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A Study of Effective Strategies for Retention for At-Risk Students at a Small Private Liberal Arts College

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by

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A Dissertation submitted to the Education Faculty of Lindenwood University in partial fulfillment of the requirements for the degree of

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

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Abstract

Student retention in higher education is currently one area most colleges are looking to improve and build upon (Baer & Norris, 2016). Higher education institutions in the United States have been under increased scrutiny from lawmakers and accrediting agencies to provide an affordable education for a diverse population for jobs in a highly technical economy (Boateng, Plopper, & Keith, 2015; Slanger, Berg, Fisk, & Hanson, 2015). Some colleges and universities are exploring programs to engage the modern student through the creation of learning communities, first-year programming, and interventions to bridge the gap of those students who are highly unlikely to persist to graduation (Alarcon & Edwards, 2012; Selingo, 2015). This study focused on an all-male retention program in one private liberal arts college over an eight-year period where invasive interventions were introduced in year five in an effort to enhance the overall program. This quantitative study was designed to determine if there was (1) a difference in the grade point average between male, first-time freshmen who did not receive specific invasive interventions as compared to male, first-time freshmen who received specific invasive interventions; (2) a difference in the number of male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions as compared to male, first-time freshmen who received specific invasive interventions; and (3) a difference in retention rates of male, first-time freshmen who did not receive specific invasive interventions as compared to male, first-time freshmen who received interventions. Data obtained from the analyses were determined not statistically significant. Future studies should be designed to obtain additional information on what aids students retention, potentially using a mixed method approach.

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Chapter One: Introduction

Educational institutions are under pressure to recruit diverse student populations, create positive learning environments, improve quality education, control costs, and stay competitive; as well respond to labor market demands (Baer & Norris, 2016). Employing highly skilled educators, involving entire learning communities, and engaging students in the learning process to improve motivational skills and grade point averages (GPAs) are essential in increasing student retention and persistence to graduation (Boateng, Plopper, & Keith, 2015; Slanger, Berg, Fisk, & Hanson, 2015). Assessing data from student support interventions and evaluating student learning outcomes can be helpful in increasing retention, decreasing financial hardships, enhancing institutional reputation, and lowering recruitment costs (Chabotar, 2010; Turjanica, 2013). To help retain students through programs of study, educational leaders need to expand on traditional student success approaches as well as those to support today's students who may attend more than one college in their effort to obtain a degree (Miller, Thompson, & Miller, 2015; Pike & Graunke, 2014).

According to the National Center for Educational Statistics (NCES) (2016), the total number of 2014 fall undergraduate students enrolled in degree-granting institutions was 17.3 million. This was an increase of 37% compared to the period between 2009-2010, but a decrease of 4% percent when compared to the 2014-2015 period (National Center for Educational Statistics [NCES], 2016, para. 3). Data released from the NCES indicated for the 2015-2016 academic year, over 1.8 million degrees at the baccalaureate level were granted (NCES, 2016). For those over age 25 achieving a bachelor degree, rates increased from 28% to 33% (NCES, 2016, para. 4). While these numbers look

encouraging, exceptions do exist and not all students entering college will graduate as planned (Pike & Graunke, 2014). According to Snyder, De Brey, and Dillow (2016), an alarming 40% of students did not complete a degreed program who started (p. 440). Therefore, institutional leaders and educators must look at individual factors such as ability and motivation to help increase student retention (Alarcon & Edwards, 2012).

To help students succeed in their first year at college and return for their sophomore year, leaders in higher education must examine institutional and student profiles, curriculum design, academic progress, ways to identify students needing help, and engage students in the learning process (Kalsbeek, 2013). In a 2016 study conducted by Chan and Wang regarding interpersonal interactions at a junior college offering manufacturing classes, a positive relationship between students' personal interactions and motivation and college outcomes was illustrated. Kuglitsch and Burge (2016) reported supporting sophomores in using information literacy as one way to help students master the skills of higher education.

In addition to retention, timely graduation is a key factor in students' transition to gainful employment (Kalsbeek, 2013). The NCES (2016) released data which showed about 87% of the 2008 four-year college institution cohort graduated with in six years (para. 4). Despite students taking longer to obtain degrees and the cost of education rising, gaining a college education is still an investment (Baer & Norris, 2016). Higher education is the key to becoming marketable in a very competitive job market, ultimately improving the national economy (Baer & Norris, 2016; The White House, 2015).

Since colleges and universities are responsible for educating millions of adult students both full- and part-time in the United States, educational leaders must explore

the reasons for college dropout rates (NCES, 2016). Finding reasons students drop out of higher education is indeed time well spent since the NCES (2016) suggested over 20.2 million undergraduate students enrolled at four-year institutions in the United States in 2014 (Snyder et a., 2016, p. 438). According to The White House (2009), "Over this decade, employment in jobs requiring education beyond a high school diploma will grow more rapidly than employment in jobs that do not; of the 30 fastest growing occupations, more than half will require postsecondary education" (para. 1). Therefore, early efforts must be made to identify and implement new programs to help students be successful in their college endeavors (NCES, 2016).

It is crucial educational leaders work with retention specialists and stakeholders to establish goals to monitor college success (Turner, 2016). Providing quality and cost effective educational experiences along with keeping students engaged in their educational process can increase the likelihood students will be retained through graduation (Kemp, 2016). Therefore, educators must consider factors such as previous experiences, behaviors, attitudes, study skills, as well as a student's readiness to enter college (NCES, 2016; Schneider & Yin, 2011; Turner, 2016). Academic support once students arrive on campus, as well as their support from families can influence whether a student drops out of school or persists to graduation and seeks higher paying jobs (Chabotar, 2010; Complete College of America, 2014; Vandal, 2012). To make this happen, institutional leaders and educators must create learning environments which allow students to reflect on their prior learning experiences and how these practices helped or hindered learning (Kemp, 2016). Improving these skills are the best chance students have of graduating on time with an affordable degree, which will increase their

earning potential (Olwell & Stevens, 2015; The White House, 2015). Having educated workers is essential if America's workforce is to be competitive with other nations around the globe (The White House, 2015). With changing work environments, including business and industry models, existing skill sets of employees may no longer fit the needs of emerging new markets (World Economic Forum, 2016).

Background of Study

Understanding key issues related to reasons why college students drop out of school is central to implementing best practices for improved student retention rates and success to completing a degree (Olwell & Stevens, 2015). College leaders must work to explore reasons why students leave prior to completion, as reasons can vary from student to student (Vandal, 2012). One reason, noted by Schneider (2010), indicated approximately 60% of first-time freshmen in the United States, although eligible to attend a college or university, were not academically prepared for postsecondary courses (p. 2).

Academic preparation necessary to score high enough on entrance exams can be a concern for many college-eligible students (Schneider & Yin, 2011). Students with low scores may have to pay to take remedial courses such as reading, math, and English that do not count as college credit hours toward their degree (Schneider & Yin, 2011). This increase in educational cost to the students may deter completion of college degrees or certificates (Complete College of America, 2014). Not only is remediation costly to the student, it is costly to taxpayers and states (Schneider & Yin, 2011).

The 25-year literature review on underlying reasons why students decide to drop out of college performed by Rumberger and Lim (2008) revealed some valuable insight when they found there is not a sole reason why a student decides to stay or leave school.

Even though reasons can vary, Rumberger and Lim (2008) implied student behavior and academic performance was influential in making the decision to stay in school. In addition, a student's participation in activities outside of regular classes such as "deviant and criminal behavior, and fiscal, material and social support resources" also impacted a student's decision to stay in school (Rumberger & Lim, 2008, p. 3). Grennille (2014) supported some of the reasons reported by Rumberger and Lim (2008) such as the influence of personal, social, and life issues as well as academic readiness. Grennille (2014) also supported using institutional data to predict matriculation such as application data, high school GPA, and dollars allotted for student aid.

According to Mertes (2015), it is necessary to look at all aspects of social integration into college life such as gender, race, age and lifestyle habits when evaluating student success in higher education. Early psychological misfortunes, such as social and binge drinking in males can negatively impact how students master academics and also adjust to college life (Liguori & Lonbaken, 2015; Olmstead, Roberson, & Fincham, 2016). It is necessary to address issues like social interactions, alcohol consumption, study behaviors, and how instructors and students get along (Liguori & Lonbaken, 2015; Turner, 2016). As researchers and educators, it is necessary to learn from previous research how to implement new preventive strategies to avoid making the same mistakes (Mertes, 2015).

Additional reasons for students dropping out of college can be influenced by factors such as students having special learning needs, cultural differences, and living in urban and rural areas (Hodge & Mellin, 2013). Leaving college can be caused by situations such as English being the second language, poor scholastic performance,

identifying and socializing with under-achieving students, lack of family support, not connecting with faculty, working too many hours, and not having a strong affiliation with the institution (Ormrod, 2010). Additionally, Johnson (2012) reported many college students worry about debt, and the risk of not being able to repay debt can interfere with completion of college. To engage students and enhance learning, administration, educators, and counselors can build a more conducive atmosphere by applying equity with all students to increase academic and work success (Baer & Norris, 2016).

Offenstein, Moore, and Shulock (2010) reported student age, race, gender, ethnicity, economic status, and college readiness also influenced college dropout rates. Kot (2014) reported a lack of academic advising and students' inabilities to integrate into college life were deterrents to returning to college. College personnel must look at psychological factors when exploring student attrition from one semester to the next (Mahlberg, 2015).

According to Luke, Redekop, and Burgin (2015), other influences on student return rates include self-ability, loss of control, and connection between education and employment. Mahlberg (2015) reported strong educator and teaching skills positively influenced self-regulation of first- and second-year students in community colleges and helped to improve retention rates. To help students transition to graduation and receive degrees, it is imperative for educational experts to work with students and identify deficits and implement action plans to address these deficits (Slanger et al., 2015).

According to Moore and Shulock (2014), another challenge to measuring students' progression and success in completing a degree has been limited due to only using retention, graduation, and transfer rates. These areas are not fully understood and

thus provide inadequate data to help educators guide students to completion of their program of study (Moore & Shulock, 2014). Moore and Shulock (2014) also noted a complicated system of transferring college credits leads to low transfer rates and is ineffective in gauging student registration patterns.

For example, not all colleges or universities include overall undergraduate graduation rates (NCES, 2016). Graduation rates are calculated by some colleges as full-time students who began and ended at a single institution (Moore & Shulock, 2014). Part-time and transferring students are not figured in the calculation (Lipkia, 2012).

To better meet the needs of all college students, educational efforts targeted at developing and mentoring diverse students is crucial to an institution's success (DeAngelo, Mason, & Winters, 2015). By engaging faculty and implementing new programs, federal and state funding for higher education, which runs in amounts to billions of dollars, can help make education more accessible and affordable for students whether it be obtaining a college degree or a certificate (Gorski & Swalwell, 2015). Gorski and Swalwell (2015) stated, "Schools can commit to a more robust multiculturalism by putting equity, rather than culture, at the center of the diversity conversation" (p. 34).

Another issue related to college retention rates is constant scrutiny from accrediting agencies (Hodge & Mellin, 2013). Academic readiness, retention and graduation rates, and federal and state funding related to performance-based education is of interest to policy makers, students, families, stakeholders, and donors (Baum et al., 2013). According to Westrick, Le, Robbins, Radunzel, and Schmidt (2015), ACT scores and high school grades can be correlated with college performance, how successful

students are freshman year, and in completing a degree. Therefore, higher education systems need to focus on ways to help students succeed (The White House, 2015). One way of helping students succeed is to place a stronger emphasis on student outcomes, which means changes for schools, students, state and federal governments, and accrediting bodies (The White House, 2015).

High attrition rates cost billions of dollars to the higher education system (National Conference of State Legislators, 2013). As retention rates are a large part of the educational accountability system in higher education, it is crucial institutional leaders pay specific attention to academic readiness and how it influences both state and federal funding (College Data, 2017). According to the United States Department of Education, of the estimated $193 billion spent for the 2014 school year, about 41% of dollars were allocated to colleges and universities (as cited in Snyder & Dillow, 2013, p. 755).

Dropping out college before completing a degree is becoming costly for tax payers (College Data, 2017). College dropout rate of first-year freshmen from the years 2003 to 2008 cost state governments billions of dollars (Complete College of America, 2014). According to Robertson (2014), the Affordable Care Act addressed student loan provisions and would eliminate the intermediary allowing students to deal directly with the government. Changing from private to federal loans was estimated to save taxpayers over $60 billion over a 10-year period, and more than $30 million would go to Pell Grant dollars to help students obtain secondary education degrees or certificates (Robertson, 2014, para. 11).

The proposed cancellation of student loans and re-appropriation to Pell Grants was done to decrease wasteful spending in the federal loan educational programs (Robertson, 2014). Curbing spending was necessary as over $2 billion in combined state and federal money was invested in students who never returned to college for their second year (Schneider, 2010; Schneider & Yin 2011; Snyder & Dillow, 2013; Snyder et al., 2016). Taxpayers and consumers are demanding more accountability on how educational dollars are invested as "nearly half of all students who begin college do not graduate within six years, and the consequences of taking on debt but never receiving a meaningful degree can be severe" (The White House, 2015, para. 2).

Postsecondary education culminating in a college degree or certificate is essential to help the workforce stay competitive in the global economy market; thus educational leaders need to implement creative programs to decrease the chances of students dropping out of college (Tinto, 2012). National college dropout rates have been complied and monitored since the 1980s (ACT, 2015).

The ACT is a nationally normed college admission exam that covers the topic areas of English, mathematics, reading, and science (ACT, 2015). The ACT results are accepted by many four-year colleges and universities and serve as national benchmarks to monitor student academic progress (Robertson, 2014). According to ACT (2015), freshman retention rates at different types of higher education institutions vary. Public community colleges have the lowest rates with retention of freshmen being slightly over 50% (ACT, 2015, p. 3). Two-year private institutions and public four-year institutions have the next lowest retention rates with freshman retention rates falling in the 60% range

(ACT, 2015, p. 3). The highest retention rates for freshman students are private four-year universities where retention of freshmen is over 70% (ACT, 2015, p. 3).

With college retention rates decreasing, and student debt on the rise, it is crucial to discuss with students how a college degree can be beneficial (College Atlas, 2014). As educational leaders move to increase enrollment, many of the students being accepted into higher education institutions are low performing students (Ormrod, 2010). At-risk students, identified by low GPAs and lower test scores on nationally normed exams such as ACT and SAT, not only need more intervention, but are also at increased risk for academic failure (ACT, 2015).

To decrease the chances of academic failure, Tinto (2012) asserted student success must be a top priority for academic leaders as they look at ways to academically prepare students to enter higher education. Having a student service center and well-prepared advisors can help with student success and retention (Mertes & Jankoviak, 2016). According to Drake (2011), the long-lasting impact instructors can have on students through advising and helping build positive relationships throughout their college experience can help students be successful in transitioning to graduation. For a student to persist to graduation, the student must have a positive integration into college life (Tinto, 2012). To help students master academic success, having a freshman seminar course along with proper advising is crucial (Guarnieri, Horne, Wallis, Rings, & Vaughan, 2015).

The terms “at-risk” and “educational reform” are common terms in American education (Tinto, 2012). The terms were coined in April 1983 when Gardner, Chair of The National Commission on Excellence in Education (NCEE) released the report, *A*

Nation at Risk: The Imperative for Education Reform (The National Commission on Educational Excellence [NCEE], 1983). In 1983, the NCEE committee members presented this report to the United States Department of Education. Noted in the report:

> Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world… States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur and others are matching and surpassing our educational achievements. (NCEE, 1983, para. 1)

The 1983 NCEE report was the first outward acknowledgment that some individuals were not succeeding in school and the United States as a whole was being threatened by mediocrity (NCEE, 1983). If something did not change to curb this downward trend of academic readiness, there would be an impact on the United States' future economy and its job markets (Frye, 2015). With changes in the economic climate, the government has tightened the budgets of institutions of higher learning and asked administrators to look not only at students who are at-risk for failure, but also at students who achieve academic success (Demetriou & Powell, 2014).

In 2008, the United States experienced the largest economic setback since the Great Depression changing the economic environment in numerous ways and leaving the economic forecast very unclear (Fischer, 2014). The 2008 recession saw job losses in nearly every sector (Fischer, 2014). Lack of employment continued with the economic recession through 2011, impacting many of the Organization for Economic Cooperation

and Development (OECD) countries, including the United States (Organization for Economic Cooperation and Development [OECD], 2013). Unemployment rates, especially young adults with lower levels of education, were hit the worst (Fischer, 2014). Taveras (2013) reported, "As in most countries, unemployment rates increased in the United States between 2008 and 2011. In 2011, 8.3% of American adults were unemployed – above the OECD average of 7.1%" (p. 1). Taveras (2013) further stated, "Not only was the United States ranking above average in unemployment, the United States ranks 5th in tertiary attainment among 25-64-year-olds, but 12th when considering 25-34-year olds" (p. 15).

To educate a new generation of workers and increase rankings and competitiveness in the world's global economy, a college education and a trained workforce is crucial (Carnevale, Smith, & Strohl, 2013; Schneider & Yin, 2011; Tinto, 2012). One way to attract students to colleges and universities and increase market share is to use a "data driven business model" to promote program values to leadership and stakeholders (Rasool, 2014, p. 9). Effective communication with administrations in higher education in regards to current research and development is crucial for updating programs and degrees offered (Noel-Levitz, 2017). This knowledge is necessary for organizational growth and in decreasing the cost of recruiting new students (Noel-Levitz, 2017).

In an effort to re-tool America, former President Barrack Obama, in 2009, announced his graduation initiative (The White House, 2009). The president noted, "Time and time again we have placed our bet for the future on education, and we have prospered as a result by tapping the incredible innovative and generative potential of a

skilled American workforce" (The White House, 2009, para. 2). In 2015, former President Obama unveiled his "American College Promise allowing students to attend community colleges at no cost to gain the education and skills necessary to enter the workforce" (The White House, 2015, para. 2). This promise by the former president, to provide community college education, had overlapping effects on all higher educational institutions (OECD, 2015a).

The former president's promise might help the economy, as it can increase student enrollment, aide in persistence to graduation, support transfer and completion rates at four-year institutions, and also help the next generation obtain gainful employment and contribute to the workforce (Schneider & Yin, 2011). Tinto's (2012) work supported the former president's plan because education is a means of making individuals more employable and thus our nation more marketable across the globe. To combat the growing problem of underachievers, there must be a better approach to correct the gap that exists between secondary education and postsecondary education (Demetriou & Powell, 2014).

According to data released by the National Conference of State Legislators (2013), while the number of students enrolling in college is increasing, many students are not prepared for college courses, and thus have to take remedial classes that impede their chances of finishing a college degree. Andreas Schleicher, deputy director of *Education at a Glance*, a reliable source of data on the state of education around the world, suggested if educational reform is to be effective legislators must understand what it takes to make reform work and use best practices when funding reform (as cited in OECD, 2016). To better meet the need of both students and institutions, a better job of

monitoring and using data pertinent to cultural change, why students drop out of college, and student success is necessary to retain and graduate students (Ormrod, 2010).

Conceptual Framework

Donabedian's process-structure-outcome model was used in this study as the conceptual framework (U.S. Department of Health & Human Services, 2015). For over 30 years, Donabedian's structure-process-outcome model has been used in the health care field to select quality and resource measures when assessing patient outcomes (U.S. Department of Health & Human Services, 2015). While this model is used mostly in healthcare, it is a recognized framework that has been used in appraising the quality of higher education (U.S. Department of Health & Human Services, 2015).

According to Bach, Haynes, and Lewis-Smith (2007), Donabedian's model of structure, process, and outcome "has relevance to any large organization where quality, value, efficiency, and effectiveness require analysis and strategic planning" (p. 65). Bach et al. (2007) used the underpinnings of this model to help meet the challenges of quality in higher education made possible through online learning. With all forms of learning, quality monitoring is necessary to measure the "breadth and depth of information" being presented and thus the student's ability to understand and retain the information necessary to advance in the educational process (Bach et al., 2007, p. 62). Bach et al. (2007) also reported "the evaluation of learning involves process and outcomes" (p. 62). Donabedian's model provided the framework for these authors to define quality, and "explore issues such as teaching, assessment, attendance and plagiarism" (Bach et al., 2007, p. 65).

Donabedian's model has also been used for assessing competency in an educational mentor (Bach et al., 2007). According to Neary (2002), Donabedian's model provided "standards through a range of activities that mentors can do or should be capable of doing" (p. 98). Neary (2002) also reported Donabedian's model can be used to determine how any organization functions. Neary (2002) stated that in education:

> Structure is the resources required to provide quality education; the environment within which that is provided; the facilities made available; the staff skills available; the equipment; and the documentation of procedures, policies and guidance to staff: process is the actual procedures and practices implemented by staff in their delivery and evaluation; and the monitoring, evaluation and actions to adjust the provision of education: and outcome is the best possible effect of education received by learners resulting from provisions of learning opportunities; and the costs of the organization providing courses. (p. 203)

Donabedian's model can be used as focused talking points for stakeholders and administrative leaders (U.S. Department of Health & Human Services, 2015). If colleges and universities are to stay competitive and deliver a quality product, educators and administrators must evaluate their educational outcomes and make changes as necessary (Neary, 2002).

Statement of the Problem

Educational leaders worldwide are being held more accountable for student success, including retention and completion of a degree or certificate (The Chronical of Higher Education, 2015). According to Way and Synco (2011), only about 71% of first-time, full-time freshmen in 2007 returned for their sophomore year (p. 220). Even

though more students are entering college, “the nation’s higher education system isn’t delivering what they need and deserve. America’s students and families need, and the nation’s strength will depend on, a higher education system that helps all students succeed” (The White House, 2015, para. 1).

To help students succeed, something must be done to better prepare students entering postsecondary education (The Chronical of Higher Education, 2015). In 2012, the National Center for Public Policy and Higher Education reported the decrease in academic readiness for college leads to increased costs to students, families, organizations, and taxpayers and interferes with students’ ability to graduate on time, or at all (The National Center for Public Policy and Higher Education, 2012). Failure to graduate impacts the nation’s college success rates (Turjanica, 2013). To compete and survive in today’s global economy, it is necessary to have workers who have education, skills, and training (Tinto, 2012). In President Obama’s American Graduation Speech, he stated, “Now is the time to build a firmer, stronger foundation for growth that will not only withstand future economic storms, but one that will help us thrive and compete in a global economy” (as cited in The White House, 2009, para. 6).

Moore and Shulock (2014) reported research exists “indicating that a variety of programs intended to provide students with early support are associated with better student outcomes, making participation in such programs a potential indicator toward degree completion” (p. 6). To help first-year students be successful in completion of their program of study, college faculty need to be more visible, offer academic help early on, and design courses which support retention and academic achievement (Ormrod, 2010). Programs to support first-year students can increase the chances of building a

culture which fosters student retention to graduation (Garza & Bowden, 2014; Selingo, 2015). Achieving student success culminating in a degree and employment can be attributed to first-year seminars, encouraging good study habits and skills, learning about campus policies, and increasing engagement with peers and involvement in other school activities (Rath, Rock, & Laferriere, 2013; Turjanica, 2013).

To find ways to encourage freshman students to return for sophomore year, educators and administrators must use a variety of interventional strategies (Rath et al., 2013). Some of these strategies include academic alerts, intervening early, following-up with scheduled meetings, and providing student support services (The Chronical of Higher Education, 2015). Other strategies include freshman orientation, training faculty to meet needs of a diverse student population, setting up learning communities, getting faculty and staff involved in building relationships with students in those communities, and finding ways to engage the student in the learning process (Johnson & Gans, 2013; Tinto, 2012).

While an abundance of research exists on why students drop out of college, research is lacking in why students succeed (Johnson & Gans, 2013). According to Jenkins-Guarnieri, Horne, Wallis, Rings, and Vaughn (2015), having organized curriculum, student engagement, and a well-designed freshman seminar program can lead to improvement in student outcomes. It is crucial for higher educational institutions to address the multiculturalism needs of students by actively involving the entire campus community (Gorski & Swalwell, 2015). In addition, faculty need to conduct more research on why students succeed. Student success data need to be used to strategize and

implement creative programs designed to mentor new students thus increasing the retention and graduation rate of diverse student populations (DeAngelo et al., 2015).

Purpose of the Study

The purpose of this research study was to evaluate the effectiveness of the Blossom Program (a pseudonym) an invasive intervention program used at a small, private liberal arts college in the Midwestern United States. The Blossom Program is financially controlled by an independent trust and board of directors who assign the host institution to identify freshman at-risk students and present them with academic and social support services. Evaluation of this program allows educational and business leaders to determine if invasive interventions, like the Blossom Program, make a difference in overall freshman retention rates, improvements in GPA, and removing students from academic probation. The results of this study were expected to enable those in decision-making capacities to create cost-effective learning environments conducive to student retention and persistence to graduation.

Research questions and hypothesis. The following research questions guided this study:

1. What statistically significant difference exists, if any, in first and second semester grade point averages (GPAs) of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?

$H1_0$: There is no statistically significant difference in first and second semester GPAs of male, first-time freshmen who received no specific invasive

interventions, as compared to male, first-time freshmen who received specific invasive interventions.

$H1_{a:}$ There is a statistically significant difference in first and second semester GPAs of male, first-time freshmen who received no specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

2. What statistically significant difference exists, if any, in the number of male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?

$H2_0$: There is no statistically significant difference in male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

$H2_{a:}$ There is a statistically significant difference in male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

3. What statistically significant difference exists, if any, in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received interventions?

$H3_0$: There is no statistically significant difference in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received invasive interventions.

$H3_a$: There is a statistically significant difference in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received invasive interventions.

Definition of Key Terms

For the purposes of this study, the following terms are defined:

Academic probation. A student admitted as a graduated high school student with a cumulative GPA of below a 2.0, graduating in the bottom half of his or her graduating class, and less than an 18 composite on ACT or SAT (Institutional Data, 2016).

At-risk student. A graduated high school student who was admitted to college on academic probation (Institutional Data, 2016).

Intervention. A particular method or treatment that has the expectation that it will potentially influence one or more outcomes (Fraenkel et al., 2015).

Outcome. The effectiveness in obtaining the intended benefit such as a competent student (Neary, 2002).

Process. Systems used to assess services such as suitability, continuity, usefulness, and equitability of the education provided (Neary, 2002).

Retention. Institution-level term used to describe the continued enrollment of a student or group of students at an institution from fall of one academic year to the fall of the consecutive year (Turjanica, 2013).

Structure. The institution, physical atmosphere, equipment, and fiscal and human resources necessary to provide quality education (Neary, 2002).

Limitations and Assumptions

A limitation of this study was all participants were male students from a small private liberal arts college. Other limitations included a small sample size of 216 male students living in the Blossom residential facility and the convenience sampling method employed (Polit & Beck, 2012). Non-probability sampling, such as convenience sampling, is collection of data from participants that is either readily available or easily accessible to the researcher completing the study (Fain, 2017). Because convenience sampling selects subjects from those readily available and meeting the selection criteria, it can contribute to sampling bias and thus results not being generalizable to any student population (Polit & Beck, 2012). However, according to Matt and Matthew (2013), "Random selection accounts for sampling bias and permits researcher to generalize their results to the population from which the sample was drawn" (para. 11).

Sample demographics. As previously mentioned, a total of 216 male participants identified as at-risk students participated in the study. Students' ages ranged from 17-20. The sample method used was a convenience sample, as all students were participants in the Blossom Program at the college (Fain, 2017). Confidentially of participants in this study was ensured by obtaining and using de-identified data (Polit & Beck, 2012). Those participating were assigning a random identification number, known only to the host college's system administrator who formulated and relinquished data on the college's behalf (Polit & Beck, 2012).

While student selection for the Blossom Program was prior to this study being conducted, students chosen for the Blossom Program was random by drawing approximately 25 at-risk students each year from a box (T. Langdon personal communication, March 26, 2015). Using a simple random technique sampling allowed each student to have an equal chance of being chosen for the study, and the choosing of one subject did not impact the choosing of another (Fain, 2017; Polit & Beck, 2012).

Significance of the Study

Evaluation of the Blossom Program is relevant because this institution will continue to enroll more at-risk students from diverse backgrounds (T. Langdon personal communication, March 26, 2015). This project will contribute to the existing body of literature on why students leave college before getting a degree (Gorski & Swalwell, 2015). Lack of knowledge and understanding of what skills are needed to succeed can support an already failing system (Gorski & Swalwell, 2015). To adequately address high dropout rates and persistence to degree attainment, government regulating bodies stress the need for institutional leaders to be more accountable (Guarnieri et al., 2015). Because educational leaders are central to an institution's vision, goals, and mission, their initiatives and recommendations based on current research are crucial to creating an educated workforce to keep this country economically sound (Turjanica, 2013).

Summary

In the introduction of this study, it is noted that education leaders are experiencing greater influence and pressures to recruit diverse student populations, employ highly skilled educators, and increase student retention and graduation rates (Baer & Norris, 2016; Boateng et al., 2015; Slanger et al., 2015). The evaluation of programs being used

to help GPAs, enhance learning skills, and curb retention rates must be assessed (Gorski & Swalwell, 2015). Data gained from supporting intervention programs may lead to an increase in retention programs (Gorski & Swalwell, 2015).

The background of study was focused on the importance of understanding and working to understand reasons college students drop out and potential effects of this action (Olwell & Stevens, 2015). Several reasons were highlighted, such as being academically underprepared, the expectations of taking remedial courses, as well as the cost associated with this line of necessary coursework (Schneider & Yin, 2011). Participation in student activities and social events both on campus and within the college community when not in class may potentially have an effect on student retention (Rumberger & Lim, 2008).

The background was also focused on educational institutions across the nation and globe being faced with rising costs of education and increasing rates of students dropping out of college (College Data, 2017; Tinto, 2012). Even though taxpayers have funded billions of dollars to reform our educational systems, literature does not support these dollars being used wisely or that students have benefited by changes in educational practices (OECD, 2015a). Since educational budgets are decreasing and funding is sometimes performance-based, educators must address institution effectiveness when finding ways to market quality students, achieve student learning outcomes, and enhance student success to degree attainment (Grennille, 2014).

To make a college degree more obtainable, it is necessary to build and maintain a college culture of student success by focusing on equity rather than culture dominating the diversity discussion (Gorski & Swalwell, 2015; Tinto, 2012). Transforming a college

culture can be difficult and often requires not only meeting the needs of a diverse student population but also meeting the developmental needs of a new millennium of students (Demetriou & Powell, 2014). According to Turjanica (2013), "Expanding the conversation beyond persistence and retention allows for a deeper examination of the goals of higher education, as well as the factors that contribute to individual as well as institutional success" (p. 2).

As to the conceptual framework of the study, Donabedian's process-structure-outcome model was described (Bach et al., 2007). The process-structure-outcome model of Donabedian's is effective when strategically planning because it is geared toward analysis of quality, value, efficiency and effectiveness (Bach et al., 2007). Donabedian's model has been used in higher education to assess learning quality of online education, competencies in educational mentors, and in determining how organizations run (Bach et al., 2007; Neary, 2002).

In Chapter One the purpose of the study was also introduced. The purpose of the study was to evaluate the Blossom Program and determine if invasive interventions made a significant difference. Research questions were centered around whether invasive interventions had an effect on improvement of GPAs, removal of students on academic probation, and fall-to-fall retention. Limitations as well as the significance of the study were also presented.

Chapter Two is a discussion of prior research studies related to issues in this study. The research presented is divided into five categories. The first is individual factors affecting freshman college student attrition. This section focuses on such topics as college preparation, time needed by students to graduate, financial factors, and

individual support systems. The second section focuses on institutional factors affecting college freshman student retention. In this section, discussion surrounds the lack of funding in areas of colleges and universities and its effects.

The third section discusses why attrition is a concern. This section references reasons to increase college retention rates, the comparison of educational dollars spent in the United States compared to the rest of the world, and decreasing the cost of college. The fourth section relates to the benefits of a college education, how education leads to a better life and the necessity of a postsecondary degree. The fifth and final section in Chapter Two provides solutions to high attrition rates. This section speaks to the funding for students, the road to graduation, and first-year programming.

Chapter Two: Review of Literature

Student retention is a concern for all leaders of institutes of higher learning (Tinto, 2012). Not only is retaining students an area of worry, but assuring students are successful in academic endeavors is also a focal point (Grennille, 2014). Educational leaders, researchers, and scholars must look closer at what aspects of higher education impact student learning and make curricular and policy changes to address those that struggle, thus enhancing student success at the freshman level (Ayers, 2011; Pike & Graunke, 2014; Stephan, Davis, Lindsay, & Miller, 2015). The purpose of this study was to determine if an invasive program designed to support low-achieving, male students in a four-year college setting can make a difference in increasing students' freshman GPA and retention rates.

In the literature review, seminal and current academic research is presented in regard to supporting students entering higher education. In the first section, factors from a student perspective which can lead to attrition are presented. Following, a discussion on retention is focused on the institutional factors. Other areas of review include factors attributing to freshman attrition rates such as readiness, costs, support services, multiple student roles, financial aid, time management, and culture. In addition, the long-term influence of student attrition on higher education and solutions to high freshman attrition are also discussed.

Individual factors affecting freshman college student attrition

Undergraduate enrollment is on the rise (NCES, 2017). The NCES (2017) reported about a 30% increase in student enrollment, approximately 13 million in 2000 to seventeen million in 2015 (p. 119). However, by 2025 NCES projects student enrollment

to jump to about 19.3 million students (NCES, 2017, p. 119). Thus, building a culture of student success involving the learning community and stakeholders is crucial for student retention on college campuses (Ayers, Gore, & Burkhammer, 2012; Tinto, 2012). According to Khuong (2014), information related to the reasons students are departing from college is a topic of the upmost importance for leaders in higher education if retention rates are to improve. However, identifying key issues to student dropout rates is not a simple task as reasons can be influenced by several factors (Hodge & Mellin, 2013). The following subsections are discussion of factors which impact students and their ability to be retained at an institution of higher education.

College preparation. Reviewing student profiles, including the ACT composite score and students' high school grade point average, during the admissions process is a major indicator for potential success and retention (ACT, 2015; Chronicle of Higher Education, 2015). While high school GPA is useful in predicting college success, so is using institutional data to find ways to narrow the gap between academic rigor and expectations of diverse student populations (Hamilton, Duerr, & Anderson, 2015). Nick Capo (2011), Associate Dean of Illinois College, reported in a study conducted at Illinois College on how standardized tests scores could be used as a strong predictor for identifying at-risk students and using data to build schedules for first-semester students that reduced students' academic risk. Capo's (2011) work supported the ACT (2015) findings that students meeting benchmarks for college readiness normally achieve success in appropriate course work.

Since 1983, the ACT has provided data on retention rates of freshman to sophomore college students and persistence to degree rates (ACT, 2015). In 2015, ACT

analyzed data from the freshman class of 2011 on the number of college students meeting the four benchmarks for college readiness; English, reading, math, and science. The ACT (2015) found, "Twenty-five percent of ACT-tested high school graduates met all four college readiness benchmarks, fifteen percent met three Benchmarks, seventeen percent met two benchmarks, and fifteen percent% met one Benchmark, and twenty-eight percent met none of the Benchmarks" (p. 20). Data used by ACT (2015) represented full-time students enrolled for the first time in the fall of 2013 at postsecondary institutions.

One area of data reported by ACT was national persistence to degree rates by institutional type and degrees offered (ACT, 2015). When looking at graduation rates, two-year public institutions had a persistence rate of about 22%, while the graduation rate of two-year private institutions was around 40% (ACT, 2015, p. 7). The ACT found, "Four-year public institutions had approximately thirty six percent persistence, while four-year private institutions were approximately fifty-seven" (p. 7).

Education in K-12 programs. Because of concerns with student preparedness upon entering higher education, cohesiveness of curricula should begin at the elementary and secondary levels (Miller, 2013). Students who are ill equipped for challenging curricula in higher education can lead students to drop out, thus raising attrition rates (Rath et al., 2013). To better prepare students academically for college, many states have adopted the Common Core State Standards (CCSS) (Grennille, 2014). The CCSS guide elementary and secondary educators as they prepare students with goals and objectives necessary to be successful in college and in a career (Rath et al., 2013).

The CCSS were released in 2010 to help increase academic standards (ASCD Common Core State Standards, 2015). Currently, 45 states have adopted the standards, four have not, and one has adopted only the English language arts portion (ASCD Common Core State Standards, 2015). Implementation of the CCSS could lead to higher academic standards and "will raise the academic bar, ensuring that more students will have the opportunity to attend college, and will excel once they are enrolled" (Rath et al., 2013, p. 15). The CCSS also helps level the playing field so all students entering the educational arena will encounter the same challenges (Rath et al., 2013)

Remedial courses for college students. Students entering college often require corrective courses (Complete College of America, 2014). About 52% of students entering two-year colleges are required to take some remedial courses (Complete College of America, 2014; Moore & Shulock, 2014). Having to take courses which are corrective in nature also impacts college retention rates, as it affects transition into the college community and what would otherwise be a natural progression in academic years (Fitzpatrick & Kirk, 2012; Moore & Shulock, 2014; Ormrod, 2010). Low academic performance can result in students having to take remedial courses such as math, writing, and reading that are costly and do not count toward hours necessary to obtain a degree or a certificate, thus impacting student retention and impacting institutional budgets (Khuong, 2014; Schneider & Yin, 2011; Spannagel, Howell, & Keener, 2015). When looking at first-time freshman students of four-year colleges, anywhere from 28% to 40% of students took at least one remedial course (National Conference of State Legislators, 2013, p. 1).

Having to take developmental coursework often leads to frustration on the student's part and he or she drops out before obtaining an education to be more marketable in today's global economy (The White House, 2015). Millar and Tanner (2011) reported there may be many reasons for early drop-out rates, but one reason may be students' poor understanding of their academic readiness for entering higher education. While there are many challenges with students getting into colleges other than academic preparedness, readiness or the lack of, for college is a concern in relation to low graduation rates (Millar & Tanner, 2011). The majority of students who begin college taking remedial courses never complete their college degree (NCES, 2016). Cromwell, McClarty, and Larson (2013) suggested, "To increase the college readiness of students, we need to be aware of the actions and achievements of students that predict success" (para. 3).

Being aware of ways to predict student success is crucial, but so are finding ways to promote a culture for students to students succeed in college endeavors and transition through programs of study in a timely manner in order to contribute to our nation's economic future (Slanger et al., 2015). Therefore, to help students remain in college, it is crucial for educators to assess student learning and make sure learning parallels with student learning outcomes (Demetriou & Kyriakides, 2012).

A system of monitoring student progress to see if students are progressing towards persistence to graduation is crucial (Slanger et al., 2015). If students are not achieving academic benchmarks to succeed in postsecondary education, educators and academic leaders must invest in tools such as early academic alert systems and academic programs that engage students in the learning process while also looking at institutional

policies to match the student with the right institution (Slanger et al., 2015). Demetriou and Kyriakides (2012) also reported educators need to complete school self-evaluations to ascertain educational effectiveness and its' impact on student learning outcomes.

Time needed to graduate. Even though college enrollment is increasing in this nation, the time it takes for a student to graduate is also rising (NCES, 2017). According to Shapiro, Dundar, Wakhungu, Yuan, and Harrell (2015), "About fifty-five percent of the students that entered college in the fall of 2008 earned a college degree or certificate by the summer of 2014" (p. 5). When looking at degree achievement by the type of institution, data showed students obtaining a degree from a public four-year college or university took longer than those from private and religious institutions (DeAngelo & Franke, 2011). According to Tinto (2012), it takes about three years for a two-year degree and about six years to complete a four-year degree.

Financial factors. Incurred debt for college students cannot be underestimated (Humphreys, 2013). In 2013, "sixty-nine percent of graduating seniors at public and private nonprofit colleges had student loans averaging about $28,400" (The Institute for College Access and Success, 2016, p. 1). According to the Institute for College Access (2016), "In 2015, 68% of graduating students at public and private nonprofit colleges had student loans averaging about $30,100" (p. 1). Brown, Haughwout, Lee, Scally, and Van der Klaauw (2015) reported total student debt nearly tripled from $364 billion to $966 billion from 2004 to 2012. The rise in student debt is alarming, as it equals about a 14% annual average increase (Brown et al., 2015). In 2012, on average, about two-thirds of student loan debt was incurred by students under age 40, about one-third was incurred by

students under age 30, and the remaining debt was incurred by students 40 years and older (Brown et al., 2015; College Data, 2017).

Failure to graduate on time also lends to skyrocketing costs to students and families and is a factor in increasing attrition rates (Martin & Lehren, 2012). Complete College of America (2014), a national nonprofit organization that helps underrepresented populations obtain an education, reported, "On average, an additional year now costs more than $3,000 extra at a two-year institution and nearly $9,000 extra in tuition at a four-year institution" (p. 10). Considering average yearly cost including tuition, fees, and room and board for undergraduate students in the United States for the academic year 2013-2014 was estimated to be approximately $20,000 at public institutions, $40,000 at private non-profit institutions, and $45, 000 at private for-profit institutions, this extra time can be costly (NCES, 2014).

College costs continued to increase in 2016-2017 for undergraduate students in the United States (College Data, 2017). According to College Data (2017), attending four-year state institutions cost on average $25,000, and private four-year colleges were double the amount of state institutions (p. 1). Researchers also reported fees increased from year to year, although financial aid offerings remained the same (Complete College of America, 2014; Robertson, 2014).

Over the past 30 years, while tuition has increased at all higher education institutions, so has the amount of student loans owed to loan servicing companies (United States Department of Education, 2015). Martin and Lehren (2012) implied a large number of students and their families are not aware of the surmounting debt incurred with obtaining a college education. Paying off student loan debt can take years and many

students decide to drop out of college before graduating (United States Department of Education, 2015). Humphreys (2013) reported students and parents alike are concerned about whether the cost of education will have positive results for short- and long-term goals of students. Student debt is concerning to students, families and lenders and must be addressed at the institutional level as well (Grennille, 2014). Therefore, experts in education and legislators must address rising costs of college tuition to assure an education is not out of reach of students wanting to better themselves to make themselves more marketable in a highly competitive job market (College Data, 2017; The White House, 2015).

Students with a college degree tend to earn more than those without a degree, thus influencing economic viability (The White House, 2015). Therefore, when students do not graduate and obtain a degree, federal and state governments worry about revenue lost through income tax. Schneider and Yin (2011) estimated students entering college in the fall of 2002, who had not completed their bachelor's degree in six years, "contributed to $3.8 billion in lost income; $5.66 million in lost federal income taxes; and $164 million in lost state and federal income tax nationwide" (p. 2). What makes lost revenue even more alarming is the figures surround only one year and one cohort of students (Schneider & Yin, 2011).

To predict how high the impact of lost revenue is for the student, as well as the federal and state governments, Schneider and Yin (2011) used the 2010, 30-year Treasury Bill Rate, 4.5%, as the discount rate to calculate the present value of lifetime earnings (p. 4). Schneider and Yin (2011) estimated, "$1.5 billion in lost income; $32 billion in lost federal income tax payments; and $7 billion in lost state income tax payments" (p. 5). For

students needing an extra year for college completion, expect to add "$22,408 in attendance and $45,327 in lost wages, thus totally $67,352 for each student seeking a bachelor's degree" (Complete College America, 2014, p. 50). While most students have access to colleges, controlling cost and completion of a degree or certificate is necessary to enter and find a job in a highly competitive and mobile workforce (Carnevale et al., 2013).

Individual support systems. College life requires social networking and interactions to actively engage and retain students (Alarcon & Edwards, 2012). Moving away from home and the support of family and friends can also impact attrition rates (Alarcon & Edwards, 2012). Acclimating to college life for the freshman student can be overwhelming and without adequate support systems, mentors, effective coping skills, early alert systems, and ways to increase academic performance, students have an increased risk of performing poorly and not returning for their sophomore year (Childs, 2015; Clark, Lewis, Puglisi, & Stanley, 2011). Choosing a college with academic and social support systems can help students adjust to being away from the security of family and home life (DeAngelo et al., 2015; Demetriou & Powell, 2014). Not only is choosing a college with academic and social support systems integral to student success, but according to Holly Ayers (2011), Division Chair of Math, Science, and Education at Ozarka Community College, so is enhancing relationships between academic and student affairs to develop a learning environment necessary to increase student success and help in achieving educational outcomes.

Johnson and Gans (2013), professors at West Chester University, reported "part of how well young adults transition to campus life may depend on how the members of

their families typically relate to one another" (para. 1). Johnson and Gans (2013) also implied a relationship between students' ability to keep their emotions under control and how well they adapted to college life.

A 2013 study conducted at Pennsylvania State University by Hodge and Mellin (2013) suggested, "that for those first-generation students who had the presence of family support were able to make decisions for themselves" (p. 132). With research findings suggesting family support, or lack thereof, impacting how students perform in college it is necessary for college leaders to have programs available to assist students in transitioning from home to college life (Hodge & Mellin, 2013; Johnson & Gans, 2013). Students, especially males, leaving college before degree completion can lead to psychological stress and can impact social adjustments later in life (Olmstead et al., 2016).

Another factor affecting college student retention is a shortage of student support services on campus (Kot, 2014; Vaughn, Wilkinson, & Swanson, 2015). To help students succeed in their freshman year and return sophomore year, college leaders, educators, and policy makers must find ways to enhance undergraduate student academic performances through social and academic programming participation, faculty academic advising, and social integration into the campus community (Kot, 2014; Vaughn, Wilkinson, & Swanson, 2015).

Sousa-Peoples, Christman, and Quattrucci (2011) reported it is crucial to know why students leave institutions and why students choose to stay in order to implement successful retention strategies. Identifying and removing barriers early on is crucial in growing enrollment numbers, preventing attrition, and increasing graduation rates

(Christman, and Quattrucci, 2011). Institutions must maintain service programs and personnel necessary to identify at-risk students and use best practices to meet these students' needs (Ayers, 2011; Sousa-Peoples et al., 2011).

When looking at barriers, it is important to understand history and know undecided students seem to have a higher dropout rate than declared majors, thus the need for early intervention programs such as freshman seminars, student engagement, and learning communities are aimed at increasing success to degree attainment for these at-risk students (Olwell & Stevens, 2015). Another factor to consider in student retention and degree completion is how instructors teach in the classroom and how it impacts diverse learning needs (Spannagel et al., 2015).

Other individual factors. In 2010, Offenstein et al. suggested, "age, race, ethnicity, gender, income, and academic preparation" can impact student attrition (p. 12). In 2017, the National Center for Educational Statistics reported that over a nearly 25-year period, while all races increased in overall level of bachelor's degree completion, the gap between White students and Black, Hispanic, and Asian/Pacific Islander students completing degrees also widened. Closure of this gap, especially between low- and high-income students, can decrease the cost associated with obtaining a degree and thus "allow students to enter the workforce on a level playing field" (Rath et al., 2013, p. 15).

Taxpayers are also impacted by low graduation rates due to federal student loans and taxes being sent into state-funded institutions (Schneider & Yin, 2011). Annually, billions of dollars are spent by state governments and millions of dollars are spent in federal funding to pay for students who drop out of college their freshman year (Schneider & Yin, 2011). To help students remain in college, educators must monitor

working students to assure they are progressing and achieving grades necessary to complete their program of study on time (Clark & Cundiff, 2011).

Individual factors affecting student attrition are reflective of the conceptual framework of the study (Botma & Labuschagne, 2017). If factors are in places that are supportive of students being successful in college, then these are representative of process areas of Donabedian's model (Neary, 2002). If students are successful, outcomes, which are the final piece of Donabedian's model, would be student retention (Botma & Labuschagne, 2017; Neary, 2002).

Institutional Factors Affecting Freshman College Student Attrition

With the cost of college education on the rise, and the dropout out rate of college freshman students increasing, retention must be a high priority for administration, educational leaders, retention specialists, and faculty (Baer & Norris, 2016; Chabotar, 2010; Turjanica, 2013). Clark and Cundiff (2011) reported students engaged in active learning and doing well in academic studies are more likely to return for their sophomore year and persist to graduation. When reviewing literature and information from educational experts, it is apparent institutions of higher education must grow new programs and partnerships (Alarcon & Edwards, 2012). Teams of staff are needed whose goals are aimed at innovative strategies to gain knowledge about students and steps needed to meet needs of a diverse student population now and in the future (Alarcon & Edwards, 2012).

Institutional factors impacting college student attrition are supported by the conceptual framework of the study. In this section, responsibilities and supports provided by institutions are discussed (Neary, 2002). The outcome, which is consistent in this

study regardless of the process, is retaining students to graduation (Botma & Labuschagne, 2017).

Educational experts and scholars must take an active effort to retain college students (Tinto, 2012). Not only must creative initiatives be implemented, such as looking at how the institutional climate influences students' desire or ability to remain at that institution, but also programs and experts must be in place to monitor effectiveness of new services and use data to measure student success, such as better grades and persistence to graduation (Baer & Norris, 2016; Demetriou & Kyriakides, 2012). Improving attrition rates and persistence to graduation are necessary if colleges and universities are to receive federal and state funding which can be tied to institutional ranking (Moschella, Bouknight, Dial, & Winfield, 2015; Way & Synco, 2011; Westrick et al., 2015).

There are also still gaps of students with different ethnicity, age, and gender completing degrees (OECD, 2015b; U.S. Census Bureau, 2012). According to DeAngelo and Franke (2011), Asian American and White students have the highest rate of achieving a four-year degree as compared to Latinos, African Americans, and American Indians, who have significantly lower rates of obtaining a four-year degree. If educational institutions want to improve graduation rates, they must be effective in gathering meaningful data and implementing programs and solutions to address student demographics and academic traits as a predictor of who will be successful or who will struggle in college (Stephan et al., 2015).

Johnson and Moore (2011), at North Carolina's Center for Academic Excellence, implemented a retention program for first-year male, minority students to enhance

retention and persistence to degree completion. This program included rigorous academic advising, tutoring, academic monitoring, and workshops to build skill sets necessary to persistence to graduation (Johnson & Moore, 2011). According to Johnson and Moore (2011) this program showed promise, as there was 80% retention for students who participated in the 2009 cohort. As a result, Johnson and Moore (2011) worked to implement a living learning community section for the 2010 cohort to help build a strong affiliation among students and the institution. The program paid off, with 95% fall to spring persistence of the cohort (Johnson & Moore, 2011, p. 313).

Change in demographic makeup of diverse student populations makes it crucial for policy makers to address issues that impede student success to graduation (Carnevale et al., 2013). Old policies and practices are not sufficient to educate a new generation of workers needed for a highly educated and trained workforce to compete in a global driven economy (Carnevale et al., 2013; Schneider & Yin, 2011). To make the workforce competitive, policy makers and administration must look at cost effective communication among departments, recruitment strategies including outcome-based models, curriculum design and delivery, student support services, and student and faculty accountability (Cade, Aboh, Roberts, & Steward, 2015).

Decreased funding. Educating students and keeping students in college can be costly (Hamilton et al., 2015; Schneider, 2010). In the past, college and university leaders have spent millions of dollars on recruitment in order to meet their targeted revenue goals (Hamilton et al., 2015; Schneider, 2010). According to Noel-Levitz (2017), private four-year colleges outspent public two- and four-year colleges for recruiting new students by about $2,000 (p. 5). To avoid losing market shares, leaders in

college and university settings are under scrutiny by external bodies to employ effective strategic marketing techniques to stay alive in a competitive education and job market (Hamilton et al., 2015; Schneider, 2010; The White House, 2009).

The U. S. Department of Housing and Urban Development (2015) reported budget cuts, lack of housing on campus, and increasing cost of a college education are problems for educational institutions. Leaders are currently focusing on creative ways to find financial aid, recruit, provide a quality education, control cost, and retain students (U. S. Department of Housing and Urban Development, 2015). The average yearly tuition for undergraduate students in the United States attending a public, four-year, in-state institution is $9,139 compared to $22,958 for a public, four-year, out-of-state institution (p. 9). Private, nonprofit, four-year institutions average yearly tuition is $31,231 as compared to a nonprofit which is $15,230 (College Board, 2017, p. 9). These tuition figures often do not include room, board, meals, books, and other transportation, which can be costly (College Board, 2017).

The Chronicle of Higher Education (2015) and Vandal (2012) reported increased focus on retention and graduation rates from government agencies because of increased loan debt and loan defaults. This interest on the increase of financial debt is due, in part, to students not persisting to graduation, or students taking longer to graduate (Vandal, 2012). The ACT (2015) reported data on college retention and persistence by college degree and institutional setting. For two-year private and public institutions offering an associate degree, the average length of time to completion was two years, while four-year public and private institutions offering a bachelor's degree was five years (ACT, 2015).

The extra year of cost of four-year degree programs is where increased focus lies (The Chronicle of Higher Education, 2015; Vandal, 2012).

A high percentage of institutions do not have the internal resources, especially financial backing, to meet all learning needs of a diverse student population (Baum et al., 2013; Vargas, 2013). When looking at institutional data from four-year public institutions offering a bachelor's degree, there was about a 64% retention rate from freshman to sophomore year, as compared to about a 70% retention rate for four-year private institutions (ACT, 2015, p. 5, p. 6). To help ensure student success and keep educational costs from rising more, data must be reviewed on an ongoing basis to identify students at- risk and implement system-wide programs to bring about constructive change (Chabotar, 2010; College Data, 2017; Ormrod, 2010; Vargas, 2013).

Reasons for Increasing College Retention Rates in the United States

According to a report from The Chronicle of Higher Education (2015), about 18 million undergraduate students entered colleges in the United States in 2014. By 2025, this number is expected to increase to around 20 million (NCES, 2017). While these numbers look encouraging, about 400,000 drop out of higher education on an annual basis (Knapp, Kelly-Reid, & Ginder, 2011; Snyder et al., 2016).

Retention data are available to educational leaders and policy makers to help them put measures in place to help cut costs associated with dropout rates (Schneider & Yin, 2011). Having financial strategies in place is one way of addressing institutional survivability in a time of shrinking education dollars and increasing student attrition (Schneider & Yin, 2011; Spannagel et al., 2015). According to the U.S. Bureau of Labor Statistics (2015), increasing college student retention is crucial for the economic viability

of our nation. Receiving a college education can be associated with higher salaries and even lower unemployment rates (U.S. Bureau of Labor Statistics, 2015).

Even though much emphasis has been placed on receiving a college degree, U.S. Census Bureau 2015 statistics showed almost nine out of 10 adults (88%) had at least a high school diploma or GED, while only one in three adults (33%) held a bachelor's or higher degree (U.S. Census Bureau, 2016, Table 1). While these numbers are improving, continual efforts to assure college completion will allow students the ability to improve earnings, enhance quality of life, and contribute more to the economic growth of nation (Carnevale et al., 2013; The White House, 2015).

Retention continues to be a problem on a national scale and will manifest into a greater concern if the number of students who enter college by 2025 is the predicted 20 million (NCES, 2017). The most alarming fact with retention is the United States is losing the educational war with the rest of the world, and the number of potential degree seekers is increasing (NCES, 2017). The World Economic Forum (2016) released some alarming data on the United States ranking in the educational world. The United States is ranked 52nd in the quality of mathematics and science education, and 5th in the country's ability to compete academically on a global basis (NCES, 2017, p. 152). These rankings are distressing for a nation that once stood out in the world of academia (NCES, 2016). If the United States wants to improve its image in global education and the market place, educational leaders and educators must make needed changes in institutional and governmental policies that fund college education and enhance students' ability to graduate within four years (Carnevale et al, 2013; Johnson & Gans, 2013; The National

Center for Public Policy and Higher Education, 2012; The White House, 2009; The White House, 2015).

Dropping out of college influences both students and taxpayers by impacting future earnings (Schneider & Yin, 2011; The White House, 2015). If the United States is to meet the challenges of a changing and mobile workforce, improving attrition rates in colleges and universities is necessary (The White House, 2015). Former President Obama, in an effort to strengthen education goals, wanted to double the number of postsecondary degrees and certificates over the next decade (Zaback, Carlson, & Crellin, 2012). By 2020, former President Obama wanted the United States to "have the highest proportion of college graduates in the world" (White House, 2009, para. 2). President Obama (2009) believed a highly educated and trained workforce will allow this country to compete with other nations in the global economy (The White House, 2009)

Schneider and Yin (2011) reported, "Governors likewise see the economic future of their states as dependent on the development of highly educated and skilled workforce that can compete with other states and nations" (p. 1). However, not all students enrolled in college will graduate with a degree or a certificate (Knapp et al., 2011; Snyder et al., 2016). In fact, "One-third of students who enter postsecondary education expecting to earn a degree leave without one" (p. 7). Failure to graduate, and the lost opportunity results in lost revenue for the student, state and federal governments, and for taxpayers who contributed to postsecondary education funding (Schneider & Yin, 2011; Spannagel et al., 2015).

Educational dollars spent in the United States. versus other nations. The Organization for Economic Co-operation and Development (OECD) is made up of 34

countries whose goal is to increase trade and economic development (OECD, 2015b). The OECD indicators are considered to be the most authoritative and correct data on the formal status of education across the globe (OECD, 2015b; World Economic Forum, 2016). In 2015, the OECD reported that, of its 34-member nations, "more than 12% of public funding is invested in education" (p. 1). Of the 11 OECD countries reporting how much they spend of their gross domestic product (GDP) for postsecondary education in 2014, the United States spent 5.3% compared to other reporting countries that spent an average of 1.6% of their GDP (OECD, 2015a; World Economic Forum, 2016). However, the United States spent 3.7% of its GDP on elementary and secondary education, slightly lower than the OECD average of about 3.8% (OECD, 2015a; World Economic Forum, 2016).

While the aim of the OECD is to provide leadership for policy makers and stakeholders in meeting challenges of educating diverse student populations, without all 34 nations reporting and finding effective means of evaluating programs or how money is spent, it stands to reason the success of enhancing economic growth and development through educational reform is at best threatened (OECD, 2015b). Without leadership and proper oversight, the $2.5 trillion dollars spent annually on educational improvements will not transform into better education in schools and classrooms (OECDb, 2015, p. 23). To better reform the educational systems, the United States must address President Obama's plea to re-claim a place in the world as the most educated nation, giving the United States the upper hand in the global economic market and further attracting more business and industry to America (Schneider & Yin, 2011; The White House, 2009; Zaback et al., 2012).

The World Bank Group provides data on the amount countries spend of their GDP on both private and public education (World Bank Group, 2018). In 2011, the United States spent 5.2% of its GDP on total educational expenditures compared to Denmark that spent 8.5% and Iceland that spent 7.5% of their GDP on total educational expenditures (World Bank Group, 2018). When comparing expenditures per student in tertiary education for the same year, the United States spent 20.9% as compared to the United Kingdom at 25.6% and Sweden at 41.8% (World Bank Group, 2018).

In isolation, these data do not paint the picture of what is happening in education across the world today, but do let the public and educational leaders know that smarter ways of delivering education to diverse student populations must occur (Carnevale et al., 2013). Effective ways of measuring outcomes is essential if colleges are to have an educational system that is sustainable (Carnevale et al., 2013). Schneider (2010) reported, "In a world that is indifferent to tradition, success will go to those individuals and countries which are swift to adapt, slow to complain and open to change" (para. 3).

Decreasing extra college costs. Working with freshman students to keep them focused and on track to graduation is a major role of all educators and educational leaders to avoid increasing the cost of an education (Offenstein et al., 2010). In 2017, the NCES released data implying approximately 60% of full-time students received a bachelor's degree from a four-year institution in six years (p. 144). Without this knowledge and ability to make early interventions, such as more basic classes, acceptance of transfer credits, and individual course loads reflecting ACT scores, graduation rates will remain subpar (Grennille, 2014). Keeping the freshman college student engaged and in college must be a high priority for administrators (Offenstein et al., 2010). The United States

Department of Education (2013) reported students attending full-time for undergraduate studies were 25% more likely to graduate than those who attended part-time (p. ?). Students' inability to graduate on time and attain gainful employment leads to increased costs for both the student and taxpayer (Schneider & Yin, 2011).

The cost of educating students from kindergarten through senior year varies from state to state (Vargas, 2013). According to Vargas (2013), Connecticut spends about "$154,000 for every low-income student verses $146,672 for higher-income students" (p. 6). It is not easy to compare education costs within this timeframe, as it varies from state to state based on cost of living and accounting practices among state regulatory agencies (Vargas, 2013). According to the U.S. Census Bureau's report (2016) for the fiscal year 2015, Alaska and Connecticut spent the most per pupil for elementary and secondary education after adjusting for inflation as compared to Arizona, Arkansas, California, and Colorado, which spent considerably less. State and federal governments must manage resources to educate future leaders of tomorrow (U.S. Census Bureau, 2016). These data are significant when trying to cut costs of higher education, because money spent on the early years of education should translate into savings in college with better academically prepared students who are ready for the rigors of higher education (Miller 2013; Rath et al., 2013; Vargas, 2013).

If state and federal governments are to be effective at setting policies addressing the cost of postsecondary education, then there must be some way to determine details of those who fail to complete degrees or certificates other than assumptions (NCES, 2011). The NCES (2011) released the 2008-09 Baccalaureate and Beyond Longitudinal Study which stated:

> Title IV colleges and universities in the United States reported that for the academic year of 2008-2009, about 79% of the 3.1 million full-time, first-time degree/certificate seeking undergraduates found it necessary to rely on financial aid;... for those students attending public four-year institutions, average price before financial aid was $16,271 and average net price was $10,747; for those attending private not-for profit four-year institutions, average price before aid was $31,401 and average net price was $19,009; and for those attending private for-profit four-year institutions, average price before aid was $26, 976 and average net price was $23,057. (p. 6)

Therefore, educators and legislators need to look at better ways to invest in tax dollars to assure that all students have a better chance of obtaining a college degree or certificate on time (ACT, 2015; OECD, 2016).

While college doors are open to students, keeping students from dropping out is a huge challenge, especially with decreasing funds allocated for education (Ayers, 2011). With high attrition rates and students not reaching full employment potential, this impacts the students' economic viability (Millar & Tanner, 2011). Not only does a high attrition rate influence students' economic future, debt incurred with trying to obtain a college degree leaves them in worse financial constraints than before they started their educational endeavors (Schneider & Yin, 2011). However, students with higher levels of education have a better chance of returning to educational institutions to pursue advanced degrees (OECD, 2016).

Long Term Benefits of a College Education

The economic well-being of this country depends on a workforce that is trained to function in a highly competitive global market (Schneider & Yin, 2011; The White House, 2009). Obtaining a college education opens up doors of opportunity and can help pave the way to personal and professional success (Snyder & Dillow, 2013). When looking at levels of education, having advanced degrees contributes to better health outcomes, increased peer and social networking, and chances of landing better paying jobs (OECD, 2016). Based on these findings, students need to entertain the idea of pursuing postsecondary education, and funding agencies should build on literacy and technical skills to increase market share in the global labor force (Schneider & Yin, 2011; The White House, 2015).

To better meet the needs of a highly competitive global market, education must be a priority for countries that want to be seen as leaders across the world (The White House, 2015). President Obama supported secondary education to build and train a better workforce by increasing funding for education (The White House, 2009). According to Bergeron and Martin (2015), "In fiscal year 2015, increased funding for education is estimated to provide a total of more than $160 billion to students enrolled in postsecondary education" (para. 4). By the year 2020, Carnevale et al. (2013) at Georgetown's University Public Policy Institute projected:

> Of all total jobs in 2020, 12% will require an associate degree while 24% will require a bachelor's degree. Overall employment is expected to increase by almost 24 million over 10 years, from 140.6 million in 2010 to 134.6 million by 2020. In addition, 30.8 million replacement jobs are expected to become

> available due to retirement and individuals leaving the workforce. Overall, the economy will create 54.8 million new and replacement jobs between 2010 and 2020. (p. 8, p. 18)

These figures are relative to the ongoing literature review that expresses the necessity for increased retention of students to persist to graduation for the economic future of the United States (Schneider & Yin, 2011; The White House, 2015).

Education leads to a better life. Earning a postsecondary degree is an important step to increasing earning potential over one's lifetime (Snyder & Dillow, 2013; U.S. Bureau of Labor Statistics, 2015). However, it is crucial for students to research job demands and pay scales and use this when determining fields of interest (Kim, Tamborini, & Sakamoto, 2015; Zaback, 2012). It is important to know that income varies according to degrees, disciplines, and by state (U.S. Bureau of Labor Statistics, 2015).

According Zaback et al. (2012), "High school graduates earned $29,423 annually; Associates Degree graduates earned $38,607 annually; Bachelor's degree graduates earned $50,360 annually; and those with graduate degrees earned $68,064 annually" (p. 8). Job openings in areas such as science, technology, engineering, and math (STEM), healthcare professions and support systems, and community services are on the rise (Zaback et al., 2012). Kim et al. (2015) found health care fields have the highest number of bachelor's degree recipients, STEM fields have the highest median income, and the education profession has seen a decrease in awarded degrees, probably secondary to lower salaries than other disciplines.

Kim et al. (2015) reported on a study conducted showing the relationship between education and the overall earnings during one's lifetime. Kim et al. (2015) described the top seven degree programs and their impact on overall earnings. The top seven most popular degree programs reported by Kim et al. (2015) were business, STEM, health science, social science, education, liberal arts, and all others.

Earnings, gender, and degrees are listed in order of comparison to show the lifetime earnings of an undergraduate with a STEM major compared to those with a social science or liberal arts major, and found STEM majors are paid more (Kim et al., 2015; Zaback et al., 2012). For students graduating with a medical or dentistry degree, men earn about $5.2 million over a lifetime, as compared to women who earn about $2.1; male graduates with business degrees earn about $2.9 million over a lifetime, while women earn about $1.9 million (Kim et al., 2015. para. 40).

Law degree graduates realize about $2.9 million life earnings for men, as compared to $1.7 million for women (Kim et al., 2015, para. 40). When comparing graduate STEM degrees between male and female recipients, males earn about $2.8 million in lifetime earnings, as compared to females who earn about $1.7 million (Kim et al., 2015, para. 40). Males with an undergraduate degree in the STEM field have the potential to earn about $800,000 more over a 40-year work span than those with an undergraduate degree in social sciences or liberal arts (Kim et al., 2015; Zaback et al., 2012).

In addition to higher earning potential, it is also important to know what else a college degree can offer (Kim et al., 2015). Other benefits from graduating college include lower unemployment rates, better job opportunities, social mobility, and a

quicker way to acquire befits of the middle-class benefits (College Atlas, 2014). Job satisfaction and security are also rewards for completing an education (Zaback et al., 2012). Employees with an education are valuable to the workplace and less likely to be laid off in times of recession or organizational downsizing (U.S. Bureau of Labor Statistics, 2015).

Postsecondary education is a necessity. According to OECD (2015b), older adults in their fifties and sixties are ranked third as the most educated in OECD countries. Younger adults round out the top 10 as having degrees in higher education (OECD, 2015b). Statistical data indicate the workforce that has, or is getting ready to retire, is more educated than the one replacing them (OECD, 2015b). With the Baby Boomer population exiting the workforce, additional jobs requiring more postsecondary education degrees will become available (OECD, 2015b).

What the modern, diverse, college student must consider when assessing degrees is the potential earning gaps between levels of education and whether the cost of getting an advanced degree is worthwhile (Abel & Deitz, 2014). However, when deciding on the importance of a degree, it is key to look at potential lifetime earnings over an entire work career (Kim et al., 2015). Hershbein and Kearney (2014), contributors to the Hamilton Project, stated, "looking at cumulative earning over the entire career, the typical bachelor's degree graduate earns $1.19 million, which is twice what the typical high school graduate earns, and $335,000 more than what a typical associate degree graduate earns" (para. 3). According to Abel and Deitz (2014), it is economical to obtain either an associate degree or a bachelor's degree, as both degrees increase one's lifetime earning

potential. Despite the increasing cost of a college education, it is still important to know a college degree is an investment in one's economic future (College Atlas, 2014).

Solutions to High College Attrition Rates

To stay competitive in the global market for education, the United States must become more aggressive in its educational attainment (Schneider & Yin, 2011). More emphasis must be placed on completing college, not just enrolling in college (The White House, 2009). To make this happen, there must be changes in institutional and governmental policies and academic support systems to promote students' success to graduation (Ayers et al., 2012; Drake, 2011; Humphreys, 2013; Moschella et al., 2015).

Funding for students. One way of helping young students and older adults needing to obtain a degree is to rethink how Pell Grants are distributed (Baum et al., 2013). To help both the young college student and the older adult returning to college, Baum et al. (2013) suggested, "The application process and eligibility criteria for Pell Grants should be simple, predictable, and transparent" (p. 13). Baum et al. (2013) reported the federal government should consider a "Pell Grant Y for younger students and Pell Grant A for older adults" (p. 15, p. 27). Pell Grant Y, for younger students, should be designed to allow funding for younger people to attend college and be successful in completing their degree or certification in a timely manner (Baum et al., 2013). Pell Grants are one source of funding for the older student population, so it must be designed and integrated with other sources of institutional, state, and federal aid to support students wanting to attend college with earnings are that are inadequate (College Board, 2017).

Pell Grants for older adults should allow funding for displaced workers trying to better their life by returning to school (Baum et al., 2013). Educational leaders and policy makers must realize funding is needed to help students return to college to obtain an education (Baum et al., 2013). Pell Grants are needed to obtain or further education and skills necessary to stay marketable in a global workforce (Baum et al., 2013). However, what must be taken into account is not what individuals earned before entering college or while in college, but what they need to stay marketable in the global workforce and what they can accomplish in long-term financial gain (Moschella et al., 2015).

The road to graduation. Persistence to degree completion has been discussed by many authors, yet there still remains a gap between identifiable problems and ways to resolve the problems (Offenstein et al., 2010). In fact, according to Offenstein et al. (2010), results of literature reviews are not that helpful. To help students be successful, it is necessary to build a college culture that fosters and promotes college completion, by focusing resources on high-risk students and their specific retention risk factors (Offenstein et al., 2010).

Demetrious and Powell (2014) reported students need to learn while in college so they can be successful in life and not just focus on graduating. If students are to be successful in the crucial first year of college, educators must be supportive, not decrease educational standards, and relate to how students view the educational experience at institutions (Alarcon & Edwards, 2012; Demetriou & Powell, 2014). In 2012, Dr. William Law, President of St. Petersburg College in Florida, implemented an initiative called, *The College Experience: Student Success,* with a goal of providing support to students to earn a degree or certificate that would help them do better in life. As a result

of the aforementioned initiative in 2014, administration and faculty from St. Petersburg College used five key strategies to improve retention including "expanding out-of-class support, integrated career and academic advising, improving new student orientation, setting up early alert system and student coaching; and enhancing the My Learning Plan tool" (para. 8-12). If institutions are to have effective retention programs, educators and administrators must understand both academic and non-academic factors that impact students' decision to enroll each semester and persist to graduation (Baer & Norris, 2016). Using best practices to make improvements in retention rates, with a goal of enhancing continued persistence to graduation can help students to improve their lives and well-being (Baer & Norris, 2016).

First year programing. In a study conducted by Selingo (2015), common practices were identified for freshman students to be successful. These practices in order of importance include, "midterm academic alerts, academic tutoring and coaching, orientation, intervention alert systems, freshman seminars, mandatory notification of grades, career exploration programs, mentoring programs, writing or studying skill programs, improvement of student awareness of key services, and degree planning" (Selingo, 2015, p. 16). Clark et al. (2011) reported efforts to enhance students' persistence to graduation creates an identity and sense of belonging to both the residential/college community of organizations, student activities, as well as educational community, participation in class, and other educational endeavors. Therefore, student involvement and attendance is necessary for student success and helps students connect with the college or university (Alarcon & Edwards, 2012).

Students who are involved in campus activities, join organizations, and assume leadership roles, connect more with the institution and therefore have more positive learning experiences and remain in college (Clark et al., 2011; Demetriou & Powell, 2014). Tinto (2012) also believed that student engagement is crucial during the first year of college.

According to Ayers (2011), it is important to create environments with an educational vision that involves the student and faculty in a collaborative partnership. Collaborative partnerships supporting service learning and advising communities that support institutional missions and goals, diverse student populations, and encourage student engagement will have a better chance of aiding in achieving institutional academic outcomes (Ayers, 2011; Grisham, Johnson, & Freeman, 2015).

In 2014, the Texas Higher Educational Coordinating Board reported, while differences may occur among institutions, three components remain constant to the success of an institution and its programs. Successful institutional programs must have strong support from stakeholders, use evidence-based research to assess needs of students, and engage faculty and staff in academic advising and program development to meet the educational needs of its constitutes (Texas Higher Educational Coordinating Board, 2014). When looking at ways to make students more successful, it is essential legislators and educators look at evidence-based practice when implementing policies and practices to create avenues for student success (Ayers et al., 2012).

One way of helping students be more successful is by implementing first-year intervention programs designed for weaker students at increased risk for poor academic performance and higher attrition rates (Childs, 2015; Garza & Bowden, 2014). Kot

(2014) reported students who received academic alerts and early academic advising improved their first year GPA. If institutions are to be successful in retaining students, they must have programs in place that not just collect data, but use data in a way to show success of programs (Hanger, Goldenson, Weinberg, Schmitz-Sciborski, & Monzon, 2012).

Legislators and college administration are not the only parties looking at ways to enhance student and faculty collaboration to increase students' chance of completing a college degree (Cade et al., 2015). With higher demands for accountability in meeting institutional student outcomes, diminishing state and federal funding, inconsistent charitable endowments, and slowing fund raising abilities, it is evident that programs be in place that address retention and persistence to graduation (Cade et al., 2015). High attrition rates impact students' ability to be gainfully employed in a mobile and highly competitive workforce and is alarming for legislators who will have to find new ways to recapture lost revenue (Schneider & Yin, 2011). Not only should educators be concerned about college retention rates, there should also be concern with continued loan default rates rising (Schneider & Yin, 2011). This compounded with more students entering college underprepared, could potentially cause future budgetary problems. (ACT, 2015; Rath et al., 2013).

In the previous two sections, relevant literature added context to support the structure in Donabedian's model (Botma & Labuschagne, 2017). The structure is one of three focuses of Donabedian's model (Neary 2002). The process portion of Donabedian's model is supported when discussing instances of first-year programming.

Summary

In Chapter Two, the literature review was presented. The chapter was divided into five sections. First, individual factors affecting college student attrition were presented. This section centered around students and factors involved in why they are not retained in higher education. The next section focused on institutional factors affecting college student attrition. Literature was presented surrounding the responsibilities of college institutions and what factors affect attrition.

Also presented were reasons for increasing college retention rates in the United States and long-term benefits of a college education. Finally, the last section was focused on solutions to high attrition rates in higher education and scholarly ideas on how to create better retention. The literature in Chapter Two was discussed through the lens of Donabedian's structure, process, and outcome model (Neary, 2002).

Predicting student retention and success is multifaceted, so it is crucial to find ways to promote a cultural climate for students to succeed in college endeavors and transition through a program of study in a timely manner to contribute to the nation's economic future (Hanger et al., 2012; Westrick et al., 2015). Educational leaders must work with stakeholders and those in marketing and admissions to attract students who are a good match for the institution, and then be highly visible to students so students feel a connection (Slanger et al., 2015). Finding ways to promote student retention is crucial as high dropout rates influences both students and taxpayers by affecting future earnings and lost revenue by not paying higher taxes (Baer & Norris, 2016; Schneider & Yin, 2011). If this country is to meet the challenges of a changing and mobile workforce, then

improving attrition rates in colleges and universities is necessary (The White House, 2015; Tinto, 2012).

In Chapter Three, the methodology used for this research project is discussed. First, the problem and the purpose of the study are addressed. Second, the research design and research questions are presented. Next, the population and sample, instrumentation, and data collection procedures are detailed. Last, the process for analyzing the data is outlined.

Chapter Three: Methodology

Educational leaders across the globe are faced with challenges of retaining college freshman students who are at high risk for academic failure (Clark et al., 2011). According to Clark et al. (2011), some challenges facing higher education institutions include how to "improve student persistence and create a positive culture for retention" (para. 1). Tinto (2012) noted, "It is one thing to understand why students leave; it is another to know what institutions can do to help students stay and succeed" (p. 6). Therefore, it is essential educational experts look at new and innovative ways to help students stay and succeed in obtaining a college degree (Heil, Reisel, & Attewell, 2014).

Academic leaders across the nation are pressured to find ways to improve their failing educational systems and student outcomes and retention rates while meeting academic expectations (Cade et al., 2015). College administrators and educators view student retention as a complicated and challenging process requiring time and effort of the entire institution in creating a climate necessary to engage students in educational activities enhancing their persistence to academic success (Moschella et al., 2015; Tinto, 2012). To enhance student retention and persistence to graduation, administrators and educators must explore ways to invest in programs, such as the Blossom Program, which can possibly enhance student involvement (Tinto, 2012).

In support of student success, Clark et al. (2011) reported to help first-year students be successful, faculty should be more visible, accessible, offer support early on, and work with college administration to build a culture to foster student retention and success. Several research studies have shown students involved in their educational endeavors and who buy into the school's academic culture will more likely stay involved

in activities that promote healthy study habits and persistence to graduation (Moschella et al., 2015; Tinto, 2012).

In this chapter, the problem and purpose of the study are restated along with research questions. The research design for the study, population and sample, and data collection procedures are presented. The chapter concludes with the data analysis, ethical considerations, and the summary.

Problem and Purpose Overview

Educational leaders worldwide are being held more accountable for student success, including decreasing the cost associated with obtaining a degree, staying competitive, addressing needs of a changing work force, and retention of students while finding ways to retain students until the completion of a degree or certificate (Spannagel et al., 2015). Childs (2015) reported when student attrition rates are high, budget cuts follow, and small institutions can be subject to closure. As more students enter college, it is crucial for institutions of higher learning to recognize consumers have choices and employ exact targeting techniques to recruit and retain students until graduation (Noel-Levitz, 2017). According to President Obama (The White House, 2009), "America's students and families need, and the nation's strength will depend on, a higher education system that helps all students succeed" (para. 1).

To help students succeed in higher education, better preparation of students entering postsecondary education is essential (Tinto, 2012). In 2012, the National Center for Public Policy and Higher Education reported lack of college readiness increases costs to students, families, taxpayers and is impeding the nation's goal to increase graduation rates. To compete and survive in today's global economy, it is necessary to have an

educated work force with skills, and training that benefits workers, states, and the nation (Zaback et al., 2012). Meeting the need of students is a huge job in institutes of higher learning, making it necessary for administration to hire about one-third more people in student services opposed to administrative personnel (Slanger et al., 2015).

The purpose of this study was to use institutional data to evaluate effectiveness of interventions provided at the Blossom Program, implemented in a small U.S. Midwestern, private, liberal arts college. Evaluation of the Blossom Program was designed to help institutional leaders and stakeholders determine if invasive interventions led to increased freshman retention rates, higher GPAs, and improving students' academic performance where they can be removed from academic probation. The results of this study are expected to enable those in decision-making capacities to create cost-effective learning environments conducive to student retention and persistence to graduation.

Research Questions

The following research questions guided this study:

1. What statistically significant difference exists, if any, in first and second semester grade point averages (GPAs)s of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?

$H1_0$: There is no statistically significant difference in first and second semester GPAs of male, first-time freshmen who received no specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

$H1_{a:}$ There is a statistically significant difference in first and second semester GPAs of male, first-time freshmen who received no specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

2. What statistically significant difference exists, if any, in the number of male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?

$H2_0$: There is no statistically significant difference in male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

$H2_{a:}$ There is a statistically significant difference in male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions.

3. What statistically significant difference exists, if any, in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received interventions?

$H3_{0:}$ There is no statistically significant difference in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received invasive interventions.

$H3_a$: There is a statistically significant difference in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received invasive interventions.

Research Design

Quantitative research can be used to improve research control and as a "means for testing objective theories by examining the relationship among variables" (Creswell, 2014, p. 247). Researchers can use quantitative research to observe relationships between variables, and help determine the cause and effect among controlled relationships (Polit & Beck, 2012). Fraenkel et al. (2015) defined quantitative research as, "research in which the investigator attempts to clarify phenomena through carefully designed and controlled data collection and analysis" (p. G-7). Most scientific disciplines, including education, use quantitative experiments to aid in generating a hypothesis and in supporting or disproving the hypothesis by using principles of mathematics and statistics (Fraenkel et al., 2015).

Quantitative research is used if the researcher wants to support theories, recognize variables, use deductive reasoning to interpret data, and confirm validity and reliability of data, while qualitative research is used to explore and understand human beliefs on a social or human problem (Creswell, 2014). Data quality is essential in research because it is not possible to arrive at a conclusion without it (Creswell, 2014). According to Polit and Beck (2012), researchers must use caution when analyzing data in research studies to avoid severe flaws, resulting in non-credible evidence for scientific use.

Methods for data collection were chosen based on the problem, ways to handle the problem, and variables being investigated (Fraenkel et al., 2015). According to Fain

(2017), valid and reliable tools are necessary when examining hypotheses or finding answers to questions. Qualitative data can be monitored or viewed, written, videoed, or recorded (Polit & Beck, 2012). Mixed method research can be used to collect, analyze, and integrate both qualitative and quantitative research to better understand when one or the other does not clearly address the research problem (Fain, 2017).

Therefore, quantitative data that can be analyzed with ease, comparisons made, and a hypothesis tested with sound statistical methods was chosen for this project. Joseph (2014) reported quantitative data implies numbers and the use of statistics is helpful in identifying relationships or patterns of behavior. Quantitative data analysis also allows the researcher to compile, summarize, and prepare data for dissemination to readers (Creswell, 2014).

In this quantitative study, causal comparative research was used (Fraenkel et al., 2015). Fraenkel et al. (2015) described causal comparative research as "an attempt to determine the cause or consequences of differences that already exist between or among groups of individuals" (p. 364). Causal comparative research is used when comparing two groups that are different, in one or more ways, and comparing the groups in an attempt to determine the reason for the difference (Polit & Beck, 2012). Fraenkel et al. (2015) stated the casual comparative approach "is to begin with a noted difference between two groups and look for possible causes for, or consequences of, this difference" (p. 365). This form of quantitative research is done retrospectively (Fraenkel et al., 2015). Fraenkel et al. (2015) stated causal comparative research, "is in contrast to an experimental study, where the researcher creates a difference between or among groups and then compares their performance to determine the effects" (p. 364).

In this study, there were several independent and dependent variables. Fraenkel et al. (2015) defined independent variables as, "those that the researcher chooses to study to assess their possible effects on one or more other variable" (p. 81). The independent variables were the invasive interventions introduced. Those interventions included free textbooks, hiring of professional tutors, offering learning enrichment classes, and hiring of a program coordinator to oversee participants in the Blossom Program.

Dependent variables are described by Fraenkel et al. (2015) as, "the variable that the independent is presumed to affect" (p. 81). In this study, dependent variables were topics of the research questions in which data were analyzed to determine if a statistically significant difference existed. The first dependent variable was whether a statistically significant difference existed in GPA from those who received the invasive intervention, when compared to a similar group of students who did not receive the intervention. The second dependent variable was whether a statistically significant difference existed for students removed from academic probation who received the invasive interventions, when compared to a similar group of students who did not receive the intervention. The third independent variable was whether there was a significant difference in the number of students who were retained the following fall who received interventions, when compared to a similar group of students who did not receive the intervention.

Population and Sample

Population is the group that research is applied to or conducted (Creswell, 2014; Fraenkel et al., 2015). The Midwestern, four-year, liberal arts college used in this study maintains an enrollment population of approximately 1,400 students (Institutional Data, 2017). The college offers 39 different undergraduate majors, along with one graduate

degree in Community Counseling (Institutional Data, 2017). The demographic makeup of the student body is comprised of students from 36 countries and 39 states (Institutional Data, 2017). Thirty-seven percent of incoming students are first-generation students (Institutional Data, 2017). Fifty-four percent of students are from low socioeconomic backgrounds, and 44% are minorities (Institutional Data, 2015).

The first-time, full-time, degree-seeking freshmen retention rate from fall-to-fall is approximately 53% (Institutional Data, 2017). A fall persistence rate from sophomore to junior year is 78%, and junior to senior year is 82% (Institutional Data, 2017). The six-year graduation rate is approximately 27% (Institutional Data, 2017). Approximately 16% of students who have entered the college in the past eight years as first-time freshman students have required some developmental or remedial coursework (Institutional Data, 2017). Male students make up the majority of students needing remedial help, almost three to one over their female peers (Institutional Data, 2017).

The study consisted of 216 male students who participated in the Blossom Program over a 10-year period. The group in the study is part of the 16% of students at the Midwestern institution requiring remedial coursework. The participants in the study were admitted to the host institution on academic probation because they had composite scores of less than 18 on the ACT or SAT equivalent, did not have a 2.0 GPA, and graduated in the bottom half of their high school class.

To comply with the Family Educational Rights and Privacy Act (FERPA), educational leaders and educators must protect students' educational records (U.S. Department of Education, 2015). De-identified data used for this study assured, with reasonable certainty, any participants of the study would not be identified (U.S.

Department of Education, 2015). De-identification of data is the procedure used to remove or obscure personal data that is recognizable on a student's record (U.S. Department of Education, 2015). The purpose for de-identification of data is to minimize the risk of disclosing information about a participant by making it nearly impossible to identify either him or her (U. S. Department of Education, 2013).

Data Collection

To complete this study, the following steps and procedures were followed. First, permission from Lindenwood's Institutional Review Board (IRB) was obtained (see Appendix A). Permission had also been previously given by the host institution's president approving the study to take place using de-identified data accessed through the systems administrator (see Appendix B). After permissions from both Lindenwood University and the host institution, where data were held, the systems administrator was contacted by email informing him of the approval to share data related to the Blossom Program (see Appendix C). It was outlined that data were to be presented in a de-identified manner complete the study.

Data specifically requested were, GPA and retention data for all students in the Blossom Program from fall 2006 to spring 2014 (see Appendix C). Data regarding academic probation used GPA to establish if a student was removed from probation after receiving a GPA of 2.0 or better either his first or second semester. The systems manager extracted data previously mentioned for participants in the Blossom program for the years of 2006 to 2014 after being presented the letter from the researcher and verifying the host institution's presidential approval. The systems manager presented information requested

to the researcher in a de-identified manner to maintain privacy and insure compliance with FERPA regulations (U.S. Department of Education, 2015).

Data Analysis

Inferential statistics were used in this study. Polit and Beck (2012) described inferential statistics as those "which are based on the laws or probability, provide a means for drawing conclusions about a population, given data from a sample" (p. 583). When the term probability is used in research, it implies predictability when a given event will happen (Fraenkel et al., 2015). Specifically, in this study, data were collected and analyzed from existing student records. Student records reviewed data from an eight-year period, 2006 to 2014. Data collected contained two different points, records *before* implementation of invasive interventions into the Blossom Program and records *after* implementation of the invasive interventions into the Blossom Program.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) system (IBM, 2016). The significance level was set at $p < 0.05$ (Polit & Beck, 2012). This significance level was used to indicate a high level of confidence that findings were reliable (Fain, 2017). According to Creswell (2014), "A statistical test is considered to be of significance if the results are unlikely by chance to have occurred, and the null hypothesis of 'no effect' can be rejected" (p. 246). To analyze GPAs and answer the first research question, IBM SPSS statistical software was used to perform an independent-samples *t*-test statistical assessment, according to the principles outlined in Fraenkel et al. (2015).

In the independent-samples *t*-test statistical assessment, Levene's test was performed (Pallant, 2016). Levene's test assures population variances of the two groups

were comparable (Pallant, 2016). Meaning, Levene's test ensures when comparing two populations that groups are alike, and analysis of said groups is appropriate (Fraenkel et al., 2015). To analyze data from research questions two and three, pertaining to participants removed from academic probation and those retained for their sophomore year, the Chi-Square test for independence statistical assessment was conducted, according to the principles outlined in Fraenkel et al. (2015).

Ethical Considerations

Ethical considerations for this study related mainly to data requested from the institution being kept in a confidential manner to protect participants, according to the principles of Fraenkel et al. (2015). Data were obtained through one of the host college's information systems administrators assigned to this study who has password access to the information. Data were obtained in a spreadsheet format for manageability (Creswell 2014). Identification numbers generated by the systems administrator are such that only he knows and will remain confidential so there is no release of information that could be potentially compromised or be used for any purpose other than this study (U.S. Department of Education, 2015). Since data analysis has been completed, the data are stored on a computer hard drive that is password protected. Data will be maintained in the password protected computer for three years, as required by the Lindenwood IRB. While portions of data were printed in hard copy, those documents were all recovered and destroyed (Creswell, 2014).

Summary

A major problem for educational experts is the dropout rate of college students and the cost associated with not completing college (Complete College of America, 2014;

Tinto, 2012). Even though research exists that identifies problems within postsecondary education, college administrators and educators are still struggling to find ways to retain and graduate students, especially those at-risk due to shrinking budgets and performance-based funding (Baer & Norris, 2016; Casey & Nicols, 2015). Thus, educational leaders worldwide are being held more accountable for student success, including monitoring GPA, changing life styles while in college, study habits, retention of students, and completion of a degree or certificate (Boateng et al., 2016; Spannagel et al., 2015). To help students succeed in educational endeavors and be more competitive in the changing global workforce, educational experts must design educational programs that promote student retention, reduce time to degree completion, control cost, increase and sustain family interactions, and increase persistence to graduation (Carnevale et al., 2013; Johnson & Gans, 2013; Schneider & Yin, 2011).

In Chapter Three, the problem and purpose were discussed referencing how leaders and higher learning institutions are being held to a higher standard. Institutions are being held with more accountability for student success in completion of a degree and affordability of that degree (Spannagel et al., 2015). There is also a growing need of survival in today's economy and to compete in that economy, there must be a highly educated and trained workforce (Zaback et al., 2012). The purpose of the study was to evaluate interventions provided by the Blossom Program. Research questions and the research design were a focus in Chapter Three.

The population and sample size of the study were introduced. The study consisted of 216 participants over an eight-year period from 2006 to 2014. Data collected were de-identifiable in an effort to ensure data could not be traced back to any

of the participants (Fraenkel et al., 2015). Collections of data were in accordance with the Lindenwood University IRB process, and permissions were received by both Lindenwood University as well as the host institution. The analysis of data was processed using inferential statistics (Polit and Beck, 2012).

In Chapter Four, results of data analysis are discussed by addressing each research question individually. The different statistical analyses used in the study are discussed pertaining to data collected to answer research questions. Additionally, tables were created to visually explain the data analysis.

Chapter Four: Analysis of Data

The purpose of this research study was to evaluate if there was a measurable difference when several invasive academic interventions were introduced in program designed to support college students at-risk of failure. The Blossom Program has been in existence at a Midwestern college in rural Missouri for approximately 20 years, giving academically at-risk students a chance at receiving a degree (Institutional Data, 2016). The college is located approximately 90 miles from the nearest metropolitan city. The program is not maintained with institutional funding but is financially controlled by an independent trust and board of directors whose main goal is to help identified freshmen with academic and social support services (Institutional Data, 2016).

The mission of the program has been to help individuals succeed in college and become productive citizens (Institutional Data, 2016). The program supports students who under normal circumstances would likely never have been given a chance in higher education due to general admission standards of colleges and universities (M. Porter personal communication, March 2017). Standards for regular acceptance at the college are to have graduated high school with a cumulative GPA of 2.0 or greater, be in the top half of a graduating class, an 18 composite on ACT or SAT equivalent, or transfer students completing 27 transferrable hours at a 2.0 GPA from an accredited institution (Institutional Data, 2016).

Examining data generated by participants of this program allows educational and business leaders vested in this endeavor to determine if the invasive interventions make a difference in overall freshman retention rates, make improvements in student GPA, and help remove students from academic probation. Results of this study were presented to

enable those in decision-making capacities to create cost-effective learning environments conducive to student retention and persistence to graduation. The institution hosting this program intend to review the findings of this study to gain useful knowledge and make statistically supported changes for the future of the Blossom Program.

Data Analysis

This study was designed to address three research questions to determine whether invasive interventions introduced in the Blossom Program influenced retention, GPA, and removal from academic probation by analyzing data over an eight-year period. Data collected were representative of academic years starting with 2006-2007 academic year and ran congruently through the 2013-2014 academic year.

In each academic year, data collected presented both fall and spring GPAs and if participants were retained from fall-to-fall. At the end of the academic year, participants in the Blossom Program left the learning community for the remainder of their collegiate career. There were 216 male participants in the study overall. One hundred and seven male students in the study from fall 2006 through spring 2010 did not receive invasive interventions. This sample of students was compared to the sample of 109 participants in the program from fall 2010 through spring 2014 when invasive interventions were introduced.

Difference of grade point average. The first question: *What statistically significant difference exists, if any, in first and second semester grade point averages (GPAs) of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?*

To answer this first question, data were separated and analyzed by semester. Analysis was done in this fashion due to participants who were either removed or withdrawn from the host institution at the end of the first semester. This absence left a gap in data in the second semester because no cumulative score was obtained and would have made the test inaccurate (Fraenkel et al., 2015)

To analyze GPAs and answer the first question, IBM SPSS statistical software was used to perform an independent-samples *t*-test, according to the principles outlined in Fraenkel et al. (2015). Pallant (2016) noted, an independent-samples *t*-test is used "when you want to compare the mean scores on some continuous variable, for two different groups of participants" (p. 239). As part of the *t*-test process, one assumption is that population variances of the two groups being compared are equal (Fraenkel et al., 2015). To assure population variances of the two groups compared were consistent, Levene's test for equality of variances was used (Pallant, 2016).

Levene's test ensures when comparing two populations that groups are alike and analysis of said groups is appropriate (Fraenkel et al., 2015). Levene's test used an alpha level of .05 as the appropriate level of significance for testing *p*-values to determine variance (Pallant, 2016). The significance level indicates when using the Levene test and an alpha score of .05 or less is obtained, variance of the two groups being compared are not the same, and data violates the assumption of equal variance (Pallant, 2016). The *p*-value for Levene's test .39, was greater than alpha, .05 and not statistically significant. This supported the assumption that the groups are of equal variances when comparing first semester GPAs (Pallant, 2016).

In the first analysis using the independent samples *t*-test, fall semester GPA of students who received invasive interventions was compared to fall semester GPA of students who did not receive invasive intervention. An alpha level of .05 was selected as the appropriate level of significance for testing *p*-values to determine statistical significance (Fraenkel et al., 2015). The *p*-value for the first analysis, .48 was greater than the alpha value of .05 set for the test (Fraenkel et al., 2015). Results of this analysis indicated no significant difference in GPA when comparing students who did not receive invasive interventions and students who did receive invasive interventions in the fall semester. Therefore, the null hypothesis was not rejected. In Table 1, detailed information from the statistical analysis is provided.

Table 1

Fall Semester GPA Statistical Analysis

Group	*N*	Mean	Std. Dev	Std. Error Mean	Sig. Value
1	107	1.67	.95	.09	.48
2	109	1.66	.91	.09	

Note: N represents the number in the group. Std. Dev is the standard deviation for each group. The Std. Error Mean is the standard error of the mean for each group. Group one represents the pre-intervention participants who received no intervention. Group two represents those who received invasive interventions.

In the second analysis, second semester GPA of students who received invasive intervention was compared to second semester GPA of students who did not receive invasive intervention. Results of the independent-samples *t*-test were evaluated using Levene's test for equality of variances (Pallant, 2015). The *p*-value for Levene's test,

.36, was greater than alpha, .05 and not statistically significant (Pallant, 2015). This result supported the assumption that the groups are of equal variances when comparing the second semester GPA (Pallant, 2016).

Using the independent samples *t*-test, the spring semester GPA of students who received invasive interventions was compared to spring semester GPA of students who did not receive invasive interventions. An alpha level of .05 was selected as the appropriate level of significance for testing *p*-values to determine statistical significance (Fraenkel et al., 2015). This test was selected to compare mean scores of the two groups (Pallant, 2016). The *p*-value obtained from the second analysis of the independent-samples *t*-test was .43. This was greater than the alpha value of .05 for the test. Results of this analysis were indicative of no significant difference in GPA for the spring semester between the two groups. Therefore, the null hypothesis was not rejected indicating no difference in participants who received invasive interventions compared to students who did not receive invasive interventions (Fraenkel et al., 2015). Table 2 provides additional information from the statistical analysis.

Table 2

Spring Semester GPA Statistical analysis

Group	*N*	Mean	Std. Dev	Std. Error Mean	Sig. Value
1	84	1.51	1.05	.11	.43
2	87	1.53	1.00	.11	

Note: N represents the number in the group. Std. Dev is the standard deviation for each group. The Std. Error Mean is the standard error of the mean for each group. Group one represents the pre-intervention participants who received no intervention. Group two represents those who received the invasive interventions.

Difference in students removed from academic probation. The second question, *What statistically significant difference exists, if any, in the number of male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?* was analyzed using the IBM SPSS statistical software. A Chi-Square test for independence statistical assessment was conducted (Fraenkel et al., 2015; Pallant, 2016). Fraenkel et al., (2015) noted a Chi-Square test as a nonparametric test of statistical significance that compares frequencies observed with those expected to see if they are significantly different (p. G-1). Frankel et al. (2015) stated, "The Chi-Square test is based on a comparison between expected frequencies and actual, obtained frequencies" (p. 238).

In this analysis, participants who were removed from academic probation, and did not receive invasive interventions, were compared to see if there was a difference between participants who were removed from academic probation and received invasive interventions. An alpha level of .05 was selected as the appropriate level of significance for testing *p*-values to determine if a statistically significant difference existed between the groups (Fraenkel et al., 2015). In this analysis, variables for analyzing removal from academic probation included the control group and removal or non-removal from academic probation (Pallant, 2016). The GPA used by the host institution to be removed from academic probation was a 2.0.

A *p*-value for this research question obtained from the Chi-Square test was .15, which was greater than the alpha .05 significance level. The result of this analysis is indicative of no statistically significant difference in participants removed from academic

probation between the two groups (Fraenkel et al., 2015). Therefore, the null hypothesis was not rejected, and no significant difference in participants removed from academic probation who received invasive interventions compared to those who did not was found (Fraenkel et al., 2015). Table 3 provides information from the statistical analysis and includes the Pearson Chi-Square significance score (Pallant, 2016).

Table 3

Participants Removed From Academic Probation

	Value	*df*	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.064[a]	1	.15
N of Valid Cases	171		

Note: There are 171 cases in the data instead of 186 because 45 students dropped between the time the two groups were compared. The *df* indicates degrees of freedom.

Table 4 is provided to illustrate participants in the two groups of pre- and post-invasive interventions. Within the two groups, Table 4 displays students remaining on probation and students who were removed. Also shown is the percentage of each group on probation and those who were removed. It should be noted, only 171 participants in this study completed the academic year. Forty-five participants between the two groups were not retained. The GPA used for removal from academic probation was 2.0.

Table 4

Percentages of Students Removed from Academic Probation

	Group 1	Group 2
Number on Probation	46	57
Number in Good Standing	38	30
Total in Group	84	87
Percent in Group on Probation	54.8%	65.5%
Percent in Group in Good Academic Standing	45.2%	34.5%
Total Percentage	100%	100%
Percent Total of Group on Probation	26.9%	33.3%
Percent Total in Good Academic Standing	22.2%	17.5%

Note: Group 1 represents the pre-intervention participants who received no intervention. Group 2 represents students who received the invasive interventions.

Difference in fall-to-fall retention. The third question, *What statistically significant difference exists, if any, in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received interventions?*, was analyzed by using the IBM SPSS statistical software to perform a Chi-Square test for independence statistical assessment (Fraenkel et al., 2015; Pallant, 2016). The Chi-Square test for independence was used in an effort to analyze the differences between the two groups of participants; those who did not receive invasive interventions compared to the participants who did. Frankel et al. (2015) stated, "The Chi-Square test is based on a comparison between expected frequencies and actual, obtained frequencies" (p. 238).

The two categorical variables for this test were the two groups, control or intervention and fall-to-fall retention and whether students were retained or not. In this analysis, the fall-to-fall retention of students who did not receive invasive interventions was compared to fall-to-fall retention of students who did receive invasive interventions. An alpha level of .05 was selected as the appropriate level of significance for testing *p*-values to determine if a statistically significant difference existed between the groups (Fraenkel et al., 2015).

A *p*-value for this research question was obtained from the Chi-Square test of .34, greater than the alpha level of .05. This score indicated no statistically significant difference in retention between the no invasive intervention group and those receiving the invasive intervention (Fraenkel et al., 2015). The result did not meet the criterion of .05 or less to support a significant difference between the two groups (Fraenkel et al., 2015). Therefore, the null hypothesis was not rejected, and there was no significant difference in participants retained who received the invasive intervention, as compared to those who did not was found. Table 5 provides information from the statistical analysis (Pallant, 2016).

Table 5

Percentage of Fall-To-Fall Retention

	Value	*df*	Asymptotic Significance (2-sided)
Pearson Chi-Square	.89[a]	1	.34
Valid *N* of Cases	216		

Note: There are 171 cases in the data instead of 186 because 45 students dropped between the time the two groups were compared. The *df* indicates degrees of freedom.

Table 6 is provided to show participants in the two groups of pre- and post-intervention. Within the two groups, Table 6 shows those retained and those who were removed. This table also shows the percentage of each group who were retained.

Table 6

Participants Retained From Fall-To-Fall

	Group 1	Group 2
Number not Retained	62	70
Number Retained	45	39
Total in Group	107	109
Percent in Group Not Retained	57.9%	64.2%
Percent in Group Retained	42.1%	35.8%
Total	100%	100%

Note: Group one represents the pre-intervention participants who received no intervention. Group two represents those who received the invasive interventions.

Summary

In an effort to determine if several invasive interventions had a statistically significant effect on the Blossom Program, GPA, fall-to-fall retention and removal from academic probation were analyzed. This analysis compared two groups, a group of participants before any invasive interventions were introduced compared to a group of participants who had access to invasive interventions.

Regarding analysis of data reviewed in Chapter Four, there was little change between the control group and the group receiving invasive interventions. Regarding a

difference in GPA from the group receiving invasive interventions compared to the control group, the independent sample *t*-test for first semester GPA showed a *p*-value of .48 and for the second semester a *p*-value of .43. To show a significant result, the *p*-value must be at .05 or less (Fraenkel et al., 2015). With regard to students being removed from academic probation, a *p*-value of .15 was found. Again, .15 was larger than the .05 needed to show a significant result (Fraenkel et al., 2015). Fall-to-fall retention rates were also shown not significant between the control group and the group receiving intervention. A *p*-value of .34 was greater than the .05 or less needed to show a significant result (Fraenkel et al., 2015).

In all, four analyses of *p*-values obtained results greater than the .05 needed to show significant results (Fraenkel et al., 2015). Therefore, the null hypothesis was not rejected for each of the research questions. In summary, there was no significant difference in participants who received invasive interventions and those who did not.

In Chapter Five, findings of the study are described. Conclusions are presented and the results of the research study are discussed in relation to the review of research in Chapter Two. Implications and recommendations for future research are also discussed. Finally, a summary of the entire study concludes Chapter Five.

Chapter Five: Summary and Conclusions

Educational leaders across the country are challenged with shrinking budgets and finding creative ways to increase student retention and progression to graduation (Tinto, 2012). According to data released by the National Conference of State Legislators (2013), the increased number of students entering colleges does not mean they are college ready, and many students have to take remedial classes that can impede timely progression to graduation. To help solve the problem of underachievers, there must be approaches to narrow the achievement gap that exists between secondary and postsecondary education (Demetriou & Powell, 2014).

Several researchers have associated student engagement with student success and retention (Carnevale et al., 2013; Schneider & Yin, 2011; Tinto, 2012). A considerable amount of literature in the past 25 years has focused on underlying reasons why students drop out of college (Tinto, 2012). No silver bullet or underlying reason has been found to determine why a student decides to stay or leave college (Rumberger & Lim, 2008; Grennille, 2014). However, if students are to progress to graduation, it is crucial to explore reasons for dropping out of college and build a culture of success by implementing programs (Khoung, 2014; Mertes & Jankoviak, 2016; Tinto, 2012). These programs must engage and support student in course completion so they will return for the next semester and increase chances of student accomplishment (Khoung, 2014; Mertes & Jankoviak, 2016; Tinto, 2012).

This study was designed to determine if implementation of the Blossom Program, an invasive intervention program used at a small private, liberal arts college in the Midwestern United States, made a statistical difference in GPA, supported students in being removed from academic probation, and increased student retention rates. In this

chapter, findings of the study are presented. In addition, results of the study are discussed in relation to research presented in Chapter Two in the conclusions section. How results of the study can be used to support students are the topic of the implications portion of this chapter. Finally, suggestions for future research round out information presented in in Chapter Five. A summary of the study is presented at the end of the chapter.

Findings

In this study, an invasive collegiate program for at-risk students was evaluated. Outcomes addressed in the three research questions were GPA, academic achievement, and retention. In the following section, results are summarized.

In the first research question, a difference in GPA was measured. The research question, *What statistically significant difference exists, if any, in first and second semester grade point averages (GPAs) of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?*, was analyzed with de-identified data using the IBM SPSS statistical software to perform an independent-samples *t*-test statistical assessment, according to the principles outlined in Fraenkel et al. (2015). As previously mentioned in Chapter Four, to achieve an accurate statistical analysis to measure if a statistically significant difference in GPAs between those who had received invasive interventions from those who had not, two *t*-tests were performed; one for the fall and one for the spring semester of students. Findings for both semesters showed no statistical difference existed between the two groups. Therefore, the null hypothesis was not rejected (Fraenkel et al., 2015). Findings indicated no statistically significant difference in GPA from students who received intervention and those who did not.

The second research question measured the number of participants removed from academic probation. The research question, *What statistically significant difference exists, if any, in the number of male, first-time freshmen who were removed from academic probation and did not receive specific invasive interventions, as compared to male, first-time freshmen who received specific invasive interventions?,* guided data collection. Data were analyzed by using the IBM SPSS statistical software to perform a Chi-Square test for independence statistical assessment, according to the principles outlined in Fraenkel et al. (2015).

In this analysis, participants removed from academic probation who received invasive interventions were compared to participants removed from academic probation who did not receive invasive interventions to determine a difference between the groups. An alpha level of .05 was set to determine if a statistically significant difference existed between the groups (Fraenkel et al., 2015). As previously mentioned, the Chi-Square test is used to compare two categorical variables (Fraenkel et al., 2015; Creswell, 2014). In this analysis, variables analyzed were two groups, control or intervention, and whether students were removed or not from academic probation (Pallant, 2016). The GPA level required to be removed from academic probation was 2.0.

The *p*-value obtained from the Chi-Square test was .151, which is above the .05 significance level (Fraenkel et al., 2015). Result of this analysis was indicative of no statistically significant difference in the number of participants removed from academic probation between the two groups. Therefore, the null hypothesis was not rejected; there was no difference in participants removed from academic probation who received invasive intervention, as compared to participants who did not.

The third research question measured the number of participants retained. The research question, *What statistically significant difference exists, if any, in retention rates of male, first-time freshmen who did not receive specific invasive interventions, as compared to male, first-time freshmen who received interventions?*, compared fall-to-fall retention rates. Data were analyzed by using the IBM SPSS statistical software to perform a Chi-Square test for independence statistical assessment, according to principles outlined in Fraenkel et al. (2015).

In this analysis, fall-to-fall retention of students who received invasive intervention was compared to fall-to-fall retention of students who did not receive invasive interventions. This test was selected because there were two categorical variables; the group who did not receive the invasive interventions compared to those who did (Pallant, 2016).

The *p*-value obtained from the Chi-Square was .34. The result did not meet the criterion to support a significant difference between the two groups (Fraenkel et al., 2015). Therefore, the null hypothesis was not rejected indicating no difference in participants who received invasive interventions compared to those who did not.

Conclusions

Findings from this study suggest invasive interventions introduced into the Blossom Program did not make a statistically significant positive difference with improvements to students' GPA, being removed from academic probation, and overall retention rates. Results obtained in this study were not indicative of research presented in Chapter Two and opinions of other scholars. Dialogue regarding findings and research are presented in the next section.

Moore and Shulock (2014) reported research exists "indicating that a variety of programs intended to provide students with early support are associated with better student outcomes, making participation in such programs and a potential indicator toward degree completion" (p. 6). According to Ormrod (2010), to successfully support first-year students in completion of their program of study, college personnel needs to be more visible, engage students, and offer support programs early on which promote retention and academic achievement. In addition, Garza and Bowden (2014) and Selingo (2015) noted well-designed programs to support first-year students can increase chances of building an academic culture which fosters student retention and increases chances of graduation. Achieving student success, culminating in a degree and employment, can be attributed to first-year programs that encourage good study habits and skills, learning about campus policies, and increased engagement with peers and involvement in other school activities (Rath et al., 2013: Turjanica, 2013).

Education administrators must use a variety of intervention strategies to help freshman students return for sophomore year (Rath et al., 2013). Some strategies include academic alerts, early intervention, follow-up with scheduled meetings, and providing students with support services (The Chronical of Higher Education, 2015). Other strategies include freshman orientation, college personnel abilities to meet needs of a diverse student population, setting up learning communities, getting faculty involved, and finding ways to engage students in the learning process (Johnson & Gans, 2013; Tinto, 2012). Many strategies supported by research were supports offered to participants in the Blossom Program.

While research showing invasive interventions in the form of first-year programs for at-risk students is beneficial, results of this study did not show a significant difference. However, not having significant results with interventions does not lessen their importance but furthers support by other scholars that suggests there is no one reason, but varying reasons, why students drop out of college (Liguori & Lonbaken, 2015; Olmstead et al., 2015; Schneider, 2010; Schneider & Yin, 2011; Vandal, 2012). Furthermore, interventions and Blossom Program framework are supported by researchers such as Ayers (2011), Alcorn and Edwards (2012), Clark et al. (2011), Mertes (2015), and Tinto (2012). However, as researchers and educators, it is necessary to use best practices when implementing new programs or changing existing programs that could help with student retention to maximize resources (Clark et al., 2011; Mertes, 2015).

Implications for Practice

While results of this study are somewhat disappointing because no statistically significant difference was found, it allows administration of the college to use data for budgeting purposes and institutional planning. Kemp (2016) reported for students to reflect on prior learning experiences and how practices helped or hindered their learning, administrative and educational leaders must evaluate effectiveness of institutional programs. Therefore, it is inherent for educational experts to work with retention specialists and stakeholders to establish goals to evaluate program effectiveness and college success (Ayers et al., 2012; Cade et al., 2015).

When students drop out of college, it sends a strong message that communities at large and institutions of higher learning are not meeting needs of its' student citizenry

(Grennille, 2014; Hodge & Mellin, 2013; Mertes, 2015; Turner, 2016). College Atlas reported an alarming 30% of students drop out of college their freshman year (para. 1). More now than ever, educational institutions are under pressure to recruit diverse student populations, create positive learning environments, involve students, improve quality education and graduation rates, control costs, stay competitive, and be responsive to labor market demands (Baer & Norris, 2016). Simply recruiting students without proper infrastructure addressing retention strategies does little to nothing to help students obtain academic success (Tinto, 2012).

Since colleges and universities are responsible for educating millions of students, both full- and part-time, in the United States, it is imperative that educational experts explore and address reasons why students drop out of college (NCES, 2016b; Tinto, 2012). It is also necessary to determine if institutional programs designed to enhance student retention are indeed effective (Mertes, 2015; Vandal, 2012). When looking at ways to monitor college success, it is wise to establish goals with the help of experts and the community at large (Turner, 2016). Looking at factors such as previous experiences, behaviors, attitudes, study skills, family and institutional support, costs, and academic readiness can influence whether a student drops out of college or persists to graduation (Complete College of America, 2014; NCES, 2016b; Schneider & Yin, 2011; Turner, 2016; Vandal, 2012).

Two areas of concern are addressed in the implications for practice for this study. First is lack of academic readiness. Schneider (2010) indicated approximately 60% of first-time freshman students in the United States, although eligible to attend college, were not academically prepared for postsecondary education (p. 2). Therefore, discussions

must ensue among policy makers, stakeholders, and educational leaders on how to increase academic readiness for its young students (Mahlberg, 2015).

Academic readiness, including not scoring high enough on entrance exams to test out of basic courses, can be concerning to students and parents (Schneider & Yin, 2011). Failure to score high enough on entrance exams may result in students having to pay for remedial courses such as reading, math, and English, lending to increased stress, increased costs to taxpayers and states, and increased risk for students not completing college (Complete College of America, 2014; Schneider & Yin, 2011). While there are continual debates on how to best help students achieve academic readiness, most researchers, educators, and policy makers agree that the current method of addressing academically underprepared students for postsecondary education is not adequate (NCES, 2016b).

To achieve college readiness and academic success requires support of legislators, educators, and administrators who can work collaboratively to implement aggressive policies to improve learning for underprepared students (Complete College of America, 2014; Mahlberg, 2015). Policies to improve college readiness might include collaboration between high school counselors and academic advisors (ACT, 2015; Rath et al., 2013). This collaboration could work to design courses promoting academic readiness and align high school graduation requirements with college admission requirements (ACT, 2015; Rath et al., 2013). Collaboration could further provide feedback to high school counselors on the number of students requiring remediation, while helping align student expectations with states' expectation of high-level academic skills for postsecondary education (ACT, 2015; Rath et al., 2013). Finally, informing

students about their level of college preparedness while in high school could be implemented (ACT, 2015; Rath et al., 2013).

The second concern for implications of practice is student retention. Moving away from home and adjusting to college life can be challenging for the freshman student (Tinto, 2012). Finding the right college that can link success with support systems and faculty mentoring can help ease the worry of parents (Heil et al., 2014). How well the freshman student adjusts to college life may be helped by family stability and support (Johnson & Gans, 2013). This is especially true for first-generation students, who might find it more difficult to transition from home life to college (Hodge & Mellin, 2013). Even with social and family support system, adjusting to college life requires students learn social and peer networking skills (Alarcon & Edwards, 2012).

Due to the lack of academic readiness and concerns of adjustment to college life, the possibility of having a summer intensive program for at-risk students may help overcome some of developmental issues that were previously mentioned. A summer gap program could be offered at a reduced cost, so it would have a minor impact on financial resources of the student. This program would not be for college credit nor would grades be assigned, only a certificate of mastered skills would be given to students who successfully completed the intensive program. Participation in the gap program would not remove the student from remedial courses at the beginning of their first year.

This program would heavily revolve around writing and mathematics with a social engagement in team-building. The team-building model would allow for social interaction, development of a support system, and adjustment to being away from home for the first time. A summer gap program could positively address the three research

questions of this study. If a student enrolled in the gap program, it would potentially help bridge the gap from his or her secondary education into postsecondary remediation classes. The intensive intervention could potentially have an immediate positive effect on GPA and being removed from academic probation. With a positive effect on GPA and removal from academic probation, combined with the social interaction from team-building, benefits of the program could naturally correlate with an increase in fall-to-fall retention.

To help with student retention rates, educational leaders must also address the shortage of academic support services on campus (Ayers et al., 2012). Some ways to assist freshman students to be successful and return for their sophomore year is for college leaders, legislative policy makers, and stakeholders to promote excellence in academic advising along with social integration into college life (Kot, 2014; Tinto, 2012). To help students integrate into college life, it is beneficial to offer academic alert programs for at-risk students and offer support services to help improve study habits, use time wisely, and counseling to help with coping skills (Baer & Norris, 2016). Early identification of barriers inhibiting motivation and ability to learn must be a priority of learning communities (Alarcon & Edwards, 2012). Another factor to address is why students leave, why they stay, and did they feel engaged with college and its offerings aimed at improving student success and retention (Sousa-Peoples et al., 2011).

While data from the study do not support invasive interventions as having a significant impact on raising GPA, removal from academic probation, or fall-to-fall retention, there is no supporting evidence that interventions should be removed. In fact, it is just the opposite. An overwhelming amount of scholarly support has been mentioned

pertaining to positive effects of offering a first-year program and having learning communities (Kalsbeek, 2013; Kemp, 2016; Tinto, 2012). While interventions of the Blossom Program showed no significant difference, the claim could be made that without those invasive interventions, the program could have produced students with lower GPAs, less students removed from academic probation, and fall-to-fall retention could have declined.

Recommendations for Future Research

A very important result of this study is the recommendation for future research. As has been discussed in previous chapters, questions arose on how to create learning environments conducive to helping at-risk students transition to graduation in a timely manner (Kalsbeek, 2013; Kemp, 2016; Tinto, 2012). Student success professionals believe if students actively engage in their services, students should achieve program-learning outcomes leading to student retention and success (DeAngelo et al., 2015; Demetriou & Powell, 2014; Tinto, 2012). From a realistic point of view, student success centers are valuable to an organization if they help students succeed, which can be measured by students completing classes, passing classes, and returning for the next semester (Kuglitsch & Burge, 2016; Mahlberg, 2015; Tinto, 2012).

Future researchers could change the research design to better capture more in-depth data (Creswell, 2014). The change in design might include evaluating more demographic data such as race and ethnicity and other factors like attending college on a sports scholarship, number of visits to learning enrichment centers/environment, personal income, parental income, first-generation students, working full- or part-time, life style habits, and transfer students (Boateng et al., 2015; Hodge & Mellin, 2013; Johnson &

Gans, 2013; Mertes, 2015; Pike & Graunke, 2014; Turner, 2016). Any or all of the aforementioned factors might have an influence on students' behavior, feelings toward the learning community, and motivation or desire to use or not use student success centers (Boateng et al., 2015; Cade et al., 2015). Potentially, larger collections of data and a mixed methods approach would be helpful in providing more meaningful data to aid in institutional planning (Creswell, 2014).

Future researchers could also separate any of the aforementioned groups and propose studies parallel to the one conducted, revealing differences in the needs of each group (Creswell, 2014). Data could potentially show overlapping needs for some groups, while other groups may not gain from certain interventions. This idea would, in theory, help a program that matched participants, or one in which the participants could be specifically selected (DeAngelo et al., 2015; Demetriou & Kyriakides, 2012; Guarnieri et al., 2015; Kalsbeek, 2013).

This study was designed around quantitative data (Creswell, 2014; Fain, 2017; Polit & Beck, 2012). Future research might benefit from using qualitative data to enhance the understanding of quantitative data in different mixed methods patterns (Creswell, 2014; Fraenkel et al., 2015; Polit & Beck, 2012). For example, a qualitative study using a series of interviews with participants throughout the first year of the program would potentially present a large range of data (Creswell, 2014; Fraenkel et al., 2015; Polit & Beck, 2012). This form of study would allow student feedback regarding opinions of what positively or negatively affected their success or lack thereof (Creswell, 2014; Fraenkel et al., 2015; Polit & Beck, 2012). A qualitative study could also be used to see if perceptions of interventions changed over the course of the study (Creswell,

2014; Fraenkel et al., 2015; Polit & Beck, 2012). This would allow students to explain, from their perspectives, reasons related to GPA, academic probation, and why they would not be returning for their second year (Creswell, 2014). Results from data might lend new information to supporting students through programs for student success and retention, impacting graduation rates positively (Jenkins-Guarnieri, Horne, Wallis, Rings, & Vaughan, 2015; Kalsbeek, 2013; Kuglitsch & Burge, 2016; Rath et al., 2013; Spannagel et al., 2015; Turner, 2016; Vaughn et al., 2015; Way & Synco, 2011).

Summary

This study was designed to determine if an invasive intervention program for male students at a small, liberal arts college in the Midwestern United States had an impact on three areas key to college student success. The study used Donabedian's process-structure-outcome model as the conceptual framework (Bach et al., 2007). For over 30 years, Donabedian's structure-process-outcome model has been used in the health care field to select quality and resource measures when assessing patient outcomes (U.S. Department of Health & Human Services, 2015). While this model is used mostly in healthcare, it is a recognized framework for appraising the quality of higher education (U.S. Department of Health & Human Services, 2015). According to Bach et al. (2007), Donabedian's model of structure, process, and outcome "has relevance to any large organization where quality, value, efficiency, and effectiveness require analysis and strategic planning" (p. 65).

The statement of the problem was presented in Chapter One. There is a growing pressure worldwide for higher accountability for student success, retention, and completion of a degree or certificate (The Chronical of Higher Education, 2015). In

2010, it was reported by the National Center for Public Policy and Higher Education that a decrease in academic readiness of college freshmen would continue to lead to future cost increases to students, their families, organizations and taxpayers. Furthermore, the lack of academic readiness would lead to interference with students' ability to graduate and if so, graduate on time (Rath et al., 2013). To help students succeed, something must be done to better prepare students for postsecondary education and help them once they arrive (The Chronical of Higher Education, 2015). One study by Way and Synco (2011), suggested only around 71% of first-time, full-time freshmen return for their sophomore year.

The purpose of this study was to evaluate the effectiveness of invasive interventions of an academically at-risk program used at a small liberal arts college in the Midwestern United States. Invasive interventions included free textbooks, hiring of professional tutors, offering learning enrichment classes, and hiring a program coordinator to oversee the participants. The Blossom Program was for first-time, full-time freshman males. The program only exists for the first year of college. Evaluation of the Blossom Program allowed the host institution, as well as leaders of other institutions of higher education, to determine if invasive interventions used made a significant difference in the improvement of student GPA, being removed from academic probation, and greater fall-to-fall retention rates for the population studied.

The literature review supporting the study of the Blossom Program and analysis of invasive interventions was presented in Chapter Two and was divided into five sections. The first section addressed individual factors affecting freshmen college student attrition. The identification of key issues and factors of why students depart or dropout is

not a simple task as reasons can be influenced by several factors (Hodge & Mellin, 2013). College preparation and poor understanding of academic readiness for entering the world of higher education may be the reason for early dropout rates (Millar & Tanner, 2011). Having an individual support system can either help or inhibit success in college (DeAngelo et al., 2015). Colleges with academic and social support systems can help students in their adjustment of being away from a structured home environment (DeAngelo et al., 2015).

The second section of literature was focused on institutional factors affecting college student attrition. The section related to the question of funding, or lack thereof. The United States Department of Housing and Urban Development (2015) reported budget cuts, lack of housing options, and increased cost of a college education are problems for educational institutions as leader look at creative ways to find aid, recruit, provide a quality education and retain students. Institutions of higher education are finding that program funding is not sufficient for meeting needs of a modern, diverse student population (Baum et. al., 2013; Vargas, 2013).

The next section of the literature review focused on reasons for increasing college retention rates in the United States. The number of students entering college was presented as well as the need to increase retention for the economic viability of the United States (U.S. Bureau of Labor Statistics, 2015). Furthermore, introduced in this section was the importance of retention strategies in a time when education dollars are shrinking, while expectations on retention is growing (Schneider & Yin, 2011). The third section also focused on the amount of education dollars spent in the United States

compared to other nations (OECDa, 2015). This section finished with the importance of decreasing the extra cost of college (Schneider & Yin, 2011).

The next section highlighted in the literature review was a discussion on benefits of a college degree. Receiving or obtaining of a college degree has the ability to open doors of opportunity, leading to both personal and professional success (Snyder & Dillow, 2013). Zaback, et al., (2012) reported individuals who obtained a bachelor's degree earned an average of $50,360 compared to $29,423 for individuals with a high school diploma (p. 2).

The fifth and final section highlighted in the literature review pertained to solutions to college high attrition rates. To help in the success of students, a college must create a culture that fosters and promotes completion by focusing resources on identification and programs related to specific risk factors (Clark et al., 2011; Demetriou & Powell, 2014; Selingo, 2015). First-year programming that centralizes on academic alerts, tutoring, orientation, mentoring, and writing and study skills have been identified as being successful (Clark et al., 2011; Demetriou & Powell, 2014; Selingo, 2015).

In Chapter Three, the research design for the study of the Blossom Program was presented. Quantitative research, specifically a causal comparative study, was used because variables being studied already existed and the data presented was in terms of a score (Fraenkel, et al., 2015). The casual comparative component was used due to the investigator trying to determine the cause or consequence of difference that existed among the groups (Fraenkel, et al., 2015)

The population of the study was a small Midwestern college campus. A convenience sample was obtained of 216 male students ranging in age from 17 to 20 who were selected to participate in the Blossom Program. Data obtained were de-identifiable and included student GPA for the fall and spring semester of their first year of college during which time they participated in a living learning environment called the Blossom Program. Other de-identified data obtained were whether or not the participant retained at the institution for their second year. The study covered an eight-year period from fall of 2006 to spring 2014 (Institutional Data, 2017).

Data analysis was conducted and compared participants from fall 2006 to spring 2010. Participants from fall 2006 to spring 2010 did not receive invasive interventions as a part of the Blossom Program. Students from fall 2010 to spring 2014 received invasive interventions previously mentioned in the summary.

In conclusion, this study did not validate statistical significance for invasive interventions introduced in the Blossom program when analyzing a difference in students' GPA, removing students from academic probation, and fall-to-fall student retention. However, this study might accomplish the goal of validating what is done well and identifying barriers to eliminate to improve services to students (Offenstein et al., 2010; Pike & Graunke, 2014; Rath et al., 2013).

There were several recommendations for future research. Potentially, collections of data and a mixed methods approach would be helpful in providing more meaningful data to aid in institutional planning (Creswell, 2014). Larger studies, and data that are more convincing, would be advantageous in showing the value of first-year living

learning communities and making improvements in existing programs (Spannagel et al., 2015; Rath et al., 2013). Future studies are needed to determine how student learning centers operate, how services are offered, and how they can better measure outcomes to be continually funded and remain sustainable in present-day education.

Appendix A

Institutional Review Board Approval

LINDENWOOD

LINDENWOOD UNIVERSITY ST. CHARLES, MISSOURI

DATE:	October 18, 2017
TO:	Michael Morgan
FROM:	Lindenwood University Institutional Review Board
STUDY TITLE:	[1137105-1] A Study of Effective Strategies for Retention for At-Risk Students at a Small Private Liberal Arts College
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	October 18, 2017
REVIEW CATEGORY:	Exemption category # 4

Thank you for your submission of New Project materials for this research study. Lindenwood University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

Appendix B

Site Permission to Conduct Research

[redacted]

June 20, 2017

To Members of the Lindenwood University Institutional Review Board,

Mr. Michael Heath Morgan, has requested and received permission to access all pertinent data for the completion of his dissertation for the Lindenwood Doctoral Program. All data obtained by Mr. Morgan from [redacted] will be redacted and all student information will be used in accordance with guidelines noted in the Family Educational Rights and Privacy act (FERPA).

Respectfully,

Bonnie L. Humphrey

Dr. Bonnie Humphrey, President

[redacted]

Appendix C

Request for Data from Institution

[redacted]
Systems Administrator
[redacted]

October 18, 2017

[redacted],

I have secured permissions through the Lindenwood University IRB and the President of [redacted] to obtain data related to the participants in the Blossom Program for the years of 2006 through 2014. The data being requested are the grade point averages (GPA), retention records, and academic probation records for all participants in the specific semesters they were considered in the Blossom Program. Please make all records de-identifiable.

Respectfully,

Heath Morgan
Lindenwood Doctoral Student

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Vita

Michael Heath Morgan grew up in Powell, Tennessee, a suburb of Knoxville. In 2003, Morgan received a Bachelor of Science in history with a minor in education from Lambuth University in Jackson, Tennessee. While at Lambuth, Morgan participated as a student athlete starting on the football team and held multiple leadership positions including President of the Epsilon Psi Chapter of the Kappa Sigma Fraternity and member of the Fellowship of Christian Athletes.

In 2003, after graduating from college, Morgan was hired as the intramural coordinator and assistant football coach at Missouri Valley College in Marshall, Missouri. That same year he enrolled in Lindenwood University Master's Program. In 2005, Morgan graduated from Lindenwood University with a Master of Arts in Education Administration. From 2004 to 2006, Morgan progressed through the ranks of the student affairs office at Missouri Valley College before becoming the Assistant to the Dean of Students. In 2007, Morgan was named the Dean of Students and remained in that role until 2015 when he was named the Vice President of Student Affairs.

During his time at Missouri Valley College, Morgan has had the opportunity of opening the Malcolm Center for Student Life, collaborating with colleagues, and overseeing the areas of residential life, student health services, student activities and intramurals, Greek life, public safety, ADA 504, student success, retention and career services. Morgan, in his spare time, likes to fish, attend athletic competitions, and spend time with his two daughters. He believes his greatest accomplishment is having a wonderful family.