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# Student Self-Reported Academic Confidence as an Indicator of First-Year Retention

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# Walden University

College of Education

This is to certify that the doctoral study by

Narine Mirijanian

has been found to be complete and satisfactory in all respects,  
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the review committee have been made.

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Walden University  
2018

Abstract

Student Self-Reported Academic Confidence as an Indicator of First-Year Retention

by

Narine Mirijanian

MS, Oakland University, 2004

BS, Oakland University, 2001

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

April 2018

## Abstract

Many 1<sup>st</sup> year college/university students have low retention and success rates, which negatively impacts their ability to remain in college and attain a career. Despite matriculation practices employed by institutions of higher learning to increase retention, a gap remains in the understanding of the causative factors of retention. The purpose of this study was to determine if academic self-confidence scores of students both prior to and post-completion of a First-Year Seminar (FYS) are reliable predictors of students' ability to progress from the first year to the second year of college. Tinto's academic retention theory framed the study. A quantitative case study approach including a paired *t* test for the dependent sample analysis, point-biserial correlation analysis, and a 1-way analysis of covariance was employed for this study. The finding of the *t* test for independent sample was that students' self-reported academic confidence did improve post completion of the FYS. The statistical analysis of correlation between posttest self-confidence scores and re-enrollment for 2nd year of college were not statistically significant. Improved self-reported academic confidence was not gender specific. The findings of this study contribute to the body of knowledge in current literature on factors of retention, specifically students' self-reported academic confidence. When careful investigations are conducted to determine causative factors that can be used as predictors of student retention, those investigations directly impact positive social change and promote accountability for current matriculation practices employed by institutions of higher learning.

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## Dedication

I would like to dedicate this journey to my family. My husband Mher, our son Andre, my mother and father, and my mother in law. This journey would have not been possible without your continued support, love, and care. I am fortunate to have such a loving family and look forward to our lifelong journey together as I pass this milestone in my life.

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## **Section 1: The Problem**

College student retention and first-year college student success have been identified as challenges in higher education and have become focal points of discussion in higher education research (American Institute for Research, 2016). The United States (U.S.) has the highest attrition rates for college students and the retention rate in 2013 was 72% for all sectors of higher education. Despite interventions and efforts focused on the improvement of student persistence, the retention rate for 2014 was essentially unchanged from 2013 (National Student Clearinghouse Research Center [NSCRC], 2016). For full-time, first-time students who started college in 2013, only 68% returned for the second term (NSCRC, 2016).

Strategies for improving student retention must include a close examination of the causative factors leading to student departure (Barr & Schuetz, 2008; Bonet & Walters, 2016; Davidson & Wilson, 2014; O’Keeffe, 2013; Zerr, & Bjerke, 2015). Many factors affect this problem, including a lack of understanding of matriculation practices that impact how students’ self-confidence relates to academic integration, and how those practices can impact student retention (Davidson & Wilson, 2014; Harvey & Luckman, 2014; Kerby, 2015). First-Year Seminars (FYSs) are associated with successful academic outcomes (Alexander & Gardner, 2009; Bers & Younger, 2014; Jenkins-Guarnieri, Horne, Wallis, Rings, & Vaughan, 2015; Miller & Lesik, 2014; Reid, Reynolds, & Perkins-Auman, 2014), but little research has been done to investigate what effect, if any, participation in an FYS has on students’ self-reported academic confidence levels and how self-reported academic confidence relates to student retention. Gaining a deeper

understanding of how self-confidence emerges will contribute to the effectiveness of institutional practices and inform interventions to improve retention.

### **The Local Problem**

First-year student retention was identified as a challenge at a large nonprofit Midwestern College. The college reported first-year student retention rates of 50% for full-time status students for the 2014-2015 academic year, 33% for part-time status students for the 2014-2015 academic year, and a reported graduation rate of 13% for students enrolled at the college in the Fall of 2009. These rates demonstrate the need to investigate the student retention problem at the research site (NCES, 2016). Despite a matriculation intervention of an FYS designed to address the problem, retention continued to be a concern (American Institute for Research, 2010; NCES, 2016). Institutional practices included collecting students' self-reported academic confidence scores both prior to and after completion of the seminar.

No investigation was done to determine whether there is a statistically significant relationship between completion of the FYS and the students' self-reported academic self-confidence level as an indicator of student retention. Knowing that academic self-confidence was reported to be an indicator of academic achievement, it was important to determine if a change in academic self-confidence was related to the completion of an FYS and could be used as an indicator of student retention (Afari, Ward, & Khine, 2012; Arshad, Zaidi, & Mahmood, 2015; Cassidy, 2012; Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013; Pascarella, & Terenzini, 1983; Walsh & Kurpius, 2016).

A gap exists in the literature regarding the use of an FYS as a strategy to improve retention by increasing students' self-reported academic self-confidence level. To investigate this relationship further, this quantitative study examined students' self-reported academic confidence levels before and after participation in an FYS through the completion of a presurvey and postsurvey. The study further examined if there was a statistically significant relationship between first-year students' self-reported academic confidence level pre- and postcompletion of an FYS and first-year completion/retention at a nonprofit four-year U.S. institution. The study also examined if differences existed between females and males in self-reported posttest academic confidence levels following completion of FYS and after pretest effects were removed.

### **Rationale**

The inability to retain students is an existing problem in many institutions of higher learning. Attrition negatively impacts institutional graduation rates and negatively impacts students both financially and professionally (Brock, 2010; Stewart, DooHun, & JoHyun, 2015; U.S. Department of Education, 2015). The inability to retain students at a private U.S. nonprofit four-year institution is reflected in institutional reported first-year persistence rates of 50% for full-time, and 33% for part-time students for the 2014-2015 academic years, and a reported graduation rates of 13% for students who enrolled at the college in the Fall of 2009 (Humar & Bailey, 2009; NCES, 2016).

The college responded to the poor student retention problem with the formation of a college-wide retention committee and a subcommittee tasked to develop a retention improvement plan. As a result, an FYS was implemented to assist students with academic

success and to improve overall retention at the college. Further, the college president for the online campus issued the following statement in an e-mail regarding the retention problem at the institution: “The College system is very focused on student retention and graduation rates. The institution continues to implement and assess strategies to positively impact these metrics” (J.L., April 19, 2017).

Despite collection of students’ self-reported academic confidence scores pre- and postcompletion of an FYS, no further studies were done to investigate the effect of FYS on academic self-confidence as an indicator of student retention. Self-confidence is purported to be an indicator of academic achievement and it was important to determine if a change in academic self-confidence was related to student retention during the first year of college (Afari, Ward, & Khine, 2012; Arshad, Zaidi, & Mahmood, 2015; Cassidy, 2012; Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013; Pascarella, & Terenzini, 1983; Walsh & Kurpius, 2016).

A gap exists in the literature regarding the use of an FYS as a strategy to improve retention and increase students’ academic self-confidence. The challenge of matriculating incoming students from the first term to the second is faced by many schools, both public and private (Astin, 1993; NCES, 2015; Oseguera & Rhee, 2009; Tinto, 1987; Wang & Pilarzyk, 2009). As the number of proprietary colleges has grown over the past 20 years, so has the requirement to examine the educational needs of these institutions as distinct from their traditional public and private counterparts (Chung, 2008; Claybooks & Taylor, 2016; Kelly, 2001; Kinser, 2006).

To investigate the student retention problem, this quantitative study examined students' self-reported academic confidence before and after participation in an FYS through the completion of a pre- and postsurvey. The study further examined whether there was a statistically significant relationship between first-year students' self-reported academic confidence level pre- and postcompletion of an FYS and first-year completion/retention at a nonprofit U.S. institution. The study also examined if differences existed between females and males in self-reported posttest academic confidence levels following completion of FYS after pretest effects were removed.

### **Definition of Terms**

The following terms were used to inform this study:

*Academic Self-Confidence:* Students' belief in their ability to be academically successful. This a precollege factor that is present at time of college enrollment (Honicke & Broadbent, 2016).

*Nonprofit Institution:* Public and private educational institutions which operate under a not-for-profit financial model. The proceeds of institutions are used to advance the financial standing and do not profit private stakeholders (Chung, 2008).

*Retention:* The process of matriculating from one academic session to the next in the same academic institution. The term is used when institutions assess student headcount from one academic term to the other and one academic year to the other (Astin, 1993; Tinto, 1998).

*Self-Confidence:* A feeling of trust in one's own ability. It is the belief that one can be successful in the attempted endeavors (Honicke & Broadbent, 2016).



### **Significance of the Study**

In 2013, the National Center for Education Statistics cited the six-year graduation rate for the 2007 reportable cohort as 59%, and the associate and certificate reportable cohort for Fall of 2010 as 20% at public institutions and 54% at private nonprofit two-year institutions (NCES, 2016). Despite institutional efforts concerning effective matriculation and onboarding, the graduation rate, as well as student retention, has not improved. The significance of this study rests in identifying key factors that contribute to the retention of incoming college freshmen by determining whether there was a statistically significant relationship between successful completion of an FYS and students' self-reported confidence level and student first-year retention.

Cultivating an understanding of the causative factors that can lead to improved retention practices, as well as the relevance of current literature, is helpful to improve retention practices at the four-year nonprofit institution. Improving matriculation practices on first-year students could positively impact students professionally and financially, as well as informing effective institutional practices that positively impact social change. Improved matriculation practices have the potential to positively affect students' graduation rates, reduce time spent on degree attainment, and decrease loan debt. Furthermore, such strides to improve student retention impact the institution's financial standing and adds to the credibility of the institution as a higher education entity committed to student success.

## Research Questions and Hypotheses

Academic retention theory, framed by Tinto (1987), indicates that student academic integration includes examination of academic self-esteem and the students' confidence level of how prepared they are to pursue an education. Investigation of how such factors contribute to students' ability to remain in college in response to current matriculation practices is necessary. This study requires a close examination of precollege factors, such as academic self-confidence, in response to currently offered FYS. The analysis includes identification of pre- and postscores of student self-assessment of academic confidence and examination of how the postscore correlates with students' ability to remain in college and progress from the first academic year to the second. Further, the role of gender was investigated to determine if a correlation existed between gender and self-reported academic confidence levels.

The following research questions guided this study:

RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?

$H_1$ : There is a statistically significant difference between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.

$H_{01}$ : There is no statistically significant difference between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.

Variable: Self-reported academic confidence

- a. Self-reported academic confidence pretest score
- b. Self-reported academic confidence posttest score

RQ 2: What is the relationship between students' first-year retention and students' self-reported academic confidence level as measured by survey scores after completion of FYS?

$H_2$ : There is a statistically significant relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.

$H_{02}$ : There is no statistically significant relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.

Independent Variable: Academic confidence level posttest score

Dependent Variable: Student first-year retention

RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?

$H_3$ : There is a statistically significant difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.

$H_{03}$ : There is no statistically significant difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.

Dependent Variable 1: Self-reported academic confidence posttest score

Independent Variable 2: Gender

Covariate: Self-reported academic confidence pretest scores

### **Review of the Literature**

First-year student retention has been studied in much of the modern literature as it relates to various factors that have been identified to impact students' ability to persist. Several factors impact first-year student retention including effective matriculation practices that encompass various onboarding seminars, known as an FYS, and other factors such as students' academic abilities, and their belief they can be successful (self-confidence). The research questions included in this study required in-depth exploration of the literature to focus on a discussion of the foundational theories of retention and current matriculation practices, as well as the role of self-confidence as a component of academic integration.

Databases utilized for this literature review included Academic Search Complete, Education Research Complete, Education Resource Information Center (ERIC), and the ProQuest Dissertations and Theses database. References to articles were also found using Google Scholar, as well as the Center for the Study of College Student Retention website at [www.ccsr.org](http://www.ccsr.org), and National Center for Education Statistics at [www.nces.gov](http://www.nces.gov).

Combinations of several key terms were used for this literature review to locate studies related to intervention programs that included: *first-year seminar, first-year experience, self-efficacy, academic self-efficacy and academic self-confidence, retention, persistence, gender including Tinto, college, university, intervention, attrition, bridge programs,*

*enrollment*, and *graduation rate*. Searches were limited to peer-reviewed scholarly works published between 2012 and the present and the search was expanded back to 2009 when no current information was located. Further, seminal works were included regardless of the year of publication.

### **Foundational Theories of Retention**

Three foundational theories played a role in shaping this study. First, the work of Tinto (1987), Astin (1993), and Terenzini and Pascarella (1984) collectively provided the foundational relevance and historical understanding of first-year retention and student retention. Via his theory of student departure, Tinto (1987) asserts that positive learning outcomes are those which foster student involvement as defined by the students' need to be socialized to the setting and the ability to handle academic rigor. Tinto refers to involvement and quality student effort as factors that impact persistence. Tinto concludes that if students do not manage to socialize and interact as members of the learning environment they are more likely to drop out.

Student involvement/integration, as defined by Tinto (1987), includes academic integration inclusive of grades and academic self-esteem. Such a model also explains how once enrolled in college, student interactions and experiences can factor into student persistence. Involvement is achieved through various stages of retention where orientation to college is made possible through intentional FYs. Such interventions provide new students with information about the character of institutional life and academic system requirements. Tinto's theory of student departure is influential in framing the approach for this study.

Research by Astin (1993) further developed the seminal research by Tinto. The input-environmental-outcomes model, proposed by Astin, has many of the same social components as Tinto's (1987) theory of college student attrition, but unlike Tinto's theory, which stresses academic integration and social integration, Astin's theory focuses on social integration as a whole and involvement in the institution as the driver of student retention. Astin (1993) provides insight into a comprehensive list of contributing factors that affect student retention including student interaction, peer group effects with regards to gender, student-faculty interaction, and faculty responses to teaching. Thus, Astin's conclusions indicate the single most powerful source of influence on undergraduate students' academic success and retention is peer group interaction.

It is important to consider the contributions of Pascarella and Terenzini (1991) and Terenzini and Pascarella (1984) who described retention models unlike Astin's (1993) and Tinto's (1987). These models include institutional and environmental factors including factors such as precollege characteristics and structural/organizational features of the institution. Thus, the third variable affecting student retention is the environment of the institution.

Each of the theories described above includes a framework that can be used to understand retention, and each varies in the degree that retention is weighted (Astin, 1993; Terenzini & Pascarella, 1984; Tinto, 1987). Further, the foundational theories of retention discussed in the present study address the needs of traditional campus-based institutions. To date, no known student retention theory has been developed to address non-traditional institutions', such as commuter campuses or online/virtual campuses'

retention needs. While Astin's theory emphasizes the importance of social integration and how students communicate and interact with each other in college, Pascarella and Terenzini focus on student characteristics that are present at the time of enrollment and how those are shaped by institutional interventions. Such theoretical conclusions apply in this study as it is desirable to investigate if interventions offered at the research site, such as FYS, are effective in retaining students. Tinto's theory of retention is the one that most heavily informs this study as it addresses the academic integration of individual students and reflects on academic self-confidence and the role it plays in student retention. The FYS experience offered as a current matriculation practice at the research study site employs Tinto's (1987) model of student departure.

This study moves beyond the foundational understanding of retention in its focus on self-confidence and the role it plays in retention. The theories cited above come from a time when retention studies were being developed and shaped. This study investigates specific interventions put forth by the institution to further understand academic integration as discussed by Tinto (1987; 1997; 2000) to include academic self-confidence and the role it plays in retaining first-year students. Involvement of students is possible when integration of students includes onboarding practices such as FYS that affect academic self-confidence. Such involvement can be achieved through various stages of retention where orientation to college is made possible through intentional FYS. Interventions in an FYS include providing new students with information about the character of institutional life and academic system requirements (Swing, 2002; Zerr & Bjerke, 2015).

## **Student Retention and Persistence**

The freshmen student population at four- and two-year institutions is changing to reflect higher numbers of underprepared students seeking degrees. Brock (2010) identifies that 42% of enrolled first-year students at community colleges place into at least one remedial reading, writing, or mathematics course. In addition, many first-generation students entering college require effective matriculation interventions that range from summer bridge programs to first-year onboarding classes (Capps, 2012; McConnell, 2000; Stewart, DooHun, & JoHyun, 2015).

O’Keeffe’s (2013) findings suggest that in addition to many factors influencing first-year student dropout rates, the sense of not belonging in college originates with being underprepared to handle the academic environment and an inability to perform in a college student capacity. The research further recommends institutions strive to provide support services and appropriate advising practices to accommodate underprepared students to improve college student persistence. O’Keeffe’s (2013) findings further emphasize the need for effective institutional matriculation practices.

Cho and Karp (2013), through a quantitative study, reported the significant finding of student academic success outcomes after completion of college success courses. The study found that students who complete college success courses are more likely to persist in their second year of college. The positive impact of remedial courses and the success of students in their first year of college, as well as the ability to transfer to a four-year institution, are supported by the study conducted by Crisp and Delgado



(2014). Thus, lack of student preparedness for college rigor is identified as a factor affecting first-year retention.

College preparation courses assist students in being academically successful, and it is reported precollege factors, such as the incoming student's grade point average, have a significant implication on student persistence from the first year to the second year (Hu, McCormick, & Gonyea 2012; Ryan, 2013; Sawyer, 2013). Self-directed gains, such as how much a student had learned as relates to real life competency, have little correlation with persistence of students during the first year of college (Hu, 2011; Hu et al., 2012). When compared with the National Survey of Student Engagement results, the level of student engagement in remedial classes has a positive correlation with the successful completion of remedial courses taken by the students (NSSE, 2005). Similar retention studies have been conducted using FYS as a platform for effective matriculations, where positive student retention outcomes have been reported when students were engaged in the learning process (Barefoot, 2000; Barefoot et al., 2005; Zerr & Bjerke, 2015).

Several causative factors have been identified related to student retention and persistence. Learning communities and student academic integration are discussed by Tinto (2000). Further demographic factors are identified to be predictors of student retention such as student preparedness and motivation. For example, significant correlations are reported between students' expressed course preference and persistence, such as addressing the rigor of the individual courses (Harvey & Luckman, 2014). Conclusions are that persistence is not exclusively dependent on academic rigor and can be affected if students are disengaged (Harvey & Luckman, 2014).

This further supports Tinto's (1987; 2000) theory of student engagement concerning why students choose to leave college. The role of students' motivation in response to formal supplemental instruction programs was measured, and the findings are suggestive of a positive impact on student persistence even though academic achievement of individual students was not impacted in those courses with formal supplemental instruction (Terrion & Daoust, 2012). Conclusions were made that engaging and motivating students within the given matriculation intervention can impact student persistence. Factors such as motivation and emotional intelligence have been examined, and Pence (2011) reported that within a pool of 390 students attending nine associate-level nursing schools in Illinois, statistically significant findings suggest a correlation between emotional intelligence and retention. As expected, the emotional intelligence scores were much higher in first-year students who persisted and completed the first year of college as compared to students who did not persist.

Social integration and term academic integration have become interchangeable with student retention. Davidson and Wilson (2013) identified causative reasons for the departure of non-traditional students. Outside of the residential four-year context, terminology such as "social integration" and "academic integration" is not sufficient and proves to be harmful to gaining further insight into student retention. A major conclusion drawn from this examination is that campus life and students' connections to it have a direct impact on the persistence of students. Also, further research is needed to identify the differentiator of social and academic integration. These findings are supported by Tinto's (1987) theory of student departure, and such findings relate to the examination of

early predictors of student success, and if those could serve as factors to predict student retention (French & Oakes, 2004; Kerby, 2015; Kim, 2015).

A new persistence model proposed by Kerby (2015) focuses on early predictors of success. Taking a closer look at academic achievement and persistence, Kerby (2015) found grade point average (GPA) and the social and academic integration of the students to be common predictors of student retention. The proposed model incorporates national and educational information and examines their direct influence on students' educational and career goals. The findings further suggest retention programs, including a sense of belonging as an outcome of adaptation, can contribute to the intellectual development of students, and, inadvertently, impact student retention (Kirby, 2015). While Kerby's (2015) model emphasizes early predictors for successful student persistence, Kim (2015), using a predictive correlational research study, reported GPA and American College Testing (ACT) scores as the two most effective predictors of student retention within a sample size of 7,045 students. Kim's findings do not support Tinto's (1987) stance on institutional factors as leading to successful student integration and positive persistence outcomes. Instead, Kim's findings support the role of precollege factors such as prior academic achievement as a key persistence factor. Taken together, Kerby and Kim's findings are that early predictors play the key role in determining student persistence outcomes. Thus, it is necessary to further investigate the role of interventions such as FYSSs in improving student integration and persistence in college.

Modern literature defines student persistence as including various factors such as precollege predictor factors, emotional intelligence, and students' ability to connect with

the institution of higher learning (Harvey & Luckman., 2014; Kerby, 2015; Kim, 2015; Terrion & Daoust, 2012). Thus, educator awareness of the types of interventions that need to be implemented to improve student retention is substantial (Harvey & Luckman., 2014; Kerby, 2015; Kim, 2015; Siekpe & Berksdale, 2013; Terrion & Daoust, 2012). The focus of this section of the literature review further attests to the great need to continue research on factors that contribute to student persistence and to develop effective institutional practices that can improve student retention. At the same time, we must be mindful of early predictor factors such as prior academic achievement and academic self-confidence, emotional intelligence, campus life, student integration, and engagement.

### **First-Year Seminar**

FYSs have been designed and employed by many institutions of higher learning. The goal of the FYS is to effectively matriculate students and ensure a successful transition of students to the second year of college. The retention of first-year students has become an overwhelming concern in higher education due to reported attrition rates of 50% for full-time students and 67% of part-time students for the 2014- 2015 academic years (NCES, 2016). Thus, implementation of dedicated First-Year Experience (FYE) courses throughout the higher learning landscape is becoming common. Seminar types vary from institution to institution. Seminars range from transitional themed to mixed format seminars where overall positive outcomes are reported demonstrating students' awareness of the benefits of taking the seminar course (Pittebdrigh, Borkowski, Swinford, & Plumb, 2016; Porter, & Swing, 2006; Barefoot, 2000; Barefoot et al., 2005; Zerr & Bjerke, 2015).

Barefoot (1992) reviewed various FYSs for nearly 500 courses intended to enhance academic and social integration of the students. Five main themed FYSs were identified: extended orientation, academic seminars with academic content, academic seminars with various topics, discipline-linked seminars, and basic study-skill seminars. As the focus of this study was to examine the role of academic self-confidence postcompletion of the FYS as a predictor of student retention, it is important to identify the FYS program studied as an extended orientation seminar.

It should be noted that not every institution has implemented defined requirements concerning who is asked to participate in an FYS and how widely criteria are implemented. Further, not every institution has conducted an in-depth study to first identify the type of FYS to be implemented (Swing, 2002). Padget and Keup (2011) reported a slight increase in how many institutions required first-time students to take an FYS from 1988 to 2009. This number increased from 43% to 54% in 2009. The report further indicated that by 2009 more four-year institutions required completion of an FYS. Because the content of the offered seminars varies and institutions include information most relevant for those specific institutions, this does not allow for an in-depth analysis of results as compared to the institution.

Padget and Keup (2011) further highlighted that 80% of institutions using FYSs require a letter grade for successful completion in comparison to the 1988 data where only 62% of institutions required a passing grade. This is an effort to improve student motivation and engagement in the FYS courses. Padget and Keup (2011) also emphasized that over the years the approach to constructing the FYS content, FYS

execution, and student eligibility requirements have changed to result in a more consistent approach. In addition, the findings further support the need to establish evidence-based practices that are controlled and employed consistently to reflect positive student outcomes.

The 2012-2013 report of the National Survey by Young and Hopp (2014) indicates that compared to the 2011 report by Padgett and Keup (2011), 89% of institutions surveyed offered at least one type of the FYS. The report from Barefoot, Griffin, and Koch (2012) stated 96.5% of surveyed institutions offered FYS. Young and Hopp (2014) found 10% of surveyed institutions did not utilize any type of an FYS. Further, 42% of surveyed institutions reported at some point an FYS did exist, citing lack of funding and staff as the most common reasons for not continuing this matriculation practice. Thus, it can be concluded that FYSs are effective in improving student persistence and should be supported.

The reported outcomes of FYSs are indicative of an increased level of engagement for academic-themed seminars, based on higher retention and higher-grade point average at the end of the second-year (Zerr & Bjerke, 2015). Even though an increased level of engagement was reported, Zerr and Bjerke (2015) did not find a statistically significant correlation between GPA and first to second-year retention for each of the seminar types. A significant correlation was reported for the transition-themed seminar in terms of easier transition to the institution of higher learning. Thus, the study drew the conclusion that when choosing an FYS, concrete goals must be defined by the institution.

This finding further enforces the need to evaluate FYS content and application and the need to research FYS content and rigor expectations. Young and Hopp (2014) indicate the seminar should provide an accurate representation of the academic rigor expectations of the given institution. Kuh, Kinzie, Schuh, & White (2011) reported when rigor is raised in the classroom, the students aspire to meet those expectations. This becomes even more applicable when discussing non-academic seminar types. Thus, seminar types need to adequately represent institutional expectations and specify the level of academic expectation to ensure student engagement and success.

In addition to research regarding FYS content and rigor expectations, FYS assigned faculty status has also been examined to determine whether full-time faculty or contingent faculty impact success rates. Jaeger (2008) reported student retention is negatively impacted when seminars are led by contingent faculty. In contrast, when discussing the results of the 2012-2013 National Survey, Young and Hopp (2014) concluded the role of contingent faculty is important and demonstrated positive student retention outcomes. These two research findings contradict each other and require further investigation. This data is included in my research study as a reminder that we must be mindful of various contributing factors when assessing FYS success. Further research is required to study the effect of contingent faculty in FYS facilitation as it relates to improving student retention. Thus, academic rigor and faculty status are characteristics that should be considered when designing FYSs.

Tinto's conclusion that student retention is dependent on social and academic integration is reinforced by findings of Rogerson and Pooch (2013). Their study indicates

the student population enrolled in FYS was significantly impacted by the ability to build relationships amongst peers and faculty. These findings contribute to the body of knowledge on how FYS is currently identified as an effective retention tool and that more research is needed to enhance FYS effectiveness. While student composition of an FYS can have an effect, it is not vital to its success. The FYS must be focused on teaching strategies that build students' intellectual excitement and impact students' academic self-confidence. In addition, faculty assigned to conduct FYS must have exceptional leadership skills and the ability to connect with first-year students (Reid, Reynolds, & Perkins-Auman, 2014).

While FYSs have been reported to have a role in impacting student retention, it is equally significant to identify if the impact of the FYS can be indicative of improving student graduation rates (Barefoot, Griffin, & Koch, 2012). Miller and Lesik (2014) reported a longitudinal quantitative analysis of an entire cohort of 1,913 first-time, full-time students. The focus of the study was to understand the impact of an FYE course and its role in student graduation and academic retention. Both descriptive and discrete “survival analysis” were conducted, and Miller and Lesik analyzed relative impact of multiple variables in a longitudinal design. The study concluded that based on descriptive statistics, the FYE positively impacts the students' ability to remain in college. Findings also suggested participation in FYE had a positive impact on students graduating within the expected time of four years. Thus, the impact of FYE is both immediate in retaining students from the first year to the second year in college and aligns to timely persistence toward graduation.



The need to address effective graduation practices that assist the students in the culmination to successful graduation and career attainment is reinforced by the Higher Learning Commission (HLC, 2008). Rigorous expectations are set forth, and institutions of higher learning are expected to address the need of effective matriculation practices that have long lasting results (Roksa, Arum, & Cook, 2016). Many of the institutions have responded with the development of various FYSs to attest to this need for continued improvement of student persistence through effective matriculation practices (Barefoot, Griffin, & Koch, 2012).

The What Works Clearinghouse report (2016) summarized the effects of FYSs to include credit hour accumulation, degree attainment, and general academic achievement for first-year college students. The effects have been positive in all above categories. The data report included a sample size over 12,000 students from four different institutions. The use of FYS is reported to have positive outcomes for degree attainment and general academic achievement. Jamelske (2009) reported that FYS students are more likely to persist in college compared to students who do not participate in FYS. In addition, the non-participants accumulate fewer college credits and have lower GPA scores as compared to participating students. This further supports the observation reported by the What Works Clearinghouse report (2016).

Knowing FYSs have overall positive results on student persistence, it is important to identify which components of the seminar have the most substantiated results in persistence efforts. Since student disengagement can lead to student departure (Tinto, 1987), the efficacy of FYS on students' overall satisfaction and its relation to student

retention was examined (Hendel, 2007). Through a logistic regression analysis, the findings show more positive responses on the survey were recorded from the students who participated in FYS seminars. Results of *t*-tests between the two groups of students indicated statistically significant differences at  $p < .05$  for 15 of the 92 items on the Student Experiences Survey. Overall, the results are conclusive; participation in the FYS affects certain dimensions of student satisfaction, though it does not affect either overall satisfaction or student retention into the second year.

While these findings provide an insight into student perceptions when involved in FYS, the literature to date does not provide adequate studies that investigate retention aspects of FYSs on student persistence. Vaughan, Parra, and Lalonde (2014) found significant positive achievement on student performance as reflected in overall GPA and student persistence with a reported 17% difference among first generation students who attended FYS and those who did not attend the seminar. Erickson and Stone (2012) supported these findings through their investigation of a cohort of Business School students. The students had to complete a formalized FYS program or FYE and were able to report a significant correlation between students' academic expectations and their intention to return for the second year of college. In the study, the FYS student participants' intent to return for second-year of college was compared to students in other divisions that did not require FYS successful completion.

Studies indicated participation in FYSs positively impacts students' ability to persist in college. Those students also demonstrated academic success outcomes where motivation and commitment to the university in conjunction with practical skills such as

critical reading, study strategies, and time management skills were used (Jenkins-Guarnieri, Horne, Wallis, Rings, & Vaughan, 2015). Even though the studies presented in this section of the literature review demonstrate FYS participation in some instances could impact students' retention, a gap exists in the literature in studying the students' self-reported self-confidence level and the impact FYS has in changing self-reported academic confidence of the students. Further, the gap is widened as limited information is reported on how self-confidence affects student retention.

### **Self-Confidence and Academic Self-Confidence**

Student persistence is grounded in addressing basic skills of learners while addressing external factors that serve as barriers to students' ability to persist (Tinto, 1987; 1997; 2000). This study examined whether or not academic self-confidence serves as a predictor of students' ability to persist in college. Self-efficacy is the core construct of Bandura's (1997) social cognitive theory. Such theory is constructed on three pillars: interpersonal influences, engaged behavior, and environmental forces that influence an individual. Bandura (2002) further attests the most central or universal belief for a person is personal efficacy. Other factors can motivate and guide, but self-efficacy has the power to produce the desired effect through a person's action. If self-efficacy is not sustained, the person/student might lose motivation to persist.

Outcome expectancies are different from self-confidence expectancies as it is possible for one to believe the task is attainable/controllable while being doubtful of one's ability to complete the task. Bandura's (1997) findings show an individual's reaction to environmental factors are based on self-efficacy and the confidence in his or

her abilities to make sense of or control the environment. Such comparison and findings closely relate to my study where the intent was to determine whether student persistence correlates with self-efficacy scores. Students' self-confidence may be correlated with their ability to perform in college. Whether self-confidence plays a role in students' engagement with the institution has been studied extensively. Feldman and Kubota (2015) and Honicke and Broadbent (2016) note academic self-efficacy is positively correlated with academic performance. Further the findings suggest lack of self-confidence, rather than lack of ability, is related to academic adaptability and disengagement. In addition, students' ability to persist in postsecondary education is correlated with their acquisition of basic skills that are successively dependent on student self-efficacy (Attewell et al., 2006; Bailey, 2009; Boylan et al., 1997; Comings et al., 2003; Goldrick-Rab, 2010).

Specific attributes, attitudes, and tendencies are present in any group of students, and these characteristics influence the learning environment and learning outcomes. Intelligence has long been reported in correlation with students' academic success, but non-academic factors in addition to intelligence, such as self-confidence, are also considered contributing factors in improving student persistence (Naderi, Abdullah, Hamid, Sharir, & Kumar, 2009). Much emphasis is given to how students mentally adjust to learning and are accommodated to master the skills and content in such a way that the individual differences of each student are maximized to achieve learning (Jonassen & Grabowski, 1993). The academic self-confidence of each student can play an integral role

in such assimilation and has been identified by Cassidy (2012) as a significant factor in educational and learning contexts.

A longitudinal correlational study conducted by Cassidy (2012) includes student self-reported data on measures of academic performance, personal control, and approaches to learning at the end of first-year. The findings of the study suggest that prior achievement and academic self-efficacy are solid predictors of GPA outcomes at the end of the first year of college. When comparing first and second-year GPA contributing factors, such as academic self-efficacy and deep and strategic approaches to learning, self-confidence increased. The study concluded that self-efficacy appeared to be the most relevant perceived factor influencing learning context; thus, self-efficacy is a factor that can predict student persistence. These findings support academic achievement outcomes found when FYs were offered as an intervention (Erickson, & Stone, 2012; Vaughan, Parra, & Lalonde, 2014).

In the systematic review of the influence of academic self-efficacy on academic performance, Honicke and Broadbent (2016) evaluated 12 years of research on the relationship between academic self-confidence and student performance. The findings of this review are conclusive of a moderate relationship existing between student academic performance and academic self-confidence. In addition, the contributions of Obrentz (2012) indicate that the predictive nature of academic performance on academic self-confidence is grounded in the instructor feedback to the student where the high-performing student's ability to use the received feedback increases the student's academic self-confidence. The consistent measurement of high academic self-confidence

in high-performing students was reported and compared to low performing students' levels of self-confidence. To further reinforce the need to investigate the role of academic self-confidence, Honicke and Broadbent (2016) suggested that academic self-confidence is a highly flexible construct and further longitudinal studies are required to establish causality and to investigate the complex interaction of academic self-confidence, academic performance, and students' motivation to delineate a clear correlation.

Afari et al. (2012) also studied the relationship between academic self-efficacy and academic performance. With a sample size of 225 college students, factors such as students' general self-esteem and academic self-efficacy were investigated. Rosenberg's Self-Esteem Scale was used to determine global self-efficacy. Academic self-efficacy was studied employing Jink's and Morgan's student-efficacy scale. The data was analyzed by confirmatory factor analysis and structural equation modelling using Analysis of a Moment Structures (AMOS) 18 program. Positive and negative self-esteem factors were identified. The findings of this study further emphasize that positive self-esteem can lead to high academic self-efficacy, and academic self-esteem is related to academic achievement.

These findings are also supported by a quantitative study by Arshad et al. (2015), who used a smaller sample size of 80 college students, after several behaviors and education problems were reported. Rosenberg's Self-Esteem Scale and the Academic Performance rating Scale were applied. The sample size included equal distributions of gender, and the results were compared among the gender groups. Pearson Product and *t*-test were used to statistically signify the study findings. Statistically significant

differences were reported between the gender groups; the female students had higher scores on academic performance while male students had higher scores on self-esteem. The study confirms a strong positive correlation exists between self-esteem and academic achievement. These reported results relate back to Tinto's (1993) findings where student departure has been identified to be dependent on a student's ability to integrate to the institution and integration is further defined by the student's ability to be academically successful.

While academic self-confidence has been shown to correlate with academic performance, Walsh and Kurpius (2016) investigated its relationship to academic persistence. The findings reveal that students' self-expectancy, the self-assessment of how students felt they were meeting academic expectations, fell shy of the .05 significance level. Further study was recommended, possibly with a larger sample size. The student's self-assessment is a factor that is positively related to self-efficacy; self-esteem factors have been reported as strong predictors of students' persistence. The reported findings from the study by Walsh and Kurpius (2016) are used in much detail to further discuss the findings of the present study.

While Walsh and Kurpius (2016) were not able to outline a clear correlation between self-confidence and persistence, findings by DeWitz, Woolsey, and Walsh (2009) indicate that all variables of self-efficacy which include college self-efficacy, social self-efficacy, and general self-efficacy, are positively and significantly ( $p < 0.01$ ) correlated with students' purpose in life. As persistence and students' decision to remain in college relate to self-driven decisions to make life alterations, the relationship of

academic self-confidence and correlation with students' purpose in life seem to be significant when exploring retention/persistence initiatives as an institution. With a sample size of 344 freshmen students at a large Midwestern university, the findings were conclusive that the correlation was significant for all types of self-efficacy, with the most significant predictor for purpose in life being general self-efficacy. These findings support the need to use the self-efficacy theory in designing effective matriculation interventions that can assist students' persistence and retention in college. This study further supported the current literature on the impact of self-confidence on student persistence (Bordes-Edgar, Arredondo, Kurpius, & Rund, 2011; Rayle, Arredondo, & Kurpius, 2005) and Tinto's (1988) theory that the more personal commitment a student has in attaining a degree, the more likely those students would be to make positive persistence decisions.

Tinto's (1987; 1988) theoretical framework supports that students who feel more integrated into college are more likely to stay. The theory further implies that occurrences after starting college have a greater bearing on students' ability to persist than precollege experiences. Nevertheless, factors identified as precollege factors, such as self-efficacy and academic self-confidence, must be examined to gain a complete understanding of all contributing factors (Bordes-Edgar, et al, 2011; Pascarella & Terenzini, 1983). The study by Lin (2016) examined contributing factors that are considered by Tinto (1993) as precollege factors, which are termed by Gloria and Kurpius (2001) as self-belief factors. Those include self-esteem, academic self-confidence, and academic self-expectancy. The sample size was over 400 students with a survey return rate of 87.3% that included



detailed demographic information. The findings of this quantitative analysis are conclusive that self-efficacy and academic self-confidence levels, when factored into the pool of data, significantly impact the variance in academic persistence decisions. Examination of the full data beta weights reveals that residential status of the students, academic self-confidence, and personal valuing of education are significant predictors of persistence decisions. One limitation of the study is the lack of diversity at the single institution where the study was conducted, which does not permit generalizations for racial/ethnic minority groups.

The literature review on self-confidence presented in this section attests to the need to explore self-confidence as a possible predictor of student persistence. Various studies reported significant findings of the possible correlation of this precollege factor and student persistence (Arshad et al., 2015; Bordes-Edgar, Arredondo, Kirpius, & Rund, 2011; Rayle, Arredondo, & Kurpius, 2005; Walsh & Kurpius, 2016). Thus, the current study employs Tinto's theory (1997), which reported the precollege factor as self-confidence and investigated if a correlation exists between self-confidence and student persistence within the provided matriculation seminars.

### **Gender**

Reflecting on student enrollment or student degree completion, gender distribution within the current student population in the United States carries a distinct apportionment and is worthy of discussion. As reported by the National Center for Education Statistics (n.d.), 40 to 45% of graduates are males, and 55 to 67% are females. In addition, 60% of students enrolled in college by 2021 are expected to be females

(Hussar & Bailey, 2013), and firm considerations must be given to gender-specific matriculation practices on onboarding first-year students (Wells, Seifert, Padgett, Park, & Umbach, 2011). Because the higher education landscape presents distribution of students and graduates by gender, this discussion focuses on factors that are gender-specific and that influence student self-confidence and retention. In addition, non-gender specific retention of first-year students has become an overwhelming concern in higher education where the attrition rates of 50% for full-time students and 67% for part-time students have been reported for the 2014-2015 academic years (NCES, 2016). Few studies have focused on whether gender plays a key role in academic achievement, self-confidence, and ultimately in student retention.

Rogerson and Pooch (2013), through a quantitative study, explored if gender plays a role in student retention and impacts the perception of content for students placed in an FYE course. The findings of the study indicate that gender plays a minimal role on students' perception. Females found goal setting/academic planning more beneficial than did male students. Even though the retention rate of the students participating in the seminar was increased when compared to students who did not participate, no further analysis was conducted to determine if a gender-specific retention relationship existed. Arshad et al. (2015) found a positive correlation exists between self-esteem and academic achievement. In addition, it was reported that a high level of self-esteem led to high academic performance. Statistically significant differences were reported between the gender groups where the female students had high scores on academic performance, and male students had a high score on self-esteem compared to females. This raises the need

to investigate if self-esteem reported by the female student played a role in reported results.

When examining gender as a contributing factor to student persistence, it has been reported that females are more likely to leave college than males (Alarcon, & Edwards, 2013). In addition, women enrolled in FYS courses and who were identified as high-achieving were more satisfied with their college experience than lower-achieving women and males (Strayhorn, 2009). Tinto's (1987) theory of student departure clearly outlines the impact of student integration in the ability to retain students, and the study by Strayhorn (2009) further supports the need for closer examination of self-confidence and its role when discussing college integration and retention. Further, practices promoting student integration can include learning communities for the students. When learning communities are implemented among Science Technology and Engineering Majors (STEM), which traditionally have a low percentage of female students, female retention had a notable 42% increase as compared to STEM programs that did not receive the intervention. When such intervention is continued through the students' first and second-year experiences, increased graduation rates were reported (Dagley, Georgiopoulos, Reece, & Young, 2016). This was a quantitative study of a sample size of 3,378 students, and STEM students accounted for one-third of the students with 33% of those STEM students being female.

The research also identifies gaps in the understanding of gender differences in perceived academic self-confidence. Cooke-Simpson and Voyer (2007) reported men have higher levels in both confidence and in academic performance. The lack of women's

self-confidence in math has been reported by Sax (1992), and inferences have been made that this gap in self-confidence levels between women and men increases during college years. High academic achievement of the females cannot solely be attributed to gender-based self-efficacy; the female students scored higher on academic self-efficacy assessments than male students did (Rezaei, 2012). Reports from a longitudinal study confirm that at the time of admission women perceive themselves as academically weaker than their male counterparts. The perception is independent of academic performance, though at graduation when these factors were investigated again, women's academic self-confidence and academic self-confidence were on the same level as males (MacPhee, Farro, & Canetto, 2013).

As many factors can contribute to students' retention, very little is known regarding the relationship of gender and retention. Investigation is needed to fully understand if self-confidence variance between genders is a contributing factor to student retention. Thus, this study focuses on expanding the literature in this area.

### **Implications**

The literature review supports the research questions selected to guide this study. The analysis of the literature findings suggests attrition is a recognized problem in higher education, and the investigation of factors contributing to improving first-year experience cannot be undermined (NSCRC, 2016). Furthermore, effective matriculation practices present a wide variation among institutions of higher learning. It is to be noted that the FYs are being offered more consistently in recent years as a tool of matriculation intervention in the hope of improving student retention (Barefoot, 2000; Barefoot et al.,

2005; Zerr & Bjerke, 2015). Self-confidence is understudied in the modern literature as it relates to FYS effectiveness and student retention.

It remains to be determined if further study of the role of self-confidence score post FYS completion can be used as an effective predictor of student retention. Gender gap in self-confidence and student first-year retention has been reported with contradicting results in the literature; demographics of students were studied only as represented by gender. It remains to be determined if the difference in gender presents as a factor that needs to be investigated. Further, it must be noted that a gap in the literature could be narrowed with the findings of this quantitative study as very little is currently known about the relationship that may exist between academic self-confidence and gender, first-year retention, and self-confidence.

### **Summary**

College student retention and first-year college student success have been identified as higher education challenges (American Institute for Research, 2016). Despite interventions and efforts focused on the improvement of student persistence, the retention rate for 2014 was essentially unchanged from 2013 and for full-time, first-time students who started college in 2013, only 68% returned for the second term of college (NSCRC, 2016). Various factors have been identified to assist with student retention and among those is the implementation of FYS across the higher education landscape as a matriculation practice to improve student retention (Bers & Young, 2014; Jenkins-Guarnier et al., 2015). Very little has been done to investigate what effect, if any, the FYS has on student self-reported academic self-confidence.

Bandura's (2003) self-efficacy theory asserts that the most central and universal construct for any person is self-efficacy. The theory suggests self-efficacy has the potential to produce the desired effect. In this study, the investigation sought to understand if self-efficacy can serve as a predictor of student retention and if the FYS offered by the institution under study can impact the students' self-reported academic self-confidence as reflected in pre- and post FYS self-confidence scores. In addition to the identified problem and significance of the proposed study, this section identifies research questions guiding the study.

The findings discussed in the literature review support the need to investigate the role of self-confidence as a possible predictor of student success. It is evident that a gap exists in the current literature regarding the use of FYSs as a strategy to improve retention and impact the students' academic self-confidence. As the use of the FYS has been more consistent in higher education as a tool to improve student persistence (Barefoot, 2000; Barefoot et al., 2005; Zerr & Bjerke., 2015), this study seeks to determine if academic self-confidence can be used as a predicting factor when discussing student retention. Further, this study investigates if gender played a role when considering self-confidence as a factor that can predict student retention. Furthermore, this study examines whether FYSs play a role in impacting students' self-reported academic confidence as reflective of pre- and postscores of students' self-confidence.

The next section includes an outline of the methodological approach to the research, the study site, the sample size, the instrumentation, and the data collection

approach. Further participant protection and limitations of the present study are also discussed.

## **Section 2: The Methodology**

### **Introduction**

This section includes a discussion of the quantitative methodology used to conduct this study. It includes the type of quantitative research design, the justification of the chosen design, as well as goals and overall evaluation of the study. I employed a quantitative case study approach with analysis to include a paired *t*-test for the dependent sample, point-biserial correlation analysis, and a one-way analysis of covariance (ANCOVA) for this research. In this section, I further include the description of the setting used to conduct the study, as well as the sampling strategy, instrumentation, and data collection. Last, I discuss the limitations of the study and how participants of the study were protected.

### **Research Design and Approach**

In this study I evaluate the potential role of academic self-confidence as a predictor of student retention. A nonexperimental, causal comparative, quantitative study research design was used to determine the effects of completing an FYS on student self-reported academic self-confidence and retention at one specific college. This type of research design was appropriate and previously collected data and achieved data were used to test the efficacy of the FYS to help students persist in their academic programs. Other research designs were investigated, but were not considered appropriate for the study. For example, qualitative research designs would not be appropriate. The investigation was not intended to examine student perception but was designed to investigate a possible statistically significant relationship between first-year students'



self-reported academic confidence level pre- and postcompletion of an FYS and first-year completion/retention at a nonprofit U.S. institution of higher education. The study investigated whether self-confidence can be used as a factor to predict student retention and students completed such survey as pre- and postcompletion of the FYS.

Further, an experimental research approach could not be used due to the archived data available for the study. The intervention in this study was offered to all Fall 2015 enrolled first-year students, thus the experimental design approach could not be employed as a control group could not be established. As the intent was to evaluate results from Fall 2015 first-year student enrollment, data available for this study came from archived reports of institutionally collected and recorded data, thus minimizing errors in data collection.

The overall goal of this project was to evaluate if academic self-confidence can be used as a factor to predict student retention. All student participants in this study completed the FYS. Students who did not complete the FYS were not included in the study. Students who did not complete pre- and postsurveys were not considered participants in the study. The other goal of the study was to determine if self-confidence scores improved post FYS.

### **Setting and Population**

The setting for this study was a large nonprofit four-year institution in the mid-west whose primary mission, according to recruitment material, is “to assist students in preparing for life-long careers.” The college offers a variety of career-focused programs in business, health science, technology, human services, and criminal justice fields. The

population for this study were students enrolled in an FYS during the Fall 2015 quarter. The population consisted of a heterogeneous group of first-year college students who enrolled and successfully completed the FYS. To be able to continue with their studies, each student was required to complete the FYS and the pre- and post FYS surveys.

A full census should be used, when it is possible and appropriate, to accurately account for the entire population the under study (Creswell, 2012). A census was used in this study to ensure that the entire first-year student population of Fall 2015 was represented. The use of a census minimized sampling bias as all possible members of the population were included. The limitation of using a census is the inability to generalize findings to a larger population. As this study was specific to a single institution, and all students in the institution who meet the criteria for the study were included, this limitation is not be problematic.

The college is comprised of multiple campuses and conducts FYS courses virtually, with students placed into the section without campus designation. Student enrollment for Fall 2015 was used to create the census. Approximately 2000 first-year students enrolled to the college for Fall 2015. In addition, a census was used to investigate the problem identified in this study for the entire institution and not to examine campus- specific enrollment or retention trends.

### **Instrumentation and Materials: Academic Self-Confidence Survey**

The survey used to measure academic self-confidence was developed by the institution as part of the FYS. Students were asked to rate six items using a 5-point Likert Scale ranging from 1 for *strongly disagrees* to 5 for *strongly agree*. In addition, the 6<sup>th</sup>

point is not applicable (NA). To score the survey, the ratings provided by the students were summed to obtain a total score. The not-applicable responses were recoded to a 0 and were included in the total. Total scores could range from 0 to 30, with higher scores indicating greater academic self-confidence. No information was provided regarding the reliability and validity of the scale. Because each item was considered separately, Cronbach alpha coefficients on the present data could not be calculated. The instrument was completed twice, once prior to beginning the FYS and again at completion of the FYS. However, tests to determine the stability of the items could not be completed because the intervention was intended to change the students' perceived ability, confidence, nervousness, satisfaction, and technological ability from pretest to posttest.

In addition to the Academic Self-Confidence Scale obtained from the research site, student information was collected including age, gender, plan of study, and race. These data were used for descriptive purposes, with gender used as an independent variable to answer the third research question and associated hypothesis. All data used in this study was made available to the researcher upon receiving appropriate approvals from the research site's Institutional Research Board (IRB) and Walden University's IRB. The data was provided from the institutional archived reports to include student enrollment, student retention, and academic self-confidence survey completion reports for students enrolled in FYS during Fall 2015 quarter. In addition, student enrollment archived data was provided for the Fall 2016 quarter.

### **Description of First-Year Seminar**

The FYS at the research site is a one-week course involving learning outcomes intended to enculturate the students to the college environment and introduce them to the academic requirements. The course is delivered 100% online and students have the opportunity to interact through discussion boards and submit assignments. The students must complete the FYS prior to starting their first course at the research site. The academic self-confidence pretest survey is completed on day one of the course and the posttest survey is completed on the last day of the course. The students are expected to explain the student role and responsibilities at the institution, including student handbook policies inclusive of academic integrity.

Students engage in various activities addressing the use of technology in the classroom. These activities include discussion board participation, assignment submissions, and testing. Students are expected to engage in various research activities including use of the virtual library, the online writing center, and other academic support resources. In addition, the assignments in the course are designed to familiarize the students with nonacademic support services such as the career services, financial aid, and the book store. Academic rigor expectations are reinforced through submitted assignments that require participation on the discussion boards and short American Psychological Association (APA) style paper submissions. Students' career exploration and discussion of their chosen career field is addressed, and students are introduced to various professional student organizations available at the institution. At the end of the

course students are asked to complete a post-experience survey. It is possible for a student to complete the FYS course and not complete the post-experience survey. Thus, any student who did not completed the post-experience survey was excluded from the census.

## **Data Collection and Analysis**

### **Data Collection**

The study used preexisting data from archived reports at the college's databanks. No investigator-participant interaction occurred in this study. The institution conducted all the necessary surveys and data collection used in this study. Upon approval of the college's and Walden University's IRB, the data required to conduct the study was obtained from the institution. Data obtained included gender, seminar completion numbers, re-enrollment numbers for the second year, and self-reported pre- and post-academic self-confidence scores for students enrolled in the FYS course. Data was limited to student information for incoming students who completed the FYS during the Fall 2015 quarter. All identifying student information was eliminated from the reports and surveys. No additional data was collected from students.

### **Data Analysis Results**

The data from student enrollment and self-confidence pretest and posttest records was analyzed using IBM SPSS version 24. The data was checked by the researcher to determine that students included in the study met the inclusion and exclusion criteria before beginning the analysis. The students who had not completed both the pre- and posttests were deleted from the case file. Cases were also deleted if students had not re-

enrolled in the second year or they were not enrolled in a degree program, either associates or baccalaureate. Data analyses included descriptive statistics using frequency distributions, and measures of central tendency and dispersion to provide a profile of the students in the program.

The research questions and hypotheses were tested using paired *t*-tests for dependent samples, point-biserial correlations, and one-way analysis of covariance (ANCOVA). Statistical significance of the findings was made using a criterion alpha level of .05. Research question 1 and the hypothesis were tested using a paired *t*-test for dependent samples to evaluate pretest and posttest scores for changes in students' self-confidence. Both pretest and posttest scores were variables that were interval levels of measurement. The assumptions for *t*-tests for dependent samples were (a) the data was continuous, (b) the data was normally distributed, (c) there were no significant outliers present in the data, and (d) the differences in the pretests and posttests were normally distributed (Creswell, 2012). The data met these assumptions.

Research question 2 and the hypothesis were tested using point-biserial correlations to describe the strength and direction of the relationship between the dichotomous variable, student retention, and the continuous variable, posttest self-confidence scores. The assumptions for point-biserial correlations included: (a) the data for academic self-confidence was continuous, (b) the data for student retention was a true dichotomy, (c) the two variables were paired, (d) there were no significant outliers in the continuous variable, (e) homogeneity of variances in each group of the dichotomous

variable, and (f) the continuous variable was normally distributed in each group of the dichotomous variable.

Research question 3 and the hypothesis were investigated using a one-way analysis of covariance (ANCOVA). The effects of the pretest for academic self-confidence were removed from the posttest to provide the change in self-confidence between the male and female students. The assumptions of ANCOVA included (a) the dependent variable was continuous, (b) the independent variable was nominal with at least two levels, (c) the covariate was continuous, (d) observations were independent, (e) the covariate had a linear relationship with the dependent variable, and (f) the slopes were homogeneous. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. Table 1 presents the statistical analysis used to address the research questions and test the associated hypotheses.

Table 1

*Statistical Analysis*

Research Hypothesis	Variables	Statistical Analysis
RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?	Variable: Self-reported academic confidence a. Self-reported academic confidence pretest score b. Self-reported academic confidence posttest score	Dependent samples used <i>t</i> -tests to determine the direction of the change in students' self-reported academic confidence level from pretest to posttest
$H_1$ : There is a statistically significant difference between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.		
$H_{01}$ : There is no statistically significant difference		<i>(table continues)</i>

Research Hypothesis	Variables	Statistical Analysis
<p>between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.</p>		
<p>RQ 2: What is the relationship between the student's first-year retention and the student's self-reported academic confidence level as measured by survey scores after completion of FYS?</p>	<p>Independent Variable: Academic confidence level posttest score</p> <p>Dependent Variable: Student first-year retention</p>	<p>Point-biserial correlation analysis were used to determine the strength and direction of the relationship between academic self-confidence and retention for the second year</p>
<p><math>H_2</math>: There is a statistical relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.</p>		
<p><math>H_{02}</math>: There is no statistical relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.</p>		
<p>RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?</p>	<p>Dependent Variable: Self-reported academic confidence posttest score</p> <p>Independent Variable: Gender</p> <p>Covariate: Self-reported academic confidence pretest scores</p>	<p>A one-way analysis of covariance (ANCOVA) were used to determine differences in academic self-confidence between male and female students after removing the effects of the pretest for academic self-confidence</p>
<p><math>H_3</math>: There is a statistically significant difference between females and males in self-reported posttest academic</p>		

*(table continues)*



Research Hypothesis	Variables	Statistical Analysis
<p>confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.</p> <p><math>H_{03}</math>: There is no statistically significant difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.</p>		

In summary, the first statistical analysis, the *t*-tests for dependent samples, was used to determine the direction of the change in students' self-reported academic confidence level from pretest to posttest. The point-biserial correlation analysis was used to determine the strength and direction of the relationship between academic self-confidence and retention for the second year while the effect of the pretest has been removed. This correlational analysis identified the influence of self-reported academic self-confidence postcompletion of the FYS and students' first-year retention. The third statistical analysis proposed in the study, a one-way analysis of covariance (ANCOVA), was used to determine if academic self-confidence differed between male and female students.

### **Assumptions, Limitations, the Scopes and Delimitations**

This study involved looking at student self-confidence score pre- and post-participation in an FYS. The study examined if there was a statistically significant relationship between first-year students' self-reported academic confidence level pre- and postcompletion of an FYS and if self-confidence can be used as a predictor of first-year retention at a nonprofit U.S. institution. The study examined the strength of the correlation between self-reported academic self-confidence and student retention.

**Assumptions:** I assumed all new students were completing the FYS and students who completed the survey answered the questions truthfully. It was assumed the students who read the items about self-confidence understood the nature of the questions. Another assumption of the study was that the survey tool currently used by the institution was a valid and reliable measure of academic self-confidence. I also assumed students entering the college intended to persist through degree completion.

**Limitations.** One limitation of the study was that the use of a census limited the generalization of findings to other postsecondary institutions (Creswell, 2012), although the findings may be of interest to administrators in other colleges and universities. Another limitation was that only students enrolled in undergraduate degree programs were used in the present study. Thus, the findings are not relevant to students in non-degree, certificate, or graduate programs. The study was limited to one large Midwestern institution. The findings may not be relevant to colleges and universities in other states or regions.

**Scope of the study.** The study employed secondary analysis of previously collected data for students' self-reported academic self-confidence. Archived data was collected twice, once prior to students participating in FYS and again after completion of the seminar. No students were asked to provide additional data.

**Delimitations.** This study was conducted at a single college with nine campuses located in a single state. A census of all freshmen required to participate in the FYS in Fall 2015 was included in this study. Newly admitted students not in an undergraduate degree program were excluded from the study.

### **Protection of Participant Rights**

Prior to beginning the study, approvals from the college where the study took place and from Walden University's IRB were obtained (06-08-17-0479110). As in any research study, protecting participants was important. The archival data obtained from the institution did not include students' personal identification information. Each participant in the study was assigned a number. The investigator had no direct interaction with the participants as all students who completed the FYS either transitioned from the first year to the second year of college or left the college.

### **Results**

To be included in the study, students had to participate in the FYS, complete both the pretest and posttest, and be enrolled in a degree program (either associates or baccalaureate). The total number of incoming students at all campuses of the college was 5,431. These students were encouraged but not required to take the FYS. After removing the students who did not meet the criteria for inclusion, data from 2,977 students was

used in the study. The students' re-enrollment information was obtained from student records. Frequency distributions were used to summarize the data. Table 2 presents the results of this analysis.

Table 2

*Re-enrollment to Fall 2016 Quarter (N = 2990)*

Re-enrollment to Fall 2016 semester	Number	Percent
Not enrolled	1,587	53.3
Re-enrolled	1,390	46.7
Total	2,977	100.0

### Data Analysis Results

The data for the study provided information regarding the gender and ethnicity of the students participating in the FYS. Demographic information on students not retained in the Fall 2016 quarter are not included in the demographic data. The data were summarized using frequency distributions for presentation in Table 3.

Table 3

*Frequency Distributions – Demographic Characteristics (N = 2977)*

Demographic Characteristic	Number	Percent
Gender		
Female	1,000	72.0
Male	389	28.0
Total	1,402	100.0
Missing 1,588		
Ethnicity		
Asian/Pacific Islander	24	1.8
African American/Black	107	7.8
Caucasian/White	1,143	83.6
Hispanic	61	4.5
American Indian	10	0.7
Other	3	0.2
Unspecified	19	1.4
Total	1,367	100.0
Missing 1,610		

Most of the participants ( $n = 1,000$ , 72.0%) were females, and 389 (28.0%) were males. This included the students who were retained. Most of the entering students who enrolled in the FYS were Caucasian/White ( $n = 1,143$ , 83.6%). The next largest group were African Americans/Blacks ( $n = 107$ , 7.8%). Nineteen participants (1.4%) did not specify their ethnicity on the survey.

The students were asked to identify their degree aspirations and the programs in which they were enrolled. Their responses were summarized using frequency distributions. Table 4 presents results of these analyses.

Table 4

*Frequency Distributions – Degree Aspiration and Enrolled Program (N = 2977)*

Degree Aspiration and Enrolled Program	Number	Percent
Degree Aspiration		
Associate Degree	965	68.8
Baccalaureate Degree	422	31.2
Total	1,390	100.0
Missing 1,587		
Enrolled Program		
Business	299	21.5
Education	68	4.9
Engineering	6	0.4
Health Sciences	707	50.9
Human Services	101	7.3
Technology	209	15.0
Total	1,390	100.0
Missing 1,587		

Most students ( $n = 965$ , 68.8%) were enrolled in associate degree programs, with the remainder ( $n = 422$ , 31.2%) in programs that would result in a baccalaureate degree. The greatest number of students ( $n = 707$ , 50.9%) were enrolled in health sciences

programs and 299 (21.5%) were in business programs. The program with the least number of students was engineering ( $n = 6$ , 0.4%).

The students' grade point averages (GPAs) after the first quarter and third quarter were obtained from student records. The GPAs ranged from 0 to 4.00, with higher GPAs indicating better academic performance. The results of the descriptive statistics used to summarize these data are presented in Table 5.

Table 5

*Descriptive Statistics – Grade Point Averages (N = 1,390)*

Grade Point Averages	N	Mean	SD	Median	Range	
					Minimum	Maximum
First quarter	1,390	3.30	.77	3.52	0.00	4.00
Third quarter	1,386	3.35	.57	3.49	0.67	4.00
Fourth quarter	1,390	3.30	.59	3.45	0.33	4.00

The GPA for the first quarter was 3.30 ( $SD = .77$ ), with a median of 3.52. The range of GPAs was from 0.00 to 4.00. The GPA for the second quarter increased slightly to 3.35 ( $SD = .57$ ), with a median of 3.49. The GPAs ranged from 0.67 to 4.00. The GPAs for the fourth quarter decreased to 3.30 ( $SD = .59$ ), with a median of 3.45. The range of GPAs was from 0.33 to 4.00.

The students' data on the credit hours attempted and earned for the first and third quarter, and Fall 2016 were obtained from student records. The number of credit hours attempted and earned was cumulative across the quarters. The data were summarized using descriptive statistics. Table 6 presents results of this analysis.

Table 6

*Descriptive Statistics – Credit Hours Attempted and Earned (N = 1,390)*

Hours Attempted and Earned	N	Mean	SD	Median	Range	
					Minimum	Maximum
Hours attempted first quarter	1,390	11.07	2.79	12	0	18
Hours earned first quarter	1,390	11.46	3.93	12	0	42
Hours attempted third quarter	1,386	31.59	8.66	32	4	68
Hours earned third quarter	1,386	43.62	24.70	38	4	168
Hours attempted, Fall 2016	1,390	44.36	14.04	44	4	86
Hours earned, Fall 2016	1,390	56.25	28.16	52	4	188

The students attempted a mean of 11.07 ( $SD = 2.79$ ) credit hours in the first quarter, with a median of 12 credit hours. The range of credit hours was from 0 to 18. The hours earned during this quarter had a mean of 11.46 ( $SD = 3.93$ ), with a median of 12 hours. Credit hours ranged from 0 to 42. A total of 577 students transferred credits, with the maximum number of credit hours reflecting the credits they had transferred at enrollment. The total number of hours attempted during the third quarter (including hours attempted previously) was 31.59 ( $SD = 8.66$ ). The median number of credit hours was 32 and ranged from 4 to 68 credit hours. The median number of hours earned at the end of the third quarter was 38, with a range from 4 to 168. The mean number of credit hours earned at the end of the third quarter was 43.62 ( $SD = 24.70$ ). In Fall 2016, the mean number of credit hours attempted was 44.36 ( $SD = 14.04$ ), with a median of 44 credit hours. The range of credit hours attempted through Fall 2016 was from 4 to 86. The number of credit hours earned in Fall 2016 was 56.25 ( $SD = 28.16$ ), with a median of 52 credit hours. The total number of credit hours earned ranged from 4 to 188.



### Pretest Equivalencies

The pretest scores for the six items measured to determine the effects of participating in the FYS were used as dependent variables in a *t*-test for independent samples. The independent variable in these analyses was re-enrollment in the Fall 2016 quarter. Table 7 presents results of this analysis.

Table 7

*Independent Samples from t-test – Pretest Scores for Academic Self-Confidence by Re-enrollment in the College*

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>DF</i>	<i>t</i>	Sig
Ability – Face-to-Face						
Not enrolled	1,587	4.05	.86	2,975	-1.69	.091
Re-enrolled	1,390	4.10	.82			
Ability – Online						
Not enrolled	1,541	3.72	.99	2,885	-.76	.449
Re-enrolled	1,346	3.74	.94			
Nervous – Face-to-Face						
Not enrolled	1,587	2.62	1.14	2,975	-.78	.436
Re-enrolled	1,390	2.66	1.16			
Nervous – Online						
Not enrolled	1,538	2.94	1.21	2,879	-1.30	.195
Re-enrolled	1,343	3.00	1.20			
Satisfied						
Not enrolled	1,546	3.92	.88	2,900	-.47	.641
Re-enrolled	1,356	3.93	.87			
Tech Skills						
Not enrolled	1,585	4.03	.87	2,972	-.42	.677
Re-enrolled	1,389	4.04	.85			

The results of the *t*-tests for independent samples used to compare pretest scores between students who re-enrolled for Fall and those who did not re-enroll were not

statistically significant. These findings provide support that students in the study were equivalent on the pretest for all six items prior to participating in the FYS.

### **Research Questions and Hypotheses**

Three research questions were developed for the study. Each of these questions were addressed using inferential statistical analysis. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05.

RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?

*H<sub>1</sub>*: There is a statistically significant difference between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.

*H<sub>01</sub>*: There is no statistically significant difference between the students' self-reported academic confidence as measured by the survey scores prior to and after completion of the FYS.

The mean scores on the six items were compared from pretest to posttest for all students in the study to determine if participation in the FYS had an influence on their academic confidence. The results of this analysis are presented in Table 8.

Table 8

*Dependent Samples from t-test – Change from Pretest to Posttest for Academic Self-Confidence*

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>DF</i>	<i>t</i>	Sig
Ability – Face-to-Face						
Pretest	2,974	4.07	.84	2,973	13.01	<.001
Posttest		4.27	.79			
Ability – Online						
Pretest	2,864	3.73	.97	2,863	20.78	<.001
Posttest		4.10	.91			
Nervous – Face-to-Face						
Pretest	2,975	2.64	1.15	2,974	-8.80	<.001
Posttest		2.47	1.18			
Nervous – Online						
Pretest	2,857	2.96	1.21	2,856	-15.36	<.001
Posttest		2.63	1.24			
Satisfied						
Pretest	2,892	3.93	.88	2,891	18.93	<.001
Posttest		4.26	.89			
Tech Skills						
Pretest	2,970	4.04	.86	2,969	16.37	<.001
Posttest		4.27	.79			
Academic Self-Confidence						
Pretest	2,775	22.02	2.81	2,774	11.29	<.001
Posttest		21.39	2.69			

The results of the *t*-tests for dependent samples that compared the pretest to the posttest scores for all students were statistically significant. The comparison of perceived ability in face-to-face classes showed that pretest scores ( $M = 4.07$ ,  $SD = .84$ ) were lower than the posttest scores ( $M = 4.27$ ,  $SD = .79$ );  $t(2973) = 13.01$ ,  $p < .001$ . Scores for perceived ability online increased from 3.73 ( $SD = .97$ ) at pretest to 4.10 ( $SD = .91$ ) posttest. This increase was statistically significant,  $t(2863) = 20.78$ ,  $p < .001$ . When perceived nervous face-to-face was compared, the pretest scores ( $M = 2.64$  ( $SD = 1.15$ ))

was significantly higher than the posttest scores ( $M = 2.47$ ,  $SD = 1.18$ ),  $t(2,974) = -8.80$ ,  $p < .001$ . The results of the  $t$ -tests for dependent samples for the item, perceived nervous online comparing the pretest ( $M = 2.96$ ,  $SD = 1.21$ ) with the posttest ( $M = 2.64$ ,  $SD = 1.24$ ) were statistically significant,  $t(2,856) = -15.36$ ,  $p < .001$ . Statistically significant results were obtained on the comparison of satisfied from pretest ( $M = 3.93$ ,  $SD = .88$ ) to posttest ( $M = 4.26$ ,  $SD = .89$ ),  $t(2,891) = 18.93$ ,  $p < .001$ . The comparison of pretest scores ( $M = 4.04$ ,  $SD = .86$ ) and posttest scores ( $M = 4.27$ ,  $SD = .79$ ) for perceived technology skills was statistically significant,  $t(2,969) = 16.37$ ,  $p < .001$ .

Academic self-confidence is the summed total of the six items that were measured in this study. The comparison of the pretest scores ( $M = 21.39$ ,  $SD = 2.69$ ) with the posttest scores ( $M = 22.02$ ,  $SD = 2.81$ ) was statistically significant,  $t(2,774) = 11.29$ ,  $p < .001$ . Based on the findings for the total scores and the six items, the null hypothesis of no difference in pretest and posttest scores was rejected. Participation in the FYS made a statistically significant difference in students' self-reported academic confidence post completion of FYS.

RQ 2: What is the relationship between the student's first-year retention and the student's self-reported academic confidence level as measured by survey scores after completion of FYS?

$H_2$ : There is a statistical relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.

$H_{02}$ : There is no statistical relationship between self-reported academic confidence level as measured by survey scores after completion of FYS and first-year retention.

Point bi-serial correlations were used to determine if there was a relationship between re-enrollment in the Fall semester and their posttest scores for the six items measuring their perceived academic confidence resulting from participation in the FYS. The results of this analysis are presented in Table 9.

Table 9

*Point-Bi-serial Correlations – Re-enrollment in the College and Academic Self-Confidence*

Academic Self-confidence	<i>N</i>	<i>r</i>	<i>p</i>
Ability – Face-to-Face	2,974	.03	.169
Ability – Online	2,905	.02	.325
Nervous – Face-to-Face	2,975	.03	.076
Nervous – Online	2,902	.02	.418
Satisfied	2,967	.02	.197
Tech Skills	2,973	-.01	.930
Academic Self-confidence	2,886	.04	.023

The correlations between the six items measuring academic self-confidence were not statistically significant, indicating re-enrollment was not related to posttest skills. The correlation between academic self-confidence ( $r = .04, p = .023$ ) and re-enrollment in the Fall semester was statistically significant. However, given that a census was used, the magnitude of the relationship was small, indicating the significance may be more related to the number of cases rather than the actual relationship between the variables. Based on

the results of these analyses, there was a failure to reject the null hypothesis of no relationship between re-enrollment and posttest scores.

RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?

*H<sub>3</sub>*: There is a statistically significant difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.

*H<sub>03</sub>*: There is no statistically significant difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores.

A one-way analysis of covariance (ANCOVA) was used to compare academic self-confidence by gender of the student. The posttest scores on academic self-confidence were used as the dependent variable, with the pretest scores used as the covariate. The gender of the student was used as the independent variable. Table 10 presents the means and standard deviations on academic self-confidence for the male and female students in the study.

Table 10

*Pre- and Posttest Mean Scores and Standard Deviations as a Function of Academic Self-Confidence*

Gender of Students	<i>N</i>	<u>Pretest</u>		<u>Posttest</u>	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Male	923	21.58	2.65	22.26	2.75
Female	366	21.45	2.77	22.10	2.81

Table 11 presents the results of the ANCOVA used to compare posttest scores for academic self-confidence after removing the effects of the pretest.

Table 11

*One-way Analysis of Variance – Academic Self-confidence by Gender*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$
Covariate (Pretest Scores)	1, 1286	1958.46	1958.46	312.72	<.001	.20
Gender	1, 1286	2.43	2.43	.39	.533	<.01
Total	1288	1960.89				

The results of the ANCOVA indicate posttest scores for academic self-confidence did not differ significantly between male and female students,  $F(1, 1286) = .39, p = .533$ . This result provides support that male and female students who participated in the FYS did not differ in their decisions to be retained. Table 12 presents the results of the one-way ANOVA for the subscale measuring differences in the six items measuring academic self-confidence.

Table 12

*Pre- and Posttest Mean scores and Standard Deviations as a Function of the Six Items Measuring Academic Self-Confidence*

Item	<u>Pretest</u>		<u>Posttest</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Ability Face-to-Face				
Female	4.08	.82	4.27	.77
Male	4.10	.81	4.34	.70
Ability Online				
Female	3.74	.95	4.12	.90
Male	3.75	.94	4.09	.88
Nervous Face-to-Face				
Female	2.69	1.16	2.52	1.18
Male	2.57	1.18	2.50	1.19
Nervous Online				
Female	3.00	1.19	2.64	1.24
Male	3.00	1.24	2.68	1.23
Satisfied – Overall				
Female	3.95	.86	4.30	.85
Male	3.90	.90	4.23	.90
Technical Skills				
Female	3.99	.86	4.23	.80
Male	4.19	.80	4.37	.73

The mean scores for each of the six items were used as the dependent variables in separate one-way ANCOVAs. The gender of the students was used as the independent variable. The results of these analyses are presented in Table 13.



Table 13

*One-way ANCOVA – Six Items Measuring Academic Self-Confidence by Gender*

Variable	Sum of Squares	DF	Mean Square	F	Sig	$\eta^2$
Ability – Face-to-Face	.33	1, 1383	.33	.72	.396	.01
Ability – Online	.34	1, 1333	.34	.58	.446	.01
Nervous – Face-to-Face	1.06	1, 1385	1.06	1.23	.268	.01
Nervous – Online	.85	1, 1324	.85	.84	.360	.01
Satisfied	.76	1, 1347	.76	1.21	.272	.01
Tech Skills	.48	1, 1382	.48	1.10	.294	.01

The comparison of the six items measuring academic self-confidence did not provide evidence of statistically significant differences between male and female students. The covariates for each of the six items were statistically significant, indicating that the pretest scores were removing a statistically significant amount of variance from the posttest scores. Based on these results, there was a failure to reject the null hypothesis of no difference in academic self-confidence between and male and female students.

### **Conclusions**

The data presented in this section of the study suggests that participation in the FYS is effective in affecting student's self-reported academic confidence. The comparison of posttest scores and pretest scores provides evidence that students' academic self-confidence increased following completion of the FYS. However, the statistical analyses of the correlations between Fall 2016 re-enrollment and academic self-confidence were not statistically significant; indicating that students' decisions to re-enroll was not a result of low academic self-confidence. The FYS was not designed to

discriminate between male and female students as the results did not find differences in academic self-confidence of male and female students relating to posttest scores after removing effects of the pretest. Collectively these findings indicate the need to continue the investigation of the role of academic self-confidence as a predictor of academic retention. In conclusion the FYS did increase self-reported self-confidence of the students, however it is unclear what role this increase in self-confidence played in student retention. Further, the scores did not vary by gender attesting that the effect of the seminar in increasing student's self-reported self-confidence is not gender specific.

### **Section 3: The Project**

#### **Introduction**

The goal of this doctoral study was to explore the students' self-reported academic confidence before and after participation in an FYS through the completion of a pre- and postsurvey. The study further examined the possibility of a statistically significant relationship between first-year students' self-reported academic confidence level pre- and postcompletion of an FYS and first-year completion/retention at a nonprofit U.S. institution of higher education. The study also examined if differences existed between females and males in self-reported posttest academic confidence levels following completion of FYS and after pretest effects were removed.

The findings as presented in this study suggest that first-year student participation in the FYS was effective in impacting students' self-reported academic confidence. The findings provide evidence that students' posttest self-reported academic confidence scores increased compared to pretest scores after completion of the FYS. The study failed to conclude if a statistically significant relationship exists when comparing self-confidence scores and student retention, and the findings indicate that the FYS, as delivered currently, does not favor gender. Research findings presented in Section 2 confirm the need to continue the investigation of factors that affect student retention and the role of self-confidence and student retention.

The white paper developed from this study will prompt discussion with institutional administrators regarding how academic self-confidence results reported in

this study can be used to impact student retention. Presenting results and recommendations in a white paper format provides the opportunity to directly communicate with administrators who have the authority to make institution-wide policy changes to positively impact student success.

Recommendations from the project findings include extending the duration of the FYS and introducing frequent touch points with students throughout the first year postcompletion of the FYS. Further the recommendations include strategies to ensure that the data on self-reported academic confidence is collected at appropriate times to better inform institutional practices, and examine if the self-confidence results shown in the study are sustained during the first academic year. Extending the seminar from one week to eight weeks and introducing frequent intentional touch points with the students would allow more time for students to explore the learning activities offered in FYS and engage further with peers and faculty; these practices are shown to increase academic self-confidence (Rogers & Poock, 2013; Zerr & Bjerke, 2015). In addition, the frequent touch points postcompletion of the FYS would ensure students form connections and trusting relationships with key members of the educational team.

### **Rationale**

White papers have been used in educational settings to provide information to policy makers in a concise and easy-to-read format (Creswell, 2012). White papers are a hybrid of articles and marketing tools purposely designed to persuade the stakeholders (Stelzner, 2007). Kolowich (2014) acknowledges white papers, as a means of communication, have a distinctly authoritative and in-depth reporting style.

The problem addressed in this white paper (Appendix A) is self-reported academic confidence and student attrition. Results of this study concerning how students' self-reported academic self-confidence is impacted in first-year students' pre- and postcompletion of FYS is an ideal topic to be presented in a white paper format. The study results indicated that the statistical analyses of the correlations between Fall 2016 re-enrollment and academic self-confidence were not statistically significant, indicating that students' decisions to re-enroll were not related to students' posttest scores.

Student involvement/integration, as defined by Tinto (1987), includes academic integration that is inclusive of grades and academic self-esteem. Such a model also explains how student interactions and experiences can factor into student persistence. Tinto's theory of student departure was influential in this study. This study investigated the effect of FYS on students' self-reported academic self-confidence and how self-confidence can be used as a predictor of student persistence. Self-efficacy is the core construct of Bandura's (1997) social cognitive theory. One of the outcomes of Bandura's (1997) social cognitive theory is that if self-efficacy is not sustained, the person/student might lose motivation to persist. The core question asked in the study was if the score of students' self-reported academic self-confidence is changed due to completion of FYS can that score become a predictor of student persistence? The findings are suggestive of improved posttest self-confidence scores, but nothing has been done to measure the sustainability of that score at the end of first year.

The white paper outlines the key findings of the study in a concise, easy-to-read format and include a focused section on recommendations. This white paper presents the

study findings and highlights the strategies that can be used to maximize the effect of improved self-confidence results after completion of a week-long FYS. The project is intended to further the impact of self-reported academic self-confidence as a predictor of student persistence. The goals of the white paper are: (a) to provide insight and understanding of the study results, (b) recommend retention strategies grounded in sustaining the effect of self-reported academic self-confidence, and (c) recommend policy change that would extend the duration of the FYS. This extended time will allow students to explore the learning activities that are offered by the FYS, as well as providing opportunities for students to engage further with peers and faculty.

### **Review of the Literature**

The literature review presented in this section provides a comprehensive summary of publishing research in the genre of white paper. Databases utilized for this literature review included Academic Search Complete, Education Research Complete, Education Resource Information Center (ERIC), and ProQuest Dissertations and Theses database. References to articles using Google Scholar combinations of several key terms were used for this literature review and included, *white paper*, *position papers*, *policy statements*, and *policy recommendations*. Searches were limited to peer-reviewed scholarly works published from 2009 to present. The Google Scholar search yielded 4.01 million results but scholarly sources focused on the use of white papers in educational policy change were limited. Further examination revealed the majority of white paper articles were white papers themselves. Thus, limited in nature, the literature review further indicates the need and the growing demand for white papers as a mode of communication of

findings and a summary of recommendations to key stakeholders with the ability to make policy changes in educational institutions.

### **Publishing Research Findings**

Creswell (2012) discussed in detail the most effective reporting structure for quantitative research findings. Journal articles, dissertations, and conference presentations have all been used to present quantitative research findings. The findings of quantitative studies must include front matter, an introduction, a review of the literature, the methods, the results, a discussion/conclusion, references, and appendices (Creswell, 2012). My study employed the quantitative study methodology to investigate the research questions.

Reports for policy makers and school personnel typically involve oral presentation and policy-position papers. This type of research report must include guidelines such as urgency and timing, report specific results, and recommendations. In addition, the author must obtain clearance of key personnel to make the presentation or distribute the policy paper to the key stakeholders (Creswell, 2012). As a means of disseminating the results of this study and incorporating recommendations grounded in literature, the white paper provides the best platform.

### **White Paper Genre**

Neuwirth (2014) stated that the genre of white paper is not obsolete and can be used as an effective marketing tool if written correctly. The original white paper was titled *British White Paper of 1922* (Churchill, 1922). Since that time white papers have been used in technology, business, education, and marketing as a position product that

serves as an effective tool of communication to the key stakeholders (Kolowich, 2014; Willerton, 2013). According to Neuwirth (2014) the key elements comprising an effective white paper include rich and substantive content intended to educate the audience. White papers present new ideas that promote innovative thinking. Further, the white paper has the potential to clearly communicate point of view on issues that are highly relevant and timely. To be effective, white papers must incorporate statistically sound data and be well-researched and grounded in literature findings. According to Stelzner (2007), the primary role of a white paper is to educate the stakeholders in business, technology, government, and educational settings. Stelzner (2007) further defined the three general uses for white paper as (a) lead generation, (b) thought leadership, and 3) close sales.

My white paper is aligned with Stelzner's (2007) theory as it is intended to demonstrate forward thinking for institutional leadership consideration and attests to the need for further investigation of the topic of student self-reported academic self-confidence and the role that it can play in first-year student persistence. Stelzner (2007) identified general guidelines for the length of the white paper and its general structure as follows: general length up to 12 pages, problem is addressed in a concise manner void of humor and direct sale strategies, and the paper must contain information that is useful to the reader. In addition, the paper should be communicated to the reader in a timely manner.

The general guidelines for the composition of white papers have also been discussed by Sakamuro, Stolley, and Hyde (2015) to include an introduction of the



problem, a background rooted in scholarly sources which address the problem presented, and a presentation of findings and recommendations. Key elements to consider are the white paper must be designed for the target audience, must be easy to follow and read, and should contain visual and/or graphic representations that make the points clear to the reader (Neuwirth, 2014; Sakamuro, Stolley, & Hyde, 2015; Stelzner, 2007).

The project presented in this doctoral study aligns with the standards described above. The study contains an introduction to the problem, literature support that addresses the problem, findings, recommended solutions, innovative approaches, and references. The intended circulation of this white paper will be the institution's executive administrative board for the initial stage. If supported, the white paper will be circulated to all administrators at the college through institutional email. Further, the paper will be submitted for publication through scholarly sources and academic websites to ensure sharing of information with institutions interested in investigating factors that can affect students' retention and the role that self-confidence plays in student retention.

### **Conclusion**

The literature findings presented in this paper attest to the effectiveness of presenting research findings to policy makers in educational settings in the form of a white paper. White papers can be used to communicate with key stakeholders in a concise and effective manner when the results of the findings are presented in an easy-to-read format. White papers are used to solicit support and effectively communicate recommendations for improvement. The results of the data collected in Section 2 indicated first-year student participation in the FYS was effective in impacting the

students' self-reported academic confidence. The findings provide evidence that students' posttest self-reported academic-confidence scores increased as compared to pretest scores post completion of the FYS. The study failed to conclude if a statistically significant relationship exists when comparing self-confidence scores and student retention. The white paper presents a possible solution to positively address the retention issue based on Tinto's (1987) theory of student departure and Bandura's social cognitive theory (1977). In addition, the white paper recommends the creation of an institutional FYS improvement plan that fits the institutional and student needs. Improving retention practices for incoming students could positively impact students professionally, financially, and inform effective institutional practices that positively impact social change.

### **Project Description**

The white paper will distribute the results of this study and raise the awareness of the importance of self-reported academic confidence as a predictor of students' persistence. The paper introduces recommendations regarding how the FYS can be improved to ensure a complete understanding of the role of academic self-confidence in promoting student persistence. The goals of the white paper are (a) to provide insight and understanding of the study results, (b) to recommend retention strategies grounded in sustaining the effect of self-reported academic self-confidence, and (c) recommend a policy change extending the duration of the FYS to eight weeks. This extension would allow students to more fully explore the learning activities offered in the FYS and engage further with peers and faculty.

To accomplish institutional awareness and obtain the support of the key policy stakeholders that promote FYS experience improvements at the institution, the white paper will be disseminated to the administrative executive board via the college e-mail system upon completion of the doctoral project. Once supported and/or approved for further dissemination, the white paper will be distributed college-wide to administrators, specifically to student affairs and college admissions departments. The college retention committee will be included in the distribution of the white paper. As other institutions also face student retention/persistence issues, the white paper will be distributed via academic journals and professional websites for the consideration of administrators at other institutions.

### **Potential Resources and Existing Support**

The institution prides itself on being data-driven and quality-focused. As the key stakeholders at the college embark on understanding the problem of student retention, the main focus of the resources needed to positively address this problem lie in the overall institutional commitment and human resources. The data-driven focus of the institution will encourage the department of institutional research to focus resources towards gathering further data required to make informed decisions. Additional findings would augment and supplement the reported results of this study.

The departments of admissions, academic affairs, student affairs, and the college wide retention committee will need to be committed to adopting the recommendations presented to improve the FYS course in achieving sustainable academic self-confidence results from students who complete the FYS experience. A need may arise to have a

designated office that oversees the FYS program at the college with a director responsible for monitoring the program outcomes. Funding will be required to support such a position and institutional commitment is imperative in addressing this staffing need. The dissemination of the white paper will not be an issue as the college e-mail server is well-designed for disseminating documents. It is technologically well-equipped to handle mass e-mails and compatible with Adobe Reader and Power Point.

### **Potential Barriers and Solutions**

The goals of this white paper are aligned with the institution's mission to provide quality education their students. The statement by the president's office enforces the institutional awareness of the problem of student attrition and the institution's commitment to examine factors affecting students' retention. The first potential barrier that I envision lies with the recent reorganization of the entire institution where many of the key members of the academic affairs, student affairs and admissions services no longer are in positions of influence at the college. The college-wide retention committee is now comprised of many new members. Therefore, prior to the circulation of the white paper I will schedule personal meetings with the new members of academic affairs, student affairs, and admissions services. These meetings will serve to inform individuals on the goals and significance of the project. The intent of the meetings is to solicit support and raise the awareness of the role of self-reported academic self-confidence student retention.

The second barrier I envision is resistance to change and lack of commitment to ensure positive change, especially as applies to the specific recommendation to extend

the length of the FYS and introduce an additional evaluation of self-confidence post-completion of the first year. As O’Keeffe (2013) suggested, among many factors influencing the students’ ability to drop out is the feeling of not belonging that ultimately originates from being underprepared. Therefore, adequate advising practices and support structures must be created to support student retention. Tinto’s (1987) theory of student departure likewise emphasizes that if not involved, students will choose to leave.

The findings of this study suggest that FYS is effective in improving students’ self-confidence but it did not identify whether the attained self-confidence was sustainable throughout the first academic year. Recommendations put forth in this white paper will require institutional commitment and financial means. Further the recommendations would impact Student Affairs and Admissions Services, thus the resistance to change is anticipated. Kotter’s (1999) 8-step Model outlines the significance of institutional commitment and involvement of the workforce when change is proposed. Thus, applying principles of Kotter’s model would require college-wide retention committee work that will be tasked to oversee the implementation of the recommendations presented in the white paper. To ensure the alignment of institutional strategic initiatives and the recommendations that are made in this white paper an intentional section in the paper will be dedicated to the significance of alignment of institutional actions with institutional strategic plan and mission of the institution (Wolf, & Floyd, 2017).

## **Roles and Responsibilities**

As a scholar and practitioner my role is to present the findings and recommendations in this project to college administrators for consideration and implementation. My role also rests in enforcing the data-driven outcomes reported in this study and call for the institutional commitment to augment and strengthen these findings through implementation of the outlined recommendations. The role I would play in the dissemination of the results and recommendations is two-fold. As a member of the stakeholder group my responsibility extends to informing all stakeholder groups impacted by the recommendations as well as external parties of similar not-for-profit institutions that focus on the problem of first-year student retention.

The key role of involving the stakeholders including the institutional research office, offices of academic affairs, student affairs, and admissions is the domain of the system president. The system president will make the necessary decisions that involve funding, human resources, and release time of key administrators involved in making the changes to the existing FYS experience. More research might be needed using the same FYS course to extrapolate information of the sustainability of the achieved self-reported academic confidence results. Therefore, the office of institutional research may be required to spearhead the process.

## **Project Evaluation Plan**

The goals of the white paper are: (a) to provide insight and understanding of the study results (b) to recommend retention strategies grounded in sustaining the effect of

self-reported academic self-confidence, and (c) to recommend strategies based on policy change to extend the duration of the FYS to eight weeks. This would allow for extended time for students to explore learning activities offered by the seminar and to engage further with peers and faculty. The goals of this white paper are aligned with the institution's mission to provide quality education to their students. The statement by the president's office enforces the institutional awareness of the problem of student attrition as well as the institution's commitment focus on determining factors affecting student retention (J.L. April 19, 2017). Thus, the evaluation of this white paper will be both formative and summative.

York (2012) identified the white paper as a specific type of report that is written for intended audience. The evaluation of such reports rest in gaining feedback and questions from the target audience. The feedback received from the college executive administrative board will be used to determine if the administrators understand and support the urgency, findings, and recommendations outlined in the white paper. Such feedback would determine if administrators identify the need to further explore students' self-confidence and if such recommendations can yield improved student retention. This feedback will provide the formative evaluation of the white paper. The summative part of the evaluation rests in the effectiveness of the project through the assessment of recommendations by the administrative team and through continued monitoring of student retention at the college.

### **Project Implications**

The project presented in this section supports the research findings outlined in Section 2 and emphasizes the effectiveness of the use of white papers. The research findings of this study and the outlined project suggest retention is a recognized problem at the college, and the investigation of self-reported academic self-confidence cannot be undermined. Furthermore, effective matriculation practices presented in the project intended to improve FYS experience are supported. FYS are being offered more consistently in recent years as an intervention tool of matriculation to improve student retention (Barefoot, 2000; Barefoot et al., 2005; Zerr & Bjerke, 2015). Self-confidence is understudied in modern literature as it relates to FYS effectiveness and student retention. Thus, these observations ground this project and highlight its significance in the overall understanding of first-year student retention.

It remains to be determined if further study of the role of self-confidence score post FYS completion can be used as an effective predictor of student retention. Knowing that gender gaps in self-confidence and student first-year retention has been reported with contradicting results in the literature, demographics of students were studied only as represented by gender. The findings reported in Section 2 state that the current FYS does not discriminate against gender. Further investigation may be required to determine if such nondiscriminatory results aid in improving first-year student retention. A gap in the literature is narrowed with the findings of this quantitative study and proposed project as very little is currently known about the relationship that may exist between academic self-confidence and gender, first-year retention, and self-confidence.



**Local Implications**

The white paper recommendations are intended to investigate further whether the achieved self-confidence scores are sustainable at the end of first academic year. The recommendations are intended to further investigate the role of self-reported academic confidence and its role in student retention. As such, sustainable improved self-reported academic self-confidence scores can lead to better academic achievement and improved retention rates at the institution. Improving retention practices for incoming students could positively impact students professionally, financially, and inform effective institutional practices that positively impact social change.

Better informed practices involving student self-confidence have the potential to positively affect students' graduation rates, reduce time spent on degree attainment, and decrease loan debt as supported by Tinto's (1987) theory of student departure and Bandura's (1997) social cognitive theory. Such strides to improve student retention would impact the institution's financial standing and add to the credibility of the institution as a dedicated higher education entity committed to student success.

**Far Reaching Implications**

Educational institutions influence the lives of students and create agents of change on both local and global levels. Students successful in attaining their educational goals graduate and become agents for positive change. The white paper informs how student self-confidence can play a pivotal role in improving student retention and graduation. In addition, the white paper will inform similar educational institutions how self-confidence can play a pivotal role in improving student retention and graduation rates, thus

promoting even more change. Improving retention practices for incoming students could positively impact students professionally, financially, and inform effective institutional practices that positively impact social change.

### **Summary**

A description of the goals and rationale for using the white paper as the project genre was presented in Section 3. This section reviewed the literature on white papers, provided descriptions of resources, barriers, and solutions and discussed roles and responsibilities, implementations, and project evaluation. Section 3 concluded with the implication of the project on local level as well as global implications and the project's role on impacting social change. Section 4 will present my reflections on the project study and my development as a practitioner scholar.

## **Section 4: Reflections and Conclusions**

### **Introduction**

The goal of this doctoral study was to explore the students' self-reported academic confidence before and after participation in an FYS. The confidence level data was collected from completed pre- and postsurvey. The study examined whether there was a statistically significant relationship between first-year students' self-reported academic confidence level pre- and postcompletion of an FYS and first-year completion/retention at a nonprofit U.S. institution of higher education. The study also examined if differences existed between females and males in self-reported posttest academic confidence levels following completion of FYS and after pretest effects were removed. This study did not look at the sustainability of the achieved self-confidence results at the end of the first academic year or at the time of re-enrollment for the following academic year. The white paper resulting from the study will initiate a discussion with institutional administrators regarding how academic self-confidence results reported in this study can be used to impact student retention. The goal is to identify strategies aimed at sustaining the students' self-reported self-confidence results and to ensure that the data on self-reported academic confidence is collected at appropriate times to better inform institutional practices and further develop interventions aimed at student retention.

My service in higher education in various capacities including as a faculty member, academic adviser, and administrator motivated me to examine this topic. In those roles, I experienced firsthand the negative impact on students' success when

institutional onboarding practices are not student-focused, do not promote student engagement and integration, and are not data-driven and continuously evaluated. Further, given Bandura's (1997) social cognitive theory, which indicates that if self-efficacy is not sustained the person/student might lose motivation to persist, I was interested in what role, if any, students' academic self-confidence plays in student retention. Thus, the research questions were selected to guide this study were:

RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?

RQ 2: What is the relationship between students' first-year retention and students' self-reported academic confidence level as measured by survey scores after completion of FYS?

RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?

The goal of my research is to inform college administrators of the impact of students' reported self-confidence on student retention aligned to the completion of an FYS. The purpose of the project was to propose changes to current institutional practices to address the sustainability of the students' self-reported academic self-confidence levels, create a data driven process that monitors the sustainability of the students' self-reported confidence, and examine the relationship between sustained self-reported academic self-confidence and first year retention. Such data-driven practices would inform recommendations to increase revenue to sustain FYS program management and

implementation on institutional level and would positively impact students both financially and professionally.

### **Project Strengths and Limitations**

#### **Strengths**

The white paper was the deliverable developed after the review of the study results. The white paper itself is a strength as it provides a unique opportunity to communicate the findings of the research study in a concise and easy to understand manner (Creswell, 2012). Further, the presented findings are easy to circulate in the form of a white paper and serve to target college administrators involved in decision-making processes. Another strength of presenting findings in a white paper format is the ability to highlight and communicate recommendations in response to the study findings. The strength of the white paper lies in drawing the attention of the administrators to how student academic self-confidence is impacted in the current FYS and how FYS can be leveraged to yield better student retention and student success. Finally, although the current literature is saturated with various studies on the effectiveness of FYS programs nationwide, there is no readily accessible literature that explores the role of student self-reported academic confidence as a predictor of student retention. Thus, the final intent of this white paper is to narrow the existing gaps in the current literature regarding the role of student self-reported academic confidence as a predictor of student retention.

#### **Limitations**

This project study and the resulting white paper are first and foremost limited by the sample size. Even though a full census was employed, the findings cannot be

generalized; however, they may be of interest to administrators of similar colleges or universities. Another limitation of the project was that only students enrolled in undergraduate degree programs were used as study participants. One of the assumptions of the study was that the findings would not be relevant to non-degree, certificate, or graduate program students. A third limitation of the study and the white paper was that aside from gender, no other factors were considered when conducting the study such as first-generation students, socioeconomic status, and other variables.

There was a limitation in the methodology used in this study. The data obtained for the study were reliable as it was provided through institutional records. The information obtained from the self-reported academic self-confidence survey could have been supplemented using mixed methodology. As noted by Stewart and Shamdasani (2014), focus groups enrich the understanding of quantitative data already available to the researcher. Small focus groups of students would be able to triangulate the quantitative data. Further, the focus groups could broaden the understanding of whether the decision to stay or leave college was based on student academic self-confidence.

Another limitation lies in the theoretical platform guiding the study. Tinto's (1987; 1988) theoretical framework supports that students who feel socialized into college are more likely to stay. Factors such as self-esteem and self-confidence have been identified as precollege factors that contribute to the students' decision to stay or leave college (Tinto, 1993). Tinto's framework was developed primarily for campus-based students and colleges, and did not factor in commuter campuses or online campus

environments. Therefore, considerations must be given to a new college-retention theory and model specifically created for commuter-campus students.

Finally, it must be noted that one of the most significant limitations of the white paper is getting the stakeholders to read, understand, and embrace the recommendations offered in the report. In this case, the issue is expounded by the institution undergoing comprehensive academic restructuring that affected many of the divisions and administrators within the target audience for this white paper. Prior to the dissemination of the white paper, I will schedule meetings with the new members of academic affairs, student affairs, and admissions. These meetings will inform each of the members on the goals and significance of the project. Lastly, a limitation lies in adopting the recommendations put forward in the white paper as those are of operation and policy change levels.

### **Recommendations for Alternative Approaches**

Dissemination of research findings in an educational setting can be accomplished in various ways, including oral presentations, published journal articles, and conference presentations (Creswell, 2012). The project presented in this doctoral study could be presented to college administrators and could also be part of a student and administrator panel discussion. While identifying key administrators and a viable pool of student participants for such a panel can be challenging, the effort will be rewarded in both groups developing a better understanding the role of self-reported academic confidence post completion of FYS intervention at the research site. Thus, I recommend that the conversation on the impact of academic self-confidence and the role that it plays on first-

year college student retention start with an oral presentation that is followed by a student-administrator panel discussion.

Although little focus is given in the current literature of the impact of self-confidence on student retention, ample research has been conducted to understand the problem of student retention (Tinto, 2006; Pascarella & Terenzini, 1991) and the FYE (Barefoot, 1992; Barefoot, 2000; Barefoot et al., 2012, Bers & Younger, 2014). The impact of student involvement and integration as conditioned by effective matriculation practices to improve retention have been studied (Austin, 1993; Tinto, 1987; Tinto, 2006). This investigation of student involvement included various analysis of FYE, freshman college programs, freshman orientation courses, seminars, first-year advising models, learning communities, and college-wide retention specialists. Strategies for improving student retention must include a close examination of the causative factors leading to student departure and need to be grounded in the academic confidence of students entering college (Barr & Schuetz, 2008; Bonet & Walters, 2016; Davidson & Wilson, 2013; O’Keeffe, 2013; Zerr, & Bjerke, 2015). One strategy to change attrition is to impact academic self-confidence and college preparation prior to the first year of college.

### **Scholarship**

Scholarship and learning are related terms and involve gaining knowledge by the process of studying and investigating (Mairs, 2014). I have been immersed in the process of learning and investigating since I embarked on advancing my education. My investigation of the student retention problem started over ten years ago as personal



observations while working as an academic advisor. I investigated this research topic as a scholar-practitioner when conducting the literature review and found the topic of student retention to be scarce of sources investigating the role of self-reported academic confidence on student retention and the role that FYS plays as an effective matriculation practice. The lack of research addressing the role of academic self-confidence and its impact in first-year student retention was eye opening. Many studies discussed the significance of factors that contribute to understanding the student retention problem but very little could be found on the role of student motivation, self-esteem, self-confidence, and student retention.

The literature was scarce on the topic of gender and academic self-confidence and first-year student retention. Other than a few Science, Technology, Engineering, and Math (STEM) and gender studies, the literature did not provide information regarding how FYS impacts self-reported academic self-confidence and gender. One of the outcomes of this scholarly investigation is that practitioners are obligated to continue the journey of understanding the student retention problem. The conversation about how retention interventions put in place impact student self-confidence and student retention must continue. When conducting research, a review of the literature to inform the researcher is imperative so gaps can be identified. This assists practitioners to focus research where it is needed so outcomes leading to positive social change can be determined. Scholarship is a tedious process. It grounds the foundation of informed research practices and problem solving that lead to effective operational practices.

## **Project Development and Evaluation**

When I started the journey of working on my dissertation I knew I had to recommend a project relevant to the findings of the study and that would further promote the understanding of student retention, FYS, and the role of academic self-confidence in student retention. Various research findings reported the positive impact of FYS programs on student retention (Barefoot, 2000; Barefoot et al., 2005; McConnell, 2000; Stewart, DooHun, & JoHyun, 2015; Zerr & Bjerke, 2015). The current practices of the college were to gather information on self-reported academic confidence, but no analysis was done to understand the role of the students' self-reported academic confidence and student retention. Further, the institution underwent an academic restructure and various administrators changed at the college. Thus, I wanted to select a project that would be current, effective, and aligned with the institution's mission and vision. Because I wanted an effective communication tool that was easy-to-read and understand and provided me with the ability to broadly share my findings and recommendations, the white paper was the selected choice for the project. In selecting the genre of a white paper, I was led to another area of scholarship, researching the project type and then defending the genre choice. As very few scholarly sources related to the use of white papers were found, it is evident more practitioners need to leverage this choice of study result dissemination (Neuwirth, 2014; York, 2012). The white paper could serve as a mode of communication of research findings and recommendations in educational settings.

York (2012) identified the white paper as a specific type of report written for an intended audience; the evaluation of such a report rests in gaining feedback and questions from the target audience. I will use the feedback received from the college executive administrative board to determine if administrators understand and support the urgency, findings, and recommendations outlined in the white paper. Such feedback will determine if administrators recognize that students' self-confidence needs to be explored further and if such recommendations can yield improved student retention. I will use this feedback to provide the formative evaluation of the white paper. The summative part of the evaluation rests in the effectiveness of the project through the assessment of recommendations by the administrative team and, through continued monitoring of student retention at the college.

### **Leadership and Change**

Change and leadership in higher education involve developing practices that initiating transformations that stem from innovative interventions driven by research findings. Leadership encourages a deeper dive into understanding what works. It further highlights the gaps in practice that provide the opportunity for team work that can lead to change (Buller, 2015). Leadership and change in higher education has been researched to explore the challenges leaders face in a time of transformation (Hilton, & Jacobson, 2012; Kezar, 2013; Kezar, 2012). As a result, change management and leadership, collectively, in higher education are popular research topics as reflected in the results of a Google scholar search that yielded 3,630,000 results. As I researched many of these sources I learned how prevalent this topic is.

As a leader in higher education I could relate to various leadership styles and leadership strategies that resonate with my own leadership philosophy. My leadership philosophy is that being a leader is a privilege and an opportunity to inspire people and guide them to be their very best. Leadership is possible when the leader believes in cooperative learning experiences that inspire project creations through trust, communication, and exchange of innovative ideas. As I near to the completion of my doctoral study I hope to apply change management in a setting that aligns with my personal leadership philosophy and is supported by the institution for the purpose of advancing students' success.

### **Analysis of Self as a Scholar, Practitioner and Project Developer**

I started the doctoral journey with a desire to understand the student retention problem and the role that student reported academic self-confidence plays in student retention. The passion for this topic developed several years prior to starting this doctoral study. During my professional career in higher education I have had several roles inclusive of faculty member, academic adviser, associate dean, dean, and online program director. In each of these roles I dealt with the question of what makes students leave college. I developed a curiosity to understand what can help students stay in college. As an administrator, I reflect on the problem of student retention and attempt to understand the factors that can predict student retention. Further, I strive to support the development of projects and evaluation practices that lead to student success. Thus, the problem of student retention is important to me as a professional.

I fully understand that various schools of thought surround the topic of student retention. It was most significant for me to understand how student perceptions of their own confidence effect their ability to stay in college. This is a concept that is supported by Bandura's (1997) social cognitive theory which states that if self-efficacy is not sustained, the person/student might lose motivation to persist, as well as Tinto's (1987) theory that is suggestive of self-esteem being a factor that impacts the student's ability to persist or leave college.

As I complete this Doctorate of Education (EdD) with Walden University, I have spent the past four years reexamining all my previous professional experiences and using the knowledge I have gained through individual courses in the program to develop and analyze myself as a scholar and practitioner. I have grown as a scholar since starting the program through developing organizational skills, critical thinking, and problem-solving skills, as well as through numerous re-writes, assessing peer comments, and critiques. I have been fortunate to be impacted by faculty members who modeled firsthand what it means to be a scholar practitioner and have spent time in teaching what it means to be a lifelong learner. I would have to say that through this process I have truly learned the meaning of flexibility and patience. I understood how to step back and analyze concepts and research problems to understand different perspectives. I understood how scholars communicate and that true scholars can agree to disagree. I also understand that scholars must substantiate their opinions through ethical scholarly practice and by supporting opinions though literature findings. Through this process I have learned how to balance

my work and personal life. As a result I have learned to apply motivational and self-confidence stimulating activities into my own teaching and advising practices.

I have always considered myself an educator and a leader. As a teacher and an administrator in higher education I believe in the opportunity to inspire people and guide them to be their very best. Leadership and teaching are possible when the leaders and teachers believe in cooperative learning experiences that inspire project creations through trust, communication, and the exchange of innovative ideas. As I investigated the topic of retention at my institution I began to recognize where we could do better with the existing matriculation practices. As a practitioner, I recognized that my institution focused on collecting data but did not leverage the information being collected. Further investigations of the current matriculation practices were needed to yield student success. It was very apparent to me that the institution responded to the need to matriculate the students, but they approached this need from the perspective of a fast/brief program which did provide orientation opportunities for the students but did not allow for sustainable effects. The current approach is a one-shot intervention but long-lasting interventions have been proven to be more effective in impacting student retention (Hyers & Joslin, 1998; Miller & Lesik, 2015; Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013; Connolly, Flynn, Jemmott, & Oestreicher, 2017; Reid, Reynolds, & Perkins-Auman, 2015).

The white paper I created as a project from my research finding will hopefully serve as an effective communication strategy with the key stakeholders at the institution. It will provide me with the opportunity to highlight the findings of this study and make

recommendations grounded in data-driven decisions, program evaluation practices, and yield sustainable results that will lead to improved student persistence. With the most recent academic restructure that occurred at the institution this is the path of least resistance.

My journey in obtaining the Doctorate of Higher Education degree from Walden University as a scholar and practitioner has truly impacted my personal and professional growth. This journey provided me with a unique opportunity to research student retention and self-confidence, a topic that I am personally passionate about. It is my hope that this study will contribute to the existing discussion of how self-confidence impacts first-year student retention.

### **Reflection on Importance of the Work**

The work presented in this doctoral study is the reflection of my educational journey and is significant for me. It was an opportunity for me to combine my personal passion of the problem of student retention and gain a better understanding of how the currently offered FYS program impacts retention and students' self-reported academic self-confidence. As the project developed I found the significance of this work as an opportunity to narrow the existing gap in the literature related to the role of academic self-reported confidence as a predictor of student retention. The literature cited in this study attested to the abundance of research conducted to understand student retention and various FYS employed by institutions of higher learning. It clearly highlights the gap that exists in the research and begins to fill it. It will inform the research study site regarding current FYS impact on self-confidence and start the conversation regarding how self-

confidence effects can be sustained and measured to better inform FYS program effectiveness and to improve student retention.

### **Implications, Applications, and Directions for Future Research**

Educational institutions influence the lives of students and create agents of change on both local and global levels. Students who are successful in attaining their educational goals graduate and become agents for positive change. The white paper will inform readers about how student self-confidence can play a pivotal role in improving student retention and graduation. Further, the white paper will make key stakeholders aware of the gaps that exist in the current FYS evaluation practices and encourage data-driven practices to improve student matriculation practices such as FYS.

The recommendations presented in the white paper are intended to further the investigation of whether the achieved self-confidence scores are sustainable at the end of first academic year. Better informed practices involving student self-confidence have the potential to positively affect students' graduation rates, reduce time spent on degree attainment, and decrease loan debt as supported by Tinto's (1987) theory of student departure and Bandura's (1907) social cognitive theory. Such strides to improve student retention will positively impact the institution's financial standing and add to the credibility of the institution as a dedicated higher education entity committed to student success.

Future research on this topic is imperative to increase the body of knowledge that focuses on understanding the role of student self-reported academic self-confidence as a predictor of students' retention. Qualitative data could be gathered from student focus



groups who have completed the FYS as a first-year matriculation to college. Such data would add depth to the quantitative data being collected from student records. Individual student interviews can be conducted to add to the qualitative data being collected. As the study focus was to understand the role of students' self-reported academic confidence pre- and postcompletion of FYS and student retention, the collected formative, qualitative information from the students would enhance the understanding of the role of self-confidence and student retention. Future research on this topic could also focus on understanding which part of the curriculum in the FYS seminar had the greatest impact on self-reported academic self-confidence. In addition, the ultimate approach would include conducting a multi-site study thus allowing for cross-examination and referencing of various FYS seminars such as other private and other public institutions where both commuter-campus and campus-life institutions are compared.

### **Conclusion**

My doctoral journey culminated in this body of work inspired through my own professional experiences and the desire to impact students' experiences to yield improved student retention and sustained academic self-confidence. The overall goal of this research study was to investigate the role of self-reported academic self-confidence prior to and after the matriculation practice, FYS, and if self-confidence can be used as a predictor of student retention. Thus, the project created based on the study results is a white paper. The white paper provides insight to college administrators regarding student self-reported academic self-confidence and the role it plays in student retention post-completion of FYS. The other goal of the white paper is to inform institutional

administrators of recommendations that can improve the sustainability of the achieved self-confidence effects and improve institutional practices to be more data-driven and measurable.

Even though the study was conducted in one large not-for-profit institution, and the findings cannot be generalized, the study carries value as it provides insight into the practices of one institution. It further identifies areas for research that focus on the role of student self-reported academic self-confidence and student retention. This study instigated conversations that included not only institutional practices and administrators, but also self-efficacy of students as measured by the pre- and postcompletion of FYS. The implications for social change of this project are evident. Those are reflected in the white paper and include how student academic self-confidence can play a pivotal role to improve student retention. The white paper will inform similar educational institutions on how academic self-confidence can play an integral role in improving student retention that can lead to timely student graduation, thus promoting even more positive change. Improving retention practices for incoming students could positively impact students professionally, financially, and inform effective institutional practices that positively impact social change.

As I conclude this journey I feel that the work has just begun. I feel energized to continue investigating the problem of student retention and how academic self-confidence can impact student retention. I believe studies that focus on understanding the impact of interventions on student self-confidence have the potential to yield student success outcomes. Further, studies and projects that influence students' ability to

graduate in a timely manner and positively impact social change as graduates become advocates of change align to Walden University's mission of affecting positive social change.

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## Appendix A: The Project

### **Executive Summary**

College student retention and first-year college success have been identified as higher education challenges and have become a focal point of discussion in higher education (American Institute for Research, 2016). First-year student retention, reported at 50% for full-time status students, was identified as a challenge at Baker College. Despite a matriculation intervention, FYS, the retention at the college continued to decline (NCES, 2016). Academic self-confidence was reported to be an indicator of academic achievement (Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013; Pascarella, & Terenzini, 1983; Walsh & Kurpius, 2016). No investigation was done to determine whether there is a statistically significant relationship between completion of FYS and the student's self-reported academic self-confidence levels as an indicator of student retention.

This study was completed using quantitative research methodology to explore Tinto's (1987) theory of student retention where academic integration is inclusive of examination of academic self-esteem and students' self-confidence levels. The guiding research questions were:

RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?

RQ 2: What is the relationship between students' first-year retention and students' self-reported academic confidence level as measured by survey scores after completion of FYS?

RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?

The results of the study were reviewed and a literature review was performed that resulted in recommendations to improve student retention through FYS experience and sustainability of academic self-confidence. The goals of this white paper are:

- to provide insight and understanding of the study results;
- to recommend retention strategies grounded in sustaining the effect of self-reported academic self-confidence;
- to recommend a policy change to extend the duration of the FYS. This promotes fuller engagement of students in the learning activities offered by the seminar and encourages greater socialization with peers and faculty.

Although these results and recommendations are specific to Baker College, the white paper informs similar institutions of higher learning desiring to decrease attrition and improve first-year student retention.

### **The Problem**

First-year student retention was identified as a challenge at Baker College. Figure A1 highlights the reported first-year student retention rates nationwide and at Baker College. The first-year student retention at the college was reported at 50% for full-time status students during the 2014-2015 academic years, 33% for part-time status students during the 2014-2015 academic years, and a reported graduation rate of 13% for students who enrolled at the college since the Fall of 2009. Further, the college reported first-year

student retention rates of 49% for full-time status students for the 2015-2016 academic years, 31% for part-time status students for the 2015-2016 academic years, and a reported graduation rate of 15% for students who enrolled at the college since the Fall of 2010, attesting to the need to investigate the student retention problem at the research site (NCES, 2016, NCES, 2017).

Despite a matriculation intervention, FYS, designed to address the retention problem, retention continued to be a concern (NCES, 2016). Institutional practices included collecting students' self-reported academic confidence scores both prior to and after completion of the FYS. Knowing that academic self-confidence was reported to be an indicator of academic achievement, it was important to determine if a change in academic self-confidence was related to the completion of an FYS and could be used as an indicator of student retention (Afari, Ward, & Khine, 2012; Arshad, Zaidi, & Mahmood, 2015; Cassidy, 2012; Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013; Pascarella, & Terenzini, 1983; Walsh & Kurpius, 2016).

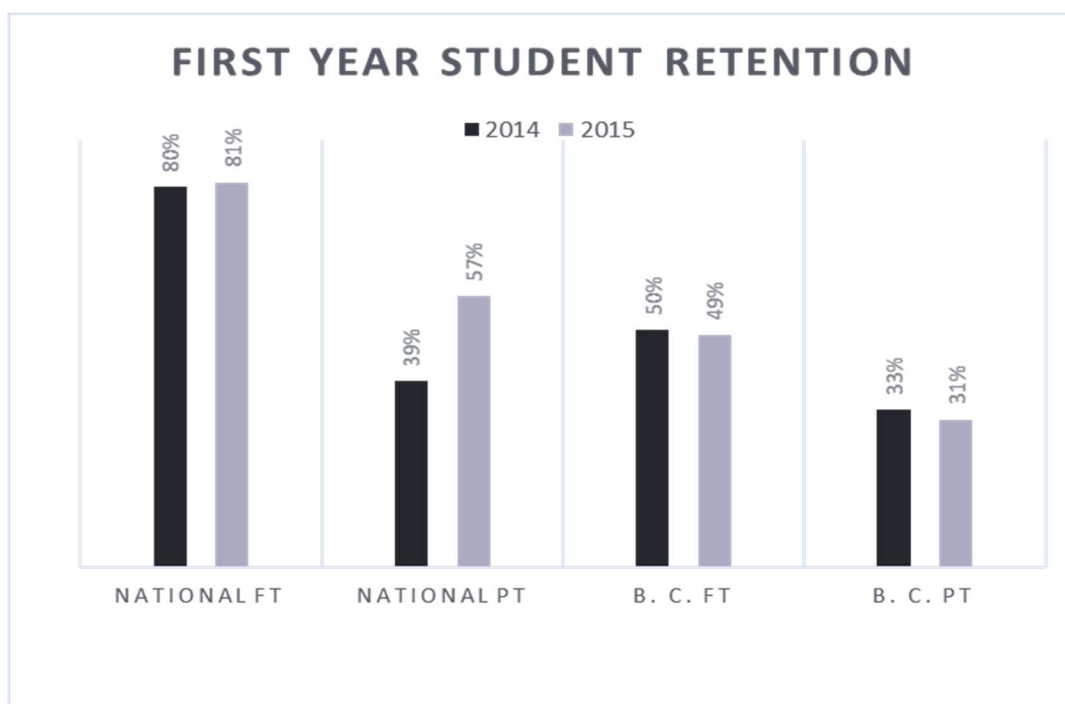


Figure A1: First Year Student Retention

### The Theoretical Framework

The work of Tinto (1987), Astin (1993), and Terenzini and Pascarella (1984), collectively, provided the foundational relevance and historical understanding of first-year retention and student retention. Tinto (1987) supported that positive learning outcomes are those that foster student involvement as defined by the student's need to be socialized to the setting and the ability to handle academic rigor. He referred to involvement and quality student effort as factors that impact persistence. Tinto's (1987) theory of retention framed this study as it addresses the academic integration of individual students and reflects on academic self-confidence and the role that it plays in retaining students.



Where this study moved beyond the foundational understanding of retention is in its focus on self-confidence and the role that it plays in retention. This study investigated specific interventions put forth by the institution to further understand academic integration as discussed by Tinto (1987; 1997; 2000) to include academic self-confidence and the role it plays in retaining first-year students. Involvement of students is possible when integration for the students includes onboarding practices such as an FYS that positively affects academic self-confidence. Such involvement can be achieved through various stages of retention where orientation to college is made possible through an intentional FYS. Interventions such as an FYS provide the new students with information about the character of institutional life and academic system requirements (Swing, 2002; Zerr & Bjerke, 2015).

Baker College was established with a mission to offer quality higher education and training that lead to student success. Student retention focus cannot be undermined, and it was important to determine if the FYS is an effective matriculation practice that leads to improved academic self-confidence and fosters a culture of student retention.

### **Design and Approach**

This study sought to evaluate whether academic self-confidence can be used as a predictor of student retention. A non-experimental, causal comparative, quantitative research study design was used. The following research questions were selected to guide the study:

RQ1: Is there a difference in students' self-reported academic confidence level as measured by the survey scores prior to and after completion of the FYS?

RQ 2: What is the relationship between students' first-year retention and students' self-reported academic confidence level as measured by survey scores after completion of FYS?

RQ 3: What is the difference between females and males in self-reported posttest academic confidence levels following completion of an FYS after removing the effects of pretest academic confidence levels as measured by survey scores?

A full student census ensured the entire first-year student population who began in Fall 2015 was represented.

### **Instrumentation and Materials**

An institution-developed Academic Self-Confidence Survey was used to measure students' academic self-confidence before and after completion of FYS. The students were asked to rate six items using a 6-point Likert Scale ranging from 1, *strongly disagree*, to 5, *strongly agree*. Further the sixth point choice was designated as not applicable (NA). To score the survey, the rating from the student was summed to obtain a total score. The NA was recorded as 0 and was included in the total score.

The Academic Self-Confidence Scale provided from the research site included student information such as age, gender, plan of study, and race. This data was used for descriptive purposes with gender used as an independent variable to answer the third research question and associated hypothesis. The study used preexisting data from archived reports at the college's databanks. No investigator-participant interaction occurred in this study. The institution conducted all the necessary surveys and data collection used in this study. The data required to conduct the study was obtained from

the institution and included gender, seminar completion numbers, re-enrollment numbers for the second year, and self-reported pre- and post-academic self-confidence scores for students enrolled in the FYS course. Data was limited to student information for incoming first-year students who completed the FYS during the Fall 2015 quarter.

### **First-Year Seminar**

The FYS is a one-week course that involves learning outcomes that are intended to enculturate students to the college environment and introduce students to the academic requirements. The course is delivered 100% online and students get an opportunity to interact through discussion boards and assignment submissions. The students must complete the FYS prior to starting their first course at the college. The academic self-confidence pretest survey is completed on day one of the course and the posttest survey is completed on the last day of the course. The students are expected to explain the student role and responsibilities at the institution including student handbook policies inclusive of academic integrity.

Students engage in various activities that address the use of technology in the classroom including discussion board participation, assignment submissions, and testing. Students are expected to engage in various research activities including use of the library, the writing center, and other academic support resources. The assignments in the course are designed to familiarize the students with nonacademic support services such as career services, financial aid, and the book store. Academic rigor expectations are reinforced through submitted assignments that require participation on the discussion boards and short American Psychological Association (APA) style paper submissions. Students'

career exploration and discussion of the chosen career field are addressed, and students are introduced to various professional student organizations available to them at the institution. At the end of the course students are asked to complete a post-experience survey. It is possible for a student to complete the FYS course and not complete the post-experience survey. Thus, any student who did not complete the post-experience survey was excluded from the census.

## **Results**

The research questions and hypotheses (see Table A1) were tested using paired *t*-tests for dependent samples, point-biserial correlations, and one-way analysis of covariance (ANCOVA). Statistical significance of the findings was made using a criterion alpha level of .05. Research question 1 and the hypothesis were tested using a paired *t*-test for dependent samples to evaluate pretest and posttest scores for changes in students' self-confidence.

Table A1

*Dependent Samples from t-test – Change from Pretest to Posttest for Academic Self-Confidence*

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>DF</i>	<i>t</i>	Sig
Ability – Face-to-Face						
Pretest	2,974	4.07	.84	2,973	13.01	<.001
Posttest		4.27	.79			
Ability – Online						
Pretest	2,864	3.73	.97	2,863	20.78	<.001
Posttest		4.10	.91			
Nervous – Face-to-Face						
Pretest	2,975	2.64	1.15	2,974	-8.80	<.001
Posttest		2.47	1.18			
Nervous – Online						
Pretest	2,857	2.96	1.21	2,856	-15.36	<.001
Posttest		2.63	1.24			
Satisfied						
Pretest	2,892	3.93	.88	2,891	18.93	<.001
Posttest		4.26	.89			
Tech Skills						
Pretest	2,970	4.04	.86	2,969	16.37	<.001
Posttest		4.27	.79			
Academic Self-Confidence						
Pretest	2,775	21.39	2.69	2,774	11.29	<.001
Posttest		22.02	2.81			

The results of the *t*-test for the dependent sample that compared pretest to the posttest scores for all students were statistically significant. Academic self-confidence is the summed total of the six items that were measured in this study. The comparison of the pretest scores ( $M = 21.39$ ,  $SD = 2.69$ ) with the posttest scores ( $M = 22.02$ ,  $SD = 2.81$ ) was statistically significant,  $t(2,774) = 11.29$ ,  $p < .001$ . Based on the findings for the total scores and the six items, the null hypothesis of no difference in pretest and posttest scores

was rejected. Participation in the FYS appeared to make a difference for the students when entering the college.

Research question 2 (see Table A2) and the hypothesis were tested using point-biserial correlations to describe the strength and direction of the relationship between the dichotomous variable, student retention, and the continuous variable, posttest self-confidence scores.

Table A2

*Point-Bi-serial Correlations – Re-enrollment in the College and Academic Self-Confidence*

Academic Self-confidence	<i>N</i>	<i>r</i>	<i>p</i>
Ability – Face-to-Face	2,974	.03	.169
Ability – Online	2,905	.02	.325
Nervous – Face-to-Face	2,975	.03	.076
Nervous – Online	2,902	.02	.418
Satisfied	2,967	.02	.197
Tech Skills	2,973	-.01	.930
Academic Self-confidence	2,886	.04	.023

The correlations between the six items measuring academic self-confidence were not statistically significant, indicating re-enrollment was not related to posttest skills. The correlation between academic self-confidence ( $r = .04$ ,  $p = .023$ ) was statistically significant. However, the magnitude of the relationship was small, indicating the significance may be more related to the number of cases rather than the actual relationship between the variables. Based on the results of these analyses, the null hypothesis of no relationship between re-enrollment and posttest scores was retained.

Research question 3 (See Table A3) and the hypothesis were investigated using a one-way analysis of covariance (ANCOVA). The effects of the pretest for academic self-confidence were removed from the posttest to provide the change in self-confidence between the male and female students.

Table A3

*One-way ANCOVA – Six Items Measuring Academic Self-Confidence by Gender*

Variable	Sum of Squares	DF	Mean Square	F	Sig	$\eta^2$
Ability – Face-to-Face	.33	1, 1383	.33	.72	.396	.01
Ability – Online	.34	1, 1333	.34	.58	.446	.01
Nervous – Face-to-Face	1.06	1, 1385	1.06	1.23	.268	.01
Nervous – Online	.85	1, 1324	.85	.84	.360	.01
Satisfied	.76	1, 1347	.76	1.21	.272	.01
Tech Skills	.48	1, 1382	.48	1.10	.294	.01

The comparison of the six items measuring academic self-confidence did not provide evidence of statistically significant differences between male and female students. The covariates for each of the six items were statistically significant, indicating that the pretest scores were removing a statistically significant amount of variance from the posttest scores. Based on these results, the null hypothesis of no difference in academic self-confidence between and male and female students could not be rejected.

### **Recommendations**

The first finding of the study is indicative that the FYS appears to make a difference for the students when entering college as reflected by a statistically significant change of self-reported academic self-confidence scores prior to and after completion of

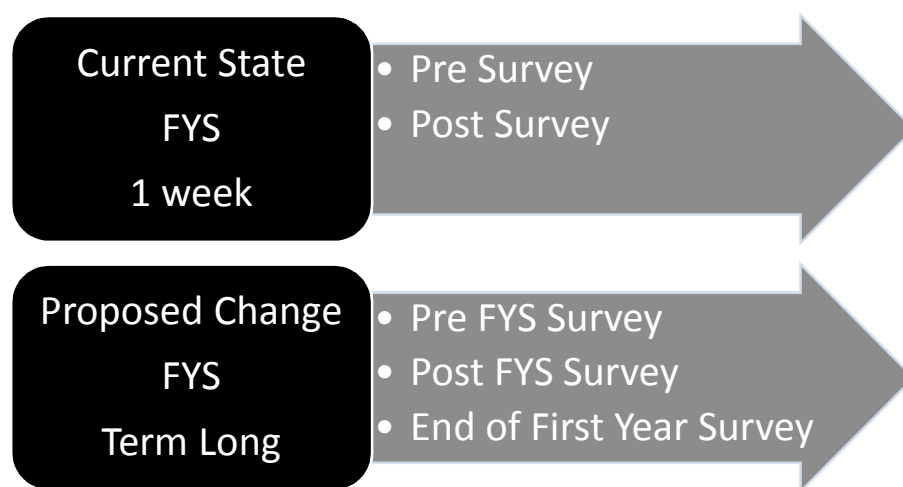
the FYS. The second finding of the study failed to identify a statistically significant relationship between improved academic self-confidence score and student retention. Consequently, the first recommendation is to strengthen the obtained results of sustaining the achieved effect of improved academic self-confident and further explore why such effect, if observed, does not impact students' retention.

The literature findings are suggestive of the FYS's impact on student persistence when the seminar is offered as a term-long experience and is a for-credit course (Hyers, & Joslin., 1998; Miller & Lesik, 2014; Nicholson, Putwain, Connors, & Hornby-Atchison, 2013; Connolly, Flynn, Jemmott, & Oestreicher, 2017; Reid, Reynolds, & Perkins-Auman, 2014). Further, a recent study by Permzadian and Credé (2016) is suggestive that extended orientation seminars, when delivered in the span of the entire first term, are most effective in positively impacting student retention. Self-efficacy is the core construct of Bandura's (1997) social cognitive theory and one of the implications of the theory states that if self-efficacy is not sustained, the person/student might lose motivation to persist. The findings are suggestive of improved posttest self-confidence scores, but it remains to be identified if the achieved affect is sustainable at the end of first year. Thus, it must be explored further if the self-confidence effect is sustainable after the end of the seminar and if it is sustained at the end of the first academic year prior to making any assumption of self-confidence as an indicator of student retention.

**Recommendation #1:** The first recommendation is to administer the Academic Self-Confidence Survey to the students who have completed the FYS course at the end of the first term after the completion of the FYS and at the end of the first academic year.



Figure A2 outlines the major changes of current FYS and of the proposed change. The collection of this information would foster data driven decisions to develop retention strategies and an FYS evaluation plan focused on the sustainability of academic self-confidence. These obtained results of the academic self-confidence scores would add to the information concerning whether the FYS intervention achieved academic self-confidence score is sustainable. Further, these results can be compared to first-year student retention information.



**Figure A2: FYS Model**

**Recommendation #2:** Cassidy (2012) suggested prior achievement and academic self-efficacy are solid predictors of GPA outcomes and that self-efficacy is a factor that can predict student persistence. Literature findings are suggestive of FYS's impact on student persistence when the seminar is offered as a term-long experience and is a for-credit course (Hyers & Joslin, 1998; Miller & Lesik, 2015; Nicholson, Putwain, Connors, & Hornby-Atchison, 2013; Connolly, Flynn, Jemmott, & Oestreicher, 2017; Reid, Reynolds, & Perkins-Auman, 2015). Knowing the academic self-confidence effect

observed in the current study was achieved with a week-long intervention, the second recommendation is to extend the seminar length from one week to 16 weeks. The reasons for this recommendation are:

1. This would allow extended time for students to explore the learning activities offered by the seminar and engage further with peers and faculty.
2. This would allow each of the course objectives to be explored in more detail.
3. This would allow increased student interaction with institutional structures that impact students; success such as Learning Support Services, the Library, and Financial Services.
4. This would allow students to further socialize with faculty and peers that have served to be positive role models in fostering first-year students' retention.

The FYS experience offered as a current matriculation practice employs Tinto's (1987) model of student departure. The extension of the seminar length and extending the time spent on each of the outcomes of the course supports Tinto's theory of retention that addresses the academic integration of students and reflects on academic self-confidence and the role that it plays in retaining students. Extended-orientation type seminars that support integration of students into institutional expectations and allow students to engage with institutional expectations yield successful retention outcomes (Feldman & Kubota, 2015; Honicke & Broadbent, 2016; Miller & Lesik, 2014; Nicholson et al., 2013).

**Recommendation 3:**

Currently, the college offers the FYS as a first-year student matriculation practice and does not assign credit hours to the delivery of this course, nor is grade assignment employed. The course is available to all students free of charge and students receive *satisfied* or *not satisfied* status upon completion of the FYS. The fact that the course does not award any credits and does not require a passing grade can undermine the importance of the course to the students. Thus, recommendation 3 is twofold:

1. Changing the course from a non-credit to a credit-awarding course would improve revenue generated from the overall enrollment at the college and offset the cost associated with the position of director of the FYS program and FYS-dedicated faculty positions. The director of the FYS program would oversee hiring and training of FYS-dedicated faculty as well as oversee ongoing FYS evaluation. Knowing every first-year student must complete the FYS and assuming the course would be one credit hour, the revenue generated with this change is estimated at \$550,000 per year. The estimate is based on 2000 new students enrolling at the college for Fall and Spring semesters. The revenue generated from this course would offset instructional costs and support the new position of director of the FYS program.

2. Changing of the FYS course to award credit and a passing grade required to pass the course would demonstrate the seriousness of the program to the students and enforce a more focused approach of the students to the FYS course.

Recommendation 3 is supported in the current literature through findings by Permzadian and Credé (2016) that are suggestive of the role of the faculty and specific

faculty training that impacts student retention through FYS courses. Most reported findings in the literature attests to the positive impact of FYS courses and students' retention include courses that are assigned a credit hour and which require a passing grade to complete the course (Feldman & Kubota, 2015; Honicke & Broadbent, 2016; Miller & Lesik, 2014; Nicholson et al., 2013; Permezadian & Credé, 2016).

### **Conclusion**

This quantitative research study explored the investigation of self-reported academic self-confidence as a predictor of student retention to answer the research questions. The findings revealed that FYS appeared to make a positive difference for the first-year students as reflected by a statistically significant change of self-reported academic self-confidence score prior to and after completion of the FYS. The study failed to identify a statistically significant relationship between improved academic self-confidence score and student retention and that self-confidence scores were not gender bias. The Mission of Baker College is to provide quality higher education and training that rests in students' success. An institutional opportunity to improve student retention and create innovative initiatives that ensure quality educational experiences aligns with the mission (Baker College, 2016). The college responded to the existing student retention problem with the formation of a college-wide retention committee and a subcommittee tasked to develop a retention-improvement plan.

An FYS was implemented as an intervention to assist students to be academically successful and to improve overall retention at the college. Further, the college president for the online campus issued the following statement, "The College system is very

focused on student retention and graduation rates. The institution continues to implement and assess strategies to positively impact these metrics” (J.L., April 19, 2017). The recommendations put forth in this paper closely align with the institution’s commitment to provide quality educational experiences that rest in student retention and students’ successful attainment of their learning goals. The recommendations in this white paper have primarily focused on how current matriculation practices can be changed to sustain the academic self-confidence results reported by the students. Further recommendations provided in this paper outline solutions that can address the HR barriers and provide dedicated FYS department funding to provide infrastructure that will monitor and continuously evaluate the effectiveness of the FYS program at the college.

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