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The Influence of the First-Year Seminar Participation on Student Retention

By

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Dissertation

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ABSTRACT

Sanavi, Sahar, PhD, May 2022

Educational Leadership

The Influence of the First-Year Seminar Participation on Student Retention

Chairperson: Dr. John Matt

College student retention is a complex phenomenon influenced by a myriad of factors and with wide-ranging implications for university function. First-year seminar is one approach to increase first-year student retention through involvement, engagement, and integration. This quantitative study examines the influence of first-year seminar on retention of first-year, full-time, four-year degree-seeking students who matriculated during the fall 2016, 2017, 2018 semester and remained enrolled for fall 2017, 2018, 2019 semester at six institutions in two Northwest states in the United States.

This study utilized an odds ratio to investigate whether first-year seminar participation had a statistically significant influence on the probability of students being retained at the targeted institutions. The results of this study were not statistically significant indicating that first-year seminar participation did not have a statistically significant effect on the probability of students being retained at the study's institutions. The odds ratio value of 1.33 indicated that students who participated in first-year seminar had 95% confidence interval of 1.27-1.39 result in not having a statistically significant effect on the probability of students being retained at the study's institutions.

Future research could replicate the study at all public four-year universities in a bigger population ideally nationwide. Additionally a mixed methods approach may help to identify underlying factors and confounding variables that contribute to the results of this research and clarify why students who attended the first-year seminar did not return for the next fall semester.

Keywords: Retention, First-year seminar, First-year Full-time, Involvement, Engagement, Integration

Chapter One – Introduction to the Study

Student retention is critical to the success and future of institutions of higher education (Thompson & Prieto, 2013). Nearly thirty percent of students drop out of college during their first year (Alarcon & Edwards, 2013), therefore institutions need to look into the reasons so as to develop retention programs that will improve the success rate.

First-year students enter college with a wide array of characteristics, including age, economic factors, gender, and race (Miller & Lesik, 2014). These factors substantially affect student preparedness and experience transitioning into higher education (Melnik, Kelly, Jacobson, Arcoleo, & Shaibi, 2014). Their transition experiences involve adjusting, developing, and changing in response to academic and social experiences (Kantanis, 2000; Latham & Green, 1997). These transition experiences have long been recognized as challenging (Schlossberg, 1981).

Most college students who drop out do so before their second year (Adelman, 2006; Barefoot, 2004; Carter, Locks, & Winkle-Wagner, 2013). As transitioning from high school to college is a difficult time, first-year seminars offer a prime opportunity for institutions to intervene and improve student integration on both academic and social levels (Carter, Locks, & Winkle-Wagner, 2013). Students who struggle in adjusting to college life are likely to continue struggling and institutional programs are thus more effective early on (Davidson, Beck, & Milligan, 2009).

Responding to attrition issues, some institutions have begun to focus more on persistence and graduation in contrast to enrollment efforts (Barefoot, 2004). The programs implemented by institutions include hiring retention directors, providing access to supplemental instruction, “early alert” interventions, and implementing first-year seminar courses (Barefoot, 2004).

Student engagement programs aim to inspire students to achieve and help them transition into the college setting (Turner & Thompson, 2014).

First-year seminars can be effective means to help students adjust to college (Miller & Lesik, 2014). Indeed, not considering the varying backgrounds of the incoming students, those who complete the first-year seminar programs are more likely to persist and graduate than other students, and with higher academic standing (Miller & Lesik, 2014; Vaughan, LaLonde, & Jenkins-Guarnieri, 2014).

Problem Statement

Nationally, in four-year colleges, approximately twenty-eight percent of first-year students drop out by the end of the first year (American College Testing Program, 2012). Students start college typically with a plan for success, yet still many do not return after the first year (Carter et al., 2013). Student retention is an ongoing issue that institutions need to address because of the negative impact that withdrawal can have on students, families, the economy and the institution itself. Thus, minimizing student attrition rates continues to be a key objective of public institutions throughout the country.

Withdrawing from college immediately affects and challenges the withdrawing student, limiting future employment and socioeconomic prospects. Once students withdraw, financial support through federal programs may be compromised. With each early departing student, state funded institutions may lose funding and support for the programs that keep the lifeblood of critical programs flowing. It is understandable that institutions plan to avoid allocating resources on students who are not dedicated to completing their programs (Baars & Arnold, 2014).

Wide-ranging research supports the detrimental impacts that student withdrawal can have on the individual, institution, and people connected to the student (Hällsten, 2017; O'Neill,

Wallstedt, Eika & Hartvigsen, 2011; Sarra, Fontanella & Di Zio, 2018; Voelkle & Sander, 2008). Apart from what may be misused such as time, money, and undue psychological pressure (Faas, Benson, Kaestle & Savla, 2018; Ortiz & Dehon, 2013), students who withdraw after one year of college may deal with years of marginalization and negative labor market outcomes (Edward & Pichyada, 2019).

Another factor that contributes to retention is student debt. The more debt students have the more likely they are to leave, as they feel pressured to drop out of college and move into jobs that do not require a college degree. As a result, their decision whether it is worth going into debt to stay in college and complete the degree is impacted by the amount of debt they would expect to carry. Rising student debt therefore, is related to student retention and could influence the dropout rate of freshman before entering their sophomore year (Bean, 1985, 1990; Tinto, 1993).

Poor retention can also lead to a negative stigma for the institution and affect future recruitment. A high level of attrition suggests both a less competitive student body or relatively deficient teaching and available support (Voelkle & Sander, 2008). From the standpoint of society and taxpayers, it may become controversial to support an institution that fails to achieve strong retention rates, as a withdrawing student takes the place of another potentially successful student (Ortiz & Dehon, 2013; Voelkle & Sander, 2008). Institutions with poor student retention rates risk losing critical federal and state funding. Without such funding, institutional revenue will likely decline and academic programs can suffer. Although individual students may go back to college in a different institution and graduate, supporting student persistence from initial entrance continues to be a major policy concern for governments and institutions around the country due to the multifaceted problems that withdrawal can create for students, institutions and

society at large (Hovdhaugen, 2009; Ortiz & Dehon, 2013; Sittichai, 2012; Voelkle & Sander, 2008).

Although colleges have attempted to introduce programs to combat student withdrawal for several decades, attrition rates have remained relatively constant across the country (Carter et al., 2013). However, there are indications that withdrawals have declined slightly in recent years, with the overall persistence rate for the fall 2017 entering cohort showing “an increase of 2.2 percentage points compared to fall 2009” (The National Student Clearinghouse Research Center, 2019). According to the National Student Clearinghouse Research Center (2019), “among all students who enrolled in college for the first time in fall 2017, 73.8 percent persisted at [some] U.S. institution in fall 2018, while 61.7 percent were retained at their starting institution.” As institutions of higher education adapt to changing demographics, and as demands for specialized education increases, institutions should research and study the effectiveness of the first-year programs in promoting student persistence.

Past research has examined the efficacy of first-year programs, however, longitudinal research and studies on this population at the state, regional, or national level are lacking. Given the importance of early intervention, the high need for additional support for at-risk students, and the consistent efficacy of freshman seminar programs, it is vital that such programs are evaluated for their effectiveness in contributing to the success of the at-risk student in both short and long terms.

Purpose of Study

The purpose of this quantitative study was to examine the relationship between freshman seminar course participation and student retention. This study added to the body of knowledge regarding the first-year seminar effectiveness in the Northwestern universities in United States.

The researcher explored how first-year seminars can successfully encourage student persistence and thereby improve success rate for students, institutions, and society at large. Understanding domestic student retention is an important first step to understanding all student retention including international student retention.

Throughout the past several decades, the proliferation of first-year seminars has expanded steadily as an institutional method to encourage student integration with the goal of improving retention and graduation rates. First-year seminar participation is largely understood to significantly improve student success (Barefoot, 1993, 1998; House & Kuchynka, 1997; Stark, Harth & Sirianni, 2001). However, while institutions throughout the country have widely adopted first-year seminars with the belief that they provide critical resources for student achievement and persistence, the research supporting this conventional wisdom is still catching up and just developing beyond “its inaugural stage” (Goodman & Pascarella, 2006, p. 26).

Research Question

This quantitative study was guided by the following research question:

What relationship, if any, exists between participation in freshman seminar classes and student retention?

Hypothesis

For the purpose of this study, the following hypothesis tested:

Students who participated in first-year seminar courses demonstrate a higher retention rate than those who did not participate.

For purposes of this study, the following null hypothesis used for statistical significance testing:

Ho: There is no statistically significant difference in retention rates between students who participated in first-year seminar courses and those who did not participate.

Definition of Terms

For purposes of this study, the following definitions were used:

Dropout. A student decision to leave college before earning a degree (Astin, 1975).

First-Time-Full-Time Freshman. First-year students enrolled in institutions of higher education for the first time, without regard to age or background (Federal Financial Aid Handbook 2017-2018; University of Montana Catalog 2017-2018).

Persistence. A student decision to continue active status at an institution (Seidman, 2012).

Student Retention. Students who are enrolled and registered in their third consecutive semester, or second year of an institution of higher education (Tinto, 1988, 1990).

Delimitations

In this study, the researcher examined institutional data regarding first-time-full-time students to evaluate the effectiveness of participation in first-year seminar programs in connection with the return of students for a second year. The population included first-year, full-time, four-year degree-seeking students who matriculated during the fall 2016, 2017, 2018 semester and remained enrolled for fall 2017, 2018, 2019 semester at six institutions in two Northwest states in the United States. The researcher did not examine the enrollment of these students beyond their third semester. This study did not include students who enroll without intention to graduate or obtain a degree; students enrolled for a limited amount of time; students enrolled for a number of credits below federal financial aid regulations; and, international non-degree seeking students. Participants included if they meet the following criteria:

- Are first-time full-time freshmen. Full-time enrollment will be determined by using the Federal Financial Aid definition of being enrolled for at least twelve (12) credits of academic work
- Participated in the first-year seminar course during their first year of enrollment at University

Limitations

Despite the availability of institutional information regarding individual students, it is difficult to avoid generalizing among such large populations. The number of students involved in this study is small compared to the overall first-time-full-time student population in the United States. This study involved some institutions that may not represent the characteristics of other institutions across the country, which could impact the generalizability of the research. Another limitation was that not all first-year seminar courses are the same or have equal experiences due to instructors.

Although this study is comprehensive in terms of first-year seminars, it examined only one of many factors related to institutional intervention into student retention. Further, this study was limited to the available institutional data and information pertinent to the research question.

Significance of the Study

Institutional success is increasingly measured by positive student retention (Siekpe & Barksdale, 2013). On average, 21% of entering first-year students did not return for a second year, based on statistics from the U.S. Department of Education, National Center for Education Statistics (2017). Research into the reasons behind retention and persistence provides critical information for institutions for purposes of planning regarding academic programs, operations,

and budget issues. Furthermore, institutions rely on such research to develop policy related to the needs of students and to improve student integration (Sabharwal, 2005).

Summary

As state support for higher education decreases, institutional budgets become increasingly dependent on revenue from student tuition and fees. Student departures not only have negative impacts on students who withdraw, but also negatively affect the stability of enrollments, institutional budgets, and public perceptions of institutional quality. There are numerous factors throughout students' collegiate careers that potentially influence their decisions to remain enrolled in college. Some of these factors are within the ability of an institution to control or influence while others are impossible to predict and resolve. Institutions of higher education have struggled to develop effective strategies to improve retention and graduation rates. However, the freshman seminar is one of the practical approaches for establishing an influential and practical method for improving student retention and persistence (Center for Community College Student Engagement, 2012; Davis, 1992; Tinto, 1993; Townsend & Wilson, 2006). The researcher explored retention rates throughout Northwestern universities in the United States. Specifically this research asked, do students who participate in Freshman Seminar courses remain at higher rates than those who do not? The research findings could potentially benefit institutional decision-making and resource allocation for student retention.

Chapter Two

Review of Related Literature

Overview

This chapter focused on the review of literature and synthesis of seminal and contemporary research addressing the relationship between the first-year seminar courses and rates of college student persistence and retention. This chapter will: 1) present an overview of student retention and persistence-related concepts and definitions of terms; 2) provide a historical overview of student retention; 3) review theoretical foundations of retention, persistence, and withdrawal; 4) examine the First-year Seminar Course; 5) provide a historical overview of Freshman Seminar; 6) review theoretical foundations of the First-year Seminar Course.; 7) examine contemporary research in relationship between Freshman Seminar and student retention.

Historical Overview of Student Retention

In his book, *College Student Retention*, Alan Seidman described nine stages of student retention in American higher education (2012). The author claim that these areas depict the emergence of student retention as a critical issue in higher education in a systematic way. The following sections will look at these historical eras.

1. Retention Pre-History (1600s-Mid 1800s)
2. Evolving toward Retention (Mid 1800s-1900)
3. Early Developments (1900-1950)
4. Dealing with Expansion (1950s)
5. Preventing Dropouts (1960s)

6. Building Theory (1970s)
7. Managing Enrollments (1980s)
8. Broadening Horizons (1990s)
9. Current and Future Trends (Early Twenty-First Century) (Seidman, 2012, p. 13)

(1.) Retention Pre-History (1600s-Mid 1800s)

According to Seidman (2012) prior to the Twentieth Century, college retention was not a concern because few students attended college and even fewer graduated. Colleges sought students with little expectation of retaining them. For most families, college was not practical or affordable (Seidman, 2012). The earliest American colleges, Harvard (1636), William and Mary (1693), and Yale (1701), were part of churches and focused on education of ministers and missionaries. Less than one thousand students were enrolled in college by the American Revolution; half in ministry, half [the sons of elites] destined for law and public life. After the Revolution, states slowly chartered colleges, but infrastructures and institutions developed slowly.

With the turn of the Nineteenth Century, new colleges emerged, and enrollment increased. Curricula once focused primarily on ecclesiastical studies broadened to include classical instruction and studies related to law and public life. Standards for admission became common. An economic downturn in the 1840s led to a debate over the state of college and education in general, which primarily catered to well off families. This set the stage for further changes in collegiate education (Seidman, 2012).

(2.) Evolving toward Retention (Mid 1800s-1900)

Institutional concern for college retention grew little in the second half of the nineteenth century, as institutional survival was critical. However, the slow growth in degrees and

expansion of the college experience made attending college more desirable (Seidman, 2012). Liberal education curricula improved, and extracurricular activities increased in popularity. Colleges responded by promoting balanced academic and social experiences. It is unknown if retention improved, because such rates were not tracked.

Enrollment in college slowly expanded to include more economically diverse student bodies, including women. In 1862, Congress passed the Morrill Land Grant Act, a watershed moment that provided land grants to states so they could charter colleges specializing in agriculture and engineering. Curricula became further refined to focus on research and to specialize, and the “college” was transformed into the “university.” The increase in universities outpaced the demand (Seidman, 2012).

(3.) Early Developments (1900-1950)

Institutional stability and growth profoundly increased in the first twenty years of the twentieth century. Retention became more of concern when enrollment at the largest institutions increased on average from 2,000 students in 1895, to 5,000 in 1915, when over 110,000 students were attending just over 1,000 institutions (Seidman, 2012). The need for educated professionals followed industrial and urban developments. Increasing demand for higher education allowed institutions to be more selective in admissions, and students competed for admission to “elite” schools. This period also saw a growth in private institutions tailored to women, religious minorities, and African Americans.

In this period, most institutions were primarily focused on attracting students rather than keeping them (Seidman, 2012). But the importance of a degree, along with awareness of who was graduating, led to the first studies in student retention in the 1930s. Prior to that time, John McNeely (1937) published, “one of the first widespread studies to examine multiple issues

related to the departure of students at multiple institutions” (Berger & Lyon, 2005, p. 14).

McNeely’s (1937) study focused on the reasons for and the rates of student withdrawal, and he sought to identify data related to institutional and other factors that affect student retention. His study conducted on behalf of the federal government, entitled “College Student Mortality,” evaluated data from sixty institutions and examined the extent of attrition, average time to complete degree, when attrition was most common, the impact of individual characteristics (gender, age at entrance, location of home, lodging, extracurricular activities, and part-time work) and the reasons for departure (Berger & Lyon, 2005). Neely’s study was ground-breaking in depth and scope and provided a model for later studies, although institutions and researchers did not recognize the importance of McNeely’s study until strategic enrollment planning became more critical in the 1970s (Berger & Lyon, 2005). Also, the Great Depression and World War II overshadowed higher education in general and the efforts to improve student retention in particular.

(4.) Dealing with Expansion (1950s)

Following the global upheaval of the mid-20th century, there were an explosion in enrollment in American higher education, and a growing recognition of the need to retain students. College became increasingly necessary for an ever more competitive professional landscape. Federal programs, and especially the GI Bill, led to a surge in enrollment from the returning soldiers, over 1.1 million (Seidman, 2012). Many institutions exceeded the capacity. Created in response to the developments in the Cold War, the National Defense Education Act of 1958 and the Higher Education Act of 1965 boosted college attendance, promoted education, and established the federal government’s lasting critical role in supporting higher education. As the demand for advanced degrees grew, institutions began to focus on retaining students (Seidman,

2012). Institutions anticipated a decline in enrollment in the 1970s because of baby-boomer demographics. This anticipation fueled interest in retention issues, with a focus on patterns of “academic failure.”

(5.) Preventing Dropouts (1960s)

The rapid increase in enrollment and in the number of institutions also coincided with the rise in enrollment of African Americans and other minority groups. Many institutions were unprepared for or unwilling to support more diverse student bodies, and retention rates were low for minority students (Seidman, 2012). These changes also coincided with the Civil Rights movement and the Vietnam War. The changing socio-economic dynamics in the 1950s and 1960s led to retention studies focusing more on individual student characteristics.

In the 1950s, studies on retention were conducted through a psychological lens, focusing on the maturity, motivation and disposition of students. In Summerskill’s 1962 study, he identified an array of causes of student attrition, including psychological family, social and financial issues. He endorsed researches aimed at identifying institutional characteristics that led to student withdrawal. He argued that retention studies should be based in psychology and sociology (Summerskill, 1962). In his groundbreaking article, “Dropouts From Higher Education: An Interdisciplinary Review and Synthesis” (1971), Spady called for in addition, a combination of these studies with a systematic, collective approach to understand and improve undergraduate retention. Retention became a central focus of theory, research, policy and practice in American higher education. Spady’s transformational model focused on individual student characteristics, the relationship with campus environment, understanding student departure processes, with sociology rather than psychology, as its basis.

Spady (1971) classified six types of retention studies from the 1950s and 1960s: philosophical, census, autopsy, case, descriptive and predictive. Philosophical (theoretical) studies typically focused on preventing college dropouts. Census studies described the rates of attrition, dropout, and transfer. Autopsy studies reflected self-reported reasons for leaving college. Case studies focused on at-risk students and the factors that led to success or failure. Descriptive approaches characterized experiences of dropouts and predictive studies tried to identify criteria of successful students. Dalrymple (1966) focused on students' pre-institutional preparation as a primary factor. Woodring (1968), believed that many college students lacked a justified basis for being in college, and they "would not have entered if they had been given valid information" (p. 13).

(6.) Building Theory (1970s)

By the 1970s there was a wealth of information based on which to begin testing policies and theories aimed at improving retention. Focused on sociology, Spady's model explained that a stronger connection between the norms of students and their college environments would likely increase the probability of persistence. In the mid-1970s, Tinto theorized that early and continued institutional commitment impacted the academic and social integration within campus, which improved student retention. Around the same time, David Kamens (1971) posited that larger, more complex institutions, with better capacity for graduate placement, had lower attrition rates. These institutions, Kamens noted, used their perceived elite status to improve student persistence. By the end of the 1970s, retention theories were becoming established, and institutions were dedicated to examining retention issues through a systematic, comprehensive lens. For instance, Cope and Hannah (1975) identified many factors related to student

withdrawal, including mental and physical health, adjustment to institutional life, student motivation and engagement, boredom, and financial resources.

(7.) Managing Enrollments (1980s)

Retention theories were further developed in the 1980s, driven by shifting enrollment due to a drop-in baby boomer attendance and changing demographics. In the late 1980s, Alexander Astin and colleagues studied large national databases from hundreds of colleges and concluded that involvement in academic endeavors and college life directly increased retention probabilities (Seidman, 2012). Many institutions began connecting recruitment and retention efforts to respond to a perceived need to maintain optimal student enrollment in terms of quality and quantity. These policies came to be called “enrollment management,” which involved wholistic research and policies focused on student recruitment, financial aid, and student support affecting enrollment and retention. Varying between institutions, enrollment management took on different names around the country.

Throughout the 1980s, retention policies evolved in response to the ever increasing empirical research. By the 1990s, a growing consensus theorized that student satisfaction based on participation and satisfaction directly impacted persistence. Perspectives varied to focus on psychological, environmental, economic and organizational factors. Campus-based theories and strategies responded to changing demographics, including first-generation and non-traditional students. Enrollment management policies also increasingly focused on community colleges and graduate students.

(8.) Broadening Horizons (1990s)

By the 1990s, institutions prioritized retention and were able to rely on thousands of published and unpublished studies. Stemming from Tinto’s theoretical model developed in the

1970s, four interconnected propositions were adopted in relation to individual students: entry characteristics; initial commitment to the institution; early social integration; and continuing student commitment. Social integration was accepted as an important indicator of retention probability, hailing back to Tinto's sociological approach. Financial aid and the ability to pay for college also became more relevant. The importance of student learning as a primary goal also helped attrition predictions. Empirical evidence suggested the importance of the intersection between academic and social involvement.

Retention studies in the 1990s also focused on the lack of cultural and racial diversity in institutions. Progressive policies focused on adapting to individuals and historically marginalized students. Institutions also adapted to an increasing number of students who transferred between colleges based on academic and personal pursuits and needs (Seidman, 2012).

(9.) Current and Future Trends (Early Twenty-First Century)

According to the report by American College Testing (2012), on average twenty-six percent of freshman do not return the following year. Retention rates vary, with more selective institutions reporting dropout rates on average of eight percent compared to less selective institutions reporting thirty-five percent. Retention rates are worse with the minority groups, including first-generation students and those from lower socioeconomic backgrounds (Seidman, 2012).

Retention efforts have continued as a central focus at most colleges throughout the country. Thousands of studies support institutional efforts, with a dedicated academic journal: *The Journal of College of Student Retention: Research, Theory & Practice*. Institutions have continued to respond to evolving student demographics and specialized curricula by

developing tailored approaches to retention efforts. Retention studies and efforts have become particularly focused on underrepresented groups, with the development of policies aimed at improving campus life for students of diverse backgrounds. Many of these policies appear to have improved retention rates, especially with underrepresented students (Seidman, 2012). The continuing diversification of students has led to renewed calls to study and develop retention policies directed at students from difficult circumstances. Struggles to retain racial minorities continue to grow as an important focus of retention policies.

Retention rates have become one of the main indicators involved in institutional accreditation and ranking, and sometimes a factor in legislative funding. The competition for resources and value includes attracting students from diverse backgrounds. Institutional success is increasingly associated with valuing diversity and the intrinsic benefits to the education experience that results.

The impact of retention has continued to play an important role in institutional policies with a focus on individual characteristics and programs dovetailed to underrepresented groups, including racial and socioeconomic minorities. The need for interconnected, wholistic approaches to retention only continues to increase in importance for many institutions. This systematic method combines detailed studies examining specific information related to retention on an individual basis.

Student retention is established as a core field of study and measure of institutional success and longevity. If anything, it has become a more important facet of institutional investment and study. This relies most directly on the importance of individual association with the institutional norms from the beginning of campus life.

Theoretical Foundation

Our current thinking about student retention is based on the theories developed by Astin (1977), Tinto (1975), and Bean (1980). A discussion of Astin's theory on student involvement is followed by an explanation on Tinto's theories, including those regarding student social and academic integration. This part concludes by outlining the approach of Bean (1980), who disagreed with the prior academics and created a new model based on worker turnover.

Astin (1977) Theory of Student Involvement

The 1970s was the flourishing period for the student retention improvement. Milem and Berger (1997), claimed that Astin's 1977 theory of student involvement was seminal in terms of developing studies into the field of college student retention and persistence.

During the 1970s, Astin and his colleagues had the first longitudinal study on the college experience when he served as the director of the American Council on Education, where he oversaw the Cooperative Institutional Research Program (CIRP). CIRP involved "200,000 students and a national sample of more than 300 post-secondary institutions of all types" and evaluated over 80 variables related to students' beliefs regarding their college experiences, including "attitudes, values, behavior, achievement, career development, and satisfaction" (Astin, 1977, pp. 3-4). Incoming students completed the CIRP survey, which focused on two categories: "(1) pretests on possible outcome measures and (2) personal characteristics (age, race, educational background, and so forth) that might affect the propensity to change or to attain certain outcomes." (Astin, 1977, p. 13). Four years after completing the incoming surveys, the students completed the follow-up surveys. The survey results were analyzed to demonstrate the effect of the college experience on student development, with a focus on "personal, social, and

vocational” growth (Astin, 1977, p. 2). According to Astin (1977), successful student development varied depending on the individual characteristics of incoming students, the institutional level of the college (four-year vs. two-year; public vs. private), and the degree of the student’s “involvement” in the college experience. Astin (1977) concluded that greater involvement led to greater student development.

Based on this work, Astin (1984) developed student involvement theory. Astin (1984) classified student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1984, p. 297). Astin (1984) concluded that student involvement encompassed the following five main postulates: 1) physical and psychological energy of students; 2) a range of varying student involvement; 3) measurable characteristics of student involvement; 4) “the amount of student learning and personal development associated with any educational program [is] directly proportional to the quality and quantity of student involvement in the program” (Astin, 1985, p. 136); and 5) “the effectiveness of any educational policy or practice was directly related to the capacity of that policy or practice to increase student involvement” (Astin, 1985, p. 136).

According to Habley, Bloom, and Robbins (2012) Astin’s theory of student involvement implied that institutions could enhance the academic experience to improve retention rates. Astin (1984) claimed that the likelihood of incoming freshman to remain in the institution depended on factors such as high school academic performance, ambitions, dedication to studying, parental background, and size of the community in which a student grows up. The more involved students are with the environment of institution, and the better their academic performance, the more likely the students will remain. Astin (1975) outlined different approaches to improve student involvement, namely admission assistance, freshmen orientation

programs, student advising, financial aid, career services, tutoring, and improving on-campus residency.

Astin's model theorized institutions should focus on facilitating degree completion in contrast to fixating on explanations for attrition. He believed this could be accomplished by assisting students to stay on track based on responding to individual student traits (Astin, 1975). Astin's investigation examined a somewhat diversified assortment of institutional policies and students, including financial aid, work, and on-campus versus off-campus residency. Astin argued that investing in retention efforts was just as important and cost-effective for purposes of enrollment management. Astin's (1975) empirical analysis demonstrated that student involvement is critical to retention. His model established that student persistence depends directly on involvement in academic programs and social life.

In sum, Astin found that student learning and success depends on the amount of time and effort involved in their program; in turn, the success of retention policies is contingent on the ability to improve student involvement (Astin, 1984, p. 298). Successful policies prioritize student involvement in both academic and formal and informal extra-curricular activities (Astin, 1975). One method to improve student involvement is to design freshmen seminars for incoming students to help them get the support they need and increase persistence. Also Astin (1975) examined how institutions of higher education increasingly relied upon student tuition instead of state funding. More and more, institutions responded to concerns regarding budget sustainability by investing in recruitment efforts. As there are many compounding variables impacting student attrition, it can be of limited value to rely upon any single characteristic to explain decisions related to persistence. Therefore, Astin (1975) examined multiple factors to

evaluate perceived influences on retention, including financial aid, employment, student-housing, aspects of an institutional and student involvement with their academic program.

Tinto (1975) Retention Theory

Another theory that influenced student retention research is Tinto (1975) theory of retention. Tinto's seminal research identified the multifaceted reasons why students withdraw from higher education and helped to explain institutional attrition rates (Tinto, 1975, 1988, 1990). Over time, Tinto's research responded to the challenges posed by increasingly diverse student groups and focused on integrating students into the college community. Tinto's theories were based on Durkheim's (1997) theory of suicide, which posited that the less integrated students are in college society, the more likely they are to commit suicide.

Tinto's "Model of Institutional Departure" highlights the importance that community involvement plays in increasing student integration and retention. Community involvement depends upon incoming students' social and academic integration, and institutions can play an important role in encouraging student assimilation (Tinto, 1993). The success that institutional programs have on retention rates arises out of the attributes, skills, financial resources, prior education experiences, disposition, and integration with the institution (Tinto, 1993).

According to Tinto (1987), the concept of retention relates to different factors, student and institution. Tinto (1987) states that many college students withdraw before graduation and do not persist. He claims the increasing attrition is significant for both students and institutions. Students who do not graduate frequently lose job opportunities, income, and other immeasurable benefits of college attendance. Institutions have increasingly recognized that student retention is critical to their success and persistence. Tinto (1987) concludes that marketing campaigns to

increase freshmen classes will not guarantee institutional endurance, and retention programs are critical.

Student persistence, Tinto asserted, is based on a student's individual traits, such as family background, past performance in school, and their commitment to the institution and degree completion. Such commitment leads to both academic and social integration with their institution. As students become more academically and socially integrated, the more likely it is that they will remain and graduate (Tinto, 1975). Tinto (1987) asserted that attrition depends more on student experiences after matriculation versus before. Decisions about withdrawal often reflect the complex social and intellectual life of the college community. Accordingly, student retention rates "serve as a barometer of the social and intellectual health of institutional life as much as the experiences of students in the institution" (Tinto, 1987, p. 6).

Tinto's past research revealed notable statistics. For instance, Tinto concluded that the "rates of dropout from higher education have remained strikingly constant over the past 100 years . . . at about 45 percent" (Tinto, 1982, p. 694). This attrition rate has prevailed despite the number of students in higher education going from eighty thousand first-year students in 1880 to nearly two million in 1980. Nor have attrition rates improved much since the 1980s, which demonstrates the inevitability of some level of attrition. Accordingly, Tinto (1982) argued, "we need ask not whether we should eliminate dropout (since that is not possible) but for which types of students in which types of settings we should act to reduce it" (p. 699). Tinto (1987) sought to explain student departure by focusing on institutional influences on the academic and social development of its students. Institutions should not focus exclusively on abstract student retention goals but rather "students would be better served if their education and their social and intellectual growth were the guiding principles of institutional action." (Tinto,

1987, p. 5). If institutions follow this principle, “increased student retention will naturally follow” (Tinto, 1987, p. 5).

Tinto’s later work utilized a longitudinal model to describe the reasons for student withdrawal (Tinto, 1993). Working from his 1987 theory, Tinto's new model utilized factors including “adjustment, difficulty, incongruence, isolation, finances, learning, and external obligations or commitments” (Tinto, 1993, p. 112). As cited in Pascarella, Terenzini, and Wolfe (1986), Tinto (1993) concluded that greater social and academic integration leads to greater levels of commitment to the institution and graduation. In 1993, Tinto examined different groups of students, including transfer, at-risk, and non-traditional, and argued such students needed individualized retention policies and programs (Tinto, 1993). Retention programs, according to Tinto, should also be adapted to fit the needs of different types of institutions, i.e., two-year, urban, and public.

Tinto (2012) claimed the institutions need rethinking about retention strategic planning. More recently, Tinto (2012) asserted that some of the research into retention has not been helpful to developing successful retention programs because many studies incorrectly presume that “knowing why students leave is equivalent to knowing why students stay and succeed” (Tinto, 2012, p. 5). As to institutional efforts, Tinto asserted that these too frequently “invest in a laundry list of actions, one disconnected from another,” without a comprehensive, “coherent framework to guide their thinking” (2012, p. 5). Improving retention and graduation rates depends on “establishing conditions within [the institution] that promote those outcomes” (Tinto, 2012, p. 6).

Tinto’s groundbreaking theory of student integration emphasized the important role that the first year plays in student persistence (Tinto, 1975, 1988, 1990). Freshman seminars need to

respond to the current needs and characteristics of increasingly diverse and ever-changing incoming student bodies. Institutions that rise to this challenge presumably will see improved retention rates, improving both student persistence and institutional success. Noting that attrition is prevalent in the first year of college, Mortenson (2010) argued that institutions should focus on the persistence of first-year students. Tinto (1986) concluded that student persistence may be influenced by the actions of faculty and administrators, and the organizational structure in place.

Tinto's theory of social integration focused more on a student identifying with a particular institution's attitudes and values than did Astin's concept which emphasized the notion of student involvement and the relationship between the institution and the student. Both Tinto's theory of student integration and Astin's theory of student involvement assert that improved interactions with student peers and faculty lead to improved persistence and success (Astin 1993; Tinto, 1993). Astin argued that student "[i]nvolvement focuses on the amount of energy a student invests in the academic experience" (1985, p. 12). Following Astin's previous research, Tinto (1987) claimed there is often a misconception regarding the relationship between the different forms of student departure and the multifaceted reasons behind the individual decisions to withdraw. Therefore, Tinto asserted it is critical to emphasize and adopt studies that are focused on individual reasons for departure rather than cumulative departure rates (Tinto, 1987). Administrators that implement these theories in recreational programming can significantly improve on-campus student involvement. Moreover, programs developed by specific academic departments can increase overall college retention levels (Grayson, 1998). Institutions that better understand successful retention theories will be better prepared to create environments that encourage students to persist and succeed. The measure and goal is improved student involvement and reduced retention rates.

In addition to studying college attrition, Tinto's earlier model has also been used to evaluate student outcomes, including reports of academic skill acquisition (Terenzini & Wright, 1987; Volkwein, King, & Terenzini, 1986), personal development (Terenzini & Wright, 1987), and major field changes (Terenzini, Pascarella, Theophilides, & Lorang, 1985). To be sure, the central pillar of Tinto's theory of departure, based on student integration in an institution, is similar to Astin's theory of involvement. Nonetheless, Tinto's model of academic integration within the institution provides important information for administrators wishing to develop and implement first-year programs to improve academic performance and encourage social involvement.

Scholars of retention studies generally agree that improved student engagement leads to student success and persistence. Alexander Astin (1975, 1984, 1999) and Vincent Tinto (1994, 2002, 2004, 2006, 2012), are frequently cited as the most influential scholars who have established the importance of the first-year seminars in promoting student persistence and success (AAC&U, 2014; D'Amico, Dika, Elling, Algozzine, & Ginn, 2014; DeAngelo, 2014). The models created and refined by Astin and Tinto demonstrate that institutions can encourage student engagement and persistence through the first-year programs. These seminars help students engage with peers and faculty members, encourage involvement in social activities, and offer students academic support and learning tools (Tinto, 1986). Astin (1999) and Tinto (2002, 2006) similarly concluded that college success depends on students adjusting to the academic demands and integrating with the social structure. Of particular importance is Tinto's (1975, 1994) theory that the first-year seminars can considerably influence student engagement and thus directly improve retention rates and the commitment to college beyond the first year (Crisp & Taggart, 2013; Tinto, 2006, 2012). Similarly, Astin's (1975, 1984) theory of student

involvement focused on student engagement with their peers in social settings and with faculty in academic settings, underscoring the importance of establishing such connections for students transitioning into college life.

First-year seminar programs can provide meaningful support for students to improve academic performance and foster social integration that will help them in their careers (Bonet & Walters, 2016; Nix, Lion, Christensen & Christensen, 2015; Permzadian & Crede, 2016). To reduce student attrition, first-year seminars are frequently utilized by institutions to assist students in transitioning into college by encouraging social integration and providing resources for academic success (Cuseo, 2001, 2002; Goodman & Pascarella, 2006; Pascarella & Terenzini, 2005; Porter & Swing, 2006; Tinto, 2002; Upcraft, Gardner & Barefoot, 2005). It is now widely accepted that first-year seminars promote student engagement, encourage learning experiences, and facilitate a sense of student belonging within the college community (Astin, 1999; Bonet & Walters, 2016; Tinto, 2012). To promote student retention, colleges have increasingly required and encouraged first-year seminar programs, in addition to providing academic assistance programs and connections with peers and faculty within the institution (Costa, 2014; Crisp & Taggart, 2013; D'Amico, et al., 2014).

Bean (1980) Explanatory Theory of Student Retention (1980)

Building on the research and theories of Tinto and Astin, Bean's model of student retention is based on the intersection of organizational turnover and psychological theories that contribute to academic and social integration. Such psychological theories include attitude-behavior, attribution, coping-behavioral, and self-efficacy. Bean asserted that four variable groups impacted retention: 1) academic success, most frequently measured by grade point average; 2) student intentions to leave, which is based on the influence of psychological

outcomes, including institutional quality, student satisfaction, commitment, and stress; 3) background and other defining variables, based on high school performance and educational dedication; and 4) so-called environmental variables that directly affect student persistent and retention, including finances, family and employment commitments, and opportunities to transfer.

Bean's (1980, 1982, 1983, and 1990) theory of retention focused on the intersection of academic variables, including student intentions and expectations, and environmental factors of the institution. In essence, Bean's model focused on five aspects that influenced student experience and retention: 1) encouraging routine student practices; 2) educating students about social and academic opportunities; 3) improving student engagement in the classroom; 4) facilitating student integration; and, 5) questioning if student success matched student investment. Bean's theory posits that institutional commitment is influenced by whether the campus environment is geared toward adapting to student attitudes (Thompson, 2005). Each student's ability to considerably adjust to the institution certainly impacts their ability to integrate and feel a sense of "belonging" to the academic environment (Bean, 1990; Thompson, 2005).

Bean's model of retention is somewhat unique in being based on relatively high-frequency studies (Bean, 1982, 1983, 1985, and 1990). Some doubts have been raised about the importance of Bean's reliance on student commitment determining persistence (Cabrera, Nora, & Castaneda, 1993). Of note is Bean's (1985) Conceptual Drop-Out Syndrome Model, which emphasizes the important role that student social integration plays into retention (Thompson, 2005). Hong, Shull and Haefner (2009) several studies show that students withdraw from college for interdependent reasons including financial, psychological, academic and sociological

causes (Seidman, 2005; Tinto, 1994). Student intentions have been shown to be the strongest predictor of retention (Bean, 1990). Notably, some studies have demonstrated how student intentions may be identified, evaluated and predicted to prevent student dropouts (Hossler, 2005). Although student ability to pay for college has been accepted as an important factor among the reasons why students withdraw from higher education (Bean, 1985, 1990; Tinto, 1993), the ability to pay is frequently impacted by noneconomic factors, including student interaction with the university and integration with the community at large (Tinto, 1993).

Conceptually, Bean's (1980, 1982, 1983, and 1985) model mirrors Tinto's model, in that student attrition depends on student experiences, including those on academic, environmental, social, and psychological levels. Yet, Bean's theory is arguably somewhat more intersectional and intricate than that of Tinto. Bean's theory of attrition has many similarities to Tinto's theory of student departure. Importantly, both studies emphasize academic and social integration, institutional compatibility, and student commitment. One notable difference is the significance of college grades as an indication of integration as opposed to an outcome variable. Moreover, the comparative study of Cabrera, Nora, and Castaneda (1993) noted that Tinto's model has established better results in terms of validated hypotheses (Tinto-70%/Bean-40%) while Bean's model scored better in relation explaining divergent student persistence (Bean-44%/Tinto-38%). Cabrera et al. (1993) hypothesized that the greater degree of divergence based on the student integration model stemmed from the effects of external factors, including student support within the academic and social community, parental engagement, and dedication to goals established upon entrance into the institution.

The connection between the "student experience" and retention rates was relatively unexplored for decades by Tinto (1975, 1987, 1993) and Bean (1980, 1983, 1990), (Tinto, 2002).

Rather, Bean and Tinto arguably focused on student perceptual experiences. These studies perhaps ignored the important role that faculty can play in encouraging student involvement in the classroom and institutions can assist with students integrating within the campus community (Milem & Berger, 1997). More recently, to improve retention rates, institutions have focused on improving student engagement and integration within the academic and social communities of colleges. To be sure, understanding why some students choose to persist and others choose to withdraw is complex and multilayered. However, institutions and researchers have come to believe that external efforts can affect student intentions to persist, including first-year success programs, financial aid, and academic and social integration.

Student Engagement & Expectations

Research into retention is critical for institutions of higher education, and student engagement is a central focus of such studies (Baars & Arnold, 2014; Clark & Cundiff, 2011; McKenzie & Schweitzer, 2001; Murray, Ireland, & Hackathorn, 2016; Permzadian & Credé, 2016). It is increasingly more common for institutions to promote activities and integrated academic experiences to improve student engagement (Kuh, 2016). Such programs include first-year seminars, faculty mentoring, and extra-curricular activities in the community. Encouraging student engagement can be challenging because of unique characteristics of the students and the broader community (Fredricks, Blumenfeld, & Paris, 2004; Kahu, 2013).

Engagement may be evaluated on behavioral, emotional, and cognitive levels. Measurement of student participation, persistence, attendance, attention, and studying represents behavioral engagement (Fredricks et al., 2004). Successful behavioral engagement can result from promoting programs to improve academic involvement beyond basic coursework, including freshman seminars, study groups, and tutoring (Chickering & Gamson, 1987). Emotional

engagement is measured by student reactions to professors, classmates, and the academic experience, which reflect student “ties to an institution and influence willingness to do the work” (Fredericks et al., 2004, p. 60). Student motivation towards academic studies underscores emotional engagement (Fredricks et al., 2004; Kahu, 2013). In turn, emotionally engaged students more easily overcome anxiety, boredom, and apathy (Park, Holloway, Arendtsz, Bempechat, & Li, 2012). Cognitive engagement focuses on student dedication to learning and how they respond to academic challenges (Fredricks et al., 2004). Student motivation also plays a role in cognitive engagement theories. Similarly, self-regulated learning (SRL) attempts to explain how students’ internal processes, including thinking, motivation, and behavior, impacts their control over learning (Pintrich, 2000). Several studies have advocated the importance of teaching SRL strategies to incoming students to improve their learning experience and help them succeed (Barefoot, 1992; Pilling-Cormick & Garrison, 2007; Pintrich, 2000; Pintrich & Zusho, 2002).

Programs addressing the improvement of student engagement need to focus on behavioral, emotional, and cognitive engagement (Kuh, 2005, 2007). Successful efforts may depend on responding to students’ wants and needs. Thus, researchers frequently measure student engagement levels through examining questionnaires, such as the Beginning College Survey of Student Engagement (BCSSE, 2019), the College Student Expectations Questionnaire (Kuh & Pace, 1998), and the 1966 Student Information Form (Astin, Panos, & Creager, 1967), to evaluate whether student expectations have been met.

Past experiences help establish student expectations, and the expectations influence future behavior (Howard, 2005). If student expectations are not met, such as receiving a poor grade on an exam, students may respond by studying harder or withdrawing from the course.

Either way, the new experiences impact their expectations, and “what students expect shapes their behavior” (Kuh, 2005, p. 88). The expectancy value theory is based on what you can expect from yourself and the value placed on completing a task. Atkinson (1957) concluded that student motivation depended on the expectations regarding what they can achieve and the value they placed on achieving that goal; in other words, expectancy and value. Describing this theoretical model, Atkinson defined expectancy as a belief “that performance of some act will be followed by a particular consequence,” and that value is defined as the relative attractiveness of succeeding or failing on a task (Atkinson, 1957, p. 360). According to Atkinson (1957), the incentive or value aspect of the expectancy-value theory simply posits that the more attractive the outcome the more motivated a student will be to work towards it. Relatedly, the more unattractive a consequence is, a student may be just as motivated to work against it (Atkinson, 1957). Expectations of self-efficacy determine whether an individual will be able to exhibit coping behavior and how long efforts will be sustained in the face of obstacles (Kuh, 2007). Self-concept beliefs and self-efficacy lead to greater academic achievement (Chemercs, HU, & Garcia, 2001; Gore, 2006; Wright, Jenkins-Guarnieri, & Murdock, 2013; Zajacova, Lynch, & Espenshade, 2005).

Institutions that are dedicated to understanding the expectations of incoming students can more successfully respond with programs and resources designed to meet such expectations (Miller, Bender, Schuh, & Associates, 2005). Although first-year college students come with expectations and self-perceptions based on past educational experiences, such expectations may not be correct (Collins & Sims, 2006). Students who excelled in high school and performed well on standardized tests are frequently challenged by the greater demands of higher education (Howard, 2005; Kuh, Gonyea, & Williams, 2005; Schilling & Schilling, 2005). Stress and

disappointment due to not meeting the expectations may lead students to halt their studies or even withdraw (Howard, 2005; Schilling & Schilling, 2005).

Student experiences also may not live up to the environmental and social expectations for college (Moneta & Kuh, 2005; Smith & Wertlieb, 2005). The campus environments in rural or urban settings may dictate the level and quality of students' social interactions (Cole, Kennedy, & Ben-Avie, 2009). Although student diversity is generally greater than ever before, institutions that are focused on a particular field may present a challenging environment for students not pursuing that specialized field (Seemiller & Grace, 2016; Moneta & Kuh, 2005). While institutions can play a role in facilitating experiences that meet student expectations, students will always be primarily responsible for their own experiences. When student experiences successfully meet expectations, improved levels of satisfaction and persistence follow. Students and institutions should strive to have realistic expectations that can match the college experience.

First-Year Seminar

Tinto (1993) asserted that the transitional nature of incoming students impacts student persistence depending on the social and academic environment of the institution. Some students are simply not prepared for the college-level course work. Thus, developmental classes may be a practical preparation method for later college courses (American Association of Community Colleges, 2014; Bailey, 2014; Veenstra, 2009). The incoming students with developmental challenges frequently need more attention to improve the probability of retention.

First-year programs are continually recognized as a successful method to provide the tools necessary for the potential at-risk students to succeed (Ellis-O'Quinn, 2012). Due to the fact that incoming students are in a transitional phase of life, institutions of higher education can be more successful in integrating these students into the community through high-impact, early-

stage programs that adapt to individual student needs (Center for Community College Student Engagement, 2014; Kuh, 2008). Freshman seminar programs can assist students in visualizing the pathway to graduation and thus facilitate retention (CCCSE, 2014; Kuh, 2008).

Persistence and retention are key factors for degree completion and student success. In the American higher education, incoming student seminars have increasingly been an integral part of institutional success. The first freshman seminar on record was offered in 1882 at Lee College in Kentucky and the first for-credit seminar program was introduced at Reed College in 1911 (Davis, 1992; University of South Carolina, 2013). In 1972, social unrest caused by civil rights issues, the Vietnam War, and other campus issues, led the University of South Carolina to develop an experimental class to “open lines of communication between [sic] students, faculty, staff, and administration” (Friedman, Clarke, & Strickland, 2016, p. 3). This became what is known as the first-year seminar, University 101. Other universities followed suit, with universities developing first-year seminars that are tailored to the needs of the particular institution. Improvement and dedication to freshman seminars increased in the 1970s (University of South Carolina, 2013). These seminars have since become one of the critical tools that institutions will utilize to integrate students into the college experience based on individual needs (University of South Carolina, 2013). Now, approximately 90% of colleges and universities offer a first-year seminar to incoming students (Permzadian & Crede, 2016). Student interactions with other peers and building a relationship with an instructor or counselor are a practical and effective way to integrate students into the campus community. Beyond the individual, seminars add to the campus community as a whole and provide a framework for understanding retention following the incoming year, which is a crucial indicator of academic persistence (CCCSE, 2014).

Barefoot (1992, p. 49) defined first-year seminars as a course that is “intended to enhance the academic and/or social integration of first-year students[.]” The goal is to help students transition from high school to college by introducing them to a variety of specific topics, teaching them essential skills for success, and providing an environment that fosters the creation of peer support groups (Barefoot, 1992). Beyond merely providing a week-long orientation, first-year seminars are valuable means for institutions to provide “a logical structure for encouraging and intrusively demanding active student involvement in learning and in the life of the institution” (Hunter & Linder, 2005, p. 276). The curriculum for first-year seminars can be adjusted to the specific needs and intentions of students and institutions in a manner that facilitates student engagement with peers, staff, faculty, and fosters a feeling of involvement and belonging with the campus community (Friedman et al., 2016). Seminars are also used by some institutions to integrate students with their ideals and expectations (Barefoot et al., 2005).

The National Survey on First-Year Seminars of 2012-2013 identified the following three principle goals of first-year seminars: 1) to develop a connection with the institution; 2) to orient students to campus resources and services; and, 3) to develop academic skills (Keup, 2014, p. 17). As noted by Coats (2014), first-year seminars are foundational “because there is a correlation between them and persistence and retention” (p. 30). First-year programs can help students by assisting to develop a connection to their institutions to become “integrated in the institution, and ultimately, persist” (Karp & Stacey, 2013, p. 1). Providing an environment of inclusion for new students from diverse backgrounds has seen success and been recognized as a “foundation for retention and ultimately graduation,” (Schnell & Doetkott, 2003, p. 378) leading to an improvement in retention rates (CCCSE, 2012; Coats, 2014). Such courses should be purposefully designed to introduce campus resources and develop skills that help students

integrate into college life with purpose, including: campus socialization activities; studying, test preparation, and time management strategies; career services, and preparation; these programs should adjust to changing demographics and sociological factors (CCCSE, 2012, 2014; Noble, Flynn Lee, & Hilton, 2008; Schnell & Doetkott, 2003; Tinto, 1993). The goal is to “foster peer to peer collaboration and faculty mentoring” (Schnell & Doetkott, 2003, p. 90).

First-Year Seminar Models

The institutional goals of first-year seminars dictate the delivery of each program, with the length and substance of the seminar set to achieve each particular institution’s goals. In their *2006 National Survey of First-Year Seminars*, Tobolowsky and Associates (2008) concluded that the majority of first-year seminars were limited to one semester; of the 968 institutions surveyed, almost half of them required the seminar for all first-year students. The 2006 survey divided first-year seminars into six categories:

1. *Extended orientation.* These courses extend one and two-day orientation programs prior to the beginning of fall semester. Topics include campus resources, student goals, and institutional history and expectations (Barefoot, 1992; Permzadian & Grede, 2016). Such seminars are dedicated to student survival (Hunter & Linder, 2005).
2. *Academic content, either uniform or variable.* These courses aim to develop critical academic and studying skills, such as critical thinking, creative writing, and communication skills (Permzadian & Crede, 2016). Uniform content programs provide the same substance across sections, and variable content programs adapted to differences among sections.
3. *Basic study skills.* This type of seminar focuses on providing detailed study skills, covering grammar, notetaking, reading strategies and time-management. The seminar attempts to “help students identify learning styles, evaluate personal and academic strengths and

weaknesses, determine career goals, and develop study skills needed to achieve academic success” (Hunter & Linder, 2005, p. 280).

4. *Pre-professional or discipline-linked.* These courses acquaint students with specific professions such as medicine or engineering, and hard-science disciplines (Hunter & Linder, 2005; Permzadian & Crede, 2016).

5. *Hybrid.* These seminars combine one or more of the previously discussed seminars, such as extended orientation and study skills content (Hunter & Linder, 2005; Saunders & Romm, 2008). Hybrid also describes seminars that include online content (Griffin, Romm, & Tobolowsky, 2008).

6. *Other.* A range of seminars are designed to respond to the unique challenges faced by some student groups. It was reported in 2006 that more than 20% of contributing institutions provided seminars for honors students and nearly 20% offered seminars “for academically underprepared students and learning community participants” (Griffin, Romm, & Tobolowsky, 2008, p. 35).

Young and Hopp (2014) reported in the *2012-2013 National Survey of First-Year Seminars* that the most common seminars available were Extended Orientation and then the Academic Variable Content.

Effectiveness of First-Year Seminars on Student Success

While first-year seminars vary between institutions, Barefoot and Fidler (1996) described seven characteristics of successful seminars:

1. Provided course credit for the seminar. According to Young and Hopp (2014), as of 2013, more than 90% of institutions offered 1 to 3 credit hours for attending a first-year seminar.

2. Focused in the first-year curriculum. As seminars consist mostly of first-year students, they can be built into a “part of general education, core, or major requirements” (Barefoot & Fidler, 1996, p. 61).
3. Involved faculty and student services professionals in the development of the seminars. Student services professionals includes residence directors, orientation leaders, and career counselors.
4. Provided training for seminar instructors. Emphasizing faculty development has improved student satisfaction in freshmen seminar programs and the quality of the programs.
5. Compensated seminar instructors. Rewarding instructors by paying them to teach the seminar or providing them with work release or other compensation (Barefoot & Fidler, 1996).
6. Involved upper-level students in seminar execution. Upper-level students are frequently valuable peer leaders that can facilitate activities and lessons.
7. Embraced systematic, transparent, and regular evaluations of seminar program effectiveness. Based on the 2012-2013 survey conducted by Young & Hopp (2014), out of the 896 survey respondents, approximately 60% responded that they formally evaluate their first-year seminar program through student course evaluations.

However, French (2018) research indicated that neither academic advisor type nor any of his study’s additional predictor variables were statistically significant predictors of the retention. According to French (2018) due to the complexity of retention many factors can influence student retention. One of underlying factors as discussed by Hickinbottom-Brawn and Burns (2015) the content of the first-year seminars may impact the effectiveness of first-year seminars as a retention tool. Hickinbottom-Brawn and Burns (2015) indicated that the instrumentalist approach focused narrowly on academic and life skills failed to promote the broader purpose of

education and did not necessary contribute to student success. Understanding the contents of the seminar can help clarify how seminars may or may not help student retention rates.

Summary

For the purpose of persistence and retention, providing an atmosphere that engages incoming students with the social and academic institutional fabric has proved to be successful (CCCSE, 2012, 2014; Noble, Flynn, Lee, & Hilton, 2007; Tinto, 1993). Institutions of higher education throughout the country continue to dedicate resources to engaging and retaining incoming students (Baars & Arnold, 2014; Grayson, 1998; Krause, Hartley, James, & McInnis, 2005; McKenzie & Schweitzer, 2001). Studies into incoming student experiences have focused on student transition, engagement, motivation, and retention rates. Student transition involves the sometimes-difficult processes of adjustment, development and change in relation to moving from one position to another (Kantanis, 2000; Latham & Green, 1997; Schlossberg, 1981). Student engagement, including attitudes towards academic requirements and participation in social activities, is also a critical component of the first-year experience (Krause & Coates, 2008; Willms, 2003). Student engagement has been directly connected to the improved student motivation, satisfaction and persistence, as well as post-college success (Asmar, Page & Radloff, 2011; Wilms, 2003). Better engagement leads to the improved motivation, which in turn contributes to persistence (Ames, 1990). Students that withdraw after their first year frequently do so because of the workload, lack of motivation, and not integrating with the community (Barnes, Macalpine, & Munro, 2015; Nelson, Kift, & Clarke, 2008). Institutions are increasingly responding to more diverse communities by adopting a range of programs designed to respond to individual student's needs. More specialized studies may be justified to understand and respond

to changing learning characteristics of students coming from more modern and diverse backgrounds (Stevens, 2011).

Chapter Three

Methodology

Research Design

In this research a causal comparative model was selected because it was not possible to arbitrarily select students and assign them to participation or non-participation in a first-year seminar, nor to randomly sample the students. An experimental design would be ideal, however, it would be unethical and could negatively impact the students' education. Moreover, the available data from the institutional data office can only be examined retrospectively.

Research Question and Hypothesis

Research Question

This dissertation guided by a single research question that is:

What relationship, if any, exists between first-year seminar participation and student retention?

Hypothesis

For the purpose of this study, the following hypothesis tested:

Students who self-select into participating in the first-year seminar courses demonstrate a higher retention rate than those students who do not participate in the first-year seminar courses.

For the purpose of this study, the following null hypothesis used for statistical significance testing:

H₀: There is no statistically significant difference in retention between students who participate in the first-year seminar courses and those who do not participate.

Participants and Population

This study was retrospective, therefore the participants were not contacted by or connected with the researcher. The data examined were consistently collected and applied uniformly as they were collected in line with the federal regulations and institutional policies, and it uses accepted definitions of retention (Tinto, 1988).

One issue in testing the generalizability of the data is the fact that the students were unidentified. Although this was beneficial as it protects the privacy of the students, it should be acknowledged that relying on unidentified sources precludes the possibility of testing the impact of different characteristics, including the family background, economic status, race, and other factors. With anonymous participants, the study did not facilitate a generalization of the entire population of the first-year college students throughout the United States. This research did not focus on the growing diversity of the students in higher education, which would create more challenges for understanding student retention (Newman, Couturier, & Scurry, 2010a; Selingo, 2015; Tinto, 1988, 1990).

Data Collection Procedures

This study was in Northwest region and six public, four-year institutions in two Northwest states in the United States participated. Other states invited to participate but were not able to participate. For this study, previously collected institutional data were used and de-identified to ensure student confidentiality. Data collected directly from the institutions or the state higher education research institute. Participants included in this study met the following criteria:

- Are first-time full-time freshmen. Full-time enrollment will be determined by using the Federal Financial Aid definition of being enrolled for at least twelve (12) credits of academic work
- Participated in the first-year seminar course during their first year of enrollment at University

Variables

1. Student Retention (SR): SR is the dependent variable in this study which is a categorical and binary variable. For the purposes of this study, the definition of SR refers to the students who are enrolled and registered in their second year of an institution of higher education (Tinto, 1988, 1990). The definition of SR includes First-Time-Full-Time Freshman. The first-year students are those enrolled in higher education for the first time seeking a four-year degree, regardless of age or background. SR is defined as a rate or percentage of students who return to institutions from one enrollment period to another. According to the standardized definition of the Integrated Postsecondary Education Data System (IPEDS) system retention is the percentage of students who are first-time, full-time, degree-seeking from the previous fall semester or term and who have reenrolled or completed their program successfully by the current fall semester or term (Habley et al., 2012).

2. First-Year Seminar (FYS): FYS is the independent variable of the study which is a categorical and binary variable. In this study, the researcher will examine the FYS course participation to determine whether it has a significant relationship to student retention. Typically, FYS focuses on the engagement, involvement, and integration of the First-Time-Full-Time students in institutions of higher education for the purpose of acquiring academic study and life management skills.

Data Analysis

This analysis completed by creating four student retention groups: 1) those who participated in first-year seminar programs and were retained and 2) not retained, and 3) those who did not participate in first-year seminar programs and were retained, and 4) not retained. The subject unit of analysis is students who are retained or who withdraw. The analysis utilized Tinto's definition of retention: students who enroll in a third consecutive semester, or second year, in an institution of higher education (Tinto, 1988, 1990).

Each group was evaluated for Relative Risk, to determine the efficacy of these programs in improving retention at four-year institutions in the Northwestern United States. Relative Risk was evaluated according to the established methods of comparison of students coming from wide-ranging backgrounds, a non-parametric model (Zar, 2010; Zhang & Yu, 1998). This evaluation facilitated a fairer comparison of students who participated in the first-year seminar programs with those who did not. It should be acknowledged that the non-parametric statistics were applied because of the different group sizes and different characteristics between those students who participated in the first-year seminar programs and those who did not. Nonetheless, parametric studies may not be effective to compare retention rates between students (Zar, 2010).

In this study, the researcher utilized the non-parametric test, or Chi-Square Goodness of Fit test, to evaluate unexpected numbers included in the four groups identified above. The non-parametric test assumes no difference between the hypothesis and considers all subjects equal (Zar, 2010). The researcher determined a priori $\alpha = .05$ to reject the null hypothesis. As the study was non-parametric, experimental results were not evaluated (Zar, 2010).

Although non-parametric tests can show how student retention is affected by participation in the first-year seminar programs, qualitative data were not collected from the students who participated in the first-year seminars to directly ask about the effectiveness of the programs related to their decisions to continue into their second year or to withdraw. Additional information about the personal characteristics of students could assist this evaluation, but it is beyond the scope of this quantitative study.

The researcher utilized Odds Ratio (OR), which is the inferential statistic, used in retrospective Case-Control Studies, Chi-Square Analyses, and in Multivariate Models predicting for categorical, ordinal, and time-to-event outcomes. It is also used in cross-sectional and cohort study designs. OR allows a fair evaluation of how the independent and predictor variables determine the dependent variable (student retention), which has a dichotomous value of either 0 or 1. OR is a measurement of relationship between an exposure and an outcome, and represents the odds that an outcome occurs given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure (Privitera, 2015).

- $OR=1$ Exposure does not affect odds of outcome
- $OR>1$ Exposure associated with higher odds of outcome
- $OR<1$ Exposure associated with lower odds of outcome

The Confidence Interval (CI) indicates the degree of uncertainty around the measure of effect (precision of the effect estimate) which is expressed as an OR. When a study includes only a small sample of the overall population using CI is appropriate. In this way, the researcher will be able to have an upper and lower confidence limit to infer that the true population effect lies between these two points. Most studies report the 95% CI to estimate the precision of the OR.

Confidence intervals can be used for hypothesis testing and the assessment of statistical significance of any estimate (Privitera, 2015).

A confidence interval (CI) provides an estimated range of values and is expressed as two numbers, known as the confidence limits. The 95% CI is defined as "a range of values for a variable of interest constructed so that this range has a 95% probability of including the true value of the variable" (Privitera, 2015). A large CI indicates a low level of precision of the OR, whereas a small CI indicates a higher precision. If analysis gives a CI of an OR over 1.0, there is a non-significant association between the variables. If analysis results in the OR and CI both entirely above 1.0, the results are more likely associated with the exposure; if below 1.0, then the results are less likely to be a result of exposure.

The 95% CI does not report the statistical significance of a measure and in practice is often used as a proxy for the presence of statistical significance if it does not overlap the null value (e.g. OR=1). Although the 95% CI gives more information than the p-value it is prone to Type I error and a 5% risk of getting a significant difference when actually no difference exists (Privitera, 2015).

Calculating Odds Ratios

To calculate Odds Ratios (OR), a two-by-two frequency table was used. In the table below one can see how odd ratio is calculated by dividing the odds of the first group by the odds in the second group (Zar, 2010).

A Participated and Retain	B Participated and Did Not Retain
C Did Not Participate and Retain	D Did Not Participate and Did Not Retain

Testing for significance enables rejection or acceptance of the null hypothesis. Tests of significance calculate the "probability" or "p-value" that an outcome has not happened by chance. In other words, the p value has been viewed as the probability of improperly rejecting the null hypothesis when the null should have been accepted (Carver, 1993; Shaver, 1993; Thompson, 1993). However, contemporary thinking is that the p value should instead be viewed as the probability of replicating the study results within the same population, rather than a means to extrapolate or generalize the results from a sample to the population as a whole or into another population that was not tested in the original study (Carver, 1993; Levin & Others, 1993; Shaver, 1993).

The logit transformation converts a conditional probability to an odds ratio to a natural logarithm or logit. This accounts for issues of predicted probabilities that are beyond the realm of possibility. After the logit is determined, the logit transformation is accomplished by converting the logit into an odds ratio and substituting the odds ratio into conditional probability (Osborne, 2015). Practically, "the odds ratio is the odds of the outcome at one level of X relative to the odds of the outcome at another level of X" (Osborne, 2015, p. 27). As noted, odds ratios are generally determined by increasing the change in odds for every 1.0 unit increase to an independent variable. To reverse the logit transformation process, Osborne (2015) concluded

that researchers should “multiply the odds ratio by the conditional odds for the intercept (in the SPSS output this is the EXP(B) constant). To get from conditional odds to conditional probabilities, divide the conditional odds by 1+ conditional odds” (p. 6). Conditional odds reflect a result that will occur based on a specific value of an independent variable (Osborne, 2015).

The Logit Transformation

Pampel (2000) describe the logit as follows,

The logit begins by transforming probabilities into odds. Probabilities vary between 0 and 1, and express the likelihood of an event as a proportion of both occurrences and nonoccurrences. Odds express the likelihood of an occurrence relative to the likelihood of a nonoccurrence. Both probabilities and odds have a lower limit of zero, and both express the increasing likelihood of an event with increasing large positive numbers, but otherwise they differ. Unlike probability, odds have no upper bound or ceiling. As a probability gets closer to 1, the numerator of the odds becomes larger relative to the denominator, and the odds become an increasingly large number. (Pampel, 2000, p. 11)

The logic transformation function calculates the conditional odds by dividing the probability of an occurrence by the probability of a non-occurrence. Here, the conditional odds are the relevant outcome, student retention, which will occur depending upon the “particular value of another variable” (Osborne, 2012, p. 4). After the conditional odds are determined, the odds ratio is utilized to “represent the ratio of the conditional odds of the outcome at one level of the independent variable relative to the conditional odds of the outcome at another level of the independent variable” (Osborne, 2012, p. 4). Therefore, the effect of the independent variables can be measured by comparing the ratio of the odds of an outcome for two groups (Osborne,

2012). Odds ratios are typically determined by the variation in odds of dependent variable occurrences for each 1 unit increase in the independent variable (Osborne, 2012).

To address problems with conditional odds that are associated with predicting outcomes below 0, the model is adjusted to calculate “the natural logarithm of the odds, which has the benefit of having no restriction on minimum or maximum values” (Osborne, 2012, p. 4). In other words, solving the initial limitation of conditional odds outside the range of possibility is accomplished with the logit, or natural logarithm of the odds (Osborne, 2012).

A logarithm is a quantity representing the power to which a fixed number (the base) must be raised to produce the original number. The original number can be expressed as y to the x power in an infinite number of ways (Osborne, 2012). A common option is the natural logarithm, where the constant e (2.7182818; “Euler’s number”) is the base. The logit, or natural logarithm of odds, may range from infinity to negative infinity. Therefore, substituting the dependent variable for the logit precludes possible issues that can arise from probabilities or conditional odds (Osborne, 2012). Through this process, “the dependent variable then becomes $\text{logit}(y)$, and the simple regression equations becomes: $\text{Logit}(y) = a + bx_1$ ” (Osborne, 2012, p. 5).

As explained by Pampel (2000), “the logit transforms a dependent variable having inherent nonlinear relationships with a set of independent variables into a dependent variable having linear relationships with a set of independent variables” (p. 18). With no ceiling or floor, “the logit can linearly relate to changes in the dependent variable X . One can now compute a linear relationship between X and the logit transformation. The logit transformation straightens out the nonlinear relationship between X and the original probabilities” (Pampel, 2000, p. 15).

As shown above, this principle is demonstrated in Figure 2 by the flat, S-shaped logistic regression curve.

Although logit transformation is methodologically beneficial, it is somewhat difficult to understand results in the form of logged numbers. To account for this, the study can reverse the process of the logit transformation, which “can bring significant clarity (and accuracy) to reporting logistic regression findings” (Osborne, 2012, p. 6). The product is the result of returning the logit into a conditional probability, a more easily understood metric as compared to the natural log of the odds of an outcome.

Summary

The purpose of this chapter is to explain the connection of the first-year seminar participation with student retention and the chosen methodology. The methodology starts by addressing the research design, questions, hypothesis, population sample, and variables involved with this study. The chapter continues by explaining the procedures for data collection and research, including how the generalizability of results is considered and analyzed.

In this quantitative study, the researcher utilized a causal comparative model to explore the relationships between the key variables. Although the benefits of the first-year seminars have been documented in prior studies, the impact on student retention in this current geographical arena provides new insight for local institutional planning. This research could add to the existing body of literature on this topic and aid in further discussion and development of resources provided for administrations throughout the region. In sum, the researcher explored how the first-year seminars can successfully encourage incoming students from diverse backgrounds to integrate into the academic and social community. This facilitates both college student achievement and the success of institutions.

Chapter Four: Results

The purpose of this quantitative study was to explore the relationship between the first-year seminar participation and student retention at public and four-year institutions in two Northwest states in the United States. The research question was what relationship, if any, exists between participation in freshman seminar classes and student retention? For the purpose of this study, the alternative hypothesis tested was; students who participated in first-year seminar courses demonstrate a higher retention rate than those who did not participate. The null hypothesis stated that there is no statistically significant difference in retention rates between students who participated in the first-year seminar courses and those who did not participate.

The target population of the study was all first-year, full-time, four-year degree-seeking students who matriculated to the study's institutions during the fall 2016, 2017, 2018 semester and remained enrolled for fall 2017, 2018, 2019 semester. The study employed a post hoc research design utilizing data collected via email directly from the Office of the Commissioner of Higher Education (OCHE) for the state of Montana and the office of Institutional Research (IR) for public and four-year institutions in Northwest states in the United States.

First-Time-Full-Time Freshman are first-year students enrolled in institutions of higher education for the first time, without regard to age or background (Federal Financial Aid Handbook 2017-2018; University of Montana Catalog 2017-2018). Student Retention defined as students who are enrolled and registered in their third consecutive semester, or second year of an institution of higher education (Tinto, 1988, 1990).

This study did not include students who enroll without intention to graduate or obtain a degree; students enrolled for a limited amount of time; students enrolled for a number of credits below federal financial aid regulations; and, international non-degree seeking students.

Descriptive Statistics

Descriptive statistics of the dataset provide general information on the institutions of the study, as presented in Table 1.

Table 1

Breakdown of First-Time Full-Time Freshman Student Enrollment by Institution

Institution	Freshman Enrollment
Institution 1	3566
Institution 2	7844
Institution 3	1076
Institution 4	678
Institution 5	4544
Institution 6	3514

This table presents the breakdown of dataset for six public, four year institutions in two Northwest states in the United States who participated in this study. First-Time-Full-Time Freshman are first-year students enrolled in institutions of higher education for the first time, without regard to age or background (Federal Financial Aid Handbook 2017-2018; University of Montana Catalog 2017-2018). For this study, previously collected institutional data were used and de-identified to ensure student confidentiality. Data collected directly from the institutions or the state higher education research institute. In table 1, you can see the participated institutions and the freshman enrollment is higher in institution number two and lower in institution number four. Highest range is 7844 to lowest range 678.

The table 2 presents the overall percentage of retention for each institution including all academic years.

Table 2
Overall Percentage of Retention for each Institution by all Academic Year

Institution	Seminar			No Seminar		
	Retain	No Retain	% Retain	Retain	No Retain	% Retain
Aggregate Inst 1	1623	669	71%	847	427	66%
Inst 1 AY 2016-2017	484	232	68%	351	158	69%
Inst 1 AY 2017-2018	601	216	74%	258	142	65%
Inst 1 AY 2018-2019	538	221	71%	238	127	65%
Aggregate Inst 2	4765	1280	79%	1324	475	74%
Inst 2 AY 2016-2017	1397	418	77%	627	235	73%
Inst 2 AY 2017-2018	1665	419	80%	349	110	76%
Inst 2 AY 2018-2019	1703	443	79%	348	130	73%
Aggregate Inst 3	296	241	55%	339	200	63%
Inst 3 AY 2016-2017	100	89	53%	115	72	61%
Inst 3 AY 2017-2018	94	86	52%	111	70	61%
Inst 3 AY 2018-2019	102	66	61%	113	58	66%
Aggregate Inst 4	207	50	81%	334	87	79%
Inst 4 AY 2016-2017	48	17	74%	102	28	78%
Inst 4 AY 2017-2018	72	19	79%	109	24	82%
Inst 4 AY 2018-2019	87	14	86%	123	35	78%
Aggregate Inst 5	1226	662	65%	1013	653	61%
Inst 5 AY 2016-2017	430	217	66%	307	200	61%
Inst 5 AY 2017-2018	434	213	67%	316	223	59%
Inst 5 AY 2018-2019	362	192	65%	390	230	63%
Aggregate Inst 6	226	56	80%	3409	853	80%
Inst 6 AY 2016-2017	83	16	84%	1249	284	81%
Inst 6 AY 2017-2018	87	21	81%	1138	271	81%
Inst 6 AY 2018-2019	56	19	75%	1022	298	77%

All academic years overall percentage of retention for each institution presented here. Student retention defined as students who are enrolled and registered in their third consecutive semester, or second year of an institution of higher education (Tinto, 1988, 1990). In the table two, you can see that in institution number three more students who did not take the first-year seminar retain at higher rate than students did participate in first-year seminar.

Breakdown of the Results

The table 3 presents the overall odds ratios, confidence interval, and the p value of each institution including all academic years.

Table 3
Odds Ratios of Student Retention Based on Freshman Seminar Participation

Variable	OR	95% CI	p value
Retain Aggregate			
Retain Institution 1 Aggregate	1.22	1.07-1.37	0.85
Retain Institution 1 AY 2016-2017	0.93	0.69-1.18	0.68
Retain Institution 1 AY 2017-2018	1.53	1.27-1.78	0.77
Retain Institution 1 AY 2018-2019	1.29	1.03-1.56	0.73
Retain Institution 2 Aggregate			
Retain Institution 2 Aggregate	1.33	1.21-1.45	0.91
Retain Institution 2 AY 2016-2017	1.25	1.06-1.43	0.80
Retain Institution 2 AY 2017-2018	1.25	1.01-1.49	0.74
Retain Institution 2 AY 2018-2019	1.43	1.20-1.66	0.79
Retain Institution 3 Aggregate			
Retain Institution 3 Aggregate	0.72	0.48-0.96	0.64
Retain Institution 3 AY 2016-2017	0.70	0.29-1.11	0.58
Retain Institution 3 AY 2017-2018	0.68	0.27-1.10	0.58
Retain Institution 3 AY 2018-2019	0.79	0.35-1.23	0.59
Retain Institution 4 Aggregate			
Retain Institution 4 Aggregate	1.07	0.68-1.46	0.63
Retain Institution 4 AY 2016-2017	0.77	0.08-1.46	0.55
Retain Institution 4 AY 2017-2018	0.83	0.16-1.50	0.99
Retain Institution 4 AY 2018-2019	1.76	1.09-2.44	0.63
Retain Institution 5 Aggregate			
Retain Institution 5 Aggregate	1.00	0.70-1.31	0.66
Retain Institution 5 AY 2016-2017	1.17	0.62-1.72	0.60
Retain Institution 5 AY 2017-2018	0.98	0.49-1.48	0.60
Retain Institution 5 AY 2018-2019	0.85	0.32-1.39	0.58
Retain Institution 6 Aggregate			
Retain Institution 6 Aggregate	1.27	1.13-1.40	0.88
Retain Institution 6 AY 2016-2017	1.29	1.04-1.53	0.75
Retain Institution 6 AY 2017-2018	1.43	1.20-1.67	0.78
Retain Institution 6 AY 2018-2019	1.11	0.87-1.35	0.72

Here in one glance you can see the conglomeration of the first-year seminar participation by odd ratio, confidence interval, and with the p value of 0.99. The odd ratio test was applied to determine if the relationship between independent variable fell within 95% confidence interval. Odds ratio allows a fair evaluation of how the independent variables determine the dependent variable (student retention), which has a dichotomous value of either 0 and 1.

Table 4

Aggregate Odds Student Retention Across All Participating Universities

	Retain	Not Retain	OR	95% CI	<i>p</i> value
First-year Seminar	9343	4088	1.33	1.27-1.39	0.99
NO First-year Seminar	4266	2495			

The aggregate odds student retention across all participating universities presents the odds ratio of 1.33 with the *p*-value of 0.99. Also the range of the confidence interval is between 1.27-1.39.

The following table represents the aggregate odds student retention across all participating universities by academic years of 2016, 2017, and 2018.

Table 5

Aggregate Odds Student Retention Across All Participating Universities AY 2016, 2017, 2018

Year	OR	95% CI	<i>p</i> value
2016	0.91	0.80-1.01	0.86
2017	1.11	1.00-1.22	0.90
2018	1.17	1.06-1.27	0.91

Here you can see the conglomeration of three academic years in all of the participating institutions. In 2016, 2017, and 2018 academic year the overall odds ratio is 0.91, 1.11, and 1.17 respectively. The following tables present overall student retention in each participated institution for academic year 2016, 2017, 2018 the breakdown of odds ratios of student retention based on freshman seminar participation across all participating universities. Aggregate Retention for Institution 1 Academic Year 2016-2017.

Table 6
Overall Student Retention at Institution 1 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	1623	669
NO First-year Seminar	847	427
	2470	1096
	Odd Ratio	1.22
	Upper 95%	1.37
	Lower 95%	1.07
	E	2.71
	SE	1.15
	Z	1.06
	<i>p</i> value	0.85

Table 7
Aggregate Retention for Institution 1 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	484	232
NO First-year Seminar	351	158
	835	390
	Odd Ratio	0.93
	Upper 95%	1.18
	Lower 95%	0.69
	E	2.71
	SE	1.91
	Z	0.49
	<i>p</i> value	0.68

Table 8
Aggregate Retention for Institution 1 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	601	216
NO First-year Seminar	258	142
	859	358
	Odd Ratio	1.53
	Upper 95%	1.78
	Lower 95%	1.27
	E	2.71
	SE	2.01
	Z	0.75
	<i>p</i> value	0.77

Table 9
Aggregate Retention for Institution 1 Academic Year 2018-2019

	Retain	Not Retain
First-year Seminar	538	221
NO First-year Seminar	238	127
	776	348
	Odd Ratio	1.29
	Upper 95%	1.56
	Lower 95%	1.03
	E	2.71
	SE	2.08
	Z	0.62
	<i>p</i> value	0.73

Table 10
Overall Student Retention at Institution 2 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	4765	1280
NO First-year Seminar	1324	475
	6089	1755
	Odd Ratio	1.33
	Upper 95%	1.45
	Lower 95%	1.21
	E	2.71
	SE	0.95
	Z	1.40
	<i>p</i> value	0.91

Table 11
Aggregate Retention for Institution 2 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	1397	418
NO First-year Seminar	627	235
	2024	653
	Odd Ratio	0.70
	Upper 95%	1.11
	Lower 95%	0.29
	E	2.71
	SE	3.21
	Z	0.21
	<i>p</i> value	0.58

Table 12
Aggregate Retention for Institution 2 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	1665	419
NO First-year Seminar	349	110
	2014	529
	Odd Ratio	0.68
	Upper 95%	1.10
	Lower 95%	0.27
	E	2.71
	SE	3.27
	Z	0.21
	<i>p</i> value	0.58

Table 13
Aggregate Retention for Institution 2 Academic Year 2018-2019

	Retain	Not Retain
First-year Seminar	1703	443
NO First-year Seminar	348	130
	2051	573
	Odd Ratio	1.43
	Upper 95%	1.66
	Lower 95%	1.20
	E	2.71
	SE	1.77
	Z	0.80
	<i>p</i> value	0.79

Table 14
Overall Student Retention at Institution 3 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	296	241
NO First-year Seminar	339	200
	635	441
	Odd Ratio	0.72
	Upper 95%	0.96
	Lower 95%	0.48
	E	2.71
	SE	1.91
	Z	0.37
	<i>p</i> value	0.64

Table 15
Aggregate Retention for Institution 3 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	100	89
NO First-year Seminar	115	72
	215	161
	Odd Ratio	0.70
	Upper 95%	1.11
	Lower 95%	0.29
	E	2.71
	SE	3.21
	Z	0.21
	<i>p</i> value	0.58

Table 16
Aggregate Retention for Institution 3 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	94	86
NO First-year Seminar	111	70
	205	156
	Odd Ratio	0.68
	Upper 95%	1.10
	Lower 95%	0.27
	E	2.71
	SE	3.27
	Z	0.21
	<i>p</i> value	0.58

Table 17
Aggregate Retention for Institution 3 Academic Year 2018-2019

	Retain	Not Retain
First-year Seminar	102	66
NO First-year Seminar	113	58
	215	124
	Odd Ratio	0.79
	Upper 95%	1.23
	Lower 95%	0.35
	E	2.71
	SE	3.47
	Z	0.22
	<i>p</i> value	0.59

Table 18
Overall Student Retention at Institution 4 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	207	50
NO First-year Seminar	334	87
	541	137
	Odd Ratio	1.07
	Upper 95%	1.46
	Lower 95%	0.68
	E	2.71
	SE	3.04
	Z	0.35
	<i>p</i> value	0.63

Table 19
Aggregate Retention for Institution 4 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	48	17
NO First-year Seminar	102	28
	150	45
	Odd Ratio	1.53
	Upper 95%	1.78
	Lower 95%	1.27
	E	2.71
	SE	5.43
	Z	0.14
	<i>p</i> value	0.55

Table 20
Aggregate Retention for Institution 4 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	72	19
NO First-year Seminar	109	24
	181	43
	Odd Ratio	0.83
	Upper 95%	1.50
	Lower 95%	1.16
	E	2.71
	SE	0.63
	Z	2.35
	<i>p</i> value	0.99

Table 21
Aggregate Retention for Institution 4 Year 2018-2019

	Retain	Not Retain
First-year Seminar	87	14
NO First-year Seminar	123	35
	210	49
	Odd Ratio	1.76
	Upper 95%	2.44
	Lower 95%	1.09
	E	2.71
	SE	5.31
	Z	0.33
	<i>p</i> value	0.63

Table 22
Overall Student Retention at Institution 5 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	1226	622
NO First-year Seminar	1013	653
	2239	1275
	Odd Ratio	1.27
	Upper 95%	1.40
	Lower 95%	1.13
	E	2.71
	SE	1.080
	Z	1.17
	<i>p</i> value	0.88

Table 23
Aggregate Retention for Institution 5 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	430	217
NO First-year Seminar	307	200
	737	417
	Odd Ratio	1.29
	Upper 95%	1.53
	Lower 95%	1.049
	E	2.71
	SE	1.89
	Z	0.68
	<i>p</i> value	0.75

Table 24
Aggregate Retention for Institution 5 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	434	213
NO First-year Seminar	316	223
	750	436
	Odd Ratio	1.43
	Upper 95%	1.67
	Lower 95%	1.20
	E	2.71
	SE	1.85
	Z	0.77
	<i>p</i> value	0.78

Table 25
Aggregate Retention for Institution 5 University Academic Year 2018-2019

	Retain	Not Retain
First-year Seminar	362	192
NO First-year Seminar	390	230
	752	422
	Odd Ratio	1.11
	Upper 95%	1.35
	Lower 95%	0.87
	E	2.71
	SE	1.87
	Z	0.59
	<i>p</i> value	0.72

Table 26
Overall Student Retention at Institution 6 Academic Year 2016, 2017, 2018

	Retain	Not Retain
First-year Seminar	226	56
NO First-year Seminar	3409	853
	3635	909
	Odd Ratio	1.00
	Upper 95%	1.31
	Lower 95%	0.70
	E	2.71
	SE	2.36
	Z	0.42
	<i>p</i> value	0.66

Table 27
Aggregate Retention for Institution 6 Academic Year 2016-2017

	Retain	Not Retain
First-year Seminar	83	16
NO First-year Seminar	1249	284
	1332	300
	Odd Ratio	1.17
	Upper 95%	1.72
	Lower 95%	0.62
	E	2.71
	SE	4.31
	Z	0.27
	<i>p</i> value	0.60

Table 28
Aggregate Retention for Institution 6 Academic Year 2017-2018

	Retain	Not Retain
First-year Seminar	87	21
NO First-year Seminar	1138	271
	1225	292
	Odd Ratio	0.98
	Upper 95%	1.48
	Lower 95%	0.49
	E	2.71
	SE	3.87
	Z	0.25
	<i>p</i> value	0.60

Table 29
Aggregate Retention for Institution 6 Academic Year 2018-2019

	Retain	Not Retain
First-year Seminar	56	19
NO First-year Seminar	1022	298
	1078	317
	Odd Ratio	0.85
	Upper 95%	1.39
	Lower 95%	0.32
	E	2.71
	SE	4.20
	Z	0.20
	<i>p</i> value	0.58

Summary

The odds ratio test was applied to determine if the relationship between independent variable and dependent variable fell within 95% confidence interval. The results are not statistically significant and fail to reject the null hypothesis indicating that there is no statistically significant effect of first-year seminar participation on the retention of first-year, full-time, four-year degree-seeking students at the study's institution.

Chapter Five: Discussion and Suggestions for Future Research

Throughout the past two decades, most public institutions of higher education have dealt with the fierce challenges of reduced government budgets. Government budget cuts, university budget shortfalls, and the rise in cost of tuition have made student retention an increasingly critical issue for institutions of higher education (Habley et al., 2012; Tinto, 1993). The national Student Clearinghouse Research Center (2019) reported that “among all students who enrolled in college for the first time in fall 2017, 73.8 percent persisted at [some] U.S. institution in fall 2018, while 61.7 percent were retained at their starting institution.”

Tinto (1993) claimed that the first year of college is the critical turning point for future student success. Throughout at least the past fifty years, the largest percentage of drop-outs from college occurs with students after their first year (Barefoot, 2004; Fike & Fike, 2008; Gordon, 1989). To that end, targeting the first-year students has been the focus of institutions because it is considered the most impactful for student success (Cox, Schmitt, Bobrowski, & Graham, 2005; Levitz, Noel, & Richter, 1999; Noel, 1985; Tinto, 1999). Among the programs and interventions that institutions of public higher education have implemented to improve student retention, the first-year seminars have become popular in the past few decades. Many institutions have implemented the first-year seminar programs to help students successfully transition from high school to college. Such programs aim to welcome students and help them integrate into academic and social campus life (Gardner, 1986).

Student retention and integration experiences depend upon the characteristics that students bring with them to college (Astin, 1975, 1993; Tinto, 1975, 1993). Recognizing such diverse backgrounds, it is important to support students in this critical time through high-impact

practices, including the first-year seminars that can encourage academic performance and social integration (Barefoot, 2000; Braxton, 2002; Goodman & Pascarella, 2006; Pascarella & Terenzini, 2005; Upcraft et al., 2005). The widespread adoption of the first-year seminar programs grew in popularity in the early 1980s (Barefoot, 2000). Since then, five main types of seminars have been frequently offered: 1) extended orientation seminars; 2) academic seminars with varying focuses; 3) academic seminars with a direct focus; 4) seminars focused on specific professions; and 5) study and skill seminars (Barefoot & Fidler, 1992). Some institutions intermix these formats to further policy objectives. Student encouragement and development is the goal of these programs, and the success thereof is measured by metrics including retention rates, academic performance, and grade point average (Barefoot, 2000; Padgett, Keup, & Pascarella, 2013; Porter & Swing, 2006).

The purpose of this quantitative study was to explore the relationship between the first-year seminar participation and student retention at six public, four-year institutions in two Northwest states in the United States. Acknowledging the demands of accountability that governments place on retention rates, it continues to be critical for institutions of higher education to develop strategies to improve programs to foster student success. This study was structured to evaluate the efficacy of such programs and to inform researchers, leaders, and educators about their impact on retention and graduation rates. Following the introduction, a review of literature, the methodology, and results provided in previous chapters, this chapter discusses the findings and presents recommendations for future studies and implications for higher education leaders and educators.

Summary of Results

The research question for this quantitative study is what is the relationship, if any, between first-year seminar participation on retention of the first-year, full-time, four-year degree-seeking students at the six institutions in two Northwest states in the United States? The researcher is unable to reject the null hypothesis stating that there is no statistically significant effect of the first-year seminar participation on the retention of first-year, full-time, four-year degree-seeking students at the study's institution. The alternative hypothesis of the study posits that there is a statistically significant effect of the first-year seminar participation on the retention of the first-year, full-time, four-year degree-seeking students at the study's institutions. Student retention is the dependent variable and the first-year seminar is the independent variable of this study which is a categorical and binary variable.

The target population of the study was all first-year, full-time, four-year degree-seeking students who matriculated to the study's institutions during the fall 2016, 2017, 2018 semester and remained enrolled for fall 2017, 2018, 2019 semester. The study employed a post hoc research design utilizing data collected via email directly from the Office of the Commissioner of Higher Education (OCHE) for the state of Montana and the office of Institutional Research (IR) for public and four-year institutions in Northwest states in the United States. Theoretically, post hoc or ex post facto research has less control throughout a study than experimental research (Hoy, 2010). The sample size limited the statistical power of the analysis and it is unfortunate that not all of the targeted institutions were able to participate in this study.

For the purpose of investigating how a set of predictor or independent variables relate to a dichotomous or binary dependent variable, an odds ratio is an appropriate statistical procedure

(Harrell, 2015). The odds ratio test was applied to determine if the relationship between independent and dependent variables fell within 95% confidence interval. Here, the evaluation focuses on the independent variable of the first-year seminar participation, and how it can influence the dependent variable of student retention rates (Privitera, 2015).

Although the alternative hypothesis predicted a relationship between the first-year seminar participation and student retention, the results indicated that the first-year seminar participation does not have a statistically significant effect on student retention. Considering the limitations of the post-hoc research design, the small study population, limited existing data, and the short timeframe of the investigation, the generalizability of the research's findings are limited.

The results of this study indicated that the first-year seminar participation does not have a statistically significant effect on student retention however, the results are substantial for future research. For instance, descriptive statistics for percentage of retention in institution one and two indicated that students who participated in the first-year seminar retain at higher percentage rate than those who did not. Future research could analyze this descriptive statistic that why and what happened from academic year of 2016, 2017, 2018 in these two institutions that boosted the retention rates? Another example is that in third institution students who participated in the First-year seminar retain at lower percentage rate than who did not participate. Future research could explore the effectiveness of the first-year seminar in this institution. Conducting an interview with the first-year seminar instructors and freshman who participated in the first-year seminar could identify the common themes and factors that clarify why students who attended the first-year seminar retain at lower percentage rate than who did not participate. Additionally, Institution Six had very higher percentage rates to begin with and they were higher among all

institutions however, gradually they faced lower percentage retention rates that could be investigated in the future research. Therefore, each institution may have done something different in the first-year seminar from year to year that resulted in different retention rates. Future research can identify the underlying factors that may contribute to the results of this research.

Implications for Practice

Programs focused on student retention have been a major focus of institutions of higher education for decades. There are many factors that influence student decisions to persist or withdraw. Some factors may be within an institution's control, while others depend solely on the student. Recognizing the fact that the majority of students who withdraw do so immediately after the first year, institutions have widely adopted the first-year seminar programs aimed at integrating incoming students into the academic and social culture of their institution. Institutions of higher education increasingly focus on the first-year seminars as a retention strategy to respond to the needs of the first-year college students from a wide range of backgrounds. The results of this study were not statistically significant however they confirm that myriad factors contribute to the retention phenomenon. This research may add to the growing body of knowledge about the effectiveness of the first-year seminar and other experimental programs and informed decisions made by leaders and educators in institutions of higher education.

Implication for Educators

The results of this study can help those directly involved with the success of students namely professors, instructors, academic advisors, and administrators. Considering factors such as academic preparedness, different types of involvement, curriculum design, and modifying the first-year seminar to the needs of the certain student groups can help educators maximize the

effectiveness of the first-year seminars. Additionally, the first-year seminars can also contribute to the overall experience for the first-year students outside of the classroom.

Many students admitted to university or college do not have the academic skills necessary to succeed in the college level courses. The first-year seminars can include topics such as reading, writing, and presentational skills, as well as information on how to find and get academic supports. By including these topics in the first-year seminars, the first-year students are able to improve their academic preparedness and have a higher chance of retention and success.

Practical curriculum design for the first-year seminars can help students develop a sense of belonging and adjust to the new environment, feel connected and increase the likelihood to retain. When educators know how to physically, emotionally, and cognitively involve the first-year students both inside and outside of the classroom, student success and retention will increase.

Moreover, the first-year programs should be modified to adapt to a diverse student population with different characteristics to positively encourage the success of students. Tailoring the first-year seminars to address, for example, the specific academic and social needs of native American students in Montana University System (MUS) could support the students from different demographics.

The first-year seminars not only should academically prepare the first-year students but also enhance the overall first-year experience. Educators can help assess, develop, and revise the first-year seminar programs and related activities to facilitate student experience for maximum involvement, engagement, and integration on campus life. The first-year seminars should foster experiences that are growth enhancing, arouse curiosity, strengthen initiative, and enable the

individual to create meaning (Dewey, 1916). By emphasizing experience outside of the classroom, through the first-year seminars student can be exposed to the real life situations that help them to be better citizens and increase a sense of belonging on campus.

Educators play a key role when through participating in the institutional retention efforts. As part of retention strategy, educators who are teaching developmental courses including the first-year seminars could participate in the Early Alert reporting which monitors student progress and provides information about at risk students through the Education Advisory Board (EAB). It would be helpful that educators submit feedback on students at any time throughout the semester by using “ad hoc reporting” option. The information that educators share through Early Alert reports or ad hoc reporting will help leaders and advisors to keep students on track.

Implication for Policy

Since this study did not find any relationship between first-year seminar and retention what do that mean for policy in institutions of higher education. If freshman seminars do not make a difference, why should we continue with this?

Although this study did not find any relationship between first-year seminar and retention rates, some literature shows that participation in first-year seminars can facilitate student success and retention. Institutions of higher education should look at successful systems within first-year seminars to determine what they are doing differently that can be attributed to their success, and design new freshman seminar programs following these models. Furthermore, a better understanding of the many factors that influence retention (such as culture of the university, student support systems, and the role that the advising center plays) would support a comprehensive strategic plan for campus retention efforts. Moreover, policy makers and leaders of institutions of higher education need to constantly evaluate and revise policies.

Implication for Leaders

As of 2012, only over half of the four-year college students at American universities earned their bachelor's degrees within six years after entering college (Tinto, 2012). The problems related to students drop-out after the first year of college are multifaceted and can negatively affect the institutions of higher education and society at large. Considering the changes in the economy and demands for more specialized degrees, student retention and the effect that the first-year seminar programs have become increasingly important. Supporting student integration both socially and academically is and should continue to be a primary goal of higher education leaders that supports the institutions of higher education and the wider communities at large. Responding to student departure issues, higher education leaders need to constantly evaluate policies and consider factors such as retention and engagement data analysis, admission standards, and budget allocation to strategically plan for student retention and success.

Leaders of institutions of higher education need to have a more comprehensive picture of freshmen students' experience through analyzing data such as students' campus resource utilization, study skills, and engagement. Student campus engagement is a key factor in student retention which is largely based on the connection created by student engagement opportunities provided by the institution (Tinto, 2012). According to Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008) there is a link between low engagement and premature departure from the college. Leaders can investigate and analysis data from the National Survey of Student Engagement (NSSE) which "collects information about first-year and senior students' participation in programs and activities that institutions provide for their learning and personal development" (NSSE website, 2020). This survey provides an informative lens into how the first-year students

spend their time and engage in on-campus activities that leads to decisions about leaving or staying at college.

Admission standards can impact retention rates. Institutions of higher education with more selective admission standards and policies admit students who are more academically prepared for college-level coursework. This results in higher retention and graduation rates than institutions with less selective admission standards. If leaders of institutions of higher education are committed to maintain more open access they should invest in more programs to support incoming students and improve retention rates. Institutions can implement the first-year seminar programs to support and respond to the needs of incoming students that are not academically prepared. The first-year seminar programs could be one of many different retention strategies such as tutoring and other developmental courses to increase engagement and develop the necessary academic skills.

Recommendations for Future Research

This study explored the possible influence of the first-year seminar participation on student retention. The study's alternative hypothesis stating that the first-year seminar participation has a statistically significant effect on student retention was not supported. However, the findings and limitations of this study strongly suggest directions for further research related to integration, involvement, and engagement of the first-year students for the purpose of student retention. This study relied upon limited existing data regarding student retention after the first year of college in the Northwestern region. Furthermore, the completeness of data presented by the institutions for this study is another limitation and additional variables connected to student persistence are not measured in this study.

The first recommendation is that the future research compares more broadly public institutions of higher education that have implemented the first-year seminar programs with those that have not. Institutions of higher education without the first-year seminars were not included in this study. It would be informative to look at their retention rates. Additionally, by including greater numbers of schools that have either optional or mandatory first-year seminars will help clarify how effective these seminars are in supporting retention and help leaders decide whether or not to have mandatory first-year seminar. Such programs and studies will provide additional insights into the various contributions that the first-year student involvement and engagement programs may have on student retention and success.

The second recommendation for future research is to replicate the study at all universities in another specific region or ideally nationwide. Previous studies investigated the influence of the first-year seminar participation on student retention at individual colleges or universities however, only a small number of studies have looked at multiple colleges and universities at the state, regional, or national levels. Since previous research yielded mixed results, replicating the study at a bigger population of all the first-year, full-time, four-year degree-seeking students will likely provide additional insights into the contributions of the first-year seminar participation on student retention.

The third recommendation for future research is to include confounding variables that have a demonstrated impact on student success and retention, including high school experience, social integration into the campus community, and parents' level of education (Astin, 1975, 1993; Bean & Metzner, 1985; Tinto, 1975, 1993). Moreover, future studies could evaluate the influence of additional variables on college retention rates including student demographic factors such as race and gender, high school grade point averages, Pell-grant eligibility, and standard test

score such as the ACT and SAT. This additional information on students' pre-college-matriculation characteristics would provide more detailed insight into college student retention and success.

Finally, utilizing a mixed methods approach that combines both qualitative and quantitative analysis would identify underlying factors that may contribute to the results of this research (Creswell, 2013). For example, adding an interview component to the study could identify the common themes and factors that clarify why students who attended the first-year seminar did not return back for the next fall semester. This qualitative data would complement the quantitative approach. More than simply mixed methods collecting and analyzing both kinds of data, both approaches work together so that the overall strength of a study is greater than either qualitative or quantitative research alone.

Summary

This quantitative study explored the influence of the first-year seminar participation on college student retention at six universities in the Northwestern United States. By using an odds ratio statistics, it was possible to investigate the relationship between the independent variable of the first-year seminar participation and dependent variable of student retention. The null hypothesis of the study, there is no effect of the first-year seminar participation on the retention of first-year, full-time, four-year degree-seeking students was not rejected. Therefore, the alternative hypothesis of the study, stating that the first-year seminar participation does have a statistically significant effect on student retention was not supported.

This study does not show a relationship between first-year seminar and retention which make sense when one considers the retention complexity. French (2018) research indicated that neither academic advisor type nor any of his study's additional predictor variables were

statistically significant predictors of the retention. According to French (2018) due to the complexity of retention many factors can influence student retention. A better understanding of the many factors that influence retention (such as culture of the university, student support systems, and the role that the advising center plays) would support a comprehensive strategic plan for campus retention efforts.

The results of this study were not statistically significant, however, the importance of students' participation in the first-year seminars should not be underestimated. There is useful information provided throughout this dissertation that can contribute to the exploration of the relationship between the first-year seminar participation on retention and help higher education leaders, administrators, and educators strategically plan for practical student retention efforts. Retention is driven by myriad of factors, and policies and practices for enhancing retention rates require comprehensive understanding of these factors. For example, higher education leaders should consider admission selectivity and budget allocation for developmental courses including the first-year seminars in their retention strategies. In summary, the study shows the need for the larger data sets that can investigate many related variables that impact the relationship between the first-year seminar participation and student retention.

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