of the population is 37% Caucasian, 14% African-American, 0.5% Hispanic, and 48% did not disclose or selected multiple origins. Students in this population are broken up into the same age ranges, which reveal 50% that are 16 – 29 years old, 38% that are 30 – 45, and 12% that are 46 and older.

Instrumentation

Two instruments were used for data collection in this study: online undergraduate student retention and successful course completion. Online undergraduate student retention is categorized in a binary manner, in that students either retained or they did not. The same is true for successful course completion, as students either passed the course with an A, B, C, or D

grade, as per the university standard, or did not pass the course. This study was conducted using archival data, which is sometimes referred to as secondary data (Cheng & Phillips, 2014), that has been identified and stored by the university in a self-hosted data center. Due to the availability and storage of large subsets of data, it has become more broadly acceptable to use existing, archival data (Johnston, 2014). While currently severely underutilized, Johnston (2014) claims that the use of secondary data can be used to more expeditiously conduct research using information that already exists in large quantities (Smith, 2011).

Several sources have affirmed the validity of using secondary data in regression analyses (Koziol & Arthur, 2011; Rudestam & Newton, 2015). Other research claims that secondary data could have greater validity because of the size of the samples that can be accessed (Johnston, 2014). Additionally, some organizations are using secondary data analysis as a key aspect of their evidence-based policy-making in order to strengthen the policy (Boeren, 2018). The purpose of validity is to ensure that the instrument is measuring what it claims to measure (Warner, 2013). Because this is a raw data extract from archives, there should be no question of the validity of the instrument.

Reliability is also of high importance, as it verifies that the data is consistently defined, dependable, and reputable (Creswell, 2014; Pierce, 2008). Because all university data is stored and managed by a single department at the institution, data governance and definitions are facilitated centrally by the internal business intelligence office. This ensures that the information does not have variance in the way that it is accessed or defined, which is the goal of reliability (Warner, 2013). Any request to the university would be addressed by the same department using the a consistent data classifications.

Procedures

Permission to conduct the study was obtained via the university's academic administration (see Appendix A) as well as the Institutional Review Board (IRB) prior to initiating the research (see Appendix B). Once academic administration and IRB approval were gained, the following steps were completed to collect the data. The details in the subsequent sections will enable this binomial logistic regression study to be repeated.

To begin the process of collecting the data, it was necessary to limit the population that was analyzed. The selected university has more than one student success course, but only one is required for all online students with fewer than 60 earned credit hours, although some students with more than 60 hours choose to enroll in this course as an elective. Therefore, this course, which will be referred to as UNIV100, best fits the purpose of this study, as the research is focusing on students who are required to complete an SSC. Once UNIV100 was identified, the research required the obtaining of student demographic and academic information.

The data for this study was collected based on coursework completed during the 2015-2016 academic year. The detailed information was anonymized first to ensure that no student was able to be individually identified. Students must have matriculated into the predetermined student success course offered by the university between fall of 2015 and summer of 2016. To comply with university policy, the researcher submitted a formal request to the academic administration for this information to be provided (See Appendix A). A support ticket was then submitted to the university analytics department to request that a direct output of the data be provided in a comma separated version (CSV) that can be opened in Microsoft Excel. Data that was requested included success indicator of course completion (Y/N), student demographic data (age, gender, and ethnicity), number of credit hours transferred, term of last attendance, and

grade point average. Participants were identified as having no experience (zero credit hours) minimally-experienced (up to 30 credit hours), , and highly-experienced (more than 30 credit hours). In order to cleanly evaluate the populations, it will not be taken into account how many previous institutions were attended, as the university does not keep consistent records of all prior colleges attended.

Upon receipt of the support ticket, a Business Data Analyst from the university's Analytics and Decision Support (ADS) office will create a script using Procedural Language/Structured Query Language (PL/SQL), which is a domain-specific language which allows the user to query information found in a relational database management system (RDBMS). The university stores its information using an Oracle RDBMS on version 12c. Once the query is completed, a raw extract of the data was compiled into a CSV document and uploaded into the support ticket system called ServiceNow, which can then be downloaded by the researcher. Upon receipt of the Excel document, the research was coded appropriately to categorize the students' age ranges and experience level, and then it was uploaded into the Statistical Package for the Social Sciences (SPSS) version 25. As it relates to quantitative research analysis, SPSS is considered the predominant statistical software (Xiao, Xu, & Xu, 2015).

The requested information includes age, gender, ethnicity, state of residence, credit hours transferred, credit hours earned, credit hours enrolled, academic program, credit hours earned after the SSC, current enrollment status, current academic status, and whether the student completed the SSC. To ensure complete anonymity, the identities of the assigned professor was not requested or exposed. For the purposes of this study, a student's name and contact information are irrelevant. The code for this data was reviewed by department peers, to avoid

unintentional errors in the data. Once this information was received, it was uploaded into SPSS for data analysis. The original file was stored in a secure folder on Dropbox with access limited to the researcher, and it will be stored for no fewer than 3 years.

Data Analysis

A binomial logistic regression analysis was used to evaluate whether number of credit hours transferred and the completion of a student success course can predict the retention of an online undergraduate college student. Based on the single criterion variable of student retention and the two predictor variables of SSC completion and transferred credit hours, the equation for this logistic regression would be:

$$\text{logit}(Y) = b_0 + b_1X_1 + b_2X_2 + \varepsilon.$$

Where X_1 represents the number of credit hours transferred and X_2 represents whether the student successfully completed the SSC. The criterion variable is represented by Y.

This design best befits this study because it is meant to model a relationship between the categorical, predictor variables and a dichotomous, criterion variable, and it is assumed to be linear (Gall, Gall, & Borg, 2007). For the purposes of this study, the criterion variable is student retention, while the predictor variables are the completion of a student success course and the number of credit hours transferred.

There are multiple assumptions that must be passed in order to ensure that this analysis is appropriate for the study (Warner, 2013). First, the criterion variable of student retention is dichotomous, meaning that the student either retained at the university or they did not. Next, both predictor variables are either continuous or nominal. The predictor variable of student success course completion is measured on a nominal scale, as it has two categories of either successful or unsuccessful attempt at completion. The other predictor variable of credit hours

transferred could be measured either continuously or nominally, but this researcher has approached them nominally and assigned them to categories of no experience (zero transferred credit hours), minimally-experienced (between 1 and 30 credit hours) or highly-experienced (more than 30 credit hours).

The third assumption requires that there is no relationship between the variables to ensure that each of them are observed independently (Warner, 2013). It also requires that each category is independent within the variable, meaning that a student cannot exist within one category. Because the criterion variable of retention is a binary state, meaning either the student does or does not retain, this variable would qualify as independent. The predictor variables are both nominal, and the student either does or does not pass the SSC and transfers in credit hours in either of the three categories of no experience, minimally-experienced, or highly-experienced.

The next assumption seeks to ensure that there is a linear relationship between the continuous predictor variables and the logit transformation of the criterion variable. Because none of the predictor variables are being measured continuously, however, this assumption is not applicable. If it were, a Box-Tidwell approach would be taken to test for this assumption. Another assumption to consider is to verify that the data does not show multicollinearity, which ensures that the predictor variables are not similar to each other and will not correlate to one another. To test for this assumption, one would evaluate the Tolerance/VIF values in SPSS. If the Variance Inflation Factor (VIF) value is found to be between one and ten, then multicollinearity is not present, but a value of less than one or greater than ten will reveal multicollinearity.

The final assumption is to confirm that there are no unusual points in your data, which are classified as significant outliers, leverage, or influential points. The presence of these

unusual points can have a detrimental impact on the regression equation and the SPSS results (Warner, 2013). It was important to detect these outliers during the SPSS statistical analysis, which can be done using case wise diagnostics or by reviewing the residuals on a scatter plot.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative study is to explore the relationship of transferred credit hours and successful completion of a student success course on a student's likelihood to retain at a private, non-profit university both in the short-term and long-term. The population (N = 11,404) includes any student enrolled in UNIV100 between fall 2015 and summer 2016, and a random selection of students (N = 3,000) was derived from the entire population. The analysis was conducted using a binary logistic regression to evaluate the predictor variables' relationship with the criterion variable, retention. There are two predictor variables, which include the categorical variables of success course completion and transferred credit hours. Using the Cox and Snell and Nagelkerke's pseudo R^2 values, the model was tested for strength. The Wald chi-squared test was also utilized to determine the statistical significance of each predictor variable. In this chapter, the research questions and null hypotheses are restated, the population descriptive statistics are provided, and the results of the binomial logistic regression analysis are explained, separated by null hypothesis.

Research Question(s)

RQ1: How accurately can short-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

RQ2: How accurately can long-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university?

Null Hypotheses

$H_0$1: There is no significant predictive relationship between the criterion variable (short-term retention) and the predictor variables (success course completion and hours transferred) for online undergraduate students?

$H_0$2: There is no significant predictive relationship between the criterion variable (long-term retention) and the predictor variables (success course completion and hours transferred) for online undergraduate students?

Descriptive Statistics

The data for this study includes 3,000 students who were enrolled in a student success course between fall 2015 and summer 2016. The predictor variable of credit hours transferred is categorical with three categories, while the success course completion variable is binary. A basic overview of the descriptive statistics can be seen below in Table 1 for the first research question regarding short-term retention and Table 2 for the other research question which addresses long-term retention.

Table *1*

Descriptive Statistics

Criterion Variable: Short-Term Retention

Variable	*Retained*		*Did Not Retain*		*N*
SSC Successful	1919	(88%)	259	(12%)	2178
SSC Unsuccessful	215	(26%)	607	(74%)	822
No Experience	659	(60%)	432	(40%)	1091
Minimal Experience	719	(73%)	262	(27%)	981
Highly Experienced	756	(81%)	172	(19%)	928

Table *2*

Descriptive Statistics

Criterion Variable: Long-Term Retention

Variable	*Retained*		*Did Not Retain*		*N*
SSC Successful	903	(42%)	1275	(58%)	2178
SSC Unsuccessful	34	(04%)	788	(96%)	822
No Experience	231	(21%)	860	(79%)	1091
Minimal Experience	303	(31%)	678	(69%)	981
Highly Experienced	403	(43%)	525	(57%)	928

Although student demographics were not analyzed as a part of either research question, it is important to consider the demographical makeup of the sample population. Table 3 provides the breakdown of the genders, age ranges, and ethnicity of the student sample population for research question one, and Table 4 presents the same for the second research question.

Table 3

Demographic Descriptive Statistics

Criterion Variable: Short-Term Retention

Variable	*Retained*		*Did Not Retain*		*N*
Female	1294	(71%)	532	(29%)	1826
Male	840	(72%)	334	(28%)	1174
15-29	1098	(71%)	458	(29%)	1556
30-45	765	(73%)	289	(27%)	1054
46-99	271	(69%)	119	(31%)	390
White/Caucasian	806	(77%)	235	(23%)	1041
Black/African American	307	(60%)	201	(40%)	508
Hispanic/Latino	94	(76%)	29	(24%)	123
Unreported/Multiple	927	(70%)	401	(30%)	1328

Table 4

Demographic Descriptive Statistics

Criterion Variable: Long-Term Retention

Variable	*Retained*		*Did Not Retain*		*N*
Female	581	(32%)	1245	(68%)	1826
Male	356	(30%)	818	(70%)	1174
15-29	485	(31%)	1071	(69%)	1556

30-45	322	(31%)	732	(69%)	1054
46-99	130	(33%)	260	(67%)	390
White/Caucasian	412	(40%)	629	(60%)	1041
Black/African American	99	(20%)	409	(80%)	508
Hispanic/Latino	43	(40%)	80	(60%)	123
Unreported/Multiple	383	(29%)	945	(71%)	1328

Results

Data Screening

Before uploading into SPSS, the data was evaluated to ensure that there were no missing components, abnormalities, or characteristics that might impede the analysis. Each variable was reviewed in detail to ensure that the data was accurate and undamaged, meaning that it abides by the standard data definitions for each component and has no missing fields. Then, the sample was randomly selected from the entire population and prepared for entry into SPSS.

There was a binary, predictor variable of student success course completion, which was coded for use in SPSS. The SSC completion variable was coded as 0 – Non-Successful completion, 1 – Successful completion. The second categorical, predictor variable was for transferred credit hours. Transfer hours was coded as 0 – No experience, 1 – Minimal experience, 2 – Highly experienced. The criterion variable of retention was coded as 0 – Not retained, 1 – Retained.

Assumptions

A binary logistic regression analysis requires that several assumptions remain intact. First, the criterion variable must be dichotomous (Warner, 2013). The criterion variable for this study only looks at whether the student has retained or did not retain. The first assumption, therefore, has been upheld. The second assumption necessitates that the predictor variables are

either continuous or categorical. The predictor variables for this study are both categorical, so this assumption is also met.

The third assumption indicates that the variables must be observed independently and that students must be independent within the variable (Warner, 2013). The variables support this assumption, and the assumption is passed. Next, there must be a linear relationship between the continuous predictor variable and the logit transformation of the criterion variable. This assumption is required for any variable that is continuous. Initially, the variable of transferred credit hours was considered as a continuous variable. After conducting a Box-Tidwell test and failing, the variable was transitioned to categorical, because it did not pass this assumption. For this assumption, a Box-Tidwell approach is no longer necessary because neither of the predictor variables is continuous (Warner, 2013). Another assumption requires that there is no multicollinearity. A Tolerance/VIF test was conducted, which proved that multicollinearity was not present, as the VIF score was 1.

Finally, a case wise diagnostic was conducted to ensure that there are no significant outliers. The data was evaluated for any cases that were above 2.5 standard deviations. Out of the 35 cases identified as possible outliers, none exceeded the stated standard deviations. Therefore, this assumption has been met.

Results for Null Hypothesis One

A binomial logistic regression analysis was conducted to predict a student's likelihood to retain to the subsequent semester based on the successful completion of a student success course and the number of credit hours transferred into the institution. The predictor variables include successful completion of the SSC and credit hours transferred. The results of the logistic

regression for Null Hypothesis One were determined to be statistically significant, $X^2(3) = 1103.293$, $p < 0.001$. Refer to Table 3 for the Omnibus Test of Model Coefficients.

Table *5*

Omnibus Tests of Model Coefficients

		Chi-Square	*df*	*Sig.*
Step 1	Step	1103.293	3	.000
	Block	1103.293	3	.000
	Model	1103.293	3	.000

There was a moderate strength to the association between the two predictor variables and the criterion variable, according to Cox and Snell's R^2 (.308) and Nagelkerke's R^2 (.440). This result shows that 31% or 44% of the variance in the criterion variable is being influenced by the predictor variables in 84% of the cases. See the Model Summary details in Table 4.

Table *6*

Model Summary

Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	2502.428[a]	.308	.440

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Additionally, the Hosmer and Lemeshow goodness of fit test is not statistically significant ($p = 0.958$), which indicates that the model is not a poor fit. Refer to the Hosmer and Lemeshow test results in Table 5.

Table *7*

Hosmer and Lemeshow Test

Step	*Chi-square*	*df*	*Sig.*
1	.645	4	.958

Further analysis for the model was conducted using the Wald chi-squared test to evaluate the statistical significance of each predictor variable. The Wald chi-squared test for course success was found to be significant, $X^2(1) = 815.315$, $p < 0.001$. The result for no experience was found to be significant, $X^2(2) = 31.007$, $p < 0.001$, as was the result for minimal experience, $X^2(1) = 30.125$, $p < 0.001$, and the result for high experience, $X^2(1) = 6.175$, $p = 0.013$. This result signifies that each of the variables added significantly to the model, and therefore the researcher must reject the null hypothesis. In addition, the odds ratios were evaluated to examine the association between the criterion and predictor variables. Table 5 summarizes the results for Wald chi-squared statistics, odds ratios, and 95% confidence interval.

Table *8*

Variables in the Equation

		B	*S.E.*	*Wald*	*df*	*.Sig*
Step 1[a]	Course Success (Y)	-2.970	.104	814.315	1	.000
	No Experience			31.007	2	.000
	Minimal Experience	-.706	.129	30.125	1	.000
	High Experience	-.336	.135	6.175	1	.013
	Constant	2.368	.109	471.883	1	.000

Results for Null Hypothesis Two

A binary logistic regression analysis was conducted to predict a student's likelihood to retain to long-term based on the successful completion of a student success course and the number of credit hours transferred into the institution. The predictor variables include successful completion of the SSC and credit hours transferred. The results of the logistic regression for Null Hypothesis One were determined to be statistically significant, $X^2(3) = 547.028$, $p < 0.001$ (see Table 6).

Table 6

Omnibus Tests of Model Coefficients

		Chi-Square	*df*	*Sig.*
Step 1	Step	547.028	3	.000
	Block	547.028	3	.000
	Model	547.028	3	.000

There was a moderate strength to the association between the two predictor variables and the criterion variable, according to Cox and Snell's R^2 (.167) and Nagelkerke's R^2 (.234). This result shows that 17% or 23% of the variance in the criterion variable is being influenced by the predictor variables in 70% of the cases (see Table 7).

Table *9*

Model/Summary

Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	3178.702[a]	.167	.234

b. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Additionally, the Hosmer and Lemeshow goodness of fit test is not statistically significant (p = 0.890), which indicates that the model is not a poor fit. Refer to the Hosmer and Lemeshow test in Table 8.

Table *10*

Hosmer and Lemeshow Test

Step	*Chi-square*	*df*	*Sig.*
1	1.126	4	.890

Further analysis for the model was conducted using the Wald chi-squared test to evaluate the statistical significance of each predictor variable. The Wald chi-squared test for course success was found to be significant, $X^2(1) = 222.394$, $p < 0.001$. The result for no experience was found to be significant, $X^2(2) = 59.114$, $p < 0.001$, as was the result for minimal experience, $X^2(1) = 57.561$, $p < 0.001$, and the result for high experience, $X^2(1) = 21.257$, $p < 0.001$. This result signifies that each of the variables added significantly to the model, and therefore the researcher must reject the null hypothesis. In addition, the odds ratios were evaluated to examine

the association between the criterion and predictor variables. Table 9 summarizes the results for Wald chi-squared statistics, odds ratios, and 95% confidence interval.

Table *11*

Variables in the Equation

		B	*S.E.*	*Wald*	*df*	*.Sig*
Step 1[a]	Course Success (Y)	-2.702	.181	222.394	1	.000
	No Experience			59.114	2	.000
	Minimal Experience	-.804	.106	57.561	1	.000
	High Experience	-.469	.102	21.257	1	.000
	Constant	.055	.071	.608	1	.436

CHAPTER FIVE: CONCLUSIONS

Overview

A binomial logistic regression analysis was conducted to evaluate whether short-term or long-term retention can be predicted based on number of transferred credit hours and the completion of a student success course (SSC) for online undergraduate students in a four-year, private, non-profit university. Each research question was investigated to determine the statistical significance of the relationship of every predictor variable to the criterion variable. The sections below discuss the results, implications, and limitations of the analysis and make suggestions for future research.

Discussion

The purpose of this quantitative, correlational study was to determine whether successful completion of a student success course can be an accurate predictor of student retention when coupled with the number of previously-earned credit hours for online, undergraduate students. Specifically, this research sought to evaluate whether the number of previously-earned credit hours can be a statistically significant predictor for a student's short-term or long-term retention after the successful completion of a required SSC. Some research has been conducted previously to look at each individual aspect to determine whether an SSC can influence student retention or to explore the characteristics of transfer students, and there is much research available regarding retention, both in the short-term and long-term. There is, however, little research that has focused on the combination of these variables in an online learning environment. Because retention should be considered both in the short-term, meaning whether a student stays in the subsequent term, and in the long-term, meaning that the student is still enrolled or has conferred a degree, each research question was analyzed and will be discussed individually.

Research Question One (Short-term Retention)

The first research question explored whether the successful completion of a student success course (SSC) could be used to predict short-term retention for online undergraduate students when coupled with the number of transferred credit hours. Research indicates that a student's departure decision is highly influenced by their pre-entry attributes in combination with their early experience with the academic system (Tinto, 1975; Tinto, 1993). These pre-entry attributes factor in family background, skills and abilities, and prior schooling, which includes credit hours earned through previous institutions, pre-college credits, and those earned through testing out of courses (Marling, 2013; McLaughlin, et al., 2015; Whang, et al., 2017). Recent data indicates that the number of transfer students is increasing signficantly each year (NSCRC, 2017; Gerhardt & Masakure, 2016), and these students are at a high risk of transferring again before finally conferring their degree (Yang, Briggs, & Avalos, 2018), especially after their first semester (Bloemer, Day, & Swan, 2017). A solution adopted by some institutions is to offer a specific course, typically referred to as SSCs, designed to introduce students to the skills needed to be successful at that institution. These courses, however, are often designed for the larger population of students that are new to higher education, instead of factoring in the specific needs of transfer students (Hoops, et al., 2015; Claybrooks & Taylor, 2016).

The results for the binomial logistic regression analysis indicate that the combination of the successful completion of an SSC and transferred credits are statistically significant as it relates to short-term retention. This study was designed to review the relationship between an SSC on students who fit into one of three transfer categories, which are broken down into students who did not transfer in any credit hours (N = 1560), students who transferred in between one and thirty credit hours (N = 981), and students who transferred in more than thirty credit

hours (N = 928). The results are consistent across all three categories of transfer credits, including no experience ($p < 0.001$), minimal experience ($p < 0.001$), and high experience ($p = 0.013$), as well as whether a student successfully completed the SSC ($p < 0.001$). Out of the 3,000 students included in the sample population, 71% (N = 2,134) of the students retained until the subsequent semester.

The literature surrounding SSCs describes how these courses were specifically designed to target student retention, especially because data shows that only 61.1% of students retain at their starting institution (NSCRC, 2017). Universities are also leveraging SSCs as a mechanism to introduce students to their school's culture as well as prepare learners with the skills needed to be successful in their future courses (Cho & Karp, 2013; Hoops, et al., 2015; O'Gara, Karp, & Hughes, 2009). The results of this research seem to support this claim, as students who successfully completed the SSC are more likely to retain at that same institution.

However, not all literature supports the assertion that SSCs are making a significant impact. Some studies indicate that SSCs can be used to target only a percentage of students or that the effect of the course is indirect or conditional, meaning that one cannot assume that a student's retention or success is tied to their completion of the SSC (DeAngelo, 2014; Kimbark, Peters, & Richardson, 2017). According to the results of this research, students who successfully completed this SSC were more likely to retain to the subsequent term. This does not counteract other research, as further evaluation will need to be done to rule out any possible alternative influences that may have skewed the study. When one looks at the data and the student count, however, it is difficult to identify any variable that might be consistently applied to this study's large sample population that would cause the results to change that drastically. Instead, it might be beneficial to explore the content of this SSC to determine whether that might have a positive

effect in a different setting with an alternative sample population.

Similar studies stated that SSCs have had no direct impact on year-to-year retention in residential programs and have asserted that students make the decision to depart during the academic year instead of during a specific course (DeAngelo, 2014). A similar theme is detected in the theory of student departure by Tinto (1993), in that he suggests that students make a departure decision during the academic year as a result of both academic and non-academic experiences at the university. Although that may hold true in residential settings, the results of this study reveal that a student's short-term departure decision can be influenced by the successful completion of an SSC, whether they have previous higher education experience or not.

The most significant difference between most of the research in this field and this study is that this research targeted the online population of students. The demand for online SSCs has grown exponentially, as the proliferation of online higher education is prevalent across many different types of institutions, especially those who are just now moving into the online learning space (Kimbark, Peters, & Richardson, 2017; NCES, 2017; Netanda, Mamabolo, & Themane, 2017). There has been much debate, however, about whether the content in an SSC caters to the broader online student population and whether an SSC should be offered at all (Heddy, et al., 2016; McLaughlin, et al., 2015). The review of these results in combination with the literature suggests that the successful completion of an SSC can increase an online student's likelihood to retain to the next semester whether the student transfers credit into a university or not.

Research Question Two (Long-term Retention)

Research question two explored whether it is possible to predict online students' long-term retention based on their successful completion of an SSC combined with the number of

credit hours transferred. While the library of research regarding long-term online retention is relatively limited due to its relative nascence (NCES, 2017), some early studies claim that students are six-to-seven-times more likely to retain residentially than they are in online programs (Gayton, 2015). Others state that over one-third of students do not retain into their second year, and a third of those that retain will choose to depart prior to their third semester (Tinto, 2012). Some universities have begun exploring SSCs as mechanisms to counterbalance the characteristics of long-term college students (Hoops, et al., 2015; Rutschow, Cullinan, & Welbeck, 2012).

The results for the binomial logistic regression analysis indicate that the combination of the successful completion of an SSC and transferred credits are statistically significant as it relates to long-term retention. This study was designed to review the impact of an SSC on students who fit into one of three transfer categories, which are broken down into students who did not transfer in any credit hours (N = 1560), students who transferred in between one and thirty credit hours (N = 981), and students who transferred in more than thirty credit hours (N = 928). The results are consistent across all three categories of transfer credits, including no experience ($p < 0.001$), minimal experience ($p < 0.001$), and high experience ($p < 0.001$), as well as whether a student successfully completed the SSC ($p < 0.001$). Out of the 3,000 students included in the sample population, 31% (N = 937) of the students either have conferred a degree or are a current student at the institution.

The results from this second research question are interesting, in that the percentage of students who have seen long-term retention doesn't seem to be a high number, yet the results of the study show that it is statistically significant, meaning that there is a correlation between successful completion of an SSC and long-term retention, when factoring in the number of credit

hours transferred into the university. In looking at the literature, there is some logic to this result, as studies show that SSCs were created to address the long-term needs of students (Kimbark, Peters, & Richardson, 2017).

In his research into the reasons why students make a decision to depart a university, Tinto (1993) indicates that students are seeking a connection with the university on academic and non-academic levels. Students are seeking a university that they can connect with, whether that be by name recognition, social networks, or faculty-to-student communication (Ruffalo Noel Levitz, 2016; Salter, 2012). Online students are also expecting to develop an understanding of the university's student support programs, both academically and socially (Beck & Milligan, 2013; Lehman & Conceicao, 2013; Stavredes & Herder, 2014). SSCs, in many cases, are developed to address these retention needs, to ensure that students are able to build a long-lasting relationship with the university and welcomes the student into the university community, while offering the academic content and rigor that students need to build their confidence in themselves and in their chosen institution (Hoops, et al., 2015; Rutschow, Cullinan, & Welbeck, 2012; Tuapawa, 2017). The fact that the results in this study were significant for students who completed the SSC no matter whether they had no, minimal, or high college experience indicates the value of SSCs for online universities looking to retain students beyond their first term or year.

Implications

This study sought to explore specific details around a growing higher education concern, as many institutions are noting an increase in student departure after the first semester or year of a student's educational career (Bowering, Mills, & Merritt, 2017; McLeod, 2019). Some institutions are creating and relying on SSCs to counter or mitigate this concern, but the current literature doesn't consistently support the long-term or short-term value of SSCs as it relates to

student retention. Research on SSCs have shown that there are early indicators of long-term success, but there is limited longitudinal data to explore the impact of these courses long-term (Bowering, Mills, & Merritt, 2017; Cho & Karp, 2013; Karp, et al., 2017).

This research also introduced the topic of transfer students, as most of the research available did not address the fact that many of the incoming students to an institution are bringing with them prior experience (Georgia Institute of Technology, 2014; Lane, Martin, & Henson, 2015; Shapiro, et al., 2015; Whang, et al., 2017; Yang, Briggs, & Avalos, 2018). In fact, the sample population used for this study showed that 48% of the students taking UNIV100 had credit transferred into the institution. Each of these students was required to take the SSC, which contains the exact same content for all students without regard for how much experience the students have had prior to enrolling. Research shows, however, that the characteristics of transfer students are different from those without prior college experience (Shapiro, et al., 2015; Whang, et al., 2017; Yang, Briggs, & Avalos, 2018).

The results of this study indicate that there is statistical correlation between students' successful completion of an SSC and their prior educational experience, as the model was able to correctly predict short-term retention correctly 84.2% of the time and long-term retention 69.5% of the time. Both predictor variables were shown to be statistically significant, meaning that the variables can be leveraged in combination to significantly predict student short-term and long-term retention. The model was stronger for short-term retention, which may indicate that there are additional variables introduced after the student's short-term retention that might impact their long-term retention.

The unanticipated success from this study is the consistent predictive value of the SSC as it relates to student retention at the institution. Historically, institutions have leveraged SSCs to

target new students, without acknowledging that the definition of new student has evolved in recent years with the growth of transferring students (McLeod, 2019; Whang, et al., 2017). The complexity only grows when one factors in the rapid growth of online education. If the proliferation of online learning continues its current trajectory, the number of online transfer students will expand as well (NCES, 2017). It is incumbent on higher education institutions to proactively address these concerns by offering first-year experience initiatives that cater to the needs of new-to-college students as well as those that have prior learning experience. Based on the results of this study, it would be wise for higher education administrators to consider the implementation of SSCs to improve both short-term and long-term retention.

Limitations

A limitation to this study is that the research did not explore demographics or personal characteristics of the population as a potential factor in the analysis. While the sample did include basic demographic data such as age, race or gender regarding the students included in the sample, none of their personal characteristics were included as a part of the study or analysis. It is, therefore, impossible to explore the statistical significance of the results as it relates to a student's age, race, gender, or other demographic categories. Demographic data is frequently utilized to narrow down the results of a study to a contained population, but it was determined to be overly-segmenting the population for this study.

A second limitation of this study is that SSCs can be significantly different at each university in the content that is included, the delivery modality of the course, and how it is facilitated. While many SSCs have similar goals of preparing students for their continued experience at the university, the topics that are addressed in each course vary based on the needs of each university and their student populations (Allen & Lester Jr., 2012; Claybrooks & Taylor,

2016; Hoops, et al., 2015). Because this study was specifically designed to look at the results of the course holistically, student scores on individual assignments and student engagement with the learning materials were not factored in.

A third limitation relates to the lack of insight into the number of previously attended universities or colleges. Research indicates that many students transfer to and from multiple universities, and the effect of these transfers on the retention at future universities is not yet known (Marling, 2013; NCES, 2017; USGAO, 2017). Because this study only considered the total number of credit hours earned without factoring in the number or type of former universities, it is impossible to assess the student's breadth of understanding regarding higher education. The foundational experience of students is likely to be stronger if the student has attended multiple universities in the past, but it is also possible that the student is more likely to depart from the current university if they have transferred from multiple universities in the past (Shapiro, et al., 2018). With the goal of keeping the current study focused on the effect of SSCs on retention for students who transferred credits into the chosen university, the number of previous colleges was considered outside of the scope of the current project.

The fourth limitation lies in the consideration of the type of previously earned credits. In many high school environments, it is possible to earn undergraduate credits through programs like Advanced Placement, CLEP, and Dual Credit (College Board, 2016; Saltarelli, 2016; Tugend, 2017). Some of these credit-earning programs do not represent experience in an actual classroom, either online or residential, and the students transferring in these types of credits should not be conflated with credits resulting from completed courses in an undergraduate learning environment as they may not adequately prepare students for higher education.

The final limitation is the means by which the university in the study calculates transferred credits. Due to the internal processes of the university, only credits accepted for transfer by the university are inputted into the student information system, which means that a student may have technically earned more credits than appears in the analyzed data. These unaccepted credits may be from unaccredited institutions or include courses that were not successfully completed at the previous institution. Because the university does not input this data into their system, it is impossible to detect how many students might be impacted by this and how that additional data might affect this study.

Recommendations for Future Research

The results of this study offered further insight into whether completing student success courses have a practical significance for the retention of transfer students. As research is continuously expanding on these topics, suggestions for future research are suggested below based on the results and limitations of this study.

1. Future studies should explore a similar population in alternative university settings, such as public universities or community colleges.
2. Additional studies should be conducted to explore the effect that demographics (e.g. location, age, race, gender, etc.) and personal characteristics (e.g. socio-economic status, religious affiliation, military experience, etc.) may have on the results.
3. A qualitative study should be designed and conducted to identify why students with previous experience are more likely to retain after completing an SSC.
4. A quantitative, logistic regression analysis should be conducted to identify the effect of alternative entry-level courses on short- and long-term retention.

5. A similar study should be conducted to explore the effect of SSCs on the retention of graduate students who have transferred in previous credit.
6. A similarly-designed study should be conducted to evaluate the effect of SSCs on the retention of undergraduate, residential students who transfer in credit.
7. A comparative analysis study should be conducted to compare the retention rates of transfer students who successfully completed an SSC and those that did not take an SSC at the beginning of their educational journey.
8. A future study should be conducted to determine whether transfer students who successfully completed an SSC and did not retain at the university transferred to another university for a subsequent term.
9. Future research should be conducted that factors in the number of universities or colleges previously attended prior to enrollment at the university in order to compare the statistical significance of the number of universities versus the number of previously-earned credit hours.
10. Additional research should be conducted that explores whether the specific content of the SSC effects the retention of transfer and/or non-transfer students after their successful completion of the course and whether changes to the content of the SSC has any impact.

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APPENDIX A

LIBERTY UNIVERSITY
OFFICE *of the* PROVOST

January 30, 2019

Bailey Anderson


Ms. Anderson,

Thank you for reaching out with regard to your request to conduct research using data from Liberty University students. This letter acknowledges that I have received and reviewed your request. I extend my approval to conduct the research project entitled *Using Student Success Courses and Transferred Credit Hours to Predict Students' Likelihood to Retain in Online Higher Education*.

Once approval is received from Liberty University's Institutional Review Board, I agree to allow the necessary access for the completion of the research project.

Sincerely,


Dr. Scott Hicks
Provost
Liberty University

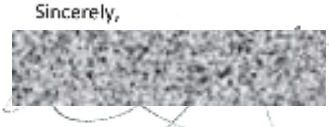
LIBERTY UNIVERSITY | COLLEGE of APPLIED STUDIES & ACADEMIC SUCCESS

January 30, 2019

To Whom It May Concern:

I approve and support the use of archival data related to courses under CASAS for Bailey Anderson's research project titled, *Using Student Success Courses and Transferred Credit Hours to Predict Students' Likelihood to Retain in Online Higher Education.*

Sincerely,



Brian C. Yates, Ed.D.
Dean

1971 UNIVERSITY BLVD
LYNCHBURG, VA 24515

P (434) 592-4110
F (434) 582 2297

WWW.LIBERTY.EDU

APPENDIX B

APPLICATION FOR THE USE OF HUMAN RESEARCH PARTICIPANTS

IRB APPLICATION #: 3680

I. APPLICATION INSTRUCTIONS

1. Complete each section of this form, using the gray form fields (use the tab key).
2. If you have questions, hover over the blue (?), or refer to the IRB Application Instructions for additional clarification.
3. Review the IRB Application Checklist.
4. Email the completed application, with the following supporting documents (as separate word documents) to irb@liberty.edu:
    a. Consent Forms, Permission Letters, Recruitment Materials
    b. Surveys, Questionnaires, Interview Questions, Focus Group Questions
5. If you plan to use a specific Liberty University department or population for your study, you will need to obtain permission from the appropriate department chair/dean. Submit documentation of permission (email or letter) to the IRB along with this application and check the indicated box below verifying that you have done so.
6. **Submit one signed copy of the signature page (available on the IRB website) to any of the following:**
    a. Email: As a scanned document to irb@liberty.edu
    b. Fax: 434-522-0506
    c. Mail: IRB 1971 University Blvd. Lynchburg, VA 24515
    d. In Person: Green Hall, Suite 1887
7. Once received, applications are processed on a first-come, first-served basis.
8. Preliminary review may take up to 3 weeks.
9. Most applications will require 3 sets of revisions.
10. The entire process may take between 1 and 2 months.
11. *We cannot accept applications in formats other than Microsoft Word. Please do not send us One Drive files, Pdfs, Google Docs, or Html applications.* ***Exception:*** *The IRB's signature page, proprietary instruments (i.e., survey creator has copyright), and documentation of permission may be submitted as pdfs.*

Note: Applications and supporting documents with the following problems will be returned immediately for revisions:

1. Grammar, spelling, or punctuation errors
2. Lack of professionalism
3. Lack of consistency or clarity
4. Incomplete applications

Failure to minimize these errors* ***will *cause delays in your processing time***

II. BASIC PROTOCOL INFORMATION

1. STUDY/THESIS/DISSERTATION TITLE (?)
Title: THE RELATIONSHIP BETWEEN CREDIT HOURS, STUDENT SUCCESS COURSE COMPLETION, AND STUDENT PERSISTENCE FOR ONLINE, UNDERGRADUATE STUDENTS IN A FOUR-YEAR INSTITUTION

2. PRINCIPAL INVESTIGATOR & PROTOCOL INFORMATION (?)	
Principal Investigator *(person conducting the research):* Bailey Anderson	
Professional Title *(Student, Professor, etc.):* Student	
School/Department *(School of Education, LUCOM, etc.):* School of Education	
Phone: 571.217.0540	LU Email: bpanderson@liberty.edu
Check all that apply:	
☒ Faculty	☒ Online Graduate Student
☒ Staff	☐ Residential Undergraduate Student
☐ Residential Graduate Student	☐ Online Undergraduate Student
This research is for:	
☐ Class Project	☐ Master's Thesis
☐ Scholarly Project (DNP Program)	☒ Doctoral Dissertation
☐ Faculty Research	☐ Other:
If applicable, indicate whether you have defended and passed your dissertation proposal:	
☐ N/A ☐ No *(Provide your defense date):* ☒ Yes *(Proceed to Associated Personnel Information)*	

3. ASSOCIATED PERSONNEL INFORMATION (?)	
Co-Researcher(s):	
School/Department:	
Phone:	LU/Other Email:
Faculty Chair/Mentor(s): Dr. Lisa Foster	
School/Department: School of Education	
Phone: 434.582.7912	LU/Other Email: lafoster@liberty.edu
Non-Key Personnel *(Reader, Assistant, etc.):* Dr. Alexandra Barnett and Dr. Kevin Struble	
School/Department: Center for Academic Development and School of Education	
Phone:	LU/Other Email: abarnett2@liberty.edu/kdstruble@liberty.edu
Consultant(s) *(required for Ed. D Candidates)*: Dr. Lisa Foster	
School/Department: School of Education	
Phone: 434.582.7912	LU/Other Email: lafoster@liberty.edu

4. USE OF LIBERTY UNIVERSITY PARTICIPANTS (?)
Do you intend to use LU students, staff, or faculty as participants *OR* LU students, staff, or faculty data in your study? ☐ No *(Proceed to Funding Source)* ☒ Yes (*Complete the section below)*

# of Participants/Data Sets: Approximately 2,000	**Department:** College of Applied Studies and Academic Services (CASAS)
Class(es)/Year(s): UNIV104/1516AY	**Department Chair:** Brad Burgess
Obtaining permission to utilize LU participants *(check the appropriate box below):*	
SINGLE DEPARTMENT/GROUP: If you are including faculty, students, or staff from a single department or group, you must obtain permission from the appropriate Dean, Department Chair, or Coach and submit a signed letter or date/time stamped email to the IRB indicating approval to use students from that department or group. **You may submit your application without having obtained this permission**; however, the IRB will not approve your study until proof of permission has been received.	
☐ I have obtained permission from the appropriate Dean/Department Chair/Coach, and attached the necessary documentation to this application.	
☒ I have sought permission and will submit documentation to the IRB once it has been provided to me by the appropriate Dean/Department Chair/Coach.	
MULTIPLE DEPARTMENTS/GROUPS: If you are including faculty, students, or staff from multiple departments or groups (i.e., all sophomores or LU Online), **the IRB will need to seek administrative approval on your behalf.**	
☐ I am requesting that the IRB seek administrative approval on my behalf.	

5. FUNDING SOURCE (?)
Is your research funded? ☒ No *(Proceed to Study Dates)* ☐ Yes (*Complete the section below)*
Grant Name/Funding Source/Number:
Funding Period (Month & Year):

6. STUDY DATES (?)
When will you perform your study? *(Approximate dates for collection/analysis):* **Start** *(Month/Year)*: February 2019 **Finish** *(Month/Year)*: April 2019

7. COMPLETION OF REQUIRED CITI RESEARCH ETHICS TRAINING (?)
List Course Name(s) *(Social and Behavioral Researchers, etc.)*: Cultural Competence in Research, Assessing Risk, Informed Consent, Privacy and Confidentiality, Liberty University Basic Course, Hot Topics
Date(s) of Completion: March 23 - April 10 2018

III. OTHER STUDY MATERIALS AND CONSIDERATIONS

8. STUDY MATERIALS LIST (?)	
Please indicate whether your proposed study will include any of the following:	
Recording/photography of participants (*voice, video, or images*)?	☐ Yes ☒ No
Participant compensation *(gift cards, meals, extra credit, etc.)*?	☐ Yes ☒ No
Advertising for participants *(flyers, TV/Radio advertisements)*?	☐ Yes ☒ No
More than minimal psychological stress?	☐ Yes ☒ No
Confidential data collection *(participant identities known but not revealed)*?	☐ Yes ☒ No
Anonymous data collection *(participant identities not known)*?	☒ Yes ☐ No

Extra costs to the participants *(tests, hospitalization, etc.)*?	☐ Yes ☒ No
The inclusion of pregnant women (*for medical studies*)?	☐ Yes ☒ No
More than minimal risk?*	☐ Yes ☒ No
Alcohol consumption?	☐ Yes ☒ No
Protected Health Information *(from health practitioners/institutions)*?	☐ Yes ☒ No
VO_2 Max Exercise?	☐ Yes ☒ No
Pilot study procedures *(which will be published/included in data analysis)*?	☐ Yes ☒ No
Please indicate whether your proposed study will include the use of blood:	
Use of blood?	☐ Yes ☒ No
Total amount of blood:	
Blood draws over time period *(days)*:	
Please indicate whether your proposed study will include any of the following materials:	
The use of rDNA or biohazardous material?	☐ Yes ☒ No
The use of human tissue or cell lines?	☐ Yes ☒ No
Fluids that could mask the presence of blood *(including urine/feces)*?	☐ Yes ☒ No
Use of radiation or radioisotopes?	☐ Yes ☒ No
***Note: Minimal risk** is defined as "the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in everyday life or during the performance of routine physical or physiological examinations or tests. [45 CFR 46.102(i)]. If you are unsure if your study qualifies as minimal risk, contact the IRB.*	

9. INVESTIGATIONAL METHODS (?)

Please indicate whether your proposed study will include any of the following:

The use of an Investigational New Drug (IND) or an Approved Drug for an Unapproved Use?
☒ No
☐ Yes *(Provide the drug name, IND number, and company):*

The use of an Investigational Medical Device or an Approved Medical Device for an Unapproved Use?
☒ No
☐ Yes *(Provide the device name, IDE number, and company):*

IV. PURPOSE

10. PURPOSE OF RESEARCH (?)

Write an original, brief, non-technical description of the purpose of your research. Include in your description your research hypothesis/question, a narrative that explains the major constructs of your study, and how the data will advance your research hypothesis or question. This section should be easy to read for someone not familiar with your academic discipline: My research is looking into how student success courses are effective measures which can predict the success and retention of transfer students into online programs. Research Questions - RQ1: How accurately can short-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university? RQ2: How accurately can long-term retention of online, undergraduate students be predicted using the completion status of a student success course and the number of hours transferred into a university? My major theoretical construct that undergirds the research is Tinto's theory of student departure (Tinto, 1993), which claims that a student's pre-entry attributes and personal commitments are directly correlated with a

student's departure decision from a university. Tinto also claims that the academic and social experiences that a student has at university can strongly influence the student's likelihood to retain. Because transfer students have already shown that they are willing to depart from at least one institution, Tinto's theory can provide a lot of insight into what might influence a transfer student's departure decision. This research will also show whether student success courses can help transfer students feel a greater sense of academic and social connection to the university.

V. PARTICIPANT INCLUSION/EXCLUSION CRITERIA

11. STUDY POPULATION (?)

Provide the inclusion criteria for the participant population *(gender, age range, ethnic background, health status, occupation, employer, etc.)*: This study requires a diverse population and will not exclude participants based on age, gender, ethnicity, or any demographic information.

Provide a rationale for selecting the above population: Due to the diversity of online learners, it is imperative to have representation in a study that matches the demographics of the larger population.

Are you related to any of your participants?
☒ No
☐ Yes *(Explain):*

Indicate who will be excluded from your study population *(e.g., persons under 18 years of age)*: There is intention to exclude anyone, as all data will be deidentified.

If applicable, provide rationale for involving any special populations *(e.g., children, ethnic groups, mentally disabled, low socio-economic status, prisoners)*: N/A

Provide the maximum number of participants you plan to enroll for each participant population and justify the sample size *(You will not be approved to enroll a number greater than the number listed. If at a later time it becomes apparent that you need to increase your sample size, submit a Change in Protocol Form and wait for approval to proceed)*: The maximum number of participants should not exceed 2,000.

ANSWER THE FOLLOWING QUESTION ONLY IF YOU ARE CONDUCTING A PROTOCOL WITH NIH, FEDERAL, OR STATE FUNDING:

Researchers sometimes believe their particular project is not appropriate for certain types of participants. These may include, for example, women, minorities, and children. If you believe your project should not include one or more of these groups, please provide your justification for their exclusion. Your justification will be reviewed according to the applicable NIH, federal, or state guidelines: N/A

12. TYPES OF PARTICIPANTS (?)

Who will be the focus of your study? *(Check all that apply)*

☒ Normal Participants (Age 18-65)	☐ Pregnant Women
☐ Minors (Under Age 18)	☐ Fetuses
☐ Over Age 65	☐ Cognitively Disabled
☒ College/University Students	☐ Physically Disabled
☐ Active-Duty Military Personnel	☐ Participants Incapable of Giving Consent
☐ Discharged/Retired Military Personnel	☐ Prisoners or Institutional Individuals
☐ Inpatients	☐ Specific Ethnic/Racial Group(s)
☐ Outpatients	☐ Other potentially elevated risk populations
☐ Patient Controls	☐ Participant(s) related to the researcher

Note: *Only check the boxes if the participants will be the focus (for example, ONLY military or ONLY students). If they just happen to be a part of the broad group you are studying, you only need to check "Normal Participants." Some studies may require that you check multiple boxes (e.g., Korean males, aged 65+).*

VI. RECRUITMENT OF PARTICIPANTS

13. CONTACTING PARTICIPANTS (?)

Describe in detail how you will contact participants regarding this study *(include the method(s) used—email, phone call, social media, snowball sampling, etc.)*: N/A - I will be pulling deidentified, archival data.

14. SUBMISSION OF RECRUITMENT MATERIALS (?)

Submit a copy of all recruitment letters, scripts, emails, flyers, advertisements, or social media posts you plan to use to recruit participants for your study as separate Word documents with your application. Recruitment templates are available on the IRB website.

Check the appropriate box:

☐ All of the necessary recruitment materials will be submitted with my application.

☒ My study strictly uses **archival** data, so recruitment materials are not required.

15. LOCATION OF RECRUITMENT (?)

Describe the location, setting, and timing of recruitment: N/A

16. SCREENING PROCEDURES (?)

Describe any screening procedures you will use when recruiting your participants *(i.e., screening survey, database query, verbal confirmation, etc.)*: N/A

17. CONFLICTS OF INTEREST (?)

Do you have a position of grading or professional authority over the participants *(e.g., Are you the participants' teacher, principal, or supervisor?)*?

☐ No *(Proceed to Procedures)*

☒ Yes *(Explain what safeguards are in place to reduce the likelihood of compromising the integrity of the research, e.g., addressing the conflicts in the consent process and/or emphasizing the pre-existing relationship will not be impacted by participation in the research.):* I have taught sections of the course that will feed the data. However, because all of the data will be deidentified, there is no bias or possibility that it will impact the students or research.

Do you have any financial conflicts of interest to disclose *(e.g., Do you or an immediate family member receive income or other payments, own investments in, or have a relationship with a non-profit organization that could benefit from this research?)***?**

☒ No *(Proceed to Procedures)*

☐ Yes *(State the funding source/financial conflict and then explain what safeguards are in place to reduce the likelihood of compromising the integrity of the research.):*

VII. RESEARCH PROCEDURES

18. PROCEDURES (?)

Write an original, non-technical, step by step, description of what your participants will be asked to do during your study and data collection process. If you have multiple participant groups, *(ex: parents, teachers, and students)* or control groups and experimental groups, please specify which group you are asking to complete which task(s). **You do not need to list signing/reading consent as a step:**

Step/Task/Procedure	**Time (Approx.)**	**Participant Group(s)** *(All, Group A, Group B, Control Group, Experimental Group, etc.)*
1. Be accepted into LU	Indeterminate	All
2. Register for INFT101/UNIV104 (same course)	10 min	All
3. Complete the course	8 wks	All
4.		
5.		
6.		
7.		
8.		

19. SUBMISSION OF DATA COLLECTION INSTRUMENTS/MATERIALS (?)

Submit a copy of all instruments, surveys, interviews questions, outlines, observation checklists, prompts, etc. that you plan to use to collect data for your study as separate Word documents with your application. Pdfs are **ONLY** acceptable for proprietary instruments.

Check the appropriate box:

☐ All of the necessary data collection instruments will be submitted with my application.

☒ My study strictly uses **archival** data, so data collection instruments are not required.

20. STUDY LOCATION (?)

Please describe the location(s)/site(s) in which the study will be conducted. Be specific *(include city, state, school/district, clinic, etc.)*: Liberty University, Lynchburg, VA.

***Note: For School of Education research**, investigators must submit documentation of permission from each research site to the IRB prior to receiving approval. If your study involves K-12 schools, district-level approval is acceptable. If your study involves colleges or universities, you may also need to seek IRB approval from those institutions. You may seek permission prior to submitting your IRB application, however, **do not** begin recruiting participants. If you find that you need a conditional approval letter from the IRB in order to obtain permission, one can be provided to you once all revisions have been received and are accepted.*

VIII. DATA ANALYSIS

21. NUMBER OF PARTICIPANTS/DATA SETS (?)

Estimate the number of participants to be enrolled or data sets to be collected: The total number of possible participants is ~11,000, but the chosen select will be fewer than 2,000.

22. ANALYSIS METHODS (?)

Describe *how* the data will be analyzed and what will be done with the data and the resulting analysis, including any plans for future publication or presentation: After being imported into SPSS, the data will be analyzed using a binomial logistic regression based on the single criterion variable of student retention and the two predictor variables of student success course completion and transferred credit hours. This data is being analyzed for the purposes of a dissertation for the fulfillment of the requirements for my Ed.D. Typically, a dissertation is published and posted to the library after it is completed. It is possible that I will submit it for publication in a journal, if I feel the quality is there. :)

IX. PARENTAL/GUARDIAN CONSENT

23. PARENTAL/GUARDIAN CONSENT REQUIREMENTS (?)

Does your study require parental/guardian consent? *(If your participants are under 18, parental/guardian consent is required in most cases.)*

☒ No *(Proceed to Child Assent)*

☐ Yes *(Answer the following question)*

Does your study entail greater than minimal risk without the potential for benefits to the participant?

☐ No

☐ Yes *(Consent of both parents is required)*

X. ASSENT FROM CHILDREN

24. CHILD ASSENT (?)

Is assent required for your study? *(Assent is required unless the child is not capable due to age, psychological state, or sedation OR the research holds out the prospect of a direct benefit that is only available within the context of the research.)*

☒ No *(Proceed to Consent Procedures)*

☐ Yes

Note: *If the parental consent process (full or part) is waived (See XIII below) assent may be also. See the IRB's informed consent page for more information.*

XI. PROCESS OF OBTAINING INFORMED CONSENT

25. CONSENT PROCEDURES (?)

Describe in detail *how and when* you will provide consent information *(If applicable, include how you will obtain consent from participants and/or parents/guardians and/or child assent.)*: Because data is deidentified, archival data, consent is not necessary.

XII. USE OF DECEPTION

26. DECEPTION (?)

Are there any aspects of the study kept secret from the participants *(e.g., the full purpose of the study)***?**

☒ No

☐ Yes *(describe the deception involved and the debriefing procedures)*:

Is deception used in the study procedures?

☒ No

☐ Yes *(describe the deception involved and the debriefing procedures)*:

Note: *Submit a post-experiment debriefing statement and consent form offering participants the option of having their data destroyed. A debriefing template is available on our website.*

XIII. WAIVER OF INFORMED CONSENT OR MODIFICATION OF REQUIRED ELEMENTS IN THE INFORMED CONSENT PROCESS

27. WAIVER OF INFORMED CONSENT ELEMENTS (?) ☐ **N/A**

Please indicate why you are requesting a waiver of consent *(If your reason does not appear as an option, please check N/A. If your reason appears in the drop-down list, complete the below questions in this section)***:** My research strictly uses archival data.

Does the research pose no more than minimal risk to participants *(i.e., no more risk than that of everyday activities)***?**

☐ No, *the study is greater than minimal risk.*

☒ Yes, *the study is minimal risk.*

Will the waiver have no adverse effects on participant rights and welfare?

☐ No, *the waiver will have adverse effects on participant rights and welfare.*

☒ Yes, *the waiver will not adversely affect participant rights and welfare.*

Would the research be impracticable without the waiver?

☒ No, *there are other ways of performing the research without the waiver.*

☐ Yes, *not having a waiver would make the study unrealistic.* *(Explain)*:

Will participant debriefing occur *(i.e., will the true purpose and/or deceptive procedures used in the study be reported to participants at a later date)***?**

☒ No, *participants will not be debriefed.*

☐ Yes, *participants will be debriefed.*

Note: *A waiver or modification of some or all of the required elements of informed consent is sometimes used in research involving deception, archival data, or specific minimal risk procedures.*

XIV. WAIVER OF THE REQUIREMENT FOR PARTICIPANTS TO SIGN THE INFORMED CONSENT DOCUMENT

28. WAIVER OF SIGNED CONSENT (?) ☐ **N/A**

Please indicate why you are requesting a waiver of signatures *(If your reason does not appear as an option, please check N/A. If your reason appears in the drop-down list, complete the below questions in this section)***:** My study uses an anonymous data collection method.

Would a signed consent form be the only record linking the participant to the research?

☒ No, *there are other records/study questions linking the participants to the study.*

☐ Yes, *only the signed form would link the participant to the study.*

Does a breach of confidentiality constitute the principal risk to participants?

☐ No, *there are other risks involved greater than a breach of confidentiality.*

☒ Yes, *the main risk is a breach of confidentiality.*

Does the research pose no more than minimal risk to participants *(i.e., no more risk than that of everyday activities)***?**

☐ No, *the study is greater than minimal risk.*

☒ Yes, *the study is minimal risk.*

Does the research include any activities that would require signed consent in a non-research context *(e.g., liability waivers)***?**

☒ No, *there are not any study related activities that would normally require signed consent*

☐ Yes, *there are study related activities that would normally require signed consent*

Will you provide the participants with a written statement about the research *(i.e., an information sheet that contains all of the elements of an informed consent form but without the signature lines)***?**

☒ No, *participants will not receive written information about the research.*

☐ Yes, *participants will receive written information about the research.*

Note: *A waiver of signed consent is sometimes used in anonymous surveys or research involving secondary data. This does not eliminate the need for a consent document, but it eliminates the need to obtain participant signatures.*

XV. CHECKLIST OF INFORMED CONSENT/ASSENT

29. STATEMENT (?)

Submit a copy of all informed consent/assent documents as separate Word documents with your application. Informed consent/assent templates are available on our website. Additional information regarding consent is also available on our website.

Check the appropriate box:

☐ All of the necessary consent/assent documents will be submitted with my application.

☒ My study strictly uses **archival** data, so consent documents are not required.

XVI. PARTICIPANT PRIVACY, DATA SECURITY, & MEDIA USE

30. PRIVACY (?)

Describe what steps you will take to protect the privacy of your participants *(e.g., If you plan to interview participants, will you conduct your interviews in a setting where others cannot easily overhear?)*: Data will be deidentified prior to being sent to the researcher. Students will be assigned a randomly generated ID, which ensures the privacy and protection of the students.

Note: *Privacy refers to persons and their interest in controlling access to their information.*

31. DATA SECURITY (?)

How will you keep your data secure *(i.e., password-locked computer, locked desk, locked filing cabinet, etc.)***?**: Data will be kept on a personal computer, which remains in the possession of the researcher. Data will be stored on a cloud server in a private folder, to which only the researcher has access.

Who will have access to the data *(i.e., the researcher and faculty mentor/chair, only the researcher, etc.)***?**: Only the researcher.

Will you destroy the data once the three-year retention period required by federal regulations expires?

☐ No

☒ Yes *(Explain how the data will be destroyed):* Files will be deleted, and the digital trash can will be emptied to ensure that the data has been purged.

Note: *All research-related data must be stored for a minimum of three years after the end date of the study, as required by federal regulations.*

32. ARCHIVAL DATA (SECONDARY DATA) (?)

Is all or part of the data archival *(i.e., previously collected for another purpose)***?**

☐ No *(Proceed to Non-Archival Data)*

☒ Yes *(Answer the questions below)*

Is the archival data publicly accessible?

☒ No *(Explain how you will obtain access to this data)*: A ticket will be submitted to ADS, who will pull the requested data fields. Data will be uploaded to the ticket system to ensure data privacy.

☐ Yes *(Indicate where the data is accessible from, i.e., a website, etc.)*:

Will you receive the raw data stripped of identifying information *(e.g., names, addresses, phone numbers, email addresses, social security numbers, medical records, birth dates, etc.)***?**:

☐ No *(Describe what data will remain identifiable and why this information will not be removed)*:

☒ Yes *(Describe who will link and/or strip the data—this person should have regular access to the data and should be a neutral party not involved in the study)*: Data is managed by the Analytics and Decision Support (ADS) office of the university. They will pull the applicable data.

Can the names or identities of the participants be deduced from the raw data?
☒ No *(Place your initials in the box: I will not attempt to deduce the identity of the participants in this study)*: BPA
☐ Yes *(Describe)*:

Please provide the list of data fields you intend to use for your analysis and/or provide the original instruments used in the study: Generic user ID, gender, age, ethnicity, credit hours transferred, number of preceding schools, credit hours completed prior to INFT101/UNIV104, Letter grade earned for INFT101/UNIV104, Number of semesters completed post course, number of credit hours earned post-course, degree conferral indicator (y/n), GPA.

Note: *If the archival data is not publicly available, submit proof of permission to access the data (i.e., school district letter or email). If you will receive data stripped of identifiers, this should be stated in the proof of permission.*

33. NON-ARCHIVAL DATA (PRIMARY DATA) (?)

If you are using non-archival data, will the data be anonymous to you *(i.e., raw data does not contain identifying information and cannot be linked to an individual/organization by use of pseudonyms, codes, or other means)*? **Note:** For studies involving audio/video recording or photography, select "No"
☒ N/A: I will not use non-archival data *(data was previously collected, skip to Media)*
☐ No *(Complete the "No" section below)*
☐ Yes *(Complete the "Yes" section below)*

****COMPLETE THIS SECTION IF YOU ANSWERED "NO" TO QUESTION 33****

Can participant names or identities be deduced from the raw data?
☐ No
☐ Yes *(Describe)*:

Will a person be able to identify a subject based on other information in the raw data *(i.e., title, position, sex, etc.)***?**
☐ No
☐ Yes *(Describe)*:

Describe the process you will use to ensure the confidentiality of the participants during data collection and in any publication(s) *(i.e., you may be able to link individuals/organizations to identifiable data; however, you will use pseudonyms or a coding system to conceal their identities)*:

Do you plan to maintain a list or codebook linking pseudonyms or codes to participant identities?

☐ No

☐ Yes *(Please describe where this list/codebook will be stored and who will have access to the list/codebook. It should not be stored with the data.)*:

****COMPLETE THIS SECTION IF YOU ANSWERED "YES" TO QUESTION 33****
Describe the process you will use to collect the data to ensure that it is anonymous:
Place your initials in the box: I will not attempt to deduce the identity of the participants in this study:
Note: *If you plan to use participant data (i.e., photos, recordings, videos, drawings) for presentations beyond data analysis for the research study (e.g., classroom presentations, library archive, or conference presentations) you will need to provide a materials release form to the participant.*

34. MEDIA USE (?)	
Will your participants be audio recorded?	☒ No ☐ Yes
Will your participants be video recorded?	☒ No ☐ Yes
Will your participants be photographed?	☒ No ☐ Yes
****COMPLETE THIS SECTION IF YOU ANSWERED "YES" TO ANY MEDIA USE****	
Include information regarding how participant data will be withdrawn if he or she chooses to leave the study*:	
Will your participants be audio recorded, video recorded, or photographed without their knowledge?** ☐ No ☐ Yes *(Describe the deception and debriefing procedures)*:	
****Note on Withdrawal:*** *Add the heading "How to Withdraw from the Study" on the consent document and include a description of the procedures a participant must perform to be withdrawn.* *****Note on Deception:*** *Attach a post-experiment debriefing statement and a post-deception consent form, offering the participants the option of having their recording/photograph destroyed and removed from the study.*	

XVII. PARTICIPANT COMPENSATION

35. COMPENSATION (?)

Will participants be compensated *(e.g., gift cards, raffle entry, reimbursement)***?**
☒ No *(Proceed to Risks)*
☐ Yes *(Describe)*:

Will compensation be pro-rated if the participant does not complete all aspects of the study?
☐ No
☐ Yes *(Describe)*:

Note: *Certain states outlaw the use of lotteries, raffles, or drawings as a means to compensate or recruit research participants. Research compensation exceeding $600 per participant within a one-year period is considered income and will need to be filed on the participant's income tax returns. If your study is grant funded, Liberty University's Business Office policies might affect how you compensate participants. Contact the IRB for additional information.*

XVIII. PARTICIPANT RISKS AND BENEFITS

36. RISKS (?)

Describe the risks to participants and any steps that will be taken to minimize those risks. *(Risks can be physical, psychological, economic, social, or legal. If the only potential risk is a breach in confidentiality if the data is lost or stolen, state that here)*: The only potential risk is a breach of confidentiality. To protect against that, data will be stored in a protected folder on the cloud to which only the researcher has access.

Will alternative procedures or treatments that might be advantageous to the participants be made available?
☒ No
☐ Yes *(Describe)*:

ANSWER THE FOLLOWING QUESTION ONLY IF YOUR STUDY IS CONSIDERED GREATER THAN MINIMAL RISK:

Describe provisions for ensuring necessary medical or professional intervention in the event of adverse effects to the participants *(e.g., proximity of the research location to medical facilities, or your ability to provide counseling referrals in the event of emotional distress)*:

37. BENEFITS (?)

Describe the possible <u>direct</u> benefits to the participants. *(If participants are not expected to receive direct benefits, please state "No direct benefits." Completing a survey or participating in an interview will not typically result in direct benefits to the participant.)*: No direct benefits
Describe any possible benefits to society: This research draws greater attention to transfer students in an online environment, which is a growing population in online learning. It also evaluates the efficacy of student success courses for transfer students, as well as non-transfer students.
Evaluate the risk-benefit ratio. *(Explain why you believe this study is worth doing, even with any identified risks.)*: Because of the very limited risk and the possibility of broad benefits, I strongly believe that this study is worth completing, as it helps to further the research in online learning, but it also calls attention to a growing population of students.