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Online First-Generation Students: A Qualitative Study on Retention

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ONLINE FIRST-GENERATION STUDENTS: A QUALITATIVE STUDY ON RETENTION

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ABSTRACT

Higher education institutions face several complicated and difficult challenges and one of those challenges, student retention, has been around for many years. Tinto (2006), a major researcher on college retention whose research has spanned over four decades, suggested that one of the most widely studied areas of higher education is student retention. Since the inception of higher education, institutions have explored and researched retention strategies to combat attrition. Many of the strategies and theories that address retention focus solely on the campus-based student. With the growth of technology, online education has become a new avenue toward earning a college degree, especially for first-generation students. While it has provided first-generation students with new opportunities and flexibility, it also creates new challenges for institutions (Sileo & Sileo, 2008). This new avenue has shifted the way in which higher education institutions approach an old challenge, but within a new environment.

The rapid growth of enrollment in online courses and degree programs suggests it is important for institutions to understand the factors that directly influence the retention of online students. According to research by Willging and Johnson (2004), online students are twice as likely to withdraw or drop out of their courses in comparison to students enrolled in an on-campus course. This qualitative study, using the modified Delphi method, will look at the implemented retention practices within higher education institutions to address the retention of first-generation students who engage in online learning.

Key Words: Retention, Online, First-Generation

DEDICATION

This dissertation is dedicated
in loving memory of my grandmother and in honor of my mother.

At a young age you both taught me to be proud of myself, to pursue my dreams,
and to transform disappointments into opportunities.

Gram, although you have been called home to be with our Lord,
I know you are here with me in spirit to see these dreams come to fruition
and you will forever be here in my heart.

To my sisters, Katelyn and Kristine.

And to my loving partner and best friend, Rodman.

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CHAPTER 1: INTRODUCTION

The challenges of first-generation student retention have impacted higher education institutions from the start. Tinto (2006), a major researcher on college retention whose research has spanned over four decades, suggested that one of the most widely studied areas of higher education is student retention. Institutions have been confronted with the changing needs of the work force and demographic trends, which has led to the need for programs and policies that are designed to specifically support first-generation students in completing their studies. In 2009, President Obama believed that more Americans should work toward earning a college degree; one way of reaching that goal is through online education (Field, 2009; Swami, 2009).

Online degree programs provide first-generation students access to higher education and have the capability of reaching more first-generation students in more locations in comparison to traditional on-campus degree programs (Allen & Seaman, 2007; Field, 2009). Online programs provide first-generation students new opportunities and flexibility, but they also create new challenges for institutions (Sileo & Sileo, 2008). One of the biggest challenges that online programs face is retention of all students, in particular the demographic of first-generation students. Research shows that student retention in online degree programs is lower in comparison to on-campus programs (Allen & Seaman, 2010; DiRamio & Wolverton, 2006; Hoyer, 2006; Liu, Gomez, Khan, & Yen, 2007; Stanford-Bowers, 2008; Terry, 2007).

Retention efforts of first-generation students include programming, policies, and targeting services to support and ensure that these students reach graduation (Berger & Lyon, 2005). According to Thayer (2000), higher education institutions have sponsored

successful retention programs for first-generation students that are responsive to the students' academic, cultural, and social aspects. Tinto's (1999) theory of retention takes into consideration three factors: cognitive, institutional, and social. The social factor of Tinto's theory requires the social interaction of both peer and faculty with the first-generation student in order to increase the chance of retention. Programs that are designed specifically for first-generation students may appear appealing to higher education faculty and practitioners, but may not seem appealing to the first-generation student (Thayer, 2000).

The retention of first-generation on-campus student programs has been researched and given attention to over the years, but now with the increased enrollments of first-generation students into online programs, institutions are faced with new challenges of retention (Allen & Seaman, 2007, 2008, 2010a; DiRamio & Wolverton, 2006; Trenholm, 2007). According to Demetriou and Schmitz-Sciborski (2011), these new challenges of retaining online first-generation students stem from Tinto's theory of retention: cognitive, institutional, and social. In other words, approaching retention from only one perspective may not be the most effective way of increasing retention.

The cognitive factors that Tinto's (1999) theory addresses are the academic ability, intelligence, and knowledge that students bring with them to the college environment. Cognitive facts are critical because they relate to the ability of the student to comprehend and complete the various academic parts of the educational curriculum (Demetriou & Schmitz-Sciborski, 2011). One of the most important elements of the cognitive factors in relation to retention is the student's ability to make decisions and problem solve (Tinto, 1975, 1993). The transition into college, whether on-campus or

online, is a social change for students and presents new stresses for students, especially for student populations that are not considered traditional college students. The institutional factors are associated with the institutions ability to provide adequate and appropriate resources for students, such as advising, career counseling, mentoring, and tutoring (Demetriou & Schmitz-Sciborski, 2011). Parental and peer support, career goals, and the ability to cope in social situations are examples of the social factors that are related to retention according to Tinto (1975, 1993). Social integration is an important factor in regards to retention and research has shown that students struggle to persist when they are not connected (Demetriou & Schmitz-Sciborski, 2011).

Research has also shown that precollege preparation and experiences have had a significant role in a first-generation student's likelihood of staying enrolled (Astin & Oseguera, 2012; Grabowski & Sessa, 2014). According to Astin and Oseguera (2012), first-generation students fall behind their peers academically and cognitively. With online education, institutions are challenged with finding effective methods of providing additional support and resources as well as fostering and maintaining the social factor of Tinto's (1999) retention theory.

Background of the Study

It is obvious that higher education has evolved over the years. In today's economy, postsecondary education has become a necessity, both for personal opportunities as well as for competitiveness in the global economy. The National Center for Education Statistics (NCES) reported that in 2014, 20.2 million students were enrolled in a higher education institution and of that total, 5.7 million were online students. That means that 28.5% of students in 2014 were enrolled in an online course(s)

at a degree-granting institution. According to Skomsvold (2015), one-third of the 20.2 million students enrolled in postsecondary education were considered first-generation students. An assumption can be made that about one-third of 5.7 million online students are most likely first-generation as well.

Inkelas, Daver, Vogt, and Leonard (2007) noted that the definition of first-generation students within research varies based on the level of college experience and degree completion of the student's parents. For the purpose of this research study, first-generation students are identified as individuals whose parents have experienced little or no time in college and did not graduate with a four year degree (Pike & Kuh, 2005; Vuong, Brown-Welty, & Tracz, 2010).

With millions of students enrolled in higher education, this can only mean that billions of dollars must be spent on education each year. Taking into consideration the very large population of students in higher education and the amount of capital that is involved, it is not surprising that institutions seek the best practices and strategies to retain students through the completion of a degree (Allen & Seaman, 2010). The rapid growth of online enrollment, which is growing at a faster rate than on-campus enrollment, has required the attention of institutions (Allen & Seaman, 2017) (see Table 1). Taking into consideration the large population of first-generation online students, strategies to retain this demographic of students through to completion are important considerations for the policy makers of higher education institutions (Allen & Seaman, 2017).

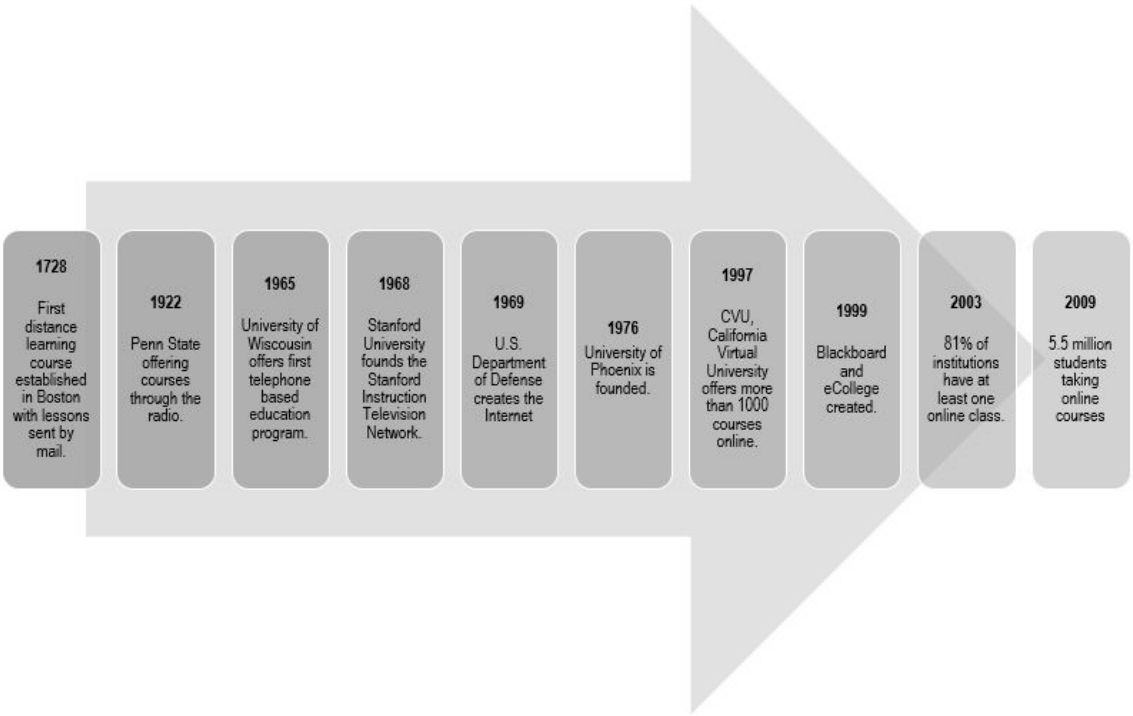
Table 1

Higher Education Enrollments, 2012-2016

	2012	2013	2014	2015	2016
All Students	20,511,849	20,454,336	20,637,987	20,536,231	20,464,608
Students Not Enrolled in Any Distance Courses	15,425,940	15,157,495	14,885,489	14,547,400	14,124,317
Students Enrolled in at Least One Distance Course	5,085,909	5,296,841	5,752,498	5,988,831	6,340,291
Proportion of All Students who Are Enrolled in at Least One Distance Course	24.8%	25.9%	27.9%	29.2%	31%
Students Enrolled Exclusively in Distance Courses	2,310,056	2,427,504	2,804,867	2,873,144	2,983,075
Students Enrolled in Some Distance Courses	2,775,853	2,869,337	2,947,631	3,115,687	3,357,216

Although online education is quickly emerging as a major learning opportunity within institutions of higher education, it is important to point out that distance education has been around many more years before the concept of online education emerged. According to Howell, Williams, and Lindsay (2003) distance education has existed since the 1800s and were primarily reading and writing-based correspondence courses (see Figure 1). The delivery of content was made through the postal service, while today it is the computer. Howell, William and Lindsay, (2003) firmly believed that access to the internet, along with the personal computer, has completely transformed distance

education to online education. With the push to have more individuals attend college to earn a bachelor's degree, leaders within higher education have created new online



programs in hopes of attracting more students (Allen & Seaman, 2008, 2010b).

Figure 1. Brief history of distance to online education.

The increase in online programs has taken higher education into a new chapter of learning and institutions have begun to capitalize on the possibility of becoming far more expansive than ever before (Allen & Seaman, 2010; Sileo & Sileo, 2008). First-generation students living all over the country who may or may not have had the opportunity to access postsecondary education are now able to have access through online degree programs.

Online degree programs are beneficial for both students and institutions. Online education provides an avenue for students to obtain a degree in which they are able to

apply for jobs for which they may not have been eligible. Appana (2008) noted the benefits of online education that points to "new markets, economic benefits, international partnerships, reduced time to market, educational benefits, anonymity, student interaction and satisfaction, growth in faculty learning curve, and 'rich' feedback and evaluation" (p. 7). Allen and Seaman (2010) noted that a large number of institutions feel that online education is critical to their long-term financial strategy and stability. From a financial perspective, institutions could see short-term gains. The willingness for an institution to offer online degree programs can be attractive to both the student and institution and while online programs will increase enrollment, it is vital for the institution to retain these students. While online degree programs offer financial gains, they do not necessarily lead to higher retention rates for first-generation students in comparison to what research has shown to be effective strategies and theories of retention. Some of those strategies will be discussed within Chapter II.

With the demand for and addition of online programs, more opportunities that are educational have become available for first-generation students through an increase in flexibility and availability of programs (Sileo & Sileo, 2008). However, several studies have noted that one of the most challenging and complicated tasks that higher institutions continue to face is student retention. Recent studies have shown that in online programs, the retention rate is considerably lower than on-campus programs (Allen & Seaman, 2010; DiRamio & Wolverton, 2006; Hoyer, 2006; Liu et al., 2007; Stanford-Bowers, 2008; Terry, 2007). A study by Willging and Johnson (2004) indicated that online students are twice as likely to withdraw or drop out of their courses in comparison to students enrolled in an on-campus course.

The focus by leaders in higher education to retain students is not new and has been researched since the early 1970s (Braxton, 2006; DiRamio & Wolverton, 2006; Escobedo, 2007; Woodley, 2004). Tinto (as cited in Woodley, 2004) connected both academic and social integration to a student's persistence in educational programs. To address current retention issues within online programs, Tinto's theory was expanded to include online programs (Woodley, 2004). Essentially what Tinto's theory says is that regardless of whether a student is on-campus or online, social integration in terms of interaction with fellow students is imperative for retention (Woodley, 2004). Braxton (2006) noted that good teaching practices that include "frequent interaction between students and faculty both in and out of class" (p. 9) enhances the students' motivations to succeed and stay engaged. Escobedo (2007) conducted a three-year research study that found lower retention rates resulted when the institution lacked communication among its members. The retention rate increased when communication barriers between the institution and students were identified and then corrected with ongoing communication efforts, along with advisement and orientation programs (Escobedo, 2007). Another study by DiRamio and Wolverton (2006) suggested that creating learning communities within online education further increases retention similar to on-campus learning communities and has proven successful in confronting the challenges associated with retention. At the same time, other studies have pointed out that online students noted that they appreciate the flexibility that is associated with online courses and not being restricted to the traditional on-campus classroom setting (Allen & Seaman 2010; Stanford-Bowers, 2008). Given these findings, the increase in enrollments of first-generation students in online degree programs has created new challenges for institutions.

Institutions could benefit greatly from having a better understanding of the reasons for student attrition and retention within these new programs.

Statement of the Problem

Research shows that the retention of students enrolled in an online degree program is consistently lower in comparison to on-campus programs (Allen & Seaman, 2010; Boston & Ice, 2011; DiRamio & Wolverton, 2006; Hoyer, 2006). Allen and Seaman (2010a) noted that the demand for more online courses and programs exists and continued to rise during the time of their research. Although there was an increase in demand, the retention of students continued to be lower in comparison to on-campus programs (Allen & Seaman, 2010a). While online programs can offer students access, affordable education, and convenience, interaction with faculty, staff, and peers are factors is just as important as it is for the on-campus environment when it pertains to retention (Boston & Ice, 2011). Thus, this may be an important factor in looking at the lower retention rate for online students. An assumption can be made that if the retention rate for online non-first-generation student is low, then the retention rate for online first-generation students must be low as well. Online programs have experienced a higher enrollment compared to on-campus programs, but student retention in online programs is still lower than on-campus programs (Allen & Seaman, 2010a; Fast Facts, 2016b).

To better understand the challenges and factors that impact retention rates of online, first-generation college students and to address the problem of low retention rates of online first-generation students, this study collected responses from experts in higher education and analyzed their insights regarding best institutional practices that may affect the retention of online first-generation students. The analysis of their recommendations

may guide leaders in higher education institutions who have the ability to create new policies and influence future practices. This study called upon the experts to share their insights and experiences. For the purpose of this study, the expert is a participant who has knowledge and experience with online degree courses or programs and/or works with online students. Their insights are important to this research because they are on the frontlines of online education, directly interacting with students and creating courses and programs intentionally designed for the online student.

Purpose of the Study

The purpose of this qualitative study was to identify what a Delphi panel of experts believe are the barriers, strategies, and practices that impact the retention of first-generation students who engage in online learning. Gaytan (2013) noted, "Most retention models have been designed for the face to face classroom learning environment, making it difficult to apply them to the online learning environment (p. 147). Thus, this research is intended to identify the gap in research regarding online first-generation students and to bring awareness to the best practices that faculty and staff are implementing to increase the retention of this student population.

Higher education institutions have struggled with the retention of on-campus students and that struggle has extended to online programs that includes first-generation students. Several research studies exist on the retention of on-campus first-generation students, but there is very little research on the retention of online first-generation students. Stover (2005) noted over 10 years ago that state and federal agencies began to take a closer look at retention of on-campus students. They found that retention data is an "indicator of academic quality" (Stover, 2005, p. 1). Retention is not only a student

issue, but it is an institution issue because it is directly connected with rankings and funding (Stover, 2005).

Offering online courses can be financially justified by institutions. This form of delivery of education reduces the institutions expenses, eliminates any need for expansion and classroom space, and significantly reduces the potential for overhead expenses (Stover, 2005). For some institutions, online education is the pathway to financial stability since institutions face the pressure of controlling costs, improving on the quality of education and campus life, shifting their focus to a more customer friendly approach, and responding to the competitive pressures of attracting students, faculty, and financial donors (Allen & Seaman, 2010b).

The focus of the institution should not only be on the recruitment of more online students, but also they need to be willing to do what is necessary to retain them, reduce the barriers that prevent retention, and most importantly provide guidance and support so they are empowered with the tool they need to reach success. Tinto (2006) noted that each departure of a student could be seen as representing the loss of a potential graduate and tuition revenue. Tinto (2006) further explained that a high rate of withdrawals or departures could become a serious strain on the financial stability of the institution. With the withdrawal rate of online first-generation students higher than an on-campus student, the "high financial costs associated with student attrition justify and demand the continued search for methods of reducing the rate of attrition" (Summers, 2003, p. 65). Thus, this study is an inquiry, using a Delphi methodology that involves a panel of experts on this problem to better understand the barriers, strategies, and practices that impact the retention of first-generation students who engage in online learning.

Research Questions

Given the issues outlined above, this study addressed the following questions:

1. What are the perceived barriers of retention for first-generation students who engage in online learning?
2. What are the recommendations for future policies and practices to reduce the rate of attrition and improve the retention of first-generation students who engage in online learning?

Theoretical Frameworks

First-generation college students experience transformations in many areas of their lives as they deal with the challenging transition into the culture of postsecondary education. In comparison to their peers, first-generation students receive far less assistance in preparing for college, feel less supported, and lack a sense of belonging (Choy, 2001). Choy's (2001) research indicated that high school graduates whose parents did not go to college reported "lower educational expectations, are less prepared academically, and lacked the needed family support in planning and preparing for college" (p. 22). The results from Choy's (2001) study revealed that "programs and practices that encourage first-generation students to take academically challenging courses in high school and counsel students and their parents about preparing for college" (p. 39) broadened the access of these students to postsecondary education and helped them succeed once enrolled. All of these factors play a direct role in the recruitment and retention of first-generation students. First-generation students have different characteristics, experiences, and needs in comparison to peers who have been traditionally served by higher education. For example, a study by Pascarella, Pierson,

Wolniak, and Terenzini (2004) found that although advising can help maintain needed support throughout the college years, first-generation students are less likely to use the various student support systems that institutions offer. Another study by Swecker, Fifolt, and Searby (2013) expanded on these ideas, finding that advising first-generation students is significant to their retention (p. 49). Their data suggests that for every meeting a first-generation student has with their advisor, the odds of that student being retained increases by 13%. First-generation online students represent a group of students who are at risk of not completing their degree and are in need of more research and support if they are to succeed (Inkelas et al., 2007; Vuong et al., 2010).

There are several theories of attrition, retention, and student persistence that researchers have explored. Generally, much of the theories and past research has focused on first-generation students who are enrolled in on-campus courses and programs. Although research is limited in this area, the conceptual framework underlying the work draws upon the following retention and collaboration theories when looking at the retention of online first-generation students.

Vincent Tinto's Theory of Retention

Within higher education, the study of retention is nothing new and initial studies on this subject were conducted through the lens of psychology. Retention has often been viewed through the lens of student development theories, which are typically grounded in psychology and sociology (Tinto, 2006). Tinto (2006) noted that the success of the student, namely retention, was originally placed on the student rather than a collaborative approach between the institution and the student. Tinto's (1999) theory shifts away from that approach and he noted that students must be involved and connected to the institution

if the institution wants to successfully retain students, particularly those who are at a higher risk of withdrawing. Tinto (1999) noted that students are more likely to stay enrolled at institutions that involve them as valued members of the community. The frequency and quality of contact with faculty, staff and other students, as well as the quality of faculty teaching, have repeatedly been shown to be independent predictors of student persistence (Tinto, 1999).

Several elements of the Longitudinal Model of Institutional Departure by Tinto (1993) are relevant to this study. The first is that students possess a group of pre-entry characteristics that directly influence their decision to stay or withdraw from school. These pre-entry characteristics include family background, skills and abilities, and prior schooling. The pre-entry characteristics are then influenced by the student's intentions and goals in pursuing an education. The model then addresses how the student's school experiences impact whether they stay or withdraw. These institutional experiences include academic performance and interaction with faculty, peers, and the institution as a whole. The student's academic and social integration also has a direct impact on their goals and motivation in regards to their education. All of these experiences influence the outcome, the decision to stay or withdraw.

John P. Bean and Barbara S. Metzner Conceptual Model of Retention

Bean and Metzner (1985) believed Tinto's model only took into account certain characteristics of a particular student in the area of socialization. Tinto's (1993) model did not include what some refer to as a non-traditional student. For the remainder of this research, I have chosen to replace the term non-traditional with adult learner. Referring to students as non-traditional puts them at a starting line behind other college students,

not only in their sense of self, but also in the minds of fellow students, faculty members, administrators and policy makers (Gulley, 2016). The National Center for Educational Statistics (NCES) (2016) defines a traditional student as an individual who is between the age of 18 and 24 who lives on or near campus and is enrolled fulltime. If we were to apply this definition to the online first-generation student, they would not be considered a traditional student. Bean and Metzner (1985) identified three main characteristics of adult learners: living off campus, being the age of 25 or older, enrolled in school part-time. These three factors reduce the importance of the social interaction part of Tinto's model. Bean and Metzner (1985) suggested looking at environmental factors rather than social interaction. In their model, the environmental factors that they believed impacted retention included encouragement from family, friends, and employers, finances, and career goals.

Alfred P. Rovai's Composite Persistence Model

Rovai's (2003) Composite Persistence Model was formed to better explain the retention of adult and online learners. The Composite Persistence Model by Rovai (2003) was established through a thorough review of Tinto (1975) and Bean and Metzner's (1985) models of retention. Rovai's (2003) Composite Persistence Model argued that students who take classes online have different, and additional, needs and therefore do not fit nicely into either model. Rovai's (2003) adapted his model to the needs of the online learner. His model specifically touches upon the factors that affect a student's decision to withdraw from an online course. Rovai's (2003) Composite Persistence Model consider factors affecting retention that include prior and after admissions as well as social integration and family responsibilities.

Collaboration Theory

Collaboration in higher education is not a new concept and administrative leaders understand the importance of bringing together collective resources and knowledge so that better decisions can be made and plans can be implemented more effectively (Glaser, 2005; Kezar, 2006, Leonard & Leonard, 2001; Mohamed, Stankosky, & Murray 2004, Sawyer, 2007). When organizations are faced with responding quickly and effectively, collaboration can be vital (Sawyer, 2007). Effectiveness, innovation, and sustainability can be best realized through collaboration (Leonard & Leonard, 2001). There is always a need to respond to the ever-changing world of higher education which allows for the generation of new solutions through a collaborative process (Kezar, 2006).

Friend and Cook (2013) defined collaboration as, "A style for direct interaction between at least two parties voluntarily engaged in shared decision making as they work toward a common goal" (p. 6.). There are six underlying principles of collaboration: voluntary; parity among participants; mutual goals; trust and shared responsibility for participation and decision-making; sharing of resources; and shared accountability for outcomes (Friend & Cook, 2013; Thousand & Villa, 2006). Just as in other organizations, there is a need for a more collaborative leadership in higher education, especially to bridge departments and offices that are siloed on-campus. Higher education is a unique and complex organization influenced by both internal and external forces. The concept of collaborative leadership has been on the rise since the early '90's (Friend & Cook, 2013). In its most basic form, collaboration incorporates theory and management that focuses on the skills of leadership to produce results across internal and external organizational boundaries (Friend & Cook, 2013).

Collaboration is understood as a:

> Process in which participants acquire knowledge through co-participating, co-cognizing, and co-problem solving within linguistically, culturally, and academically heterogeneous groups throughout the course of task completion. The goal is learning, and joint activity facilitates or mediates learning for the participants. (Gutierrez, Baquedano-Lopez, Alvarez, & Chiu, 1999, p. 87)

Collaboration between individuals and organizations can be difficult and challenging according to Corrigan (2000). Collaboration requires affective, cognitive, and social trust. Many institutions have issues in terms of collaboration with governance, finance, information sharing, programming, and institutional initiatives (Corrigan, 2000; Rhoten, 2004).

Rhoten (2004) found that collaborative efforts that span multiple departments and programs may be able to harness the expertise and resources necessary to achieve stronger outcomes. However, departments within higher education institutions are often viewed as siloed and fragmented, enabling each unit to pursue what they feel is best for themselves rather than the whole (Rhoten, 2004). The true nature of collaboration is that the combination of two different parts should result in more than the two parts alone, not less (McCarthy, 2002). Collaboration can be an important tool for fostering unity at an institution; therefore, the collaborative advantage of creating more than the sum of its parts should be vital to the institution (McCarthy, 2002). Collaboration occurs when people recognize that that they "cannot achieve their missions, goals, objectives and aspirations; capitalize on important opportunities; solve pressing problems; meet urgent

needs; or satisfy their accountability requirements…without the others" (Lawson, 2004, p. 229).

Significance of the Study

While distance education is not new to higher education, online education is new in comparison to traditional on-campus educational programs. Online education is growing, progressive, and not declining (Allen & Seaman, 2010, 2011). Online education offers institutions greater potential to reach more first-generation students, allowing them access to postsecondary education (Allen & Seaman, 2008; Field, 2009). This newer form of access to higher education generates greater opportunities for first-generation students (Sileo & Sileo, 2008).

Studies on first-generation students, retention of first-generation students, and online education have been conducted over time, but looking specifically at the retention of online first-generation students needs more study. Allen and Seaman (2010, 2011, 2017) noted that leaders in higher education have expressed their concerns over the low retention rates of online students, which includes the population of first-generation students. Research as shown that online programs have a lower retention rate in comparison to on-campus programs and a gap in research exists in identifying holistic and best practices for online first-generation students (Allen & Seaman, 2011, 2015, 2016).

Leaders in higher educational institutions that have identified online degree programs as part of their strategic growth plans will find this research helpful as they implement polices to increase the retention of online first-generation students. Through this research, the panel of experts provided insights for current and future leadership and

the goal is that these findings may lead to recommendations regarding relevant retention practices of online first-generation students.

Overview of the Methodology

This research study used the Delphi method because it provides a means for an organized appeal for opinion and possible consensus among experienced practitioners (Linstone & Turoff, 1975, 2002). The Delphi method is a forecasting process framework based on the results of several rounds of questionnaires sent to a panel of experts. Several rounds of questionnaires are sent out, and the responses are aggregated and shared with a group anonymously after each round. RAND, a non-profit institution that helps improve policy and practice through research, developed the Delphi method in the 1950's. The method entails a group of experts who reply to questionnaires and subsequently receive feedback in the form of statistical representation of the "group response," after which the process repeats itself. The goal is to reduce the range of responses and arrive at something closer to expert consensus.

This Delphi method is modified for this study in comparison to the original Delphi method, which was created for the U.S. Air Force to solve a problem (Linstone & Turoff, 1975). Linstone and Turoff (1975, 2002) noted that in terms of modifications to the method, a number of factors could influence the decision to make modifications so the method is applicable to the situation being studied. One of the major characteristics of this modified Delphi method will be the quest for consensus on a particular issue, in this case, retention of online first-generation students. In contrast, the original Delphi method did not seek consensus, but rather focused on forecasting or future projections for the original problem (Linstone & Turoff, 1975).

The original Delphi method, used to solicit the expert opinion for a military project, contained four main characteristics (Linstone & Turoff, 1975). First, the anonymity of the participants was implemented to allow the freedom to express their opinions without social pressure. This also allowed the researcher to evaluate on their merit, rather than who suggested the idea. Second, iteration since it allows the participants to refine their views in light of the group's progress from one round to another. Third, controlled feedback that informs the participants of the other participant's perspectives and provides the opportunity for the participants' to clarify or change their views. Fourth is the statistical aggregation of the group response, which allows for a quantitative analysis and interpretation of data. According to Linstone and Turoff (1975, 2002) only research studies that exactly follow the four characteristics should be considered a Delphi study and all others referred to as a modified Delphi study.

The quest for consensus among experienced staff, faculty, and administrators of online education, rather than forecasting, is a major modification for this study. Confidentiality will be addressed, which provides participants a non-pressured environment where they can express their opinion freely and provide space for them to potentially disagree with each other without fear (Linstone & Turoff, 1975). The Delphi method, in comparison to other data method techniques, uses multiple interactions designed to develop a consensus of opinion concerning a specific problem or issue (Linstone & Turoff, 1975). The continuous interaction among the participants allows and encourages them to reassess their initial opinions

The major steps that will be taken for this modified Delphi method study include:

- Identification of administrators, faculty, and staff of online education from an accredited higher education institution in the Northeast area of the US based on set criteria, which is described in Chapter 3.
- Attain a declarative statement from the participants in response to this question: Based on your experiences, what would you say are the top issues that influence the retention of online first-generation students that pertain to academic variables, background and defining variables, and environmental variables?
- Transcribe the responses and develop a Likert-type scale questionnaire instrument for each of the two subsequent rounds.
- Analyze the two rounds of Likert-type scale responses.
- Prepare data feedback to the participants for each round.
- Analyze all comments and statements in each round of questionnaires by the participants for commonalities, patterns, and themes that will determine consensus.

All information and links to the questionnaire will be only accessible via the Internet and will be sent out via email to the participants.

The selection of experienced administrators, faculty, and staff involved with online education was chosen by the researcher using the outlined method by Linstone and Turoff (1975). The number of participants can vary and some studies can have over 500 participants. Experienced participants will be defined in this modified Delphi method study as those individuals who have experience in the field of online education.

Researchers have modified the Delphi method in several ways since its creation from the 1950's (Linstone & Turoff, 1975). It was through the collection of declarative statements and the rounds of the Likert-type scale questionnaires that the participants were able to come to a consensus concerning the issue of retention of first-generation students.

Limitations and Delimitations

Effective research has the potential for a positive impact across the field of higher education, particularly in the study of retention within online degree programs (Creswell, 2005). The scope of this research is limited to the retention factors and practices of online first-generation students. Although the research for this study is very specific, it may be useful to leaders in higher education for on-campus programs that also have first-generation students.

The modified Delphi method assumes that the participants will be experts in the field, specifically for this study in online education at an accredited institution in the US, and will be selected by the researcher based on certain criteria, which is outlined in Chapter 3. The participants will be selected using a nonrandom sample, also known as reputational or snowball sampling. This form of sampling is not considered to be a broad representation of individuals and should not be generalized (Creswell, 2005). This form of sampling follows the Delphi method explained by Linstone and Turoff (1975, 2002). They describe that the validity and reliability of the data is built into the Delphi process because the identified experienced participants in the field of online education are providing the data; therefore, experienced practitioners provide reliable data. Linstone and Turoff (1975, 2002) stated that an informed smaller group of expert participants is a

more desirable approach in comparison to uninformed larger group of participants, which allows for a greater possibility of confronting the problem and coming to a consensus. According to Creswell (2005), delimitations put parameters on research. This research study will be limited to techniques and methods associated with the Delphi method (Linstone & Turoff, 1975, 2002).

The Researcher

My mother and grandmother supported and encouraged me to follow my dreams, wherever my dreams might take me. They always stressed how important school was and although they did not graduate from college, they understood how important a college education was as well as all the opportunities that it offered. As a first-generation student, I did not quite understand the "dos and don'ts", or even the "how-tos", of applying to college and it seemed as though my friends had an instructional manual in the form of parents. Beyond that, I struggled with the feelings of guilt and inadequacy, and I lacked a sense of belonging. I felt that a college education was out of my reach. It was not for me, especially since no one in my immediate family had earned a bachelor's degree. It was not until later in my adult life that I finally made the decision to enroll in college and when I did, I enrolled in an online undergraduate degree program.

This topic is important to me because I was an online first-generation student who experienced many obstacles and struggled throughout my undergraduate journey to graduation. My goal is that this research brings a deeper understanding to a complex issue, strengthen what is already known, and identify gaps in theory to practice for future research. The retention of online first-generation students is important to institutions because the future of how education is delivered to the students is forever changing and

expanding. First-generation students have moved from enrolling in on-campus degree programs to online degree programs. Like myself, first-generation students are finding themselves challenged by life obligations and priorities. Online education was not always an option for individuals who were not able to enroll in an on-campus degree program. That has changed and online education provides another pathway for first-generation students to earn a bachelor's degree. I understand what it means to be an online first-generation student and I have my own beliefs on best practices for retention, but my research is looking at the views and perspectives of faculty and practitioners who work directly with online first-generation students.

Creswell (2005) indicated that research could include a variety of strategic, ethical, and personal issues. As a first-generation student who completed both a bachelor's and master's degree online and who currently works in higher education, I am aware that my education, experiences, and knowledge that I have gained could bias the research process. To minimize the impact of bias and personal opinion I will take the following steps:

- Maintaining confidentiality and anonymity, I will verify the coded data with trusted faculty members.
- I have had no professional experience working with online first-generation students or forming strategies and/or practices that address the retention of that student population.
- I will use a qualitative analysis to ensure that all data will be considered and properly represented.

Being aware of any potential bias while conducting this research was important because it will allow me to remain objective verses subjective. Creswell (2005) noted that complete objectivity cannot be maintained, but bias could be limited through my awareness of my level of education, experiences, and knowledge of being an online first-generation student.

Summary

Student retention has impacted higher education for many years and with the increasing enrollments in online degree programs institutions are faced with finding ways to reduce attrition and increase retention (Allen & Seaman, 2007, 2008, 2010; DiRamio & Wolverton, 2006; Trenholm, 2007). The NCES reported that in 2014, 20.2 million students were enrolled in higher education and of that total, 5.7 million were online students and that number continues to grow. The rapid growth of online enrollment, which is growing at a faster rate than on-campus enrollment, has required the attention of institutions (Allen & Seaman, 2010a). Taking into consideration the large population of first-generation online students, strategies to retain this demographic of students through to completion must be of important considerations for the policy makers of higher education institutions (Allen & Seaman, 2010a).

With the demand for more online programs, more educational opportunities have been offered to first-generation students through an increase in flexibility and availability of programs (Sileo & Sileo, 2008). The increase in enrollments of first-generation students in online degree programs has created new challenges for institutions, namely the retention of the online first-generation student. Retention of students enrolled in an

online degree program is consistently lower in comparison to on-campus programs (Allen & Seaman, 2010; Boston & Ice, 2001; Terry, 2007).

The purpose of this study is to identify what a Delphi panel of experts believe are the barriers, strategies, and practices that impact the retention of first-generation students who engage in online learning. To develop a deeper understanding of the problem of low retention rates of online first-generation students, this study will collect responses from experts in higher education and analyze their insights regarding best institutional practices that may affect the retention of online first-generation students. The analysis of their recommendations may guide leaders in higher education institutions who have the ability to create new policies and influence future practices.

CHAPTER II: LITERATURE REVIEW

Introduction

Education has become a necessity for many reasons, including financial survival because of how low minimum wage is in the US for many without educational opportunity. There is no guarantee that a graduate's return on investment of earning a bachelor's degree will provide financial stability, but the potential of earning a salary higher than minimum wage dramatically increases (Inkelas et al., 2007). The focus on education has grown over the years and more people today are enrolling in secondary education (Fast Facts, 2016).

One area that has expanded in recent years is the number of students enrolling into distance and/or online degree programs. Since 2012, there has been a consistent 2% increase each year of students enrolled in at least one online course (Fast Facts, 2016). Of particular note is how enrollment of first-generation students into online programs has created new opportunities for students, but for higher education institutions it has also created new challenge (Sileo & Sileo, 2008). Researchers define first-generation students in several ways, including one whose parents have earned a high school diploma or less (Inkelas et al., 2007; Pike & Kuh, 2005). With access to online education, first-generation students now have the ability to earn a bachelor's degree while maintaining their obligations and responsibilities outside of the world of academics. Online education provides first-generation students the flexibility to attend class virtually, which they may not otherwise have had the opportunity to do. Gravel (2012) cited several research studies (Berge & Huang, 2004; Bocchi, Eastman, & Swift, 2004; Carr, 2000; Chyung, 2001; Diaz, 2002, Herbert, 2006; Liu, Gomez, Khan, & Yen, 2007; Rovai, 2003; Rust,

2006; Terry, 2001; Tyler-Smith, 2006) (p. 56) that indicate online students withdraw at a significantly higher rate than on-campus students. Liu et al., (2007) noted several reasons for low retention rates that include a lack of self-motivation, self-discipline, time management skills, technology experience, and available institutional support. Research by Standford-Bowers (2006) noted that online education presents unique challenges for students, faculty, and administrators and when students do not feel comfortable within the social and academic milieus of the online environment they are more likely to withdraw in comparison to an on-campus student (p. 38). Allen & Seaman (2013) found that a continuing concern for higher education administrators were lower retention rates in online programs (p. 30). Although online enrollments continued to increase, the decrease in retention became a barrier for growth of online programs (Allen & Seaman, 2013).

The purpose of my research is to identify what a Delphi panel of experts believe are the contributing factors and recommendations surrounding online first-generation student retention. Therefore, my research questions are the following:

1. What are the perceived barriers of retention for first-generation students who engage in online learning?
2. What are the recommendations for future policies and practices to reduce the rate of attrition and improve the retention of first-generation students who engage in online learning?

The areas of literature that I plan to review are retention, which include conceptual frameworks of Tinto's Retention Theory, Bean and Metzner's Conceptual Model of Retention, and Rovai's Composite Persistence Model, online education, first-generation students, and collaboration theory. There has been much research done on

retention and retention theories, online education, first-generation students, and collaboration within higher education, but there is a gap in knowledge and research that specifically addresses the retention of online first-generation students.

Literature Review

Literature searches and collections of literature will be supported by using multiple sources, including Google Scholar, Educational Resource Information Clearinghouse (ERIC), ProQuest, EBSCOhost, textbooks, periodicals, journals, and The University of Vermont's online library. These resources have provided reliable peer-reviewed literature for topics related to this study as well as historical information. The literature search for this research study has revealed that there is very little literature or research that specifically addresses the retention of first-generation online college students. This literature review is organized into three major sections: Student Retention, History of Distance and Online Education, and First-Generation Student Retention. This is represented in Figure 2. I close the review with a look at collaboration theory. Retention is not the sole responsibility of one person or one area of higher education. As Tinto (1975) noted, retention is everyone's responsibility. According to Kezar (2006), higher education institutions can benefit in several ways from collaboration, including functioning more effectively and having a positive impact on grade point averages, learning outcomes, and retention.

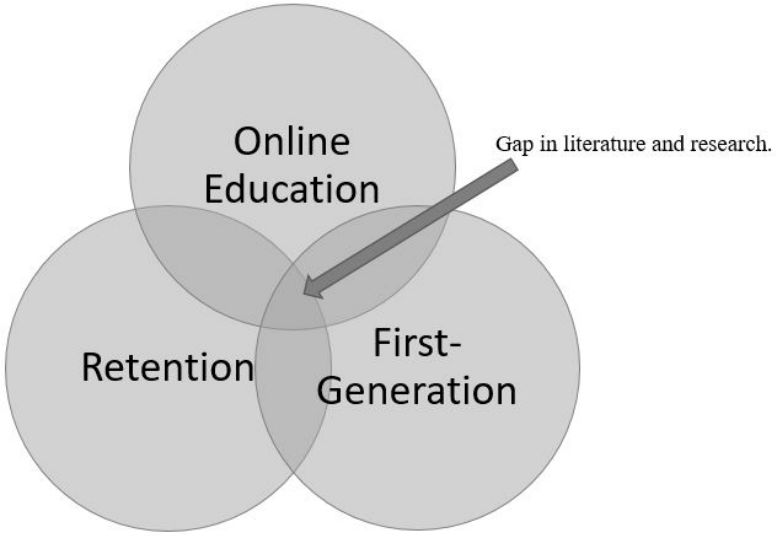


Figure 2. Topics explored within this literature review and identifying the gap in literature and research.

Student Retention

Practitioners, faculty members, and leaders within higher education are eager to support and move students towards achievement. As the growth of online programs continues to expand it is not surprising to find institutions concerned over the retention of the online learner (Boston & Ice, 2011). Retention is extremely important for both the student and institution. Both the student and institution strive for success, but success looks different for each one. Success for a student is the earning of a college degree, whereas the institutions sees success in terms of retention (Boston & Ice, 2011). Berger and Lyon (2005) defined retention as the institutions' ability to retain a student from admission until graduation.

Retention of online undergraduate students is a critical topic that needs to be addressed and improved upon. When comparing face-to-face undergraduate classes, online courses have a much lower completion rate and in some cases as much as 10-20% (Russo-Gleicher, 2013). Despite this critical need to improve retention, few qualitative

methodology studies have been conducted (Russo-Gleicher, 2013). Boston and Ice (2011) stressed how important and imperative it is that models are developed to help explain why retention rates are lower than on-campus programs.

Student retention “has been a documented issue in higher education in the United States since the late 1800s” (Boston & Ice, 2011, p. 1) which resulted in research studies regarding the topic of retention dating back to 1926. One of the first studies on retention, which paved the way for future research, was conducted in 1938 and led by John McNeely. Data from 60 institutions were collected, examined, and later published by the U.S. Department of Interior and the Office of Education (Demetriou & Schmitz-Sciborski, 2011). McNeely’s research examined demographic characteristics, social engagement, and reasons for departure (Demetriou & Schmitz-Sciborski, 2011). At the time, the study was groundbreaking and provided institutions an opportunity to begin taking a closer look at retention. Fast forward to the present, 80 years later institutions are still conducting research to address the issue of retention. The issue of retention is multidimensional with multiple layers. Allen and Seaman (2010a, 2013) reported that program growth and the increase of online students has become a priority for over 80% of major institutions of higher education in the US.

Retention theories, or theories of departure, offer an explanation of why students may leave college. According to Bean (n.d.), "Theoretical models of departure are models based on theories, while models of departure identify factors assumed to be related to retention without providing an explanation of why the factors act the way they do" (para. 13). Bean (n.d.) noted that theories, theoretical models, and models are used interchangeably literature.

Vincent Tinto's Theory of Retention

One of the most popular theories of retention is from Tinto (1975) who stated that retention is directly related to the student's connection with their institution. Tinto's (1975) theory of student departure, which is also known as Student Integration model, seeks to explain the continuing and interactive forces that impact the student's voluntary departure from an institution prior to degree completion. The framework of Tinto's (1975) Student Integration model comes from the work of Emile Durkheim's suicide theory, which explained that an individual's unsuccessful and low level of connection to society is a precursor of suicide.

On the other hand, if the individual had an adequate support group and sufficient integration, the likelihood of suicide is reduced. Similarly, Tinto's (1975) model suggested that student retention is related to an individual's connection to the institution and an adequate support group (see figure 3).

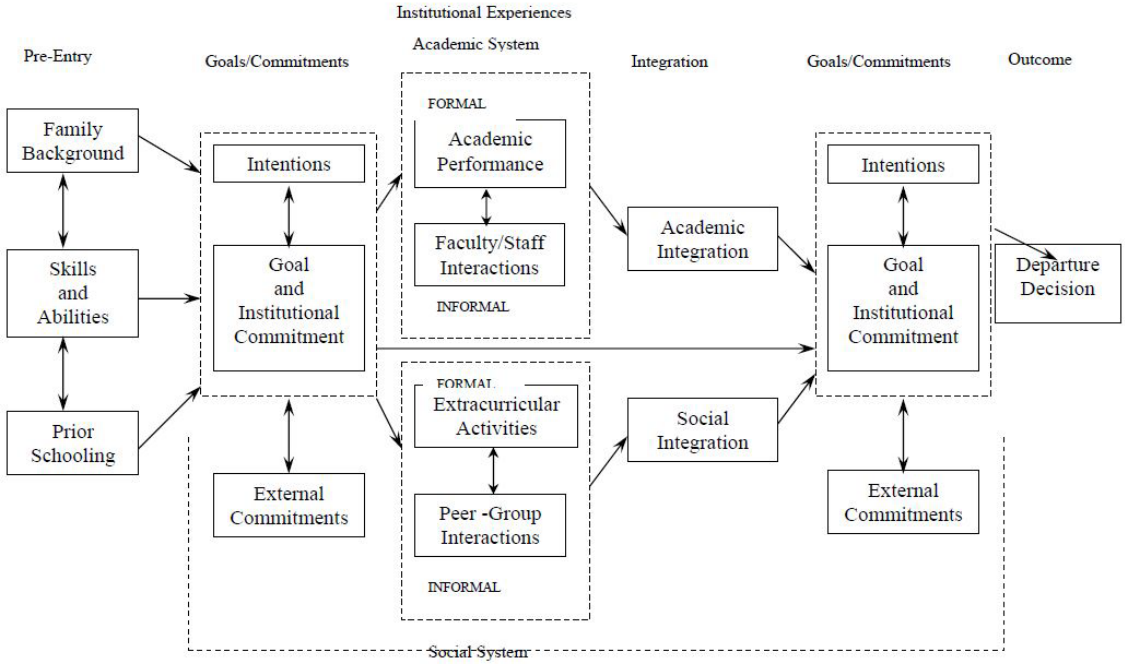


Figure 3, Tinto's Theoretical Model of College Withdrawal.

Tinto's theories and research have been revered by many as the most influential attempt at explaining retention in higher education. Tinto's (1975) theory was designed to address all areas, aspects, and processes that had influence over a student's decision to withdraw. Since Tinto's theory was published in 1975, he has twice modified it based on new findings (Tinto, 1999). Tinto (1999, 2006) believed that it is important for institutions to understand the reasons why a student withdraws; therefore, he strived to collect data that helped to distinguish the many reasons for a student's withdrawal. Having a better understanding of why a student withdraws allows institutions to specifically target at risk students by providing them with assistance and additional services.

The main concept of Tinto's (1975) theory is the level of the student's integration into the institution, which included the academic and social systems. Tinto uses the term "integration" as a way to describe the process the student experiences internally, which the student integrates the norms and values of the institution and its environment into their own value system (Tinto, 1999, 2010). Tinto (1999) explained that integration is the process in which a student ascertains membership within the community of the institution. This membership within the community serves as a precursor for retention. The more integrated a student is within the institution, the greater the commitment is from the student to that institution; which results in a higher retention rate (Tinto, 1975, 1999, 2006). Tinto (1975, 1999) noted that the integration must be academic as well as social. Only one form of integration increases the likelihood of withdrawal. The academic and social integration are not separate of each other, but rather indivisible according to Tinto (1975, 1999). According to Tinto (1975, 1999), academic integration

is the result of the faculty investing in the student by actively encouraging them to share their viewpoints and information and social integration is the connection and interactions with peers, staff, and faculty.

Tinto (1975, 1999, 2006) indicated that the social integration into the institution is vital to retention and persistence. Tinto (2010) distinguished between the terms retention and persistence:

> Retention refers to the perspective of the institution. Institutions seek to retain students and increase their rates of institutional retention. By extension the term student retention refers to that process that leads students to remain within the institution in which they enroll and earn a degree. By contrast, persistence refers to the perspective of the student. The term student persistence refers to that process that leads students to remain in higher education and complete their degree. (p. 53)

The lack of social integration may lead to a withdrawal and this is a result of students feeling as though they do not 'belong.' The feeling of not belonging is also connected to the experiences of first-generation students, which will be discussed further in this chapter. In Tinto's research (1999, 2006, 2010), he found that students who are socially connected within their institution are more motivated academically, which translates to higher retention rates.

John P. Bean and Barbara S. Metzner Conceptual Model of Retention

Bean and Metzner's (1985) Conceptual Model of Retention was a revision of Tinto's (1975) Student Integration model that further explain the retention of adult learners (see Figure 4). Their model's objective was to understand the factors and

implications that affect adult learners continued enrollment. Bean and Metzner (1985) believed that Tinto's model did not address the specific situations of adult learners. Bean and Metzner (1985) defined an adult learner as a student who is 25 years old or older, does not live on-campus, is a part-time student, or is some combination of those factors. Bean and Metzner (1985) noted that Tinto's model did not take into consideration the adult learner and only focused on the on-campus student at a four-year institution, who differs greatly from the adult learner or online student.

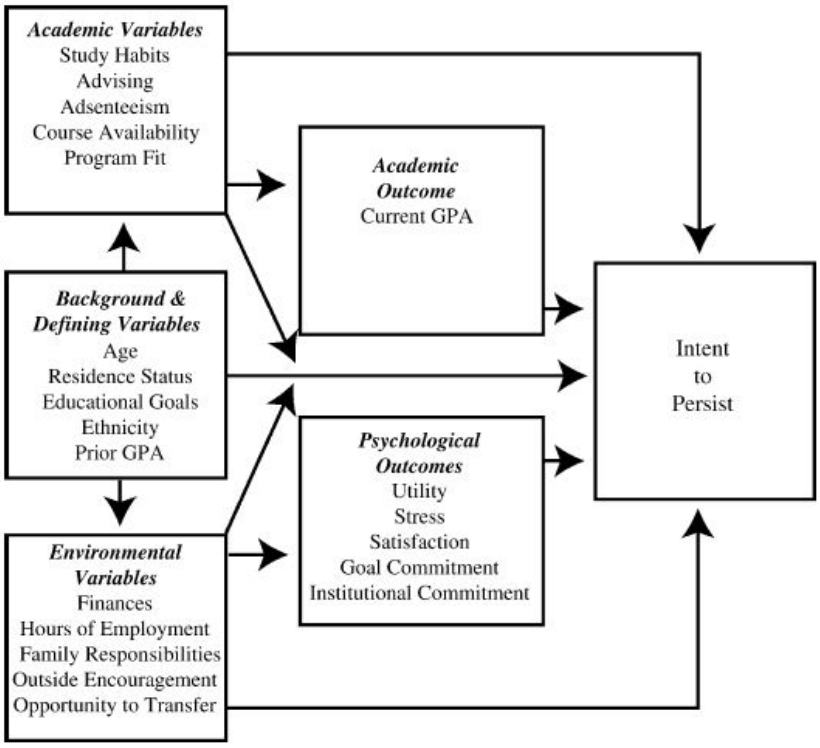


Figure 4. Conceptualization of Bean and Metzner's retention model.

Tinto's (1975) Student Integration focused heavily on the social integration, which is the connection that the student has with the community at the institution. Bean and Metzner (1985) noted that adult learners and online students have limited to no interaction within the community at the institution. Tinto's (1975) model suggested that the student's social integration acts as a support system while Bean and Metzner's (1985)

model suggested that for the adult learner, their support system includes family, friends, peers, and employers, all who are outside of the institution.

Housing was identified by Bean and Metzner (1985) as the most important difference between on-campus students and adult learners. Adult learners spend less time on-campus in comparison to their counterpart and this results in less academic and social contact with peers, staff, and faculty. Additionally, adult learners have far less contact with staff and faculty outside of the classroom and participate in fewer extracurricular activities. In Bean and Metzner's (1985) retention model, social integration is present, but at a much smaller extent. Bean and Metzner (1985) believed that for adult learners the decision to stay or withdraw does not rely heavily upon their social integration. In the Bean and Metzner (1985) model, the academic integration plays a major factor in retention. Included in academic integration are academic variables, which include absenteeism, course availability, major availability, and study skills (Bean & Metzner, 1985). Poor academic integration, which may lead to poor academic outcomes, can lead to a withdrawal.

Bean and Metzner's (1985) model also takes into consideration environmental variables, which include employment, encouragement from others, finances, and family responsibilities. Higher education institutions have almost no control over those variables. Bean and Metzner (1985) model suggested that environmental support can compensate for weak academic support, but academic support cannot compensate for weak environmental support. This means that what happens in the students life off campus is more important, and more of an indicator of withdrawal, than what is happening in their life on-campus.

Bean and Metzner modified Tinto's (1975) Student Integration Model so it could better fit adult learners. The biggest difference between the two models is directly related to the social integration. In Tinto's model, the social integration happens at the institution and is connected to the on-campus student, but for adult learners the social integration, or college environment, is far less and at times non-existent. As a result, Bean and Metzner (1985) highlighted that the impact of social integration in terms of retention is not the same for adult learners. They suggested that a greater focus on the environmental variables is a better predictor for retention.

Alfred P. Rovai's Composite Persistence Model

Rovai (2003) evaluated Tinto's (1975) Student Integration model and Bean and Metzner's (1985) Conceptual Model of Student Retention and discovered that both did not adequately address or explain low retention rates of online students. Consequently, Rovai (2003) designed the Composite Persistence Model that incorporated both Tinto's (1975) and Bean and Metzner's (1985) retention models as well as other important variables that impact retention. Rovai's (2003) model set out to better explain the retention of adult learners and online students. The model explained that students have certain skills and characteristics prior to being admitted into college and once they have been admitted, those skills and characteristics then become interactive with both external and internal factors. Depending on the many variables, which include the characteristics of the student, their skills, and internal and external factors, the student will eventually make a decision to whether they want to persist or withdraw.

Online student retention. Students who are enrolled in online degree programs have different needs than on-campus students and therefore, do not fit into Tinto's (1975)

or Bean and Metzner's (1985) models. Rovai's (2003) modified his model so that it can be adapted to the needs of the online student, specifically regarding the factors that impact the student's decision to withdraw.

In Figure 5, Rovai's model is divided into two categories: prior to admission and after admission. The figure shows the needs of the students during their online experience. In the Prior to Admission section, there are two categories, student characteristics and student skills, which were both in Tinto's (1975) and Bean and Metzner's (1985) models. In the After Admission section, there are two categories as well - external and internal factors. Rovai (2003) included them in the model since Bean and Metzner (1985) had explained that external factors, such as employment, encouragement from others, finances, and family responsibilities, have an impact on retention. As an example, if a student cannot afford to pay for college or adjust their work schedule, they are more likely to withdraw. These types of factors are environmental variables that institutions do not have control over and are significant to online students (Bean & Metzner, 1985). Rovai (2003) incorporated the impact of external factors into his model because he recognized that it was lacking in Tinto's (1975) and Bean and Metzner's (1985) models.

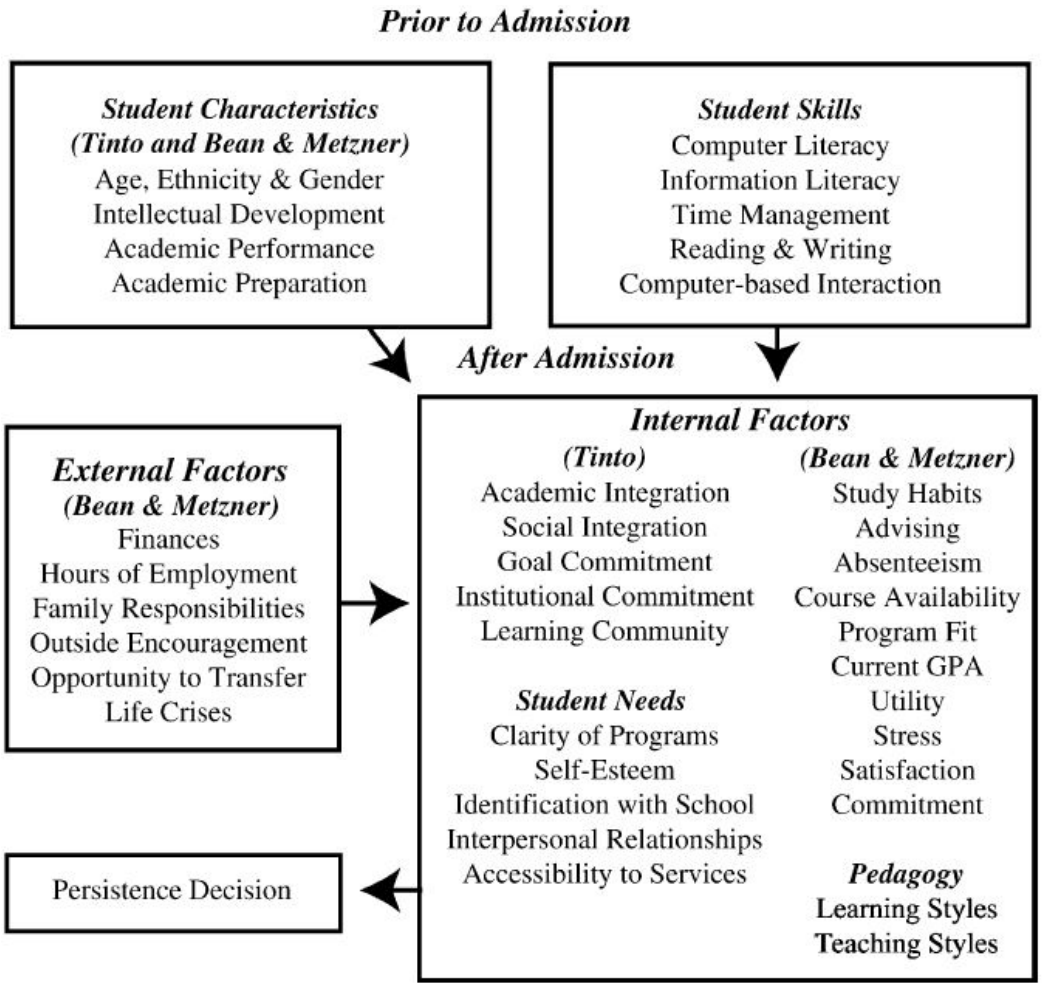


Figure 5. Conceptualization of Rovai's model.

The internal factors that are part of Rovai's model are directly from Tinto's (1975) and Bean and Metzner's (1985) models. However, Rovai adapted Tinto's (1975) and Bean and Metzner's (1985) internal factors to fit student's online students as opposed to on-campus students. Rovai suggested that the extent to which the internal factors are achieved by the online student would have a direct impact on their retention. The online students' needs include accessibility to services, clarity of program, identification with school, interpersonal relationships, and self-esteem (pg. 10-11).

There is no correct or simple formula that will guarantee student retention and the topic itself is complicated by multiple issues (Rovai, 2003). However, there is a growing

consensus among higher education administrators that believe online education is vital to the financial stability and growth of their institutions (Allen & Seaman, 2016).

From Distance to Online Education

History of Distance Education

Distance Education has been around many more years and is different from online education. According to Howell et al. (2003), distance education has existed since the 1800;s and were primarily reading and writing-based correspondence courses with the delivery of content through the postal service. The primary objective of distance education was to create opportunities for the under-represented and for those without access to traditional higher education institutions (Kentnor, 2015). A pioneer of distance education, Isaac Pitman, began teaching shorthand through correspondence in 1840. Pitman would mail postcards to his students and instructed them to transcribe passages from the Bible into shorthand and to return them for correction (Kentnor, 2015, p. 23). Around 1873, Illinois Wesleyan College became the first higher education institution in the US to offer a degree program "in absentia" (Kentnor, 2015, p. 23). To set distance education in perspective of today's online education, Power and Gould-Morven (2011) suggested that the author of the Corinthians, Saint Paul, developed the form of distance learning over 2000 years ago. Technology in the classroom has unfolded in stages; the first beginning with St. Paul's letters to his people, followed by Pitman's introduction of correspondence courses in the mid-1800s, which proceeded to be a means for what ended up evolving into distance learning (Power & Gould-Morven, 2011; Moore & Kearsley, 2005; Schulte, 2011).

Contemporary online education. The emergence of online education began in 1989 when the University of Phoenix, a for-profit higher education institution, began using CompuServe, one of the first consumer online services (Kentnor, 2015, p. 28). With the unveiling of the World Wide Web (Web) in 1991, the University of Phoenix became the first institution to offer online education courses and programs via the Internet (Kentnor, 2015). It was not until the late 90's that the traditional nonprofit higher education institutions began to offer online education courses and programs.

Allen and Seaman (2017) noted that as of fall 2015, 29.7% of all higher education enrollments are taking at least one distance education course (p. 11). As higher education institutions include more and more online programs in their curricula, universities are including the fluent use of technology as an outcome skill (Howell et al., 2003). Additionally, some institutions are encouraging students to take online courses and even requiring students to take at least one online course before they graduate (Howell, Williams, & Lindsay, 2003). Allen and Seaman (2005), and Sileo and Sileo (2008) suggested that because of online programs more students in more locations have the capability of accessing education than ever before in the US. If the goal of education is to produce a productive citizen, clearly online education is affording many individuals an opportunity that otherwise would not exist.

Higher education institutions today often implement online programs and courses as a means to increase their student enrollment and increase access to post-secondary education (Allen & Seaman, 2011; Schiffman, Vignare, & Geith, 2007). In 2014, 5.7 million students were considered online students (NCES). Those figures are up over 18% since between 2002 and 2010 (NCES). Howell and colleagues (2003) believed that

access to the internet, along with the personal computer, has completely transformed distance education to online education.

Purpose, benefit and challenges of online education. Online education via the Internet is a concept that is relatively new to modern educational practices in comparison to how long higher education has been in existence. The purpose of online education is not limited to only increasing student enrollments so institutions can increase their revenue, but the true purpose of online education is to provide individuals, in all stages of life, the opportunity to achieve their educational goals while also participating in all of the other aspects of their lives (Paquette, 2016, p. 80). The goals and objectives of online education vary from one institution to another, but purpose remains consistent. Online courses provide institutions the ability to maximize the resources made available to them to meet the educational needs of their students (Lei & Gupta, 2010, p. 617). Leadership within higher education have expressed their concern with not only having the ability to enroll disadvantaged students, who otherwise may not have had the means of attending classes on-campus, but also with how to retain them (Lei & Gupta, 2010).

For this student population, the flexibility of not being required to be in class at a certain time can be beneficial and enticing. This benefit of not having to be in class at a particular time comes in the form of asynchronous online courses. Asynchronous online courses are set up so that students do not have to participate in coursework at a specified time, but rather, students are able to engage in discussion boards, assignments, and recorded lectures to facilitate learning and academic and social integration (Lei & Gupta, 2010). Asynchronous online courses offer a great amount of freedom for online students from the restrictive time constraints of on-campus programs (Bair & Bair, 2011).

Research by Lei and Gupta (2010), Moore and Kearsley (2005), and Means, Toyamma, Murphy, Bakia, and Jones (2009) supported the belief that the flexibility of online education has allowed higher education institutions to recruit and admit students, such as first-generation students, that otherwise may not have been able to attend post-secondary education do to many barriers. The benefits and advantages of online education are not limited to only flexibility in time. Tuition cost, room and board, childcare, lost time from a job, and time to commute to and from campus can also be contributing factors for students when determining to enroll in an online program (Lei & Gupta, 2010; Moore & Kearsley, 2005; Stanford-Bowers, 2008).

Lei and Gupta (2010) found that online education can "train students in the technology that is providing a competitive advantage for global corporations" (p. 619) while building international knowledge. The interaction that can take place between the faculty and student and between the student and their peers within an online course promotes deeper learning and critical thinking skills, which are all valuable to the education experience for the student (Lei & Gupta, 2010).

Allen and Seaman (2017) noted that the growth in the number of students who are enrolled in distance education, coupled with the overall decline in the overall number of students enrolled, has resulted in far fewer students on-campus in 2015 than in 2012 (p. 23). The total number of on-campus students who are not enrolled in any online course(s) has dropped between 2012 to 2015 (Allen & Seaman, 2017, p. 23) (see Figure 6). Researchers point out that demographic and economic factors will continue to impact the enrollment rate of online education; therefore, it is important for institutions to understand the barriers and variables that impact the retention of online students, in

particular first-generation students for whom the online option was intended to support their college attendance (Allen & Seaman, 2013; Lei & Gupta, 2010).

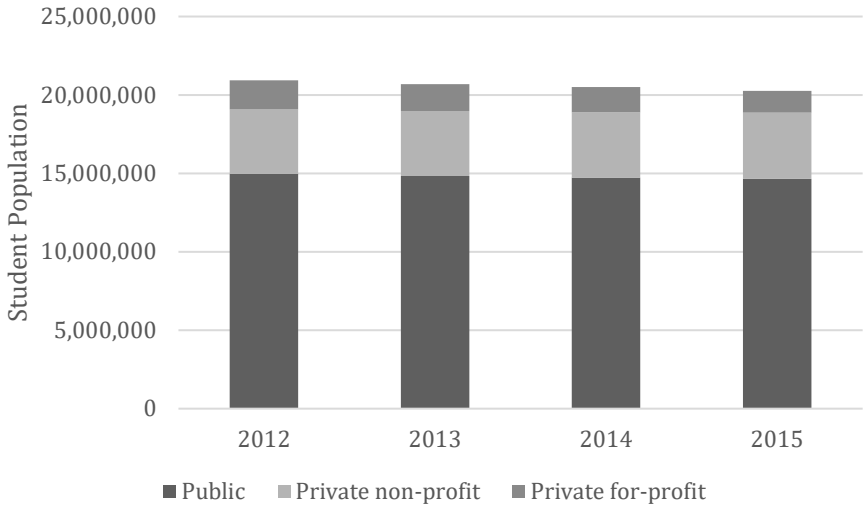


Figure 6. Total on-campus enrollments, 2012-2015.

Stanford-Bowers (2008) suggested, "Online learning presents unique challenges for not only the learners, but the faculty and administrators as well. Those responsible for making decisions regarding designing, facilitating, and even learning in these environments must stretch themselves to think beyond the limitations of the traditional classroom" (p. 38). This means that the faculty roles are changing and will need to continue to shift so that they are able to remain current with new demands of online education, as well as the added pressure of admissions and retention.

Online education is a much different medium for teaching and learning and requires a different pedagogy (Fried, 2012). Some faculty have discovered it to be challenging in the sense that they cannot take their on-campus course and simply put it online. Paquette (2016) noted that online courses required far more work from faculty than they initially expect, which stems from having to learn new technology and

pedagogy for online instruction. There are aspects of online education that can decrease the workload of faculty, but there are other areas associated with online education that increases the faculty workload. Those include developing content and providing high quality feedback (Bair & Bair, 2011).

Faculty play an important role in online education. Several research studies (Bair & Bair, 2011; Lei & Gupta, 2010; Paquette, 2016) show that support and participation from faculty regarding online education and its growth is vital and essential. According to Allen and Seaman (2013), there is a disconnection between online administration and online faculty in regards to the desire and motivation of expanding online education. Allen and Seaman (2013) indicated that less than one-third of online administrators indicated that their faculty believe in the legitimacy and value of an online education. Additionally, Allen and Seaman (2013) found administrators are "more excited than fearful" and faculty are "more fearful than excited" in terms of online education. This gap regarding online education between administrators and faculty is a major barrier to initiating and fostering the growth of online education, as well as having possible implications to the online student retention (Allen & Seaman, 2013).

Koenig (2010) and others (Regan, Evmenova, Baker, Marci, Spencer, Lawson, and Werner, 2012) found in their studies that many faculty have negative perceptions toward online education, particular its efficacy. Koenig (2010) noted that the negative perceptions faculty have toward online education and its efficacy stem from their comparison of online and on-campus learning. Faculty that have taught online courses have also reported feeling disconnected from students within the online learning environment (Regan et al., 2012). Regan et al. (2012) found that one of the primary

reasons for the disconnection the faculty felt was from the communication tools used in online education was insufficient for creating an engaging environment. As faculty have become more comfortable with the various communication tools, as well as technology, their perception toward online education as well as their willingness to teach online strengthens (Allen & Seaman, 2013; Koenig, 2010; Regan et al., 2012).

First-Generation Students. The presence of first-generation students in post-secondary education is not a new occurrence. Irlbeck, Adam, Akers, Burris, and Jones (2014) reported that the number of first-generation college students enrolling in postsecondary education continues to rise. Access to higher education has changed over the years, and continues to change, as results of the G.I. Bill, Morrill Acts, Higher Education Acts, Trio programs, open access to courses, and online education (Chen, 2005). These programs have provided first-generation student's, who are often comprised of adult learners, ethnic groups, members from working class families, and women, access to a post-secondary education that they otherwise may not have had access. The Higher Education Act of 1965 was signed into law to strengthen resources for higher education institutions and provide financial assistance for students. The G.I. Bill provides several benefits to members of the US military, which include education benefits. Military members are able to use these well-deserved benefits to attend college. The Trio program is a federally funded program that provides outreach and support services for students from disadvantaged backgrounds. Included in the Trio program are first-generation students.

Access, according to Everett (2015), can be defined as "the conditions and factors that facilitate and encourage or prohibit and discourage a person from attending college"

(p. 53). The student population has continued to become more diverse as a result of the increased access to higher education and that has caused institutions to take a closer look at how they are supporting their students (Atherton, 2014).

The literature defines a first-generation student in several ways. Chen (2005), Inkelas et al. (2007), Pike and Kuh (2005), and Warburton, Bugarin, and Nunez (2001) defined a first-generation college student as one whose parents have earned a high school diploma or less, while Nunez and Cuccaro-Alamin (1998) defined a first-generation college student as whose parents never earned a bachelor's degree, but may or may not have some postsecondary education. For the purpose of this research study, first-generation college students will be defined as one whose parents never earned a bachelor's degree.

Being the first in their family to attend college, first-generation students usually lack the support that is typically available, and needed, to their peers whose parents have earned a bachelor's degree (Pike & Kuh, 2005; Ward, Siegel, & Davenport, 2012). First-generation students can often lack support and information from family who may not possess the knowledge and skills needed to navigate the complex higher education system (Dumais, Rizzuto, Cleary, & Dowden, 2013). This puts first-generation students at a disadvantage from their counterpart. Their mindset, experiences, and expectations may also differ from their counterpart who has had a parent with college experience. Dumais and colleagues (2013) noted that first-generation students sometimes perceive a lack of support when family members are not actively involved by asking questions or offering support. A large number of first-generation students do not ask for help when faced with difficulties or challenges because it shows that they are inept, incompetent,

and weak (Dumais et al., 2013; Irlbeck, et al, 2014; Miller, Valle, Engle, & Cooper, 2014).

First-generation students have many risk factors including lack of family support, difficulty navigating the higher education system, poor math, reading, and writing skills, weak study habits, underdeveloped critical thinking and problem solving skills, poor time management, and low academic self-esteem (Chen, 2005; Dumais et al., 2013; Irlbeck et al., 2014; Pike & Kuh, 2005; Ward et al., 2012). This population of students is often perceived as less likely to be academically ready for college, able to financially afford college, or able to succeed in college because of risk factors that they experience (Chen, 2005). As a group, first-generation students report that their transition to college is more difficult in comparison to their counterparts and many of the risk factors listed above directly contribute to that (Ward et al., 2012). These risk factors become actual barriers for success and the retention of first-generation students is lower than their counterparts (Miller et al., 2014). Choy (2001) reported that these barriers often turn into frustration and isolation for the student.

According to Engle and Tinto (2008), first-generation students have an average of three risk factors which can include lack of parental education and a low socioeconomic status. Because many of the risk factors are interrelated, it significantly increases the students' likelihood of withdrawal. In comparison to their counterparts, students with no risk factors are three times more likely to complete their college education and earn a bachelor's degree within six years (Engle & Tinto, 2008). Engle and Tinto (2008) reported that close to 60% of first year first-generation students will withdraw during their first year of college. Such a high rate of departure is very problematic for higher

education institutions. According to research by Engle and Tinto (2008), factors that impact the first-generations decision to withdraw can include the lack of academic preparation, knowledge of the higher education system, and social confidence.

Research on the retention of first-generation students suggests that precollege preparation and characteristics play an important role in supporting students' college success, which includes academic and social integration, achievement, retention, and graduation (Pike & Kuh, 2005). Pike and Kuh (2005) noted that educational goals, family backgrounds, high school experiences, and personal expectations are all factors that impact the success of the student. As noted by Ward et al. (2012) the transition from high school to college is stressful and for first-generation students it has the potential to increase the chance of withdrawal. The first year is an important time for the first-generation student where they are faced with adjustments in daily routines, engagement in new activities, and the integration to the culture of higher education. Miller et al. (2014) explained that the first year could be an important predictor of retention because it is in the first year that they build upon an invaluable foundation toward success.

There are many factors that contribute to the retention of first-generation students, including networks of social support, which according to some researchers have had the most significant impact on the student's postsecondary education experiences (Atherton, 2014; Everett, 2015; Irlbeck, et al, 2014). Their social support system is made up of educators, family, parents, and peers. Each having a different role, but contributing to the navigation of the college experience, all in hopes of a positive outcome - graduation. Although first-generation students prefer not to ask for help, assistance from their support system plays an important role in the entire process from making decisions about going,

of where to apply, up to graduation (Atherton, 2014). Research by Engle and Tinto (2008) and Irlbeck et al. (2014) showed that faculty play a vital role in supporting and retaining first-generation students. Some first-generation students reported that they felt intimidated by the faculty-student relationship and that faculty were unapproachable (Engle & Tinto, 2008; Irlbeck et al, 2014). Engle and Tinto (2008) recommended that faculty should act as mentors and integrate themselves with campus activities and organization. Faculty who are visible and involved helps to demonstrate to first-generation students that they are approachable.

There is an abundance of research on first-generation students and retention, but few researchers have looked closely at retention in online programs for first-generation students. Research by Krajewski (2015), Kalinski (2015), Macy (2014), and Snyder (2014) look at retention of online students and retention of non-traditional online students. While some first-generation students are considered non-traditional, not all non-traditional are first-generation. This is where the gap in research exists.

Higher Education Strategies to Support First-Generation Students

Just as recruitment is critical to the admission process, retention is vital because it focuses on the significance of keeping students once they are enrolled in higher education. Retention strategies to retain and support first-generation students comprise an important initiative that institutions take to keep this population of students connected and enrolled. Retention is important for many reasons. From the institution's perspective, "The retention of students is necessary to provide financial stability and to sustain academic programs," but most important, institutions want their students to have a

"positive college experience, complete their academic goals, and enter the workforce" (Fike & Fike, 2008, p. 69).

Higher education institutions have spent many years and has committed a lot of money toward developing intervention programs and support services to help first-generation students to become more integrated within the education environment both academically and socially Everett (2015). Tinto (2006) noted, "We learned that involvement matters and that it matters most during the critical first year of college" (p. 3). Research by Kreysa (2006) founded that some on-campus first-generation students were not academically prepared for college level courses and as a result, institutions have recommended that the students enroll in remedial programs in hopes of strengthening their academic abilities. In addition to remedial programs as a strategy plan to support first-generation students, Engle and Tinto (2008) and Irlbeck et al., (2014) suggested that, mentoring programs are an effective method of supporting and retaining first-generation students. Support programs for first-generation students are most successful when they use informal faculty to student contact, meaning outside of the classroom, in order to help students participate in the academic and social life of the institution (Longwell-Grice and Longwell-Grice, 2007).

Kezar (2006) noted that many higher education institutions have put programs in place to support first-generation students. Another example of support for on-campus first-generation students is a summer bridge program. Summer bridge programs evolved from the need to assist first-generation students with making a successful transition from high school to college. According to Colyar (2011), "Summer bridge programs are

intended to address important preparation and achievement gaps" (p. 123) and therefore, the focus of such program is to support and retain this population of students.

The literature and research that pertains to the retention of first-generation students seems to have exclusively focused on the on-campus first-generation student. With the increase of students enrolling in online courses and degree programs, it is important that institutions take a closer look at its efforts of retaining online first-generation students. These efforts to increase retention cannot be isolated to only one department within the institution.

Collaboration Theory

Just as retention, collaboration is not a new concept within higher education. Collaboration within higher education institutions is required now more than ever because of how increasingly complex and integrated postsecondary education has become. Gray (1989) understood collaboration as an interdependence of participants, the development of solutions from sharing perspectives, combined ownership of decisions, and a collective responsibility for results. According to Gray (1989), "Collaboration is a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (p. 5). Wood and Gray (1991) developed the following definition of collaboration: "A process in which a group of [independent] stakeholders of an issue engage in an interactive process using shared rules, norms, and structures to act or decide on issues related to that [organization]" (p. 140). Gray's (1989) understanding and definition of collaboration highlights the independent and inter-dependent of cross-departmental collaboration in higher education for the purpose of solving a problem, such

as increasing the retention of first-generation online students. Gray (1989) further explained that true collaboration occurs between independent stakeholders when shared norms, rules, and structures are put in place to decide on issues that is related to the organization. Collaboration within organizations is not just for the sake of working on a problem or issue together, but that it is a process that facilitates mutually agreed upon solutions that are collective and implementable.

The ever-changing external challenges and pressures has required higher education institutions to take a closer look at their need for collaborative work to address large concerns and issues (Kezar, 2006). Kezar (2006) noted that institutions have become aware of the importance of building internal partnerships to increase capacity, effectiveness, efficiency, and to address admission and retention concerns. There was a time that both academic and student affairs were one entity and student development was approached from a holistic process (Colwell, 2006; Kezar, 2006). That has since changed and now most institutions have divided into two sides, which have separate roles and responsibilities. According to Colwell (2006) and Kezar (2006), research has shown that collaboration between academic and student affairs enables and strengthens a holistic learning environment and although there is research to support that, there is still a separation between academic and student affairs. The separation has come with a list of practices that has made collaboration challenging. Practices such as not including faculty on student affairs committees or student affairs practitioners on faculty committees, and a lack of communication between both sides has caused separation rather than integration (Glaser, 2005; Leonard & Leonard, 2001; Sawyer, 2007). According to Rhoten (2004), collaboration has the ability to provide multiple benefits to higher education institutions

and the advantage of collaborating within provides the ability to achieve something that could not have been achieved by any one unit alone.

Research by Colwell (2006), Kezar (2006), and Sawyer (2007) found that academic and student affairs can complement each other as they engage in collaborative work. Collaboration of practices, such as inclusion of both sides on institutional committees, joint participation in first year student orientation, mentoring programs, and advising provides a balance of representation and decision making (Glaser, 2005). This joint approach is referred to as cross-functional collaboration or internal collaboration (Gratton & Erickson, 2007; Hansen, 2009). According to Hansen (2009), cross-functional collaboration happens when members of the same organization coordinate and integrate work among the departments. Within higher education institutions, when cross-functional collaboration is implemented, it allows for the increase of effectiveness in many areas, which include admission, customer service, research and development, and retention to name a few (Gratton & Erickson, 2007; Hansen, 2009). Hansen (2009) noted there are several positive gains that an organization has from cross-functional collaboration. Those include better decision-making, improved organizational function, and innovation.

Summary

Chapter 2 contained a review of literature and historical background information regarding retention, online education, and first-generation students. There has been much research done on retention and retention theories, online education, first-generation students, and the importance of collaboration within higher education, but there is a clear

gap in the knowledge and research that specifically addresses the retention of online first-generation students.

Tinto's (1999, 2010) theory weighs heavily on how the student is integrated within the institution. This integration expands beyond the area of academia and moves into the social systems. One of the main concepts of Tinto's (1999, 2010) theory that directly affects retention is the student's membership to the institutional community. Bean and Metzner's (1985) theory builds upon Tinto's theory and takes into consideration the factors and implications that affect adult learners. With limited to no interaction within the institutional community, Bean and Metzner's (1985) theory suggests that the key to retention is the support system that is outside of the institution. Rovai's (2003) model presents a third theoretical approach to retention, which explains that prior to being admitted, students have certain skills and characteristics that become interactive with both internal (institutional community) and external (support system outside of the institution) factors. It is through the interaction, along with many variables, that pushes a student to decide to persist or withdraw (Rovai, 2003). As institutions continue to integrate more online courses and programs into higher education, more research will be necessary to address pressing issues such as retention of first-generation students.

Relying on retention theories provide institutions the ability to respond accordingly to the needs of their students so they are able to better retain the online student (Rovai, 2003). Rovai (2003) noted that when addressing students' needs, simply providing information to online students is not enough. Institutions should move beyond the external factors, which tend to be out of their control, and focus on internal factors (Rovai, 2003).

Through this modified Delphi research, my goal is to explore the retention practices of online first-generation students in accredited higher education institutions by expert participants who might be able to contribute to the best practices as well as contributing to the existing knowledge surrounding retention of online students.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this qualitative study is to identify what a Delphi panel of experts believe are the top contributing factors, strategies, and practices that impact the retention of first-generation students who engage in online learning. This study addressed two main research questions:

1. What are the perceived barriers of retention for first-generation students who engage in online learning?
2. What are the recommendations for future policies and practices to reduce the rate of attrition and improve the retention of first-generation students who engage in online learning?

To achieve this, the study used the Delphi method. The major steps that took place for this modified Delphi method study are:

- Identification of administrators, faculty, and staff of online education from an accredited higher education institution in the US based on set criteria, which is described in Chapter 3.
- Attained a declarative statement from the participants in response to open-ended questions: Based on your experiences, what academic variables, background and defining variables, and environmental variables influence the retention of online first-generation students?
- Transcribed the responses and develop a Likert-type scale questionnaire instrument for each of the two subsequent questionnaires.
- Analyzed the two questionnaires of Likert-type scale responses.

- Prepared data feedback to the participants for each questionnaire.
- Analyzed all comments and statements in each questionnaires made by the participants for commonalities, patterns, and themes that determined consensus.

Linstone and Turoff (1975) noted that the Delphi method is an appropriate method for putting together the structure of a model and can be particularly useful when the topic being considered, such as retention of online first-generation students, does not lend itself to precise analytical techniques (p. 4). In their introduction to the Delphi method, Linstone and Turoff (1975, 2002) described the objective of most Delphi method applications as the reliable and creative exploration of ideas. The Delphi method is a means of group communication, which allows for the gathering of knowledge while allowing the participants anonymity to express their opinions freely (Linstone & Turoff, 1975). Linstone and Turoff (2002) stated that the "Delphi [method] may be characterized as such for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem" (p. 3). Vernon (2009) stated, "The Delphi [method] is one example of a group of research approaches known as the formal consensus development methods, which are considered where there is limited evidence" (p. 69). As noted in Chapter 2, the literature search for this research study revealed that there is limited literature and research that specifically addresses the retention of first-generation online college students.

Applications in Education

The Delphi method has been used extensively as an educational tool and dates back several decades. Some of the earliest findings of the Delphi method being used in

education was from the Adelson study in the 1960s (Hasson, Keeney, & McKenna, 2002). Some of the more recent studies using the Delphi method were found in the review of the current literature (Kalinski, 2015; Manning, 2010; Wessel, 2013; Zeedick, 2010). Using the Delphi method is especially useful for assisting with strategic planning for higher education institutions, developing goals and objectives, and improving curriculum (Linstone & Turoff, 1975).

The Delphi method is an appropriate method for this study for several reasons. This study sought the creative ideas of a knowledgeable group of expert participants in the development and consensus of best practices to retain first-generation students who engage in online education. The participants were from public, private, and various sized institutions throughout the New England area. Creswell (2005) noted that qualitative research provides an opportunity for understanding and a means of interpreting experiences by examining meaning from participants' perspectives. Qualitative research offers flexibility in the approach to studying an issue or concern and the Delphi method is one example of many methodological approaches. In comparison to quantitative research, the number of participants examined can, and usually is, significantly smaller, which provides for the potential of the formation of theories that could come from the participant's perceptions, instead of on measurable outcomes (Creswell, 2005).

Research Design and Methodology

Researchers use several different methods to examine trends among individuals that may share similar characteristics and one method is using qualitative research (Creswell, 2013). A qualitative research design using the modified Delphi method approach was used to explore expert opinions regarding practices and barriers that

directly pertain to the retention of online first-generation students in higher education institutions located in the US. Qualitative research helps to interpret experiences and bring meaning to a person's experiences (Creswell, 2005). Some research questions "inherently lend themselves more to a quantitative than a qualitative approach" according to Patten (2004, p. 21). Skulimoski, Hartman, and Krahn (2007) noted that, qualitative research is "interpretivist" in the sense that the researcher is interested in how the social world is interpreted, understood and experienced. Therefore, using the Delphi method is the best approach for this qualitative research study for several reasons. The Delphi method is an efficient process of acquiring a consensus view from experts in the field of higher education. When the problem "does not lend itself to precise analytical techniques" (p. 4), but can benefit from subjective judgement on a collective basis, Linstone and Turoff (1975) recommend using the Delphi method. The participants who contributed their expertise have no history of organizational ties and represents a diverse background with respect to their experiences and expertise" (Linstone & Turoff, 1975, p. 4). This method is also cost and time efficient, which was taken into consideration when selecting the best approach for this research.

Method

The Delphi method and its many modifications have been used in educational research settings for several decades, including the area of online and distance education (Kurubacak, 2007; Turoff, et al., 1995; Turoff, et al., 2004). The objective of a Delphi study is the reliable and creative "exploration of ideas or the production of sustainable information for decision making" (Pare, Cameron, Poba-Nzaou, & Templier, 2013, p. 207). The Delphi method is a structured process of gathering knowledge from a panel of

experts through a series of questionnaires (see Appendices D-F for the three rounds of questionnaires used in this study). The Delphi method represents an "inductive, data-driven approach that is often used in exploratory studies on specific topics or research questions for which no or limited empirical evidence exists" (Pare et al., 2013, p. 207). In this study, I used three rounds of questionnaires and feedback to develop a consensus of opinion that concerns the retention of online first-generation students discussed below.

Norman Dalkey, Olaf Helmer, and Nicholas Rescher, employees of the RAND Corporation (a Research and Development nonprofit company), first introduced the Delphi method in the 1950s, which was used for a study that was conducted for the military (Linstone & Turoff, 2002; Skulmoski et al., 2007). According to Linstone and Turoff (2002), “The objective of the original study was to obtain the most reliable consensus of opinion of a group of experts by a series of intensive questionnaires interspersed with controlled opinion feedback” (p. 10). Since then, the Delphi method has increased in popularity and is known to be a “flexible research technique well suited when there is incomplete knowledge about an issue or problem” (Skulmoski et al., 2007, p. 12). Seeing as there is limited research pertaining to the retention of online first-generations students, the Delphi method provides the flexibility to conduct research that seeks the consensus of experts that are physically located in several areas of the country, is cost effective, and allows for structured process of addressing complicated problems.

Typically, the Delphi method goes through four phases or rounds. The first round is the exploration of the topic with one or more open-ended questions (Skulmoski et al., 2007). The second round is where the panel of experts are “reaching an understanding of how the group views the issue” (Linstone & Turoff, 2002, p. 5) and the participants may

agree or disagree regarding barriers that were raised in phase one. Round three allows the participants to prioritize the barriers that had been previously identified in earlier rounds. The final evaluation took place in the third round where "previously gathered information had been initially analyzed and the evaluations have been fed back for consideration" (Linstone & Turoff, 2002, p. 6). Linstone and Turoff (2002) noted, "If there is significant disagreement, then that disagreement is explored in the fourth round to bring out the underlying reasons for the differences and possibly to evaluate them" (p. 6). For the purpose of this study, I used a modified approach by only having three rounds.

The Delphi method relies on the anonymity of the participants; rounds are used to seek feedback and recommendations; and feedback is provided after reach round of questions, which "informs the participants of the other participant's perspectives, and provides the opportunity for the Delphi participants to clarify or change their views" (Skulmoski et al., 2007, p. 3). Adler and Ziglio (1996) and Skulmoski et al. (2007) noted that when face to face interaction is used within a Delphi study negative effects on the responses to the questions could happen as a result of group dynamics such as body language, difference of opinions, and personality differences. Within the face-to-face approach, the participants may see each other's responses and comments, causing the interaction between the participants to be counterproductive (Powell, 2003). The participants are encouraged to share their opinions and recommendations and when coupled with the anonymity that is offered, it is intended to result in more honest and forthcoming opinions and suggestions. Through open and honest responses, participants may reveal recommendations, suggestions, or predictions for leaders and policy makers not previously revealed or refined (Linstone & Turoff, 2002). By providing a space for

confidentiality, a likelihood was that the panel of experts would be more open and willing to express their views and to share their voice. This confidentiality can avoid disagreement among the participants and "domination by quantity or by strength of personality" (Linstone & Turoff, 1975, p. 4).

Vernon (2009) said that among the many benefits of this method, one of the most important is the “access to the range of experts” that is required for the Delphi method (p. 73). Additionally, “Delphi response rates can be good and importantly, Delphi have proved over the last 50 years of operation that they are capable of producing consensus when this is the desired outcome” (Vernon, 2009, p. 73). Skulmoski et al. (2007) recommend the Delphi method when a researcher’s intention is to “identify recommendations for the future” (p. 18). Through the open and honest responses by the participants, it is a goal that these experts are able to reveal recommendations, suggestions, and prioritize barriers for educational leaders and policy makers that may positively influence the retention of first-generation adult online students.

Due to limited research on the topic of online student retention, the Delphi approach seems to provide a unique opportunity for conducting research on this topic. Skulmoski et al. (2007) stated that the Delphi method “can be applied to problems that do not lend themselves to precise analytical techniques, but rather could benefit from the subjective judgments of individuals on a collective basis” (p. 2). Using the Delphi method, it allows for the possibility of refining the participant's point of view through the process of multiple rounds of questions (Skulmoski et al., 2007).

Consensus

A flexibility of the modified Delphi is allowing the researcher to define consensus and set a "cut-off" that will be used to determine consensus (Boulkedid, Abdoul, Loustau, Sibony, & Alberti, 2011; Linstone & Turoff, 1975; Skulmoski et al., 2007). Miller (2006) and Boulkedid et al. (2011) noted that consensus on a topic can be decided if a certain percentage of the votes fall within a prescribed range. Consensus in Delphi studies can vary from 55% to 100% agreement, with 70% considered as the standard (Linstone & Turoff, 1975, 2002; Vernon, 2009). Vernon (2009) noted that it might be extremely difficult to get participants representing different constituencies with varying viewpoints and priorities to reach unanimity. Linstone and Turoff (1975), Miller (2006), Boulkedid et al (2011) suggested that at least seventy percent of the participants should rate two or higher on a three point Likert-type scale and therefore, the mean would need to be at 2.25 or higher. In literature and previous research studies using the modified Delphi method, the use of the mean score, based on a Likert-type scale, is strongly favored (Boulkedid et al., 2011; Linstone & Turoff, 1975; Manning, 2010; Skulmoski et al., 2007; Vernon, 2009; Wessel, 2013; Zeedick, 2010). In this study, consensus will be researched when a theme has a mean score of 2.25 or higher.

Research Purpose and Questions

The purpose of this study was to explore how higher education institutions are addressing the retention issue of online first-generation students by identifying the perceived barriers relating to the retention of online first-generation students and exploring the best practices and strategies of reducing the identified barriers. The results

from this study are intended to provide a foundation for a model of retaining online first-generation students.

According to Creswell (2005) and Neuman (2003), a central problem can be researched through a qualitative approach. In this research, the central problem is the lower retention rates of online first-generation students. Open-ended questions are often relied upon to gather data for qualitative research studies (Creswell, 2005). Neuman (2003) said, that "qualitative researchers use early data collection to guide how they adjust and sharpen the research question because they rarely know the most important issues or questions until after they become fully immersed in the data" (p. 143). According to Creswell (2005), the research questions for qualitative studies are often broad and general and the purpose is to examine the experiences of the participants. Thus, in this study I began with open-ended questions as a means of discovering the top contributing factors that impact the retention of online first-generation students. This was followed by two sequential rounds of questionnaires that asked the panel of experts to come to a consensus regarding the best practices for retaining online first-generation students.

Skulmoski et al. (2007) noted that for studies using the Delphi method, the first round of questions are typically open ended and broad. The philosophy behind that is to widely cast the research net (Skulmoski et al., 2007). The goal of casting the net widely in the first round, the researcher is more likely to get a broader range of responses than if a narrow set of questions were to be asked (Skulmoski et al., 2007). Thus, in this study I used such strategies by Skulmoski et al. (2007) to seek a wide range of diverse responses that address the research questions of this study.

Participants

In Delphi studies, sampling procedures can be of great concern and building a panel of experts is sometimes a challenge because of the nature of the study. Essentially, Linstone and Turoff (1975) believe that the participant's experiences is more capable of confronting a problem and coming to a consensus in comparison to random individuals completing a questionnaire. For this study, I compiled a list of 475 administrations, faculty, and staff from accredited four-year higher education institutions and invited them to participate in this research with a goal of a 10% participation rate. Linstone and Turoff (1975) explained that a small group of informed and knowledgeable participants is more advantageous than a larger panel of uninformed participants. Linstone and Turoff (2002), noted that the Delphi panel consisted of only experts since the Delphi was originally introduced and used to "deal with technical topics and seek a consensus among homogeneous groups of experts" (p. 80). Since its first use, the Delphi method and modified Delphi method have been used in several research studies including those in higher education (Collins, 2005; Manning, 2010; Lach-Smith, 2010; Wessel, 2013; Zeedick, 2010).

Hsu and Sandford (2007), Powell (2003), and Linstone and Turoff (1975) noted that there is truly no minimum amount of participants required for a Delphi study, but there should be at least three kinds of experts to create a successful mix of participants. For this study, I invited three distinct kinds of experts to participate: Administrators, faculty, and staff. The selection of appropriate participants for a Delphi study is extremely important and should be selected based on their knowledge of the subject

matter (Skulmoski et al., 2007). Each participant needed to have experience with online courses or degree programs and/or experience working with online students.

I believe that the term "expert" is subjective. For the purpose of this research study I will be applying the definition of an expert by Hsu and Sandford (2007) who noted, that an expert is one who is "highly trained and competent within the specialized area of knowledge related to the target issue" (p. 3). Linstone and Turoff (1975) suggested that a set criteria should be established and followed to maintain the validity of the panel of experts. The following criteria will be used to select the final participants for the study:

- Employed at an accredited higher education institution within the US
- Employed as an administrator, faculty, or staff within a unit that works directly with online courses, programs, and/or students

Procedure and Data Collection

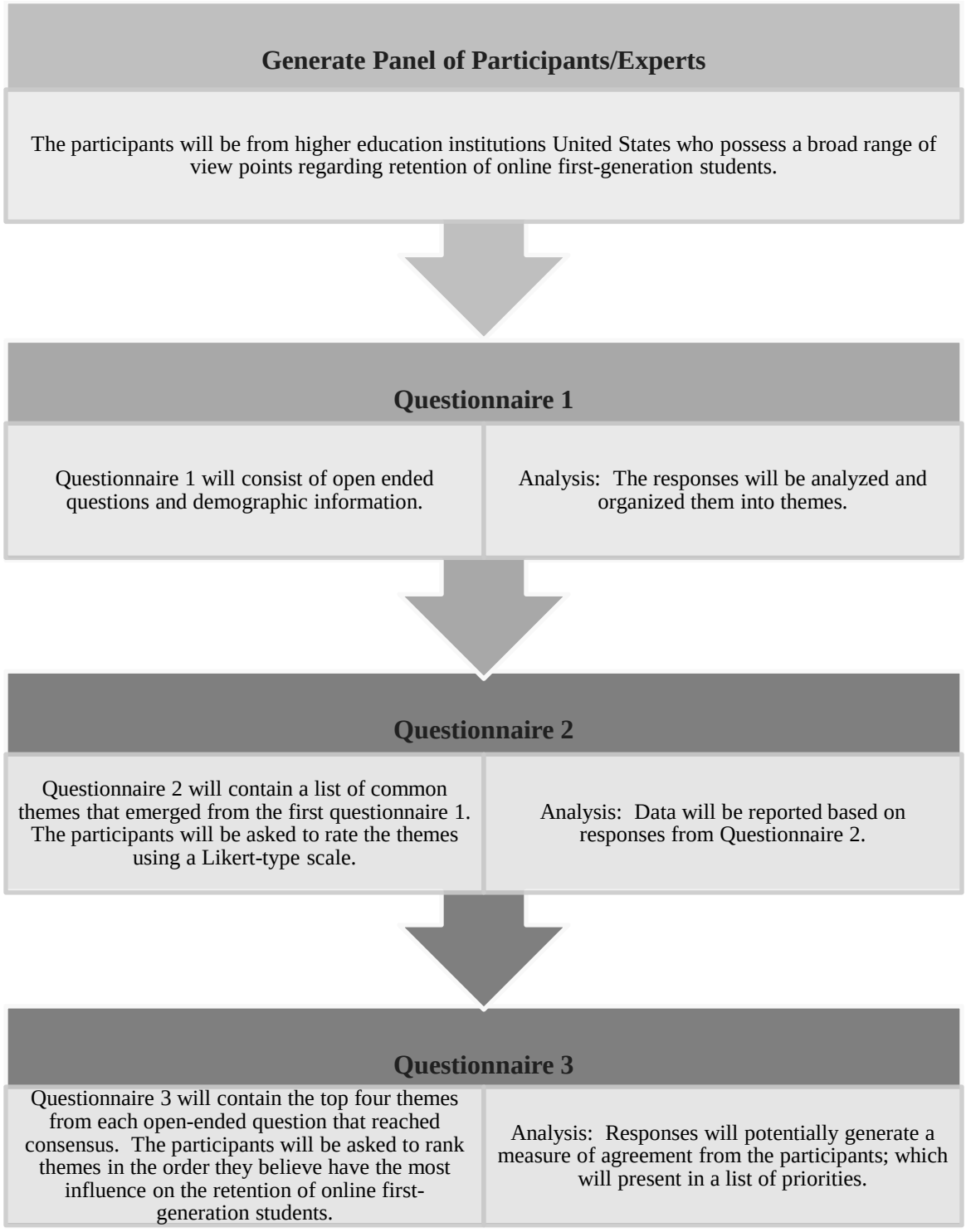


Figure 7. Overview of the Delphi Method.

It is important that the participants stay engaged during this study. Removing barriers, such as time, place, and distance, and requiring no face-to-face meetings and having all communication done through the Internet (e.g., email and online questionnaire), kept the participants engaged and involved throughout the three rounds of this study. The first questionnaire was available to all participants for 10 days. I then took one week to code the data accordingly, after which I emailed only those who participated in the first questionnaire a link to the second questionnaire. The second questionnaire was made available for one week. After the close of the second questionnaire, I then coded the data accordingly and emailed a link to the third questionnaire to only those who participated in the second questionnaire. The third questionnaire was made available for one week.

Three rounds of online questionnaire were distributed with notifications and links sent directly to the participants via email. In the first questionnaire, I asked for demographic information and a declarative statement from the participants concerning the following questions: Based on your experiences: What academic variables influence the retention of online first-generation students? What background and defining variables of students influence the retention of online first-generation students? What environmental variables influence the retention of online first-generation students? What strategies and/or practices influence the retention of online first-generation students? After the completion of the first questionnaire, I evaluated the participant's responses and organized them into themes.

The second questionnaire contained a list of common themes that emerged from the participant's responses to the open-ended questions in the first questionnaire. The

participants rated the common themes using a zero to three Likert-type Scale of High Impact, Medium Impact, Low Impact or No Impact (Linstone & Turoff, 2002). A "neutral" response was not included in order to force an opinion (Fowler, 2001).

In the third and final questionnaire, the participants received the results from the second questionnaire and using a Likert-type scale they were asked to rank the top themes in each section that they believe has the most influence on the retention of online first-generation students. The participants were asked one additional open-ended question at the end of the final questionnaire: Regarding the four themes you selected as having the most influence, what is your recommendation for future practices and policies to improve the retention of online first-generation students?

Coding Method

Coding is the process in which raw data is transformed into a standardized form. Collecting data for research is important, but understanding the data and making sense of it is just as critical. This involves preparing the data for analysis, going deeper into understanding the data, representing the data, and interpreting the meaning of the data. Analyzing data is an ongoing process and calls upon the research to reflect, ask questions, and take notes. To analyze the data, I used Creswell's (2013) suggested steps:

1. Collect the data
2. Read all the responses
3. Develop codes which will identify themes of the participant's perception and experiences that are relevant to my research question
4. Code the data by using the developed codes, this will identify themes in the participants' responses

The data was analyzed and interpreted using a coding method that Creswell (2005) explains as a means of identifying patterns, trends, and themes. A coding process, which is known as constant comparison, was used for comparing and analyzing text for keywords and phrases to identify similar or repetitive responses as well as emerging themes (Creswell, 2005). This process was used in Manning (2010) and Ugboajah (2007). When necessary, I will made adjustments to my codes after reading through all the data collected. The adjustments were made to accurately capture the data and themes as they emerge. Neuman (2003) suggested that coding discovers "visible and surface content," which are phrases and words that are found in the responses of the participants.

After reading the collected data, I used several guiding questions to help me code: What is this saying? What does it represent? What is this an example of? What is trying to be conveyed? Creswell (2013) said that it is in this category that researchers “build detailed descriptions, develop themes or dimensions, and provide an interpretation in light of their own view or views of perspectives” (p. 184).

Rather than creating codes before I read through the data (prefigured codes), I decided that Creswell’s (2013) approach was a better fit in comparison to other approaches. As Creswell (2013) noted, prefigured codes limit the analysis of the data while using the emerging strategy allows for openness of what the data is revealing.

Instrument

According to Creswell (2005), qualitative research frequently relies on open-ended questions and interviews to gather data. Neuman (2003) noted, that qualitative researchers will "use early data collection to guide how they adjust and sharpen the research questions because they rarely know the most important issues or questions until

after they become fully immersed in the data" (p. 143). Using the Delphi method allows for the initial questions in the first questionnaire to be broad and open-ended allowing for possibility of more important issues or questions to arise (Linstone & Turoff, 1975; Powell, 2003; Skulmoski et al., 2007). The initial questions provided a basis for the study and the following rounds of questionnaires were determined based on the participants' response to the initial questions (Linstone & Turoff, 1975; Vernon, 2009).

When developing an instrument, Creswell (2005) noted that there are four steps to follow: review literature, present general questions to a targeted group of participants, form questions, and pilot test the study. Because of previous research studies using the modified Delphi method within the purview of higher education (Kalinski, 2015; Manning, 2010; Wessel, 2013; Zeedick, 2010) I did not conduct a pilot study. Additionally, pilot studies are often used when the scope of the design is large and complex (Creswell, 2005). Since this study is on the smaller side and the implantation of the study has been done in prior studies, it supports the decision not to pursue a pilot study.

Data Analysis

The data analysis of the responses to the open-ended question from the first questionnaire was done through the use of elements from grounded theory methodology. Charmaz (2006) explain that grounded theory methods allow for systematic, but flexible, guidelines for collecting and analyzing data. Collins (2010) Lach-Smith (2010), and Taylor (2008) used elements of grounded theory in a Delphi study and noted that grounded theory can aid the researcher in becoming sensitive to the themes that emerge through the data. During the first questionnaire, the researcher used grounded theory

techniques to assure that all data is analyzed using a systematic method (Charmaz, 2006). Each line of the participants' responses was examined, noting any recurring ideas and defining them as themes using the following guiding questions: What is this saying? What does it represent? What is this an example of? What is trying to be conveyed?

Vernon (2009) explained the data analysis approach for Delphi studies: Each previous round is summarized for each item under consideration and presented back to participants. This allows participants to compare their personal position with that of the collective group. The participants shared their experiences and perceptions, which allowed for the identification of top factors that influence best practices used to retain online first-generation students.

Ethical Considerations

The most important concern in addressing ethics is maintaining the confidentiality and privacy of all the participants and all information that is related and connected to them. Each participant in this study has rights and those rights were made known to them (Creswell, 2005) (see Appendix B for the Consent to Participate). Each participant was informed via email of the purpose of this study and how the results will be used (see Appendix A for the initial email to all potential participants). I ensured the participants that all demographic data remained confidential. The participants only interacted with me through email and questionnaire responses.

As the researcher, I generated data for this study and reported it truthfully without any form of modifications (Creswell, 2005). Data will only be collected during the three rounds of questionnaires and from the individuals who consented to participate. LimeSurvey was selected because of its secure database and ability to maintain

confidentiality. Additionally, this research study was submitted to the Research Protections Office at the University of Vermont for review through the Institutional Review Board and was approved on September 18, 2018.

Consent and Confidentiality

In the email that was sent to the participants, I included an introduction to the topic, the purpose of the study, and a link to the first round of the study (See Appendix A). Within the Consent to Participate (see Appendix B), I explained that their responses will be confidential and I am the only person to have access to the data collected. Demographic information was collected only in the first questionnaire. The demographic data collected will be used to determine whether or not the participants in the study meet the criteria to participate and are a representative sample of the targeted population. For example, a participant who does not have any work experience with online courses, programs or students will not be eligible to participate in the study. All questionnaires were created and data was collected through LimeSurvey, a secure internet site used by the University of Vermont.

Summary

The primary objective of this study is to develop a foundational understanding of expert perspectives on retaining online first-generation students. To achieve this goal, I conducted a study using a modified Delphi method approach to gather data that could form a consensus among the participants. The modified Delphi method was chosen because it allows experts to participate that are geographically separated, in combining the knowledge and abilities of a diverse group for the purpose of addressing a complex problem or issue (Millar, Thorstensen, Tomkins, Mepham, & Kaiser, 2007). This

modified Delphi method allowed experts to examine and review suggested best practices, provide feedback on their use, and offer recommendations about additional best practices. The success of a Delphi study relies upon the careful selection of the participants to ensure the best possible outcome.

This modified Delphi method used three rounds of questionnaires. During the first questionnaire the participants offered a narrative response and the researcher used a qualitative analysis of grounded theory to determine common themes. In the second questionnaire, the participants were asked to evaluate the themes by indicating the importance of each item using a Likert-type scale. In the third and final questionnaire, the participants prioritized the top common themes from round two and the participants were asked for their opinion on what they believe has the most influence on the retention of online first-generation college students.

A qualitative approach to this study is more appropriate because this form of research allows for the examination of a smaller number of participants in comparison to quantitative research (Creswell, 2005). Additionally, Linstone and Linstone (1975, 2002) and Skulmoski et al. (2007) noted that the Delphi method is appropriate for research when one is searching to identify recommendations for the future. It is the hopefulness of the researcher that this study may lead to future best practices regarding how to efficiently and successfully retain online first-generation students.

CHAPTER 4: FINDINGS

Introduction

The purpose of this study was to explore how higher education institutions are addressing the retention issue of online first-generation students by identifying the perceived barriers and exploring the best practices and strategies of reducing the identified barriers. The results from this study are intended to provide a foundation for retaining online first-generation students. In Chapter 1, the problem and purpose of the study was presented and explained and in Chapter 2, literature findings that relate to the study were identified and explored. Chapter 3 discusses the modified Delphi method, which was used for this research, and will discuss the instrument used to collect the data, the analysis of the data, each round of questionnaires, and the findings. The questions that guided this research are:

1. What are the perceived barriers of retention for first-generation students who engage in online learning?
2. What are the recommendations for future policies and practices to reduce the rate of attrition and improve the retention of first-generation students who engage in online learning?

Overview of the Study

The study consisted of three rounds of questionnaires that asked the expert participants to share their experiences, knowledge and opinions pertaining to the research questions. The responses were analyzed after each of the three rounds of questionnaires. Common themes were identified and shared with the expert participants after each round allowing for further refinement (Linstone & Turoff, 2002). Questionnaire 1 asked four

open-ended questions, which resulted in identification of several common themes. Questionnaire 2 gathered additional data by asking the participants to rate the common themes that were generated from the four open-ended questions in the first questionnaire. The common themes that were rated as high impact for the retention of online first-generation students were identified in Questionnaire 2 and presented to the expert participants in Questionnaire 3. Participants were asked to rank the high impact common themes in Questionnaire 3 that they believed had the most influence on the retention of online first-generation students. Additionally, they were also asked for recommendations for future practices and policies to improve the retention of online first-generation students.

Participants

When using the Delphi method, the researcher relied on the expertise of the participants and the selection of the participants as a "critical component of the Delphi research since it is their expert opinion which the output of the Delphi is based" (Skulmoski et al., 2007, p. 3). Each participant had experience and knowledge with the issue that is being researched; they had the ability and willingness to participate; and they offered sufficient time to participate in each round of questionnaires (Linstone & Turoff, 2002; Skulmoski et al., 2007; Vernon, 2009).

The expert participants for this study were 32 administrators, faculty, and practitioners in higher education. Their roles include Associate Provost, Dean, Registrar, Director, Coordinator, Faculty, and Advisor. The participants were affiliated with four-year higher education institutions that offered online courses and/or degree programs. Participants were determined to be eligible to participate in the study based on their work

experience with online degree courses or programs and/or with online students. Each participant was located through a web search of higher education institutions that offer online courses or online degrees and was contacted directly via email. There was no limit set on the number of participants who could participate. All individuals who were willing to participate and met the criteria were selected to participate in this study. In Questionnaire 1, participants responded to demographic information questions. See Appendix C for the list of demographic questions.

Of the 475 individuals that received a personal email inviting them to participate in this study, 32 fully completed Questionnaire 1. Of the 32 participants from Questionnaire 1, 26 completed the second questionnaire. Of the 26 participants who completed the second questionnaire, 25 completed the third questionnaire. The number of participants in a Delphi study can vary according to Linstone and Turoff (2002). It is important to have participants who are experts in the field of study in comparison to a large number of participants who are not experts (Linstone & Turoff, 2002).

Participants work for both private and public four-year institutions, they all hold a master or doctorate degrees, 13 self-identified as a first-generation undergraduate student, and 10 completed one or more of their degrees online. Only two participants self-identified as first-generation online students. Twelve participants have 1-5 years of experience; six participants have 6-10 years of experience; six participants have 11-15 years of experience; seven participants have 16-20 years of experience; and one participant has 21 or more years of experience (see Appendix D for participant demographics).

Presentation and Analysis of Data

Participants were recruited via email invitations only and all data was collected through a secure website, LimeSurvey. Vernon (2009) noted that for Delphi studies, the data that is collected should be summarized and presented back to the participants allowing them to "compare their personal position with that of the collective group" (p. 71). The initial email was sent to 475 individuals on September 24, 2018 with a deadline to participate by October 5, 2018. Thirty-two individuals completed Questionnaire 1, which closed at 12:00am on October 6, 2018, preventing any additional participants.

After completion of the first questionnaire, participants' responses were analyzed, interpreted, and coded into common themes using qualitative data analysis procedures (Creswell, 2013; Neuman, 2003). Questionnaire 2 was made available to the participants on October 11, 2018 with a deadline of October 19, 2018. The second questionnaire contained a Likert-type scale and the participants were asked to rate the common themes in terms of high impact, medium impact, low impact, or no impact on the retention of online-first generation students.

The results from Questionnaire 2 were put into a table with the aid of Microsoft Excel and the mean level of agreement was determined. The results were shared with the participants in Questionnaire 3, which was released on October 21, 2018 with a deadline of October 26, 2018. In Questionnaire 3, the participants were provided a list of the themes that were determined to be of high impact and were asked to rank them in the order they believe have the most influence on the retention of online first-generation students. Participants were also asked to provide recommendations for future practices and policies to improve the retention of online first-generation students.

Findings

According to Linstone and Turoff (2002), the Delphi distinguishes itself from ordinary polling procedures because the researcher provides feedback of the gathered information from the group and presents the opportunity for the participants to refine their judgements based upon their reaction to the collective views of the group (p. 22). The goal of this study was for the participants to develop a consensus regarding the topic of retention pertaining to online first-generation students, which aligns the purpose of the Delphi method (Linstone & Turoff, 2002; Skulmoski et al., 2007). Linstone and Turoff (2002) noted that the "validity of the resulting judgement of the entire group is typically measured in terms of the explicit 'degree of consensus'" among the participants (p. 22). Below are the results of the data that was retrieved and analyzed from each of the three questionnaires.

Questionnaire 1 Themes

Based on the participant's experiences, observations, or perception, they identified variables in each of the following categories that impact the retention of online first-generation students: Academics, background, environmental, and strategies/practices. In Questionnaire 1, the participants were asked four open-ended questions:

1. What academic variables influence the retention of online first-generation students?
2. What background and defining variables influence the retention of online first-generation students?
3. What environmental variables influence the retention of online first-generation students?

4. What strategies and/or practices influence the retention of online first-generation students?

The responses of the participants were collected through LimeSurvey and using qualitative data analysis procedures, a total 40 common themes emerged from the four open-ended questions. The use of content analysis set apart specific characteristics of the participants' responses for the purpose of finding a common theme, for describing and coding the responses in terms of "predetermined and defined characteristics," and analyzing the data for frequency, intensity, and space (Neuman, 2003, p. 313). Neuman (2003) noted that manifest coding seeks to identify content that is visible and at the surface. Examples would include how words and phrases appear in the participants responses (Neuman, 2003). According to Neuman (2003), this form of coding is highly reliable because phrases and words either exist or not. Manifest coding also requires the coder to determine assumptions or inferences that may or not be present in the participants' responses (Neuman, 2003). Assumptions or inferences may be determined based on how frequent they appear, the nature of the wording, and expectations and experiences of the researcher (Neuman, 2003).

The themes that were identified from each questionnaire were established primarily from the process of manifest coding. Words that were repeated, as well as combinations of words, were identified and in most instances were combined into one theme. As an example, "knowing about the supports a school has" and "supplemental instruction" were identified and coded as one theme. Similarly, "demonstration of resilience" and "persevere when challenges are presented" were also considered as one theme. This is consistent with Neuman (2003) who stated, "Careful measurement is

critical in content analysis because the researcher takes murky symbolic communication and turns it into precise, objective, and quantitative data" (p. 312).

Appendix J contains the statements made by the participants and the corresponding themes. The sole purpose of Questionnaire 1 was to establish a list of common themes. Thirty-two participants, through their statements, formed 40 themes in four categories. Academic variables had 10 themes, background/defining variables had 9 themes, environmental variables had 8 themes, and strategies and practices had 13 themes.

Table 2

List of Common Themes and Respective Categories that Emerged from Questionnaire 1

Category	Theme
Academic Variables	Academic preparedness
	Access to resources
	Departmental collaboration
	Gap year
	Navigating higher education
	Presentation/delivery of course materials
	Quality of K-12 education
	Responsiveness/availability of instructors
	Rigor of course
	Technology and learning management systems
Background/Defining Variables	Ability to self-advocate
	Commitment/motivation
	Experience with technology/online courses
	Financial aid
	Health related challenges
	Organizational and time management skills

	Race/ethnicity
	Students' fluency in English
	Veterans/military status
Environmental Variables	Access to reliable computer/internet
	Adequate study environment
	Employment
	Family
	Finances
	Geographic location
	Mentors
	Peer and social networks
Strategies and Practices	Advising
	Career services and resources
	Co-curricular involvement
	Community college partnerships
	Course/curriculum development
	Defining/explaining expectations
	Diverse faculty and staff
	Faculty and staff training
	Faculty/staff relationships
	Onboarding
	Peer relationships
	Sense of belonging
	Technical support

Questionnaire 2: Rating Themes

After the data were analyzed from Questionnaire 1, the second questionnaire was formed and an access link was provided to the participants via email (see Appendix F for the email to the participants and Appendix G for Questionnaire 2). The purpose of the second questionnaire was to begin to identify a level of agreement among the

participants. Linstone and Turoff (2002) noted that the second round of the Delphi method "involves the process of reaching an understanding of how the group views the issue" (p. 5). Questionnaire 2 consisted of 40 common themes separated into four categories as they appeared in the first questionnaire. In each questionnaire, the themes were not defined for the participants and the participants' statements were not shared. Defining the themes or sharing the participants' statements would have predetermined the meaning of each theme. Allowing for ambiguity gave the participants the freedom to interpret the theme in whichever way they have experienced it. Skulmoski et al. (2007) stated that the responses from the first round of a Delphi study are the basis of developing questions for the second round (p. 4). Additionally, Skulmoski et al. (2007) noted that if the purpose of the first round of the Delphi study was to generate a list, then it is "common to pare down that list" (p. 4) in the future rounds of the study.

In Questionnaire 2, the participants were asked to rate each theme on a Likert-type scale. All replies were converted into numeric data and entered into a Microsoft Excel spreadsheet. The response of high impact was converted to a three, medium impact was converted to a two, low impact was converted to a one, and no impact was converted to a zero. The mean score was determined for each theme. Several themes reached the level of consensus of having a mean score of 2.25 or higher, which is displayed in Table 3. Consensus in Delphi studies can vary from 55% to 100% agreement, with 70% considered as the standard (Linstone & Turoff, 1975, 2002; Vernon, 2009). Linstone and Turoff (1975), Miller (2006), and Boulkedid et al. (2011) suggested that at least 70% of the participants should rate two or higher on a three point Likert-type scale and therefore, the mean would need to be at 2.25 or higher.

Table 3

Complete List of Themes That Reached Consensus in Questionnaire 2

Category	Theme
Academic Variables	Academic preparedness
	Access to resources
	Navigating higher education
	Responsiveness/availability of instructors
	Technology and learning management system
Background/Defining Variables	Commitment/motivation
	Experience with technology/online courses
	Financial aid
	Health related challenges
	Organizational and time management skills
	Students' fluency in English
Environmental Variables	Access to reliable computer/internet
	Adequate study environment
	Employment
	Family
	Finances
Strategies/Practices	Advising
	Communication
	Course/curriculum development
	Defining/explaining expectations
	Faculty and staff training
	Onboarding
	Sense of belonging

In Questionnaire 1 there were 40 themes identified and in Questionnaire 2 that list shifted to 23 themes. Eighteen themes did not reach the level of consensus among the

participants. The top four themes from each category that reached consensus were selected and presented in Questionnaire 3. Figures 8 through 15 display each category that contains the level of impact each theme has on the retention of online first-generation students as well as the corresponding mean score.

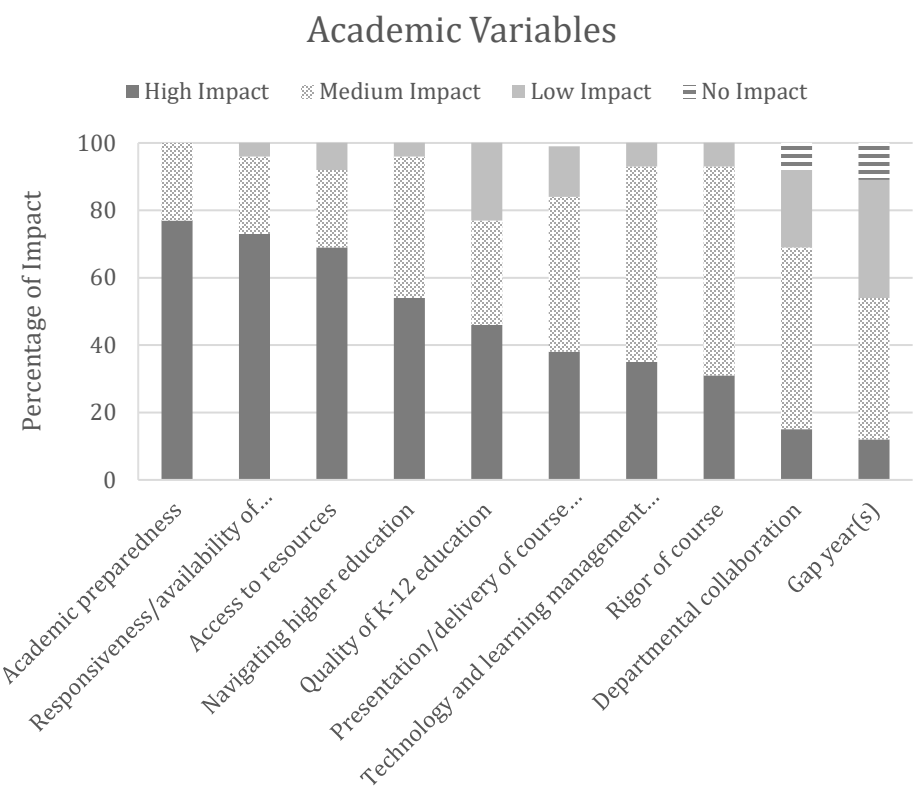


Figure 8. Percent of impact each theme has on retention of online first-generation within the Academic Variables category from Questionnaire 2 (n=26).

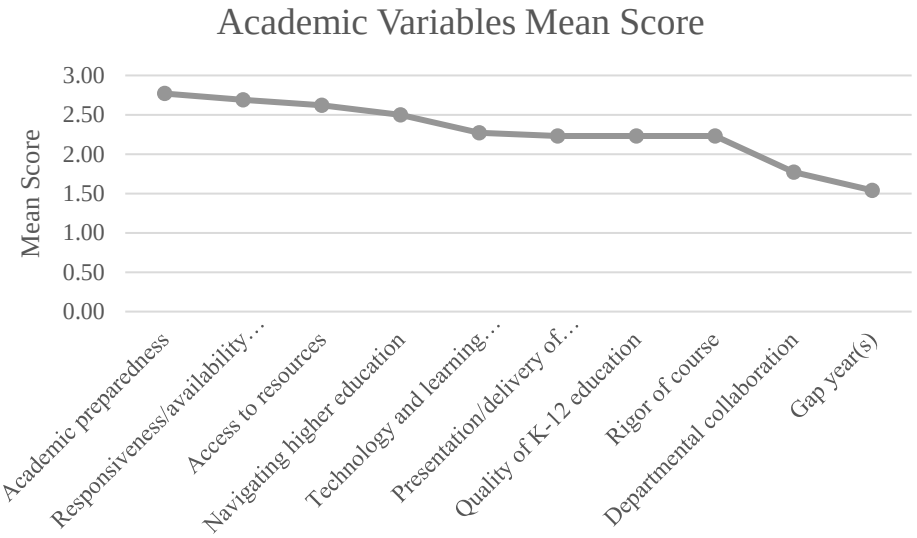


Figure 9. Mean score of each theme within the Academic Variables category from Questionnaire 2 (n=26).

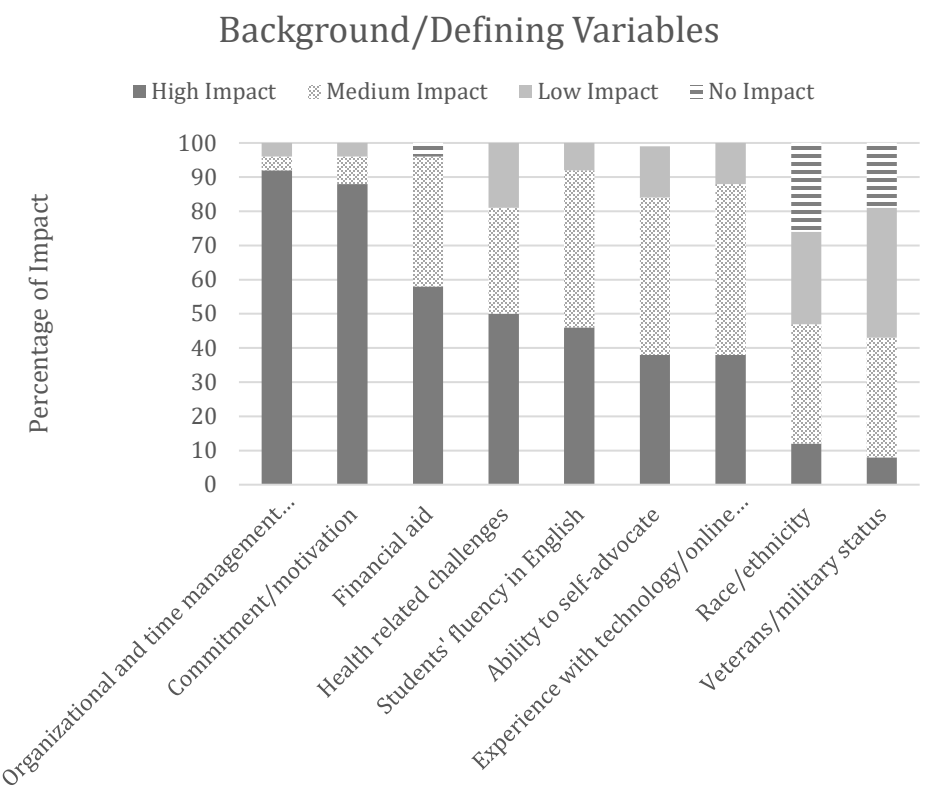


Figure 10. Percent of impact each theme has on retention of online first-generation within the Background/Defining Variables category from Questionnaire 2 (n=26).

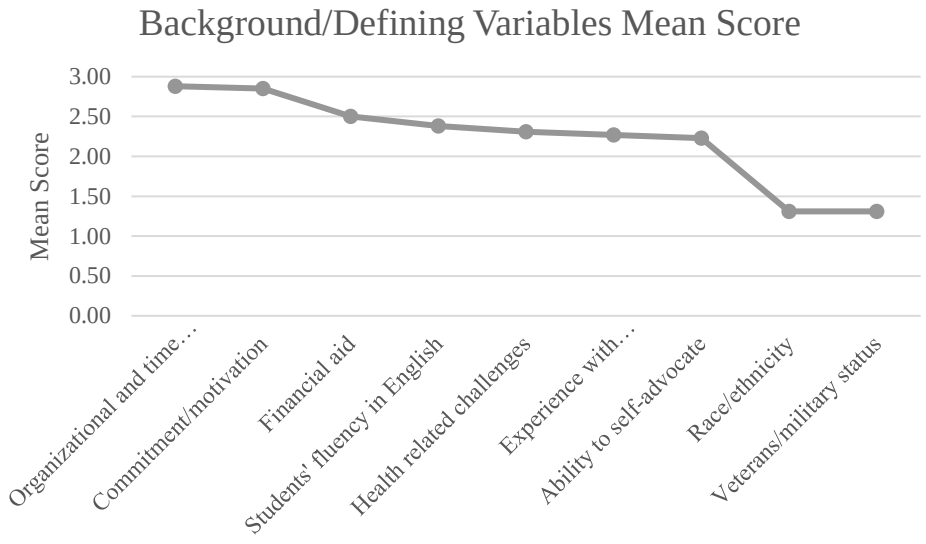


Figure 11. Mean score of each theme within the Background/Defining Variables category from Questionnaire 2 (n=26).

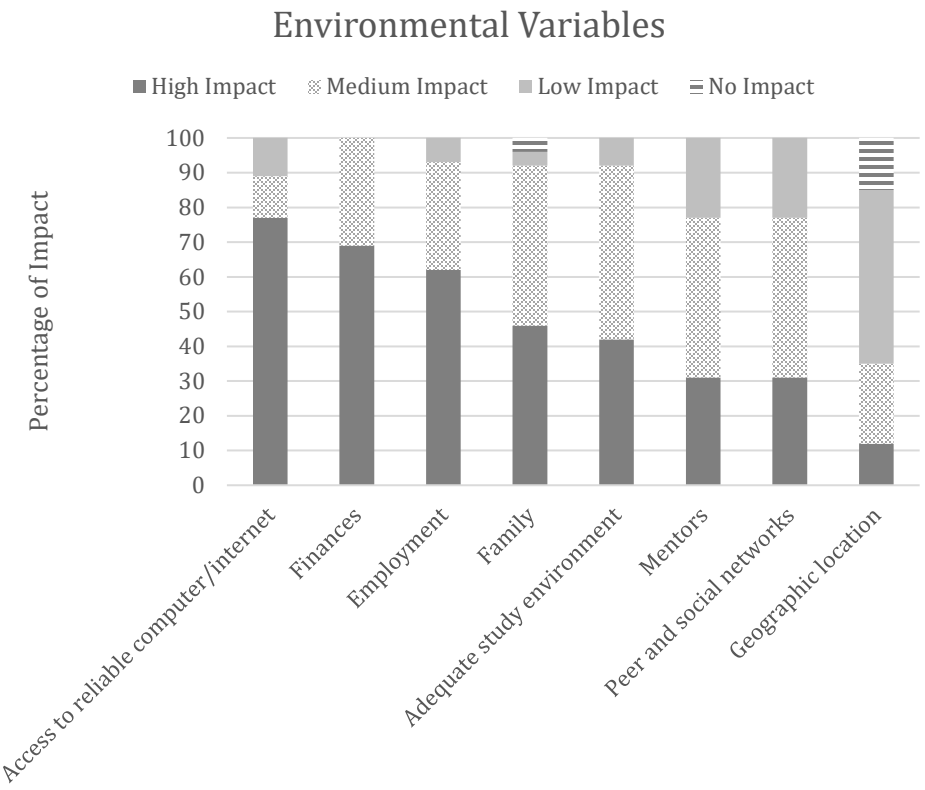


Figure 12. Percent of impact each theme has on retention of online first-generation within the Environmental Variables category from Questionnaire 2 (n=26).

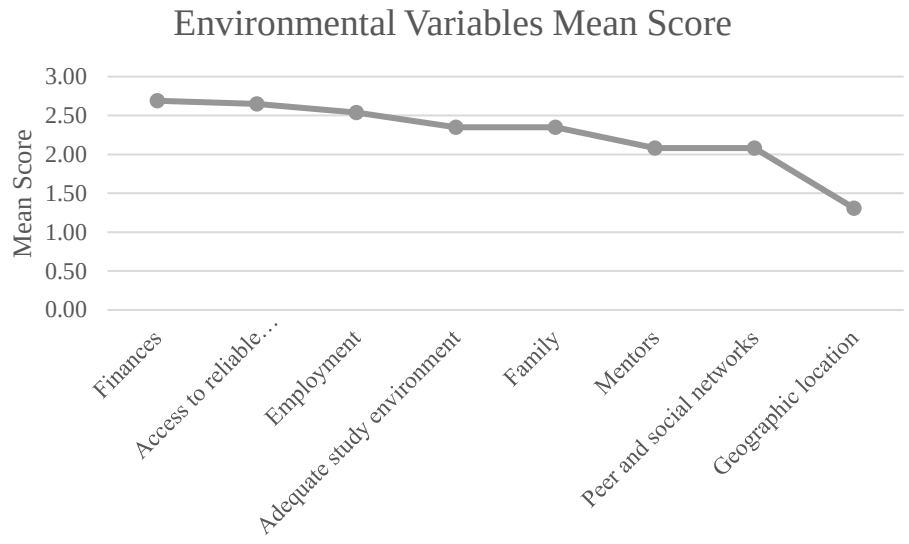


Figure 13. Mean score of each theme within the Environmental Variables category from Questionnaire 2 (n=26).

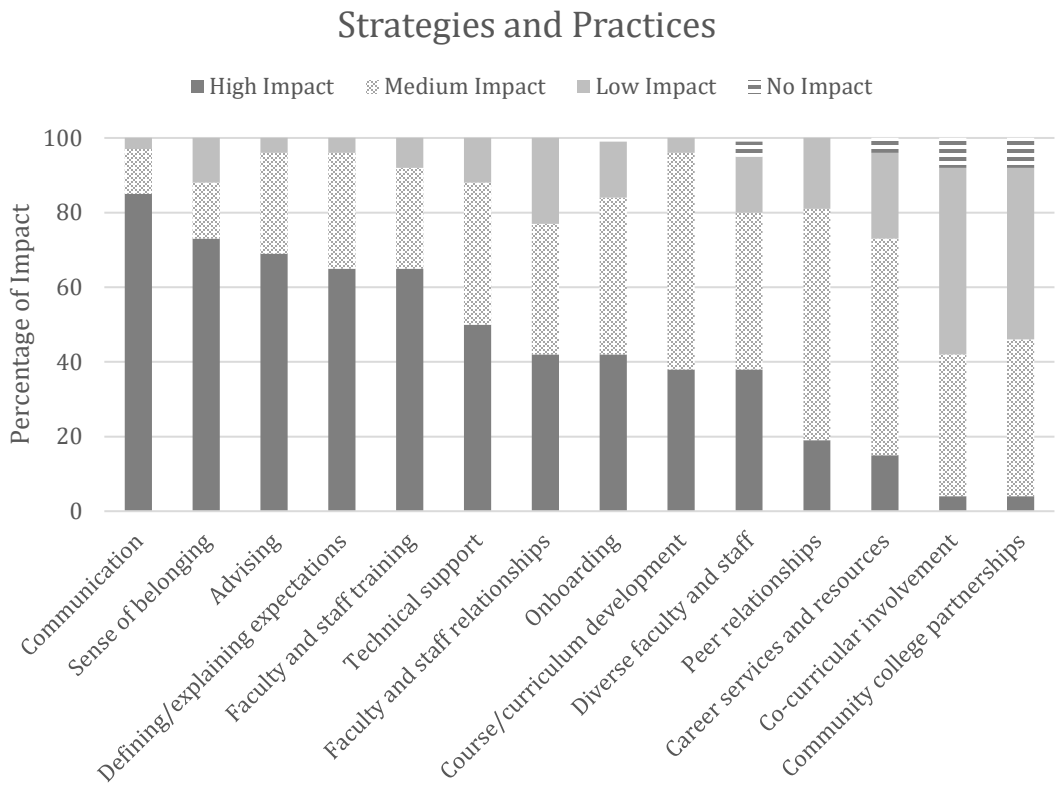


Figure 14. Percent of impact each theme has on retention of online first-generation within the Strategies and Practices category from Questionnaire 2 (n=26).

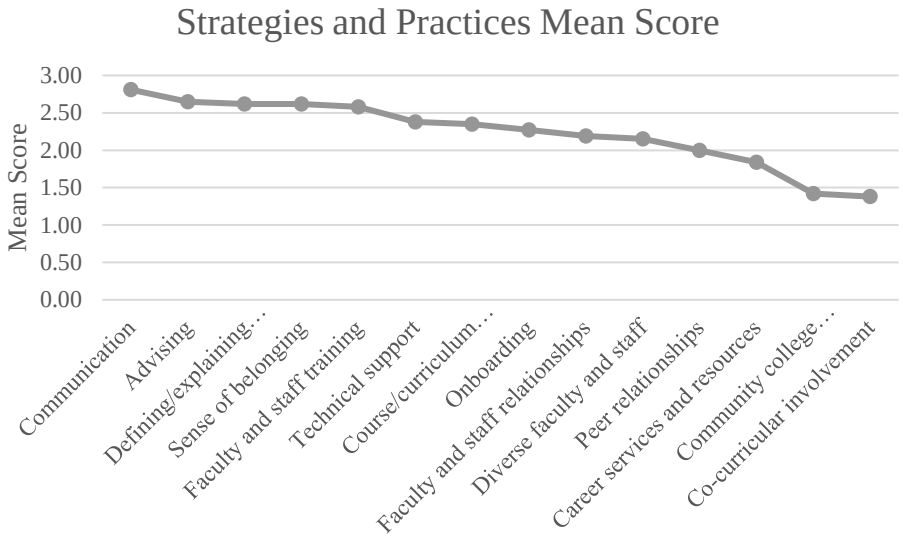


Figure 15. Mean score of each theme within the Strategies and Practices category from Questionnaire 2 (n=26).

Questionnaire 3: Identifying the Most Influential & Future Recommendations

For this study, one of the objectives of the second questionnaire was to reduce the list of 40 common themes that were shared in the first questionnaire to a more succinct list that could be shared with the participants in the third questionnaire (Linstone & Turoff, 2002; Skulmoski et al., 2007; Vernon 2009). The purpose of this was to seek refinement and consensus (Linstone & Turoff, 2002; Vernon, 2009). Based on the top four themes in each of the four categories that the participants rated in Questionnaire 2, Questionnaire 3 asked the participants to rank those themes that they believe have the most influence on the retention of online first-generation students (see Appendix H for the email to the participants and Appendix I for Questionnaire 3). The total number of times each theme appeared in one of the four ranking positions from most influential to least influential was determined. The totals were then multiplied by a ranking value of the following: Most influential 3, the second ranking 2, the third ranking 1, and the least influential 0. The mean score was determined for each theme by dividing the number of participants (n=25) by the total score each theme received. Figures 16-19 contain the themes and corresponding mean score. One open-ended question was asked in Questionnaire 3: Regarding the four themes you selected as having the most influence, what is your recommendation for future practices and policies to improve the retention of online first-generation students? The data collected from this open-ended question were analyzed, interpreted, and coded into common themes using qualitative data analysis procedures (Creswell, 2013; Neuman, 2003) (see Appendix M for a full list of recommendations from Questionnaire 3).

In this study, Questionnaire 1 involved gathering participants' responses for the purpose of determining themes within the four categories. Therefore, consensus in the first questionnaire was not considered. In the second questionnaire, participants were asked to rate the themes in each category based on the level of impact they believe it affects retention. Consensus was reached on several themes (see Table 2). In the third questionnaire, the expectation was that the participants would reach consensus by repeating the ranking of the top four themes in each category. Although several themes reached the level of consensus of having a mean score of 2.25 or higher in the second questionnaire, no themes reached consensus in the third questionnaire (see Figures 16-19).

Below is the top theme from each of the four categories that came closest to reaching consensus as well as themes that were frequently discussed in the open-ended question in Questionnaire 3.

Academic preparedness. The theme of academic preparedness was developed through several varying statements that participants shared. One participant noted, "Institutions should focus on recruitment strategies that look beyond volume and to find students who are actually prepared to succeed in school." The theme of gap years was also tied into academic preparedness as it was mentioned that time away from school can contribute to a decrease in math and writing skills. Shifting to a different perspective on academic preparedness, several participants placed the responsibility on the institution to academically prepare students for success. One participant noted, "Some students really seem to struggle with math and writing, perhaps from lack of secondary school preparation, but we can counter that with resources such as tutoring and writing courses."

A second theme that was captured within academic preparedness is the collaborative effort of partnering with community colleges. One participant noted that based on their experience, "An associate degree at a community college can prepare the student for success." At the community college level, the student has the ability to receive additional resources and support that a four-year institution may not be able to offer due to availability of resources and class sizes.

Access to resources. Participants recommended that online first-generation students have access to resources, but as one participant noted "Simply suggesting a resource is not enough." Online first-generation students not only need to know what resources and tools are available to them, but they also need to know how to access them. "First-generation students need more than a link to click on" and "sometimes it takes a little detective work to figure out what they need or what they are asking for" one participant shared. Suggestions for resources that should be made available to online first-generation students include Library access, tutoring, technology support, writing center, career support, and counseling. Resources for online first-generation students should be equal to on-campus first-generation students. One participant recommended, "Having a seamless and fluid environment that is equivalent to what is being offered on ground, without skimping on anything for the online students."

Advising and advisor relationships. The participants recommended that assigning an advisor to a student who will function as a point of contact is critical to retention. The role of the advisor encompassed several responsibilities such as providing guidance on how to access resources, maintaining a graduation plan, and providing frequent follow-up conversations to see how the student is doing overall. One participant

recommended that advising hours be extended past the traditional workday since many students who are engaged in online learning are working during the day and focusing on their courses in the evening. The participant did not share any further details of how this would be implemented or how it would affect a budget.

Commitment/motivation. The online environment removes the student from the physical connection with the campus, institutions community, faculty and staff, which can be challenging for the student. One participant shared that "in the online environment, students must have an especially strong sense of motivation and commitment." Institutions should have the responsibility of "informing and adequately preparing students for the time commitment for an online course" because often students do not understand the pedagogical difference between online and on-campus courses. The isolation of the online environment can impact the student's ability to see the end goal. The light at the end of the tunnel can seem far off and out of reach, especially when the student is focused on how far they need to go rather than how far they have come. The online environment can challenge the commitment and motivation of the student and the lack of positive encouragement and reinforcement from faculty and staff can directly affect the student. A theme that is closely tied to commitment and motivation is family. As one participant noted, "Family can be a support or a barrier."

Finances. The idea of free education is nice, but the reality is that many online first-generation students are not receiving a free education - whether they are paying for tuition or fees. A participant shared that in their experience, "Students that are first-generation and/or online have issues with finances and being able to afford the educational experience." Several participants expressed their concerns that finances can

be a barrier for retention and success. "Finances constitutes a high percentage of issues we see with first-generation online students. These financial issues often affect academic performance." "Finances and the ability to work and make ends meet while pursuing their online degree has a major impact" on whether they stay or not. Another participant noted, "There's no debating this, financial aid is a huge factor." Reducing the barriers for success can help with retention and one participant provided a solution, "We need more grants and scholarships for online first-generations student that do not need to be repaid."

Defining/explaining expectations. If you have never taken a course in college, the learning environment can be foreign, which can be exacerbated if you are a first-generation student and engaged in online learning. Participants believe that it is the responsibility of the faculty and staff to clearly define expectations. A participant explained, "Students whose expectations match that of the expectations of the program are more likely to be retained and succeed." The participant went on to share, "Instructors should have clear expectations explained at the beginning of each course" so that the student is aware of what is needed by them to be successful. Many participants expressed that students should know what the expectations are for graduation, course requirements, and accountability. The most common statement from the participants regarding expectations revolved around the faculty and instructors making sure that their courses have clearly outlined expectations. One participant shared that "instructors who have clear expectations are allowing the student the opportunity to decide if that course is right for them at that moment."

Onboarding. Several times this theme was referenced in the first questionnaire. Participants explained that the various onboarding strategies that are being implemented

as policy at higher education institutions serve as a means of understanding who the student is at the start of their first semester as well as connecting them with faculty or staff immediately. One participant explained that at their institution, orientation differs from onboarding. Orientation happens once, leaving the student with no follow up. Onboarding is continuous through their first year. The student is not overloaded with information within their first few days, but rather, information is dispersed concisely and throughout the year.

Sense of belonging. Throughout all three questionnaires, this theme appeared in the participant's responses and in the third questionnaire; it was split evenly between being ranked most influential and least influential. Participants expressed how important it is for first-generation students to understand that they belong in higher education. One participant wrote in all capital letters "I feel that the greatest variable is that they are included, they belong." The nature of the online environment possesses a challenge of how to connect students to the university community. One participant shared that:

> We have to create connections with staff, students, faculty, and clubs/organizations connected to the university that enhance persistence, so the students feel like they are a part of something, that they belong there. Why not have an online club or organization?"

Fostering a sense of belonging in higher education is an "important component" to the complexity of retention.

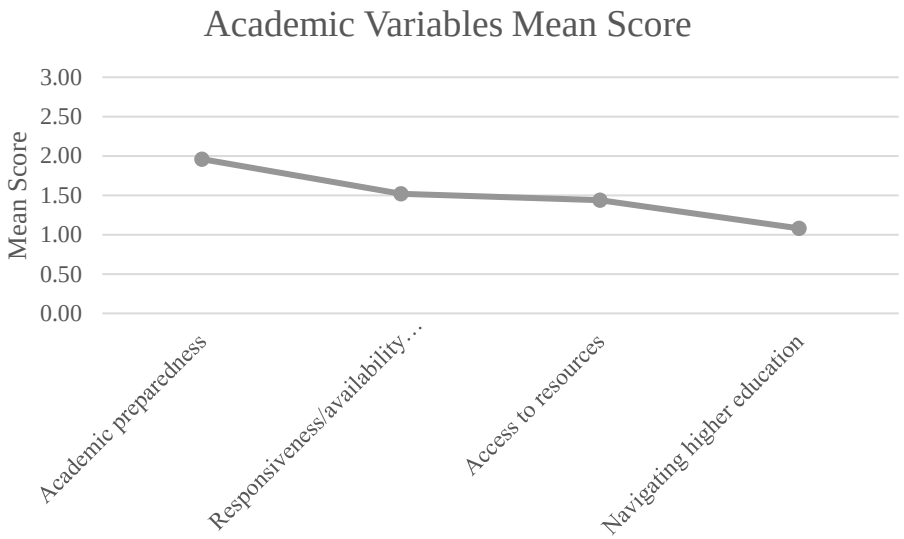


Figure 16. Mean score of each theme within the Academic Variables category from Questionnaire 3 (n=25).

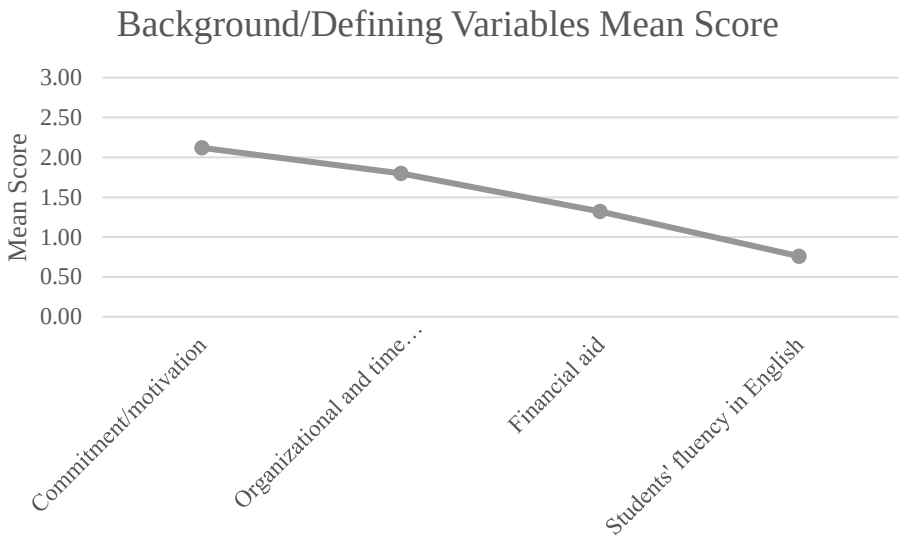


Figure 17. Mean score of each theme within the Background/Defining Variables category from Questionnaire 3 (n=25).

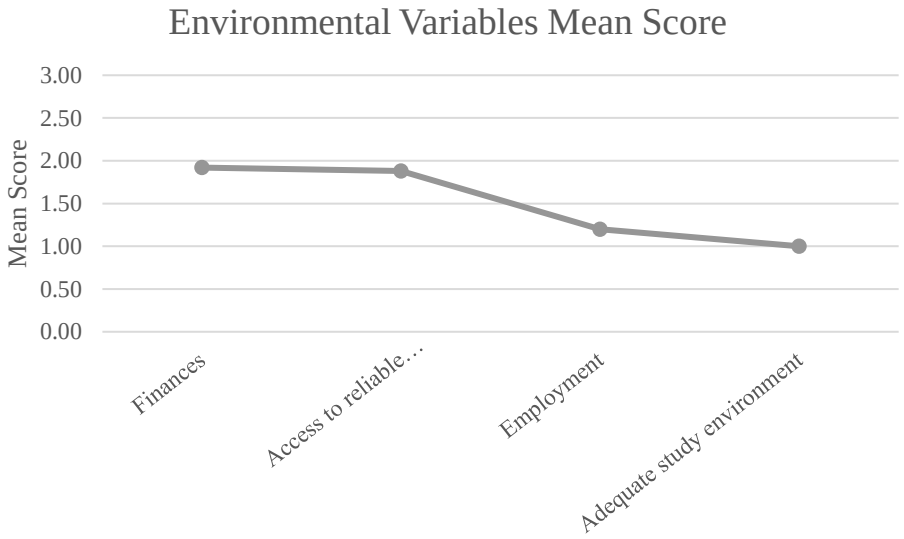


Figure 18. Mean score of each theme within the Environmental Variables category from Questionnaire 3 (n=25).

Figure 19. Mean score of each theme within the Strategies and Practices category from Questionnaire 3 (n=25).

Synthesis

Synthesizing is much more than just reporting. It is a matter of bringing the data together to form clear and coherent ideas from several sources or different points of view. The participants in this study represented several different views, which allowed for the

combination and connection of ideas to form a meaningful understanding of the data. The synthesis of the questionnaires are important because it shows the connection between each questionnaire as well as revealing the various views of the participants.

In the first questionnaire, academic preparedness, commitment/motivation, family and advising were the highest reoccurring themes in each category. Participants expressed how important it is for online first-generation students to be academically prepared for the rigor and demand of college courses. It was specifically mentioned that the rigor and demand is different, and at times intensifies, in comparison to on-campus courses. Commitment and motivation was a theme that the participants focused on as well in the first questionnaire. They believed that to be successful one of the most "important pieces to the puzzle" is being motivated. As one participant noted, "Students are because they have a desire to better themselves." Many of the participants noted that family could be a barrier to success or a form of support. The demands of family and competing priorities can deter the student from their courses. Some of the participants who self-identified as faculty noted that they try to be flexible with students when family issues arise. Advising was also a theme that participants stressed in the first questionnaire. The participants noted that effective advising is more than just helping a student select courses. A holistic approach to advising requires the advisor "build a rapport with the student, encourage them, provide guidance and connections to resources, and be engaged in their journey."

In the second questionnaire, the top theme in each category changed with one exception. Several themes reached the level of consensus by earning a mean score of 2.25 or higher, but the top themes from each category included academic preparedness,

communication, finances, and organizational and time management skills. Participants were presented with a complete list of themes for each category that had emerged from Questionnaire 1. The participants then rated them on a scale of most influential to least influential in term of how that theme impacted the retention of online first-generation students. Questionnaire 2 did not contain any open-ended questions. Questionnaire 2 began to allow the participants to refine their responses in hopes of reaching consensus. The shifting of the top themes in each category is an example of the participants being presented with new ideas that may not have been previously considered (Linstone & Turoff, 1975; Skulmoski et al., 2007).

In the third questionnaire, no themes reached the level of consensus, but according to Linstone and Turoff (1975, 2002) and Vernon (2009), this does not mean that the participants are not in agreement at all. Consensus in Delphi studies can vary from 55% to 100% agreement, with 70% considered as the standard (Linstone & Turoff, 1975, 2002; Vernon, 2009). Vernon (2009) noted that it might be extremely difficult to get participants representing different constituencies with varying viewpoints and priorities to reach unanimity. In this study, Vernon's (2009) concept would apply as the participants are a diverse panel of experts from various roles within higher education. Participants viewed this study through a different lens, which was evident in their responses to the open-ended questions. Specifically for this study, the reason for selecting diverse participants was to "obtain a broad consensus on a complex issue" (Linstone & Turoff, 1975, p. 60).

Linstone and Turoff (2002) noted that full consensus is not a requirement in a Delphi study and may not be the desired outcome. Linstone and Turoff (2002) stated,

"The impact of one conceptualization of a situation upon others and the influence of the various constructions of reality assumed by the [participants] generate what could be the most significant results from any Delphi inquiry" (p. 40). Participants can come to a shared reality regarding the issue as part of the process of reaching consensus, even if consensus is not reached (Linstone & Turoff, 2002).

According to Linstone and Turoff (1975, 2002) and Vernon (2009), various levels of consensus can be strived for in each questionnaire or at the end of the Delphi study. Linstone and Turoff (1975, 2002), Miller (2006), and Boulkedid et al (2011) suggested that at least 70% of the participants should rate two or higher on a three point Likert-type scale and therefore, the mean would need to be at 2.25 or higher. Vernon (2009) adds that consensus on a particular topic could also be considered "reached" if the responses of the participants become stable (p. 72). Meaning, there is no further value in refinement toward consensus if the responses from the participants remain unchanged from one questionnaire to the next (Vernon, 2009). Several themes showed stability throughout the three questionnaires despite not reaching consensus in Questionnaire 3. The themes included academic preparedness, access to resources, commitment/motivation, organizational and time management skills, access to reliable computer/internet, finances, advising, and communication.

Having not obtained consensus in the third questionnaire represents how complex and challenging the issue of retention of online first-generation students truly is for administrators, faculty, and staff in higher education. One participant noted, "The ranking are the right items, and it matters less between them which is most important and more that they are all there as part of a coordinated program design."

Summary

The results of the data collected for this Delphi study were presented in Chapter 4. The purpose of this Delphi study was to explore the barriers of retaining online first-generation students and to understand ways of improving retention of this population of students. Through a series of questionnaires, the participants identified the barriers for retaining online first-generation students. The participants, experts in their field, shared their recommendations, which has the potential of having positive implications for leaders in higher education institutions who have the ability to create new policies and influence future practices.

Each of the three questionnaires contained the responses from the participants. After each questionnaire, common themes were noted and shared in the next questionnaire with the participants for refinement and consensus (Linstone & Turoff, 2002). One purpose of the Delphi is to reach a degree of agreement or consensus (Linstone & Turoff, 2002; Skulmoski et al., 2007; Vernon 2009). Linstone and Turoff (2002) noted, "Consensus on a single definition is not the goal, but rather the eliciting of many diverse points of view and potential aspects of the problem" (p. 27).

In Questionnaire 1, the four open-ended questions that the participants replied to became the basis for the identification of the common themes (Linstone & Turoff, 2002; Skulmoski et al., 2007). In Questionnaire 2, based on the common themes that had emerged, the participants were asked to rate to what degree the theme impacted the retention of online first-generation students. In Questionnaire 3, the participants were asked to rank the highest rated themes that they believe had the most influence on the retention of online first-generation students. Moving from the first to the third

questionnaire, the results of the highest ranked theme continued to change. The participants were asked to offer recommendations for future practices and policies to improve the retention of online first-generation students.

Chapter 5 will include a discussion of the findings, implications, recommendations for future studies and conclusion.

CHAPTER 5: DISCUSSION, RECOMMENDATIONS, CONCLUSION

Summary

The challenges of retention have impacted higher education institutions right from start and with the rapid growth of technology, new avenues of earning a degree has required institutions to look at this old problem through a new lens. Online degree programs provide first-generation students access to higher education and have the capability of reaching more first-generation students in more locations in comparison to traditional on-campus degree programs (Allen & Seaman, 2008; Field, 2009). Online programs provide first-generation students new opportunities and flexibility to earning a post-secondary degree, but they also create unique challenges for institutions (Sileo & Sileo, 2008).

Allen and Seaman (2017) noted that the demand for more online courses and programs exists and enrollment continues to rise. Online programs have experienced a higher enrollment compared to on-campus programs, but student retention in online programs is still lower than on-campus programs (Allen & Seaman, 2010a; Fast Facts, 2016b).

Purpose

The purpose of this qualitative study was to identify what a Delphi panel of experts believe are the top issues, strategies and practices that impact the retention of first-generation students who engage in online learning. Gaytan (2013) noted, "Most retention models have been designed for the face to face classroom learning environment, making it difficult to apply them to the online learning environment (p. 147). Thus, this research is intended to identify the gap in research regarding online first-generation

students and to bring awareness to the best practices that faculty and staff are implementing to increase the retention of this student population.

Statement of the Problem

The gap in literature and research was identified after taking a closer look at topics of online education, retention, and first-generation students. Despite this critical need to improve retention of online first-generation students, few qualitative studies have been conducted (Russo-Gleicher, 2013). Boston and Ice (2011) stressed how important and imperative it is that models are developed to help explain why retention rates are lower in online education than on-campus education.

One theory of retention from Tinto (1975) stated that retention is directly related to the student's connection with their institution. Tinto's (1975) theory of student departure, which is also known as Student Integration model, seeks to explain the continuing and interactive forces that impact the student's voluntary departure from an institution prior to degree completion. The main concept of Tinto's (1975) theory is the level of the student's integration into the institution, which included the academic and social systems. Tinto uses the term "integration" as a way to describe the process the student experiences internally, which the student integrates the norms and values of the institution and its environment into their own value system (Tinto, 1999, 2010). Tinto (1999) explained that integration is the process in which a student ascertains membership within the community of the institution.

Bean and Metzner's (1985) Conceptual Model of Retention was a revision of Tinto's (1975) Student Integration model that further explains the retention. While this study did not specifically focus on adult learners, online students are often generalized

into this one demographic. The objective of Bean and Metzner's (1985) model is to understand the factors and implications that affect adult learners' continued enrollment. Bean and Metzner (1985) believed that Tinto's model did not address the specific situations of adult learners, such as those that fall under the category of environmental variables.

Review of Methodology

In this study, using a modified Delphi method and Bean and Metzner's (1985) retention model, participants identified several factors, strategies and practices that influence the retention of online first-generation students as well as recommendations to help improve the retention of this population of students. The recommendations of the participants have the potential for future change within leadership decisions, policy, and retention practices regarding first-generation students who engage in online education (Linstone & Turoff, 2002).

The modified Delphi method was used to gather the opinions and recommendations from the participants. The participants engaged in three questionnaires. The data was collected, coded, and analyzed in order to form a consensus about the issue. In each questionnaire, themes were refined using open-ended questions and Likert-type scales of rating and ranking (Skulmoski et al., 2007). The modified Delphi method was specifically used for this research because it met the need of identifying recommendations for the future (Linstone & Turoff, 2002; Skulmoski et al., 2007; Vernon, 2009).

The Delphi method and its many modifications have been used in educational research settings for several decades, including the area of online and distance education

(Kurubacak, 2007; Turoff et al., 1995; Turoff et al., 2004). The objective of a Delphi study is the reliable and creative "exploration of ideas or the production of sustainable information for decision making" (Pare et al., 2013, p. 207). The Delphi method is a structured process of gathering knowledge from a panel of experts through a series of questionnaires. Vernon (2009) said that among the many benefits, one of the most important is the “access to the range of experts” (p. 73) that is required for the Delphi method. Due to limited research on the topic of online student retention, the Delphi approach seems to provide a unique opportunity for conducting research on this topic. Skulmoski et al. (2007) stated that the Delphi method “can be applied to problems that do not lend themselves to precise analytical techniques, but rather could benefit from the subjective judgments of individuals on a collective basis” (p. 2).

In the first questionnaire, the participants were asked four open-ended questions. Thirty-two participants replied to the first questionnaire and 40 themes emerged from their response to the open-ended questions (see Appendix J for a list of common themes).

In the second questionnaire the participants were asked to rate the common themes from the first questionnaire. There was some agreement in their responses, but not all of the themes reached consensus of having a mean score of 2.25. The top four themes from Questionnaire 2 included academic preparedness, communication, finances, and organizational and time management skills. The results from the second questionnaire suggest that when the participants were presented with new ideas by their peers, ideas that they may not have thought about or considered previously, they reassessed their original responses to open-ended questions (Skulmoski et al., 2007).

In Questionnaire 3, participants ranked the four common themes that received the highest mean score in each of the four categories from Questionnaire 2. None of the themes in Questionnaire 3 reached the level of consensus by having a mean score of 2.25. The theme that received the highest mean score from each category included academic preparedness, commitment/motivation, finances, and defining/explaining expectations. Participants were also asked one open-ended question seeking recommendations for future policies and practices that would help to increase the retention of online first-generation students (see Appendix M).

Limitations

Several limitations were associated with this research study. First, it is important to note that only one researcher coded and analyzed the data. Second, the initial invitation of participants for this study was limited to what contact information one researcher was able to find using a general Internet search of online degree courses or programs offered through higher education institutions. Third, this study did not include for-profit institutions. Fourth, in the third questionnaire, consensus was not reached. Fifth, the number of participants decreased from the first to third questionnaire, which potentially could have alerted the level of consensus. While the study did reach a point of saturation where the participants shared similar themes within their responses, a larger pool of participants could be considered to increase the transferability of this study. Therefore, the generalizability of this research study may have been impacted by the mentioned restrictions and limited sample size. Additionally, the participants were not asked to self-identify race or gender. Knowing or increasing the diversity of the

participants should be considered as a means of strengthening a study like this if replicated.

Discussion

The common themes that emerged in this study are directly related to Bean and Metzner's (1985) retention model. Bean and Metzner's (1985) Conceptual Model of Retention was a revision of Tinto's (1975) Student Integration model. Bean and Metzner's (1985) model suggested that for the student, there are several internal and external variables that impact retention. Bean and Metzner's (1985) Conceptual Model of Retention provides a framework concerning the contributing factors that impact student retention and for investigating the way online education affects retention.

Academic Variables

As student populations continue to become more diversified, "Institutions must understand students' academic preparedness to better serve them" (Atherton, 2014). The theme of academic preparedness, which was introduced in Chapter 2, was frequently discussed in the first questionnaire, reached consensus in the second questionnaire, and had the highest mean score in Questionnaire 3. First-generation students typically rank lower than their peers who are not first-generation when comparing grade point averages, completion of academically rigorous courses, and scores on standardized examinations (Atherton, 2004; Choy, 2001).

While first-generation students may be a growing population in higher education overall, the opportunity to earn a bachelor’s degree has not increased proportionately (Engle & Tinto, 2008). According to research by Engle and Tinto (2008), factors that impact the first-generations decision to withdraw can include the lack of academic

preparation. Atherton's (2014) research noted that the "lack of social capital transmitted from family and friends contributes the lack of awareness to the extent that lower standardized scores and GPA might affect their academic outcomes (p. 828). The inability to understand this connection combined with lack of academic preparation "can lead to frustration and difficulty succeeding in initial college courses" (Atherton, 2014, p. 828). Frustration and lack of success contribute to overall difficulties in transitioning to college and ultimately to negative retention (Atherton, 2004; Choy, 2001; Tinto, 1975). Choy's (2001) research indicated that high school graduates whose parents did not go to college reported lower educational expectations, they are less prepared academically, and lacked the needed family support in planning and preparing for college (p. 22).

First-generation students have many risk factors, including difficulty navigating the higher education system, poor math, reading, and writing skills, weak study habits, underdeveloped critical thinking and problem solving skills, and low academic self-esteem (Chen, 2005; Pike & Kuh, 2005; Ward et al., 2012; Dumais et al., 2013; Irlbeck et al., 2014). The goal is for first-generation students, regardless if they are on-campus or online, to thrive, not just survive. One participant shared that "we are not nearly doing enough to help first-generation students navigate the unmapped terrain of higher education." Rhoten's (2004) found that collaborative efforts that span multiple departments and programs might be able to harness the expertise and resources necessary to achieve stronger outcomes. However, departments within higher education institutions are often viewed as siloed and fragmented, enabling each unit to pursue what they feel is best for themselves rather than the whole (Rhoten, 2004).

Background/Defining Variables

Liu et al. (2007) noted several reasons for low retention rates that include a lack of self-motivation and self-discipline. Learning is both social and experiential (Liu et al., 2007). According to Tinto (1975, 1999), the more integrated a student is within the institution, the greater the commitment is from the student to that institution, which results in a higher retention rate. Tinto's (1999, 2006) theory takes into account the commitment a first-generation student has to the institution, which can be fostered through a sense of belonging and the building of relationships. Braxton (2006) noted that good teaching practices that include "frequent interaction between students and faculty both in and out of class" (p. 9) enhances the students motivations to succeed and stay engaged. Bennett and Monds (2008) explained that setting up an environment to create a sense of community and providing meaningful feedback [interaction] is more likely to establish a connection among students and faculty in an online course" (p. 3), which will enhance the level of commitment and motivation.

The student's academic and social integration also has a direct impact on their goals and motivation in regard to their education. All of these experiences influence the outcome, and the decision to stay or withdraw. Demetriou and Schmitz-Sciborski (2011) found that to "understand motivation for learning, the social context must be examined" (para. 21). Developing relationships "with faculty and other university personnel may be especially beneficial for first-generation students as those people can provide the necessary information, perspective, values, and socialization" (Irlbeck et al., 2014, p. 155). The results developing relationship is a stronger commitment and motivation (Irlbeck et al., 2014).

Environmental Variables

Bean and Metzner's (1985) model of retention takes into consideration environmental variables. Environment variables are the external variables that are typically outside the control of higher education that impact the retention of students. In comparison to Tinto's (1975) theory on retention, Bean and Metzner (1985) suggested looking at environmental factors rather than social interaction. Bean and Metzner's (1985) model of retention suggested that environmental support can compensate for weak academic support, but academic support cannot compensate for weak environmental support. In their model, some of the environmental factors that they believed impacted retention included encouragement from family, family responsibilities, friends, and employers, finances, and career goals (Bean & Metzner, 1985).

Participants in this study identified several environmental variables that Bean and Metzner (1985) had previously confirmed through their research, in additional to others. Additional themes in this category included access to reliable computer and internet and having an adequate study environment. As with the other environmental variables, higher education institutions do not have much control of having a reliable computer, internet, or an adequate study environment. While some institutions do offer a free laptop to their students, this does not eliminate the problem of needing a reliable computer.

On the other hand, there are the internal variables that higher education institutions do have control over. Institutional factors are associated with the institutions' ability to provide adequate and appropriate resources for students, such as advising, career counseling, mentoring, and tutoring (Demetriou & Schmitz-Sciborski, 2011).

There is the potential that first-generation students may be lacking mentorship, which could be either an external or an internal factor. Engle and Tinto (2008) and Irlbeck et al. (2014) recommended that faculty and staff should be willing to act as mentors. Engle and Tinto (2008) and Irlbeck et al., (2014) suggested that mentoring programs are an effective method of supporting and retaining first-generation students. Support programs for first-generation students are most successful when they use informal faculty to student contact, meaning outside of the classroom, in order to help students participate in the academic and social life of the institution (Longwell-Grice & Longwell-Grice, 2007). Although Bean and Metzner's (1985) model of retention argues that academic support cannot compensate for weak environmental support, participants felt strongly about building personal relationships as a strategy for helping students reach success.

Strategies and Practices

The institutional factors are associated with the institutions ability to provide adequate and appropriate resources for students, such as advising, career counseling, and tutoring (Demetriou & Schmitz-Sciborski, 2011). Academic advising, which was a theme that had been heavily referenced since the first questionnaire, fell to least influential in the third questionnaire. Although academic advising did not reach consensus, it was referenced over 12 times in the third questionnaire. A study by Pascarella, Pierson, Wolniak, and Terenzini (2004) found that although advising can help maintain needed support throughout the college years, first-generation students are less likely to use the various student support systems that institutions offer. Another study by Swecker, Fifolt, and Searby (2013) expanded on these ideas, finding that advising first-generation students is significant to their retention (p. 49). Their data suggest that for

every meeting a first-generation student has with their advisor, the odds of that student being retained increases by 13%.

First-generation students can often lack support and information from family who may not possess the knowledge and skills needed to navigate the complex higher education system (Dumais et al., 2013). This puts first-generation students at a disadvantage from their counterpart. Their mindset, experiences, and expectations may also differ from their counterpart who has had a parent with college experience. Since first-generation students often rely on information and assistance from those who are outside of their family, such as academic advisors and instructors, "some researchers recommend that proactive advising be used with this population of students because it places the responsibility on the advisor, rather than the student, for making the initial contact and establishing the advising relationship (Swecker et al., 2013, p. 47).

As noted, academic advising is just one of many resources available to online first-generation students. Participants identified a number of strategies and practices that impact the retention of this population of students. This lack of information or awareness about university resources can negatively influence the performance of the students (Thayer, 2000). First-generation students have a limited knowledge of college finances, limited budget management skills, and lack of experience negotiating the bureaucratic processes of higher education (Thayer, 2000). Providing additional support and bringing awareness to the resources available to the students and where to access the resources is important for retention.

There are several challenges that both the online first-generation students and institution are faced with pertaining to resources. Research shows that there is a lack of

awareness of institutional resources, which leads to low use of services (Thayer, 2000; Ward et al., 2012). This can be rectified with an increase of communication from either the student or the institution. A lack of academic planning can be addressed with more focused outreach (Swecker et al., 2013). One participant shared an experience with an online first-generation student. After being placed on academic trial, the student shared with the participant that they finally realized that for them to be successful they needed to take advantage of the resources that were made available to them. By the time the student reaches that point, they have possibly already experienced the desire to withdraw and give up (Thayer, 2000; Ward, Siegel, & Davenport, 2012).

Observations and Reflections

As the researcher, I understand that my own experiences and biases have the ability to impact how I conducted this study. One way in which I sought to remain aware of my own potential biases was to use a research journal. This allowed me to make note of important findings during this study and it served as an opportunity for me to reflect upon what I experienced and felt while reading the responses of each participant. My observation and reflection is through the lens of an online first-generation student who has taught undergraduate online courses and works in the field of academic affairs.

The participants in this study did not mention in any of the three questionnaires that a factor of retention for online first-generation students could be poor academic performance. A list of examples of what could have been included could easily be created, but this one specifically stood out. There are two examples of what directly impacts academic performance: learning disabilities and mental health. Academic performance in return impacts retention. Neither learning disabilities nor mental health

was mentioned by the participants in any of the three questionnaires. One could argue that the questions in the study did not allow the participants the space to include academic performance, learning disabilities, or mental health. At the end of each questionnaire an optional, not required, question asked the participants "Is there anything else you would like to share?" This space was used by participants to include words of encouragement, suggestions, articles, references to research studies, and served as a "catch all" for what they felt did not fit in to the questions. My observation of the participants not referencing learning disabilities and mental health stems from the physical separation of the campus and student. As with on-campus students, online students also have learning disabilities and face mental health issues. Although they are online students, they experience the same challenges as on-campus students.

Another observation that I made from the participants' responses was the lack of reference to collaboration among the various academic and non-academic units within their institutions. Siloes in higher education are not limited to the academic unit or department that one belongs to, but transcends across campus. The purpose of a silo is to keep the focus in one area, but this practice dismisses opportunities for interdisciplinary collaboration. The needs of the students would be better served if cross-functional sharing of knowledge and best practices were a common practice within institutions.

Perhaps one of the most important things that I have learned in my time in higher education is the importance of collaboration. The challenges that many institutions face today require that we look at the role of the faculty and staff, the curriculum, and the many other processes that impact retention. It is critical to understand that whatever

strategies and practices are implemented for the purpose of increasing the retention of students must be done in a cross-functional and collaborate approach.

The last observation I made regarding the participants' responses was regarding advising. In the first questionnaire advising was mentioned approximately 20 times, it reached consensus in the second questionnaire with a mean score of 2.65, and in the third questionnaire it was ranked the lowest influential with a mean score of 1.32 and was mentioned the most with over 12 references in the open-ended question. Although advising fell to the least influential, the participants appeared to stress how important and vital advising is to retention and first-generation students.

One of the most effective strategies for increasing retention rates is targeted advising according to Swecker et al. (2013). Participants shared several examples of targeted advising that included one on one conversations, personal outreach, and proactive advising. Poor advising can be stressful for first-generations students. Having personally experienced a good advisor and a poor advisor, understanding that advising is much more than selecting what classes to pick out for the following semester is important. Advisors must be able to ask the right questions, find out the students goals, and have the ability to plan into the future. The online first-generation student who is navigating higher education for the first time places trust in the advisor to support them while navigating through this educational journey.

Recommendations

Conducting research may help leaders within higher education better understand the many factors and variables that influence the retention of online first-generation students. Having a better understanding of the factors and variables provides an avenue

for administrators, faculty, and staff to develop and implement meaningful policies and practices.

An implication for administrators may be to close the gap in knowledge, research, and training of faculty members who teach and advise online first-generation students. One participant, who self-identified as an online instructor, noted, "I do not know which of my students are first-generation, nor do I know what contributes to retention." Another participant who also self-identified as an online instructor shared:

> I don't know how to answer questions about how to retain and address the needs of online first-generation students, because I don't even know what their special needs might be. Frankly, this questionnaire has made me realize that there's a serious gap in my own knowledge, both about my students and about the theory and practice of teaching and advising first-generation students.

Research and training may provide an awareness into how faculty members contribute to the overall retention of students (Demetriou & Schmitz-Sciborski, 2011; Dumais et al., 2013).

This leads to a larger question of, "What is the role of faculty?" Tinto's (1999) theory of retention takes into consideration three factors: cognitive, institutional, and social. The social factor of Tinto's theory requires the social interaction of both peer and faculty with the first-generation student in order to increase the chance of retention. Historically, the role of the faculty has not included retaining students. Their role has been to teach and educate. Although the issue of retention has been around since the start of higher education, it only has been more recently that retention has become a means of measuring the success of an institution (Pattengale, 2010). The new thinking is that

institutions have a responsibility to promote and support student success (Pattengale, 2010). This means that faculty members, who are on the front-line and interacting with students frequently, have become an important part of the collaborative effort of retaining students (Pattengale, 2010; Tinto, 1999).

Another implication is the need for cross-functional collaboration among the various academic and non-academic units within an institution. One participant noted, "Retention is connected to a number of variables in higher education and the on-the-ground work done daily by staff and faculty together must be supported through policies and structures within the institution." Collaboration within a higher education institution is process that facilitates mutually agreed upon solutions that are collective and implementable. Kezar (2006) noted that higher education institutions have become more aware of how important it is to build internal partnerships to increase effectiveness, efficiency, and to address concerns pertaining to retention. According to Colwell (2006) and Kezar (2006), research shows that collaboration between academic and non-academic units within an institution enables and strengthens a holistic learning environment. Despite this evidential research, there is still a separation between academic and student affairs.

Of the 32 participants, none of them directly used the word collaborate, but as noted above, one participant did refer to staff and faculty working together. The lack of referencing collaboration by the participants could be for many reasons, including an assumption that collaboration is an obvious necessity for retention or that collaboration was simply not considered as a necessity. Research by Colwell (2006), Kezar (2006), and Sawyer (2007) found that academic and student affairs can complement each other as

they engage in collaborative work. For collaboration to be successful, practices should include having adequate time for structured meetings, aligning collaboration structures for both horizontal and vertical collaboration, create an environment of mutual trust, and identify a mission and purpose.

Recommendations for future policies and practices to increase the retention of online first-generation students include advising, communication, professional development, and onboarding.

Advising. Theme of advising, which reached the level of consensus in the second questionnaire, was often suggested and noted of its importance. The themes faculty and staff relationships and sense of belonging are closely related to the theme of advising. Since several of the participants noted the difference between the three themes, therefore, each theme was coded and presented separately. In the second questionnaire, faculty and staff relationships received a mean score of 2.19 and sense of belonging received 2.62. All three themes can be associated with literature that suggest the importance of quality advising, which results in building relationships and having a sense of belonging (Ward et al., 2012). One participant noted, "Having involved academic advisors can influence the retention of online first-generation students. For me, advising on a deeper level is more than just suggesting what classes to take." Another participant shared their experience as an advisor and noted, "As an advisor [I] regularly follow up to check in on [the students] progress, discuss time management tips, listen to [their] challenges, and offer encouragement."

Research on retention reveals that a lack of interaction is a key factor in a student's decision to withdraw (Gravel, 2012; Tinto, 1999). Online students can

experience a lack of support, creating "isolation that can be discouraging and lead to failure" (Gravel, 2012, p. 56). Tinto (2006) noted that the interacting between student and advisor should not be limited to only the professional advisor. Gravel (2012) and Tinto's (2006) research support the recommendation for a holistic advising approach. This approach could potentially be more individualized for the online first-generation student, which is more effective in dealing with concerns as they arise and providing access to necessary resources.

Communication. Communication was the second highest rated theme in the second questionnaire, with a mean of 2.81 and was referred 14 times in the first questionnaire. Participants noted that communication must be effective in order for it to aid in the retention of online first-generation students. Participants provided examples, such as to provide detailed information, but to also use caution so that the student is not "overloaded" during their first few weeks of the semester with unimportant information, explain the expectations of the student that pertain to the course and degree program while allowing them to also communicate their expectations, and have a consistent point of contact who regularly speaks with the student and follows up on their progress. Escobedo (2007) found in their research that a lack of communication between members of the institution and students resulted in a lower student retention. When communication increased the retention rate improved.

Communication is written in the language of faculty and staff and not for students, although it is usually sent to students. It is often written to inform and not to engage. Historically, the approach to communication has been "here is the information" rather than "how can I help?" (Escobedo, 2007). A blanket recommendation of

"communicate better" or "create effective communication" is meaningless unless it is supported by tangible action steps. Escobedo (2007) and Yook (2012) noted that there are steps to take that will engage, enhance, and create effective communication. First, determine the best channel of communication - email verses text message. Discovering what means of communication students are more responsive to and what they are not responsive to will provide great benefit and guidance to determining what channel of communication to use. Second, create an informed communication plan - determine what type of information will be conveyed through what means and how often. Third, use communication to offer support - this will not only help students success, but also it will also form a stronger connection between faculty/staff and the student.

Professional development. The reference of professional development of faculty and staff had been mentioned twice in the first questionnaire but reached the level of consensus in the second questionnaire with a mean score of 2.58. One participant who self-identified as an online advisor shared that "more professional development is needed for us and faculty regarding first-generation students, especially within the online environment." Another participant who self-identified as an online faculty said, "Students who have done well in a traditional classroom are likely to do well in an online learning environment. In my 15 years of teaching thousands of online students, I've yet to see anything different that predicts success other than past academic success." There is a clear need for a thorough hiring and training of online faculty and staff.

Standford-Bowers (2008) noted that there are several challenges that are present in online learning and those challenges are not only isolated to the student. Administrators, faculty, and staff all experience unique challenges pertaining to online

education. Those who are tasked with making decisions regarding the "design, facilitation, and learning within these cyber environments must stretch themselves to think beyond the limitations of the traditional classroom" (Stanford-Bowers, 2008, p. 38). As a result of the increased enrollment of online education, the position and role of faculty may be shifting (Stanford-Bowers, 2008). What has been the prior understanding of traditional faculty roles and faculty training has needed to shift to accommodate this new avenue of education (Howell, Williams, & Lindsay (2003). Stanford-Bowers (2008) noted that often times faculty who transition from on-campus to online lack the necessary training. Reframing the faculty roles and how faculty are trained is a significant benefit to both the faculty and the student (Howell et al., 2003).

Providing mentoring, monitoring, and professional development opportunities for faculty and staff may help to make sure that the best practices are employed in term of retention. Professional development provides the opportunity for collaborative learning; engages the professional to expand their knowledge, gain new skills, and foster growth; provides time to focus on the needs of the students to achieve success; and allows the professionals to identify challenges and problem solve. Effective professional development should be ongoing and include adequate time for feedback, practice, support, and training. The hope is that a goal for faculty and staff members are to become more effective in their position and providing professional development opportunities is one means of reaching that goal.

Onboarding. Onboarding was suggested nine times in the first questionnaire, reached consensus in the second questionnaire with a mean score of 2.27, and was referenced three times in the third questionnaire. A participant who self-identified as an

administrator noted, "A structured approach to new student onboarding is key to building perseverance" and it "opens dialogue between the student and the institution about their needs and everyone's expectations." Although onboarding is important, one participant cautions overloading the students may be detrimental, "Often, students are front-loaded with information once they're accepted…these front-loaded materials are too much, for someone who is new to online learning, to comprehend." While there is agreement that onboarding is a contributing factor to retaining online first-generation students, there must be a balance of information being provided.

Lessons from the world of business show that there are major benefits from having an onboarding process for new employees. There are several areas of business that are improved by having an effective onboarding program for new employees, some of which include the cost of turnover, loss of productivity, employee performance, employee retention, and happier employees (Llarena, 2013). Table 4 highlights how the lessons from the world of business translates to higher education.

Table 4

Transferable Lesson from the World of Business

Business	Higher Education
Cost of Turnover	Cost of recruiting students verses retaining students
Loss of Productivity	Decreased retention/completion
Improved Employee Performance	Student Success (Student Performance)
Increased Employee Retention	Student Success (Retention)
Happier Employees	Student Success (Satisfaction)

Onboarding should be continuous, starting before the beginning of the semester and continuing throughout. Many of the common themes that had emerged from the

questionnaires can be incorporated within onboarding. All of the following are recommendations from the participants:

- Prior to the start of the semester, student's should experience and be introduced to the learning management system the institution use.
- Students should be made aware of the demand and requirements of being an online student.
- Students should be introduced to their academic advisor or success coach, be provided contact information for their advisor or coach, as well as an introduction to the resources that are available to them.
- Expectations should be made clear at the start, along with objectives, and an introduction to the online environment/culture.
- Just after the start of the semester might be a good time to have some form of questionnaire, where students can self-identify, express their personal and academic goals, and express what expectations they have of the institution.
- A carefully crafted questionnaire can also help identify at risk students, which could result in additional support and resources being provided earlier rather than later.
- Ongoing communication between the institution and the student should be frequent, which includes follow up conversations from the academic advisor or success coach.
- Require some form of development courses that cover various skills, such as time management, studying, group work, and writing.

One participant noted that orientation differs from onboarding in their institution. Orientation is a quick, one-time introduction compared to onboarding, which is continuous throughout the first year.

Future Areas of Research

Both topics - retention and first-generation - have been researched over the years and with advancement of technology, higher education institutions have seen an increase in online education (Allen & Seaman, 2007, 2008, 2010a; DiRamio & Wolverton, 2006; Trenholm, 2007). Accompanied with the increase in online enrollment are new challenges that institutions had not previously experienced. According to Demetriou and Schmitz-Sciborski (2011), these new challenges of retaining online first-generation students must be approached from multiple perspectives to be most effective. The demand for online education will continue to grow and, therefore, supporting this student population warrants the attention of administrators.

This study researched the retention of online first-generation students from the perspective of experts within higher education. Further qualitative and quantitative research on this topic is warranted from the student's perspective. Online first-generation students would provide a valuable perspective on the factors, strategies, and practices that have influenced their retention. Studies that are designed to use both qualitative and quantitative methods would allow for an in depth and more detailed picture of the online first-generation students' experiences.

Conclusion

Lesson Learned

The Delphi method provides those interested in engaging in research or "discovering what is actually known or not known about a specific topic" a flexible and adaptable tool to gather and analyze the needed data (Hsu & Standford, 2007, p. 5). With every research method, there are shortcomings and weaknesses that should be considered. The Delphi method risks the potential for low response rate and for this study, 32 participants replied to the first questionnaire out of 475 invitations. By the third questionnaire, the number of participants dropped to 26. When possible, it would be advisable to explain to the participants the importance of full participation through all rounds of questionnaires and the method of the study through a creative way, such as including a link in the initial email to a short Prezi or YouTube presentation. One participant shared, "I wish you would have mentioned up front it was a Delphi study model."

There are risks of selecting or limiting what experts can participate in the study. Participants may omit important concerns, factors, or issues. In particular, two factors that were not addressed in this study were mental health and learning disabilities. The results and recommendations may have been different if staff were included from student accessibility departments as an example. For future Delphi studies in the field of online education, I recommend including a more diversified group of expert participants.

As an online first-generation student, practitioner, and online instructor, I believe that I have a unique perspective on this topic. While this study has confirmed what is known about online education, first-generation students, and the combination of online

first-generation students, it has also provided me an opportunity to learn more about this population of students. There are four topics that I believe are important to highlight: There is no one-size-fits-all, intellectual and mental health needs, relational engagement, and infrastructure.

In Questionnaire 3, no themes reached the level of consensus, but according scholars, such as Linstone and Turoff (1975, 2002) and Vernon (2009), this does not mean that the participants are not in agreement at all. This lack of consensus is in itself has meaning for consensus across participants. If, for example, one theme had reached the level of consensus in Questionnaire 3, an argument could be made that the one theme that reached consensus could be the solution to "fixing" the retention issue of online first-generation students. Since that did not happen, it is clear that the participants recognized that there is no one theme or a one-size-fits-all solution to this issue. As one participant noted, "Most of the items in the ranking are the right items, and it matters less between them which is most important and more that they are all there as part of a coordinated program design." Knowing and understanding the barriers that online first-generations students experience combined with effective strategies and practices to support this population of students is important for retention, but also can be challenging. There is no one-size-fits-all because not every online first-generation student shares the same experiences and barriers.

The online first-generation student shares similar needs as the on campus student, which requires the institution to provide equal resources. There were specifically two themes that did not come up in the participants responses: mental health and learning disabilities. With the student being out of sight, are they also out of mind too? Within

higher education institutions, students who present with mental health diagnoses and learning disabilities are more likely to be offered additional support and resources by faculty and staff. On campus students are often reminded of the support resources that are available to them. Additionally, when faculty and staff observe a behavior that is concerning, they are able to make a referral to the appropriate department or possibility reach out to the student. The online student does not have this benefit of in person observations, which one could argue is a possible reason why the participants in this study may not have included either mental health or learning disabilities as a theme. Although they were not mentioned in the participant's responses, they are two themes that do exists for online first-generation students based on previous research by Irlbeck et al. (2014) and Atherton (2014).

Similar to psychotherapy, "academic advising is a relational process focused on fostering change and growth" (Ali, 2018). Throughout this study, it became clear that students need more than just academic advising. Outreach to students by faculty and staff is the bedrock of forming relationships with students and it is within those relationships that students develop a sense of belonging. Outreach is not to replace academic or advising, but rather be a supplement to advising. Both processes of advising and outreach should be designed to support the student in attaining their goals. The participants in this study shared that students need to have multiple "check-in's" by various faculty and staff. This form of outreach provides the student a needed connection throughout their time in higher education.

At some institutions, online education seems to be an afterthought. There is a lack of infrastructure needed to support and serve online students. Participants shared

their experiences from various institutions and at times noting the lack of infrastructure at their place of employment, but surprisingly they did not offer recommendations for ways to rectify the issue. It is easy to think that the lessons learned and the recommendations that were mentioned could be either applied to on campus or online. While this is true that the recommendations can be applied to either on campus or online, when building an infrastructure to support online students, administrators, faculty, and staff must think outside the box. Online students do not live in a Monday through Friday, 8 to 4 world. They are attending to school responsibilities at all hours of the day. With this in mind, building an infrastructure to support students means that advising appointments may need to happen at 11 o'clock at night, relational engagement should be enacted upon by both faculty and staff, access to the library and resources should always be made available, mental health counseling should be offered via skype or phone, and faculty should hold virtual office hours outside of the traditional Monday through Friday work schedule. Institutions have an obligation to serve online students by providing the same equal resources and services as the on campus student. This strategy requires commitment and solid infrastructure.

This study has identified several factors that contribute to the low retention rate of first-generation students who engage in online education as well as recommendations for strategies and practices to combat the document attrition. Study participants shared their recommendations, which as one participant noted, "…most of the items in the ranking are the right items, and it matters less between them which is most important and more that they are all there as part of a coordinated program design."

An overall plan for action based on the findings of this study is to create a culture online that is focused on student success. Student success is everyone's responsibility and one of the steps of reaching success is retaining the online first-generation student. An effective online culture within higher education enables and requires creativity, commitment, and innovation. Engaging in best practices is only part of the process. Changing the way higher education institutions addresses the issue of online retention of first-generation students begins when there is a convergence of academic and non-academic units, a sharing of best practices, and an acceptance that the success of the online first-generation student is not the sole responsibility of one person or unit. Such changes will help higher education institutions face the complicated and difficult challenges they face with respect to the important issue of student retention.

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Appendix A: Email Invitation to Participants

Dear (Name),

I hope this email finds you well. My name is David Dearden, I am a first-generation doctoral candidate working toward completion of my Doctorate in Education Leadership and Policy Studies at the University of Vermont. I invite you to participate in my short research study. My research is titled: *Online First-Generation Students: A Qualitative Study on Retention.* The purpose of the study is to explore and develop a deeper understanding about retention practices of online first-generation students in higher education.

The study consists of three short online questionnaires. In each questionnaire, you will be asked for your opinion and your responses will be kept confidential. The first questionnaire has four open-ended questions and I ask that you please complete it no later than October 5, 2018. The second and third questionnaire will be emailed at a later time.

I am truly excited by the possibility of your participation in this research study. Should you have any questions concerning this study, please feel free to contact me at XXXXXXXX@uvm.edu or 802.XXX.XXXX. Thank you in advance for your time, dedication, and valuable insight.

To participate, please click here (go.uvm.edu/questionnaire1)!

Sincerely,
David Dearden

Goals and Background Information:

This research may offer new suggestions for leadership decisions and institutional policies, programming activities and institutional structures for both online and on-campus degree programs. The goal of the study is to develop consensus among experts for effective future retention practices of first-generation students in online degree programs in higher education. Administrators, faculty, and staff who are involved in both online and on-campus degree programs may benefit from your recommendations regarding retention practices.

This style of questionnaires allows for the gathering of knowledge while providing the participants anonymity to express their opinions freely. This research will rely on participants to share their experiences, ideas, and perspectives related to the retention of first-generation students who engage in online learning.

Appendix B: Consent to Participate

University of Vermont, College of Education and Social Services

Name of Investigator: David Dearden

Title of Project: Online First-Generation Students: A Qualitative Study On Retention

Request to Participate in Research

I would like to invite you to participate in a web-based online questionnaire. The questionnaire is part of a research study whose purpose is to develop a better understanding of what best practices are used by higher education professionals to retain online first-generation students. This questionnaire should take about 15 minutes to complete.

The decision to participate in this research project is voluntary. You do not have to participate and you can refuse to answer any question. Even if you begin the web-based online questionnaire, you can stop at any time.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you from participating in this study. However, your responses may help us learn more about online first-generation retention.

You will not be paid for your participation in this study.

Your participation in this study is confidential and will not be made known to any participants. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.

If you have any questions regarding electronic privacy, please feel free to contact the Office of the Chief Information Officer at 802.XXX.XXXX.

If you have any questions about this study, please feel free to contact me at ddearden@uvm.edu or 802.XXX.XXXX.

If you have any questions regarding your rights as a research participant, please the office of Human Subject Research at 802.XXX.XXXX. You may call anonymously if you wish.

This study has been reviewed and approved by the University of Vermont Institutional Review Board.

By clicking on the “Next” button below you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.

Thank you for your time!

David Dearden

Appendix C: Demographic Data Form

1. First Name
2. Last Name
3. Email Address
4. What is the highest degree that you have earned?
5. As an undergraduate student, were you a first-generation student?
6. What degrees have you completed online?
7. How many online for credit courses have you completed?
8. What is your current position at your institution?
9. In what capacity do you work with online students?
10. How many years of full-time work experiences do you have with online courses, degree programs, or students?
11. What percentage of your job responsibilities are dedicated to working with online students?

Appendix D: Participant Demographics

What is the highest degree that you have earned?

High School Diploma or GED	0
Associate Degree	0
Bachelor Degree	0
Master Degree	11
Doctorate Degree	21

As an undergraduate student, were you a first-generation student?

Yes	13
No	19

What degree(s) have you completed online?

None	22
Associate	0
Bachelor	0
Master	7
Doctorate	5

How many online for credit undergraduate courses have you completed?

0	22
1-5	8
6-10	0
11+	2

What is your current position at your institution?

- Academic Advisor
- Academic Advisor / Faculty
- Academic Advisor / Program Developer
- Administrator
- Associate Director of Academic Advising
- Associate Provost
- Assistant Director
- Assistant Director of Admissions / Faculty
- Dean
- Faculty
- Program Coordinator
- Program Coordinator / Faculty
- Program Director / Faculty
- Registrar

How many years of full-time work experience do you have with online courses, online degree programs, or online students?

0 Years	0
1-5 Years	12
6-10 Years	6
11-15 Years	6
16-20 Years	7
21+ Years	1

What percentage of your job responsibilities are dedicated to working with online students?

0%	0
1-20%	5
21-40%	4
41-60%	2
61-80%	5
81-100%	16

Appendix E: Questionnaire 1

1. What academic variables influence the retention of online first-generation students?
2. What background and defining variables influence the retention of online first-generation students?
3. What environmental variables influence the retention of online first-generation students?
4. What strategies and/or practices influence the retention of online first-generation students?

Appendix F: Questionnaire 2 Email to Participants

Dear (name),

Thank you so much for participating in the first questionnaire! The second questionnaire is now ready.

Please note:

This questionnaire will take 5 minutes or less to complete.

This questionnaire has been sent to only those who participated in the first questionnaire. Please do not share this email or link to the questionnaire.

I would be grateful if you could complete the second questionnaire no later than Friday, October 19.

Should you have any questions concerning this study, please feel free to contact me at XXXXXXX@uvm.edu or 802.XXX.XXXX.

Thank you again for your participation and valuable insights!

Please click here (Web link: go.uvm.edu/questionnaire2) for access to Questionnaire 2.

Sincerely,
David Dearden

Appendix G: Questionnaire 2

Listed below are common themes that emerged from participants' responses to "what academic variables influence the retention of online first-generation students?"

Rate each item below based on your experiences, observations, or perception of how it impacts the retention of online first-generation students using the following scale:

- High Impact
- Medium Impact
- Low Impact
- No Impact

	High Impact	Med. Impact	Low Impact	No Impact
Academic preparedness				
Access to resources				
Departmental collaboration				
Gap year(s)				
Navigating higher education				
Presentation/delivery of course materials				
Quality of K-12 education				
Responsiveness/availability of instructors				
Rigor of course				
Technology and learning management systems				

Listed below are common themes that emerged from participants' responses to "what background and defining variables influence the retention of online first-generation students?"

Rate each item below based on your experiences, observations, or perception of how it impacts the retention of online first-generation students using the following scale:

- High Impact
- Medium Impact
- Low Impact
- No Impact

	High Impact	Med. Impact	Low Impact	No Impact
Ability to self-advocate				
Commitment/Motivation				
Experience with technology/online courses				
Financial aid				
Health related challenges				
Organizational and time management skills				
Race/ethnicity				
Students' fluency in English				
Veterans/military status				

Listed below are common themes that emerged from participants' responses to "what environmental variables influence the retention of online first-generation students?"

Rate each item below based on your experiences, observations, or perception of how it impacts the retention of online first-generation students using the following scale:

- High Impact
- Medium Impact
- Low Impact
- No Impact

	High Impact	Med. Impact	Low Impact	No Impact
Access to reliable computer/internet				
Adequate study environment				
Employment				
Family				
Finances				
Geographic location				
Mentors				
Peer and social networks				

Listed below are common themes that emerged from participants' responses to "what strategies and/or practices influence the retention of online first-generation students?

Rate each item below based on your experiences, observations, or perception of how it impacts the retention of online first-generation students using the following scale:

- High Impact
- Medium Impact
- Low Impact
- No Impact

	High Impact	Med. Impact	Low Impact	No Impact
Advising				
Career services and resources				
Co-curricular involvement				
Communication				
Community college partnerships				
Course/curriculum development				
Defining/explaining expectations				
Diverse faculty and staff				
Faculty and staff training				
Faculty/staff relationships				
Onboarding				
Peer relationships				
Sense of belonging				
Technical support				

Appendix H: Questionnaire 3 Email to Participants

Dear Dr. Varney,

Thank you so much for participating in the second questionnaire. The final questionnaire is ready and can be accessed by clicking here (web link: go.uvm.edu/questionnaire3).

Please note:

This questionnaire contains ranking questions and one open-ended question.

I would be grateful if you could complete the third questionnaire no later than Wednesday, October 31.

Thank you again for your continued support!

Should you have any questions concerning this study, please feel free to contact me at XXXXXXXX@uvm.edu or 802.XXX.XXXX.

Sincerely,
David Dearden

Appendix I: Questionnaire 3

Below are the themes that were rated as having the highest impact on the retention of online first-generation students pertaining to academic variables.

Please rank them in the order you believe have the most influence on online first-generation student retention in higher education.

Double-click or drag-and-drop items in the left list to move them to the right - your highest-ranking item should be on the top right, moving through to your lowest ranking item.

Your choices	Your ranking
Academic preparedness	1
Access to resources	2
Responsiveness/availability of instructors	3
Navigating higher education	4

Below are the themes that were rated as having the highest impact on the retention of online first-generation students pertaining to background and defining variables.

Please rank them in the order you believe have the most influence on online first-generation student retention in higher education.

Double-click or drag-and-drop items in the left list to move them to the right - your highest-ranking item should be on the top right, moving through to your lowest ranking item.

Your choices	Your ranking
Commitment/motivation	1
Financial aid	2
Organizational and time management skills	3
Students' fluency in English	4

Below are the themes that were rated as having the highest impact on the retention of online first-generation students pertaining to environmental variables.

Please rank them in the order you believe have the most influence on online first-generation student retention in higher education.

Double-click or drag-and-drop items in the left list to move them to the right - your highest-ranking item should be on the top right, moving through to your lowest ranking item.

Your choices	Your ranking
Access to reliable computer/internet	1
Adequate study environment	2
Employment	3
Finances	4

Below are the themes that were rated as having the highest impact on the retention of online first-generation students pertaining to strategies and/or practices.

Please rank them in the order you believe have the most influence on online first-generation student retention in higher education.

Double-click or drag-and-drop items in the left list to move them to the right - your highest-ranking item should be on the top right, moving through to your lowest ranking item.

Your choices	Your ranking
Advising	1
Communication	2
Defining/explaining expectations	3
Sense of belonging	4

Regarding the four themes you selected as having the most influence, what is your recommendation for future practices and policies to improve the retention of online first-generation students?

Appendix J: Participant Statements and Coded Themes

Academic Variables

Theme	*Statements by Participants*
Academic preparedness	• Previous high school academic experience • Students are often not prepared for college level work • High schools that did not prepare them for college • Academic performance • Students may be less prepared academically • Academic success in high school • Good reading and math skills
Access to resources	• Access to information on how higher education works; • Access to resources/helping to understand how to use • those resources • Knowing about the supports a school has in place for their academic success • Writing or tutoring support, online tutoring services • Institutional resources, writing center or tutors • Showing them where to find help and who to ask • Bridge such as tutoring or outreach • Online help center • Access to additional resources, librarian support • Online student counseling services • 24/7 help services • Supplemental instruction • Counseling
Departmental collaboration	• Retention is connected to a number of variables - program fit, support resources, staff/faculty availability and their ability to work together, student's personal life, background, among many others. • Partnering with community colleges
Gap year(s)	• Time gap between high school and college
Navigating higher education	• Students are not used to the environment to navigate college on the whole • Knowledge of post-secondary education • Learning the language and processes of higher • Little support and knowledge about the post secondary experience

	• Knowing how to apply for and accept financial aid, understanding how grants and loans work
Presentation/ delivery of course materials	• Presentation of academic material • Combination of materials, level of interactivity, quality of supporting resources, lecture videos • Instructors should be able to harness the use of technology
Quality of K-12 education	• Academic preparation-especially in the areas of writing and math • Lack of study skills • Poor habits developed in high school • Student readiness
Responsiveness/ availability of instructors	• Instructor presence • Individualized feedback • Highly organized/transparent courses • Professor who is highly responsive to students • Professor who cares about the student's success • Available for virtual office hours
Rigor of course	• Rigor of courses • Coursework to be more challenging • Providing interesting and varied content • Program type and program requirements
Technology and learning management systems	• Using online learning management systems • Quality computer or laptop • Grasp of online platform • Learning how to navigate the online environment • Understand how the learning environment works • Required technology • Ease of interface • Ease of technology • Course design that is easy to navigate • Learning management system • Courses laid out in an effective manner

Background/defining Variables

Theme	*Statements by Participants*
Ability to self-advocate	• Being empowered to self-advocate • Lack of ability to self-advocate • Independent work style • Self-motivation, self-confidence • Self-discipline, self-directed learner
Commitment/motivation	• Demonstration of resilience and grit • Commitment to complete • Motivation • Desire/drive to get the degree • Work hard and persevere when challenges are presented • Interest in furthering education, grit • Desire to better self
Experience with technology/ online courses	• Students' technological skill and comfort History/experience with online courses
Financial aid	• Maintain financial aid GPA requirements
Health related challenges	• Health issues
Organizational and time management skills	• Time management and self-directedness • Good time management skills • Ability to manage time effectively • Strong study habits
Race/ethnicity	• Diversity of cultures • Background of race/religion
Students' fluency in English	• Students' fluency in English
Veterans/military status	• Veterans • Students currently serving in the military

Environmental Variables

Theme	*Statements by Participants*
Access to reliable computer/internet	• Quality of internet connectivity • Reliable equipment (printer/laptop) • Good, reliable computer and reliable internet access; • Access to technology • Ability to connect to the internet • Access to their own computer
Adequate study environment	• Adequate study space • Place to study
Employment	• Job that requires overtime hours • Employment situation and stresses/demands associated • with current jobs • Finances and the ability to work and make ends meet • Support from an employer • Tuition reimbursement • Flexibility with work schedule • Needing to be employed while in school • Employer supported encourage participation
Family	• Lack of support for their educational dreams at home • Lack of support system at home • Security of home, job, health, and family • Cohesiveness of family • Family situation with regard to significant and on-going stresses, conflicts, and responsibilities • Family demands; strong family support • Family/colleague support system • Non-academic responsibilities • Supportive family and work environment • Competing priorities with work/family • Lack of support, whether that is familial or community • Support mechanisms at home • Responsibilities outside of education • Managing multiple responsibilities
Finances	• Costs of courses • Affordability • Financial issues often affect academic performance • Finances can make a huge difference • Socioeconomic status

Geographic location	• Geography may impact readiness for education because of quality of schools, quality of neighborhoods
Mentors	• A person with prior experience to "give them the lay of the land" • Mentorship • Role models
Peer and social networks	• Peer and wider social networks • Group work • Affinity groups

Strategies and Practices

Theme	*Statements by Participants*
Advising	• Supportive Academic Advising • Academic support, advising, supportive faculty • Proactive advisement • Rapport with instructors/advisors • Lots of advising • Success coaches who regularly follow up • Involved academic advisors • Someone is available to answer questions when needed • Academic advisors for individual meetings/conversations • Students need to hear from their faculty/student services that they are doing great, and can achieve their goals • Encouraging, inspiring • Listen to the challenges faced by the student • Offer encouragement and positive affirmation
Career services and resources	• Career services • Assisting with resume writing • Development social media professional profiles • Providing content that is useful and meaningful for their interests and life goals • Students who can't see how their program/courses will help their career, do not finish the program;
Co-curricular involvement	• Clubs/organizations connected to the university • Students feel like they are a part of something
Communication	• Effective online communication and outreach • Greater contact and support • Regular contact with the student
Community college partnerships	• Partnering with community colleges
Course/curriculum development	• Developing curriculum that activates prior knowledge and experiences • Developmental classes offered before semester start • Balancing courses/more demanding with less demanding • Flexibility with course scheduling • Class sizes should vary according to subject matter • Keep undergraduate course sections under 15 students

Defining/explaining expectations	• Set up expectations in the beginning • Students whose expectations match that of the expectations of the program • Adequately preparing students for the time commitment • Asking the student of their expectations for the course/institution • Understand the expectations and requirements • Understand the time commitment • Clear course expectations
Diverse faculty and staff	• More rainbow/queer, brown and black bodies
Faculty and staff training	• Training for professors who are teaching first-generation students • Professors teaching the classes should be experienced and trained
Faculty/staff relationships	• Contact with the faculty teaching the course • Dedicated academic advisor • Dedicated persons need to be in place • Strong relationship with advisor or someone else • Students have direct contact with any faculty or staff member of the university • Contact and relationship with someone at the University • Developing relationships with students • Making a personal relationship with students if possible • Personal contact is also vital • Feeling a sense of connection to the instructors
Onboarding	• Onboarding strategies • Structured approach to new student onboarding • On-boarding is critical • Strong On-Boarding • What is done to help them adjust during their very first semester • Providing support with initial challenges that these students face • Front-loaded materials are too much, for someone who is new to online learning, to comprehend • Screening of online students during orientation
Peer relationships	• Creating opportunities for students to connect with peers • University wide first generation program • Creation of a student community

	• Connect with other first generation students • Peer support • Peer connections • Connection with other students in the course
Sense of belonging	• Being included in the online classroom • Helping students become connected • Engaged with college community • Inclusion in the courses • Helping students get connected, so they feel they belong, and they matter at the institution • Students feel connected and supported to the institution • Fostering a sense of belonging in higher education
Technical support	• Providing a good tech support Help with understanding the learning management system

Appendix K: Mean Score of Each Theme from Questionnaire 2

Academic Variables

Theme	Mean Score
Academic preparedness	2.77
Access to resources	2.62
Departmental collaboration	1.77
Gap year(s)	1.54
Navigating higher education	2.50
Presentation/delivery of course materials	2.23
Quality of K-12 education	2.23
Responsiveness/availability of instructors	2.69
Rigor of course	2.23
Technology and learning management systems	2.27

Background/Defining Variables

Theme	Mean Score
Ability to self-advocate	2.23
Commitment/motivation	2.85
Experience with technology/online courses	2.27
Financial aid	2.50
Health related challenges	2.31
Organizational and time management skills	2.88
Race/ethnicity	1.31
Students' fluency in English	2.38
Veterans/military status	1.31

Environmental Variables

Theme	Mean Score
Access to reliable computer/internet	2.65
Adequate study environment	2.35

Employment	2.54
Family	2.35
Finances	2.69
Geographic location	1.31
Mentors	2.08
Peer and social networks	2.08

Strategies and Practices

Theme	Mean Score
Advising	2.65
Career services and resources	1.85
Co-curricular involvement	1.38
Communication	2.81
Community college partnerships	1.42
Course/curriculum development	2.35
Defining/explaining expectations	2.62
Diverse faculty and staff	2.15
Faculty and staff training	2.58
Faculty and staff relationships	2.19
Onboarding	2.27
Peer relationships	2.00
Sense of belonging	2.62
Technical support	2.38

Appendix L: Mean Score of Each Theme from Questionnaire 3

Academic Variables

Theme	Mean Score
Academic preparedness	1.96
Access to resources	1.44
Responsiveness/availability of instructors	1.52
Navigating higher education	1.08

Background/Defining Variables

Theme	Mean Score
Commitment/motivation	2.12
Financial aid	1.32
Organizational and time management skills	1.80
Students' fluency in English	0.76

Environmental Variables

Theme	Mean Score
Access to reliable computer/internet	1.88
Adequate study environment	1.00
Employment	1.20
Finances	1.92

Strategies and Practices

Theme	Mean Score
Advising	1.32
Communication	1.56
Defining/explaining expectations	1.64
Sense of belonging	1.48

Appendix M: Participants Recommendations from Questionnaire 3

Recommendation
Clear communication
Establishing and maintaining relationships with advisors
Provide needed support, i.e. tutoring, writing, technology
Introduction courses to online education
Provide access/guidance to more scholarships
Improve academic skills
Building and strengthen relationships with community colleges
Advising, i.e. course selection, trouble-shooting
Career Coaching
Training for online faculty
Understanding how to access resources, i.e. online library
Easy to navigate learning management system
Provide clear expectations of student and within courses
Understanding the needs of the students, i.e. survey, interview
Collaboration between faculty and staff
Sense of belonging/community
Establish and maintain a mentoring program