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The Effects Of Academic Success Coaching On First-Year Students

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THE EFFECTS OF ACADEMIC SUCCESS COACHING ON FIRST-YEAR STUDENTS

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ABSTRACT

Student retention has been of increasing concern for college and university administrators for over the last 20 years, but the need for more effective strategies to address retention issues has never been more of a pressing matter than it is today (Allen, D.F. & Bir, 2012). Some research (Bettinger & Baker, 2011; Dansinger, 2000; Griffiths, 2012; Knight, 2012) has identified peer academic success coaching as potential intervention strategy to address the retention issue in higher education. Relatively few studies have addressed the assessment of these coaching interventions and the majority have been qualitative in nature. The purpose of this study was to determine the effects of academic success coaching programs on student success in the first year of college. The theories used to frame this study were Bandura's self-efficacy theory, Zimmerman's self-regulated learning theory, Locke and Latham's goal-setting theory, and positive psychology. The results from this quantitative, quasi-experimental study indicated that students who were participants in academic success coaching did increase in their self-efficacy score, had higher semester GPAs, and persisted at higher rates than students without coaching, but the results were non-significant. Participation in coaching was not a predictor of persistence, although semester GPA was a significant predictor of retention to the Spring semester.

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CHAPTER 1

INTRODUCTION

Many factors make up the need for today's higher educational institutions to prove their effectiveness. State governments are holding institutions accountable for student learning and the retention of students to graduation. "State systems of higher education are not only challenged to address decreasing state budgets but are also asked to increase student retention and other measures of student success" (Jaeger & Eagan, 2011, p. 507).

Reviewing the literature related to the complex issue of student retention, there are many different interacting variables that factor into the equation. Factors such as gender, race, ethnicity, and age as well as many complex psychological variables, such as student intention and commitment, are all issues (Braxton, Hirschy, & McClendon, 2004; Pascarella & Terenzini, 2005; Seidman, 2005; Tinto, 1993). Lillis (2011) suggested there are very specific issues that affect students' decision to leave an institution. Some of these issues include socioeconomic background, academic performance, social integration, campus climate, peer support, academic self-confidence, and student-faculty relationship. Even though there have been decades of research on the topic of student retention, there is no "magic bullet" to solve this increasingly complicated issue.

Problem Statement

Social integration and student involvement are key to helping students feel connected to a university; one area that may have a huge impact on students' decision to remain at an institution is student interaction with their peers. J. Allen, Robbins, Casillas, and Oh (2008) stated that as colleges and universities try to address the many state, professional, and accreditation requirements imposed, identification of resources to improve student performance and educational attainments is paramount. Academic coaching programs have become an important retention support strategy to help students develop goals for their academic year and elicit the help of a seasoned peer to guide them along the way. Barkley (2011) stated that the process of academic coaching involves a self-learning intervention strategy based on a reciprocal relationship that encourages students to reflect and monitor learning activities through the encouragement of a peer support. The problem is determining assessment methods to gauge the effect the program has on retention. As such, program effectiveness of current coaching models is increasingly important.

Purpose of the Study

The purpose of this study was to determine the effects of academic success coaching programs on student success in their first year in college. Bonner and Tolhurst (2002) indicated that academic coaching has been shown to increase self-regulation and self-efficacy skills related to improved academic performance. As a result, the effectiveness of academic success coaching may be linked to an increase in student success.

Primary Research Questions

The study was designed to investigate the effectiveness of academic success coaching on student success for first-year students. The research was guided by four research questions:

(1) Do students who participate in academic success coaching increase their self-efficacy?

(2) Do student participants in coaching perform better than non-participants on their semester grade point average (GPA) as a result?

(3) Are there statistically significant differences in gender between participants and non-participants in coaching?

(4) Do students who participate in academic success coaching programs persist at a higher rate than non-participants?

Research Design

In this quantitative study, a quasi-experimental, nonequivalent groups pretest-posttest control design was used. Established sections of a First-Year Seminar class were used and given a pretest and posttest with one group receiving a coaching intervention. I used Bandura's (1994) construct of self-efficacy to determine if students who participated in academic success coaching programs increase their self-efficacy by virtue of attending regular success coaching sessions throughout a semester compared to students who did not take part in the program.

Participants

The study focused on students who were enrolled in a large public university in the Midwest and were in their first year in college. Participation in academic success coaching programs is typically voluntary, so students who participated in the program in the fall semester were asked to participate in the study.

Instrument

The instrument used in this study was the General Self-Efficacy scale (Schwarzer & Jerusalem, 1995). This is a 10-item psychometric scale that is specifically designed to measure confidence and optimistic self-beliefs used to cope with demanding tasks that occur during the

semester. This scale has been used with hundreds of thousands of participants and the scale has an acceptable reliability and validity (Schwarzer & Jerusalem, 1995). Participants were asked to take the inventory at the beginning of the semester and at the end of their success coaching sessions at the semester's end. Data were analyzed to determine if participation in the program resulted in an increase in self-efficacy.

Procedures

Students were sent an email asking them to participate in the study by filling out the online General Self-Efficacy survey. Before each participant would proceed to the survey, each student was asked to fill out an informed consent electronically in order to be included as a participant in the study. Participants received a link to a Qualtrics survey to complete the inventory. Once complete, participants met with academic success coaches to continue with the development of goals for the semester. Meetings with success coaches continued throughout the semester, and meeting attendance was tracked through the use of participants' student identification numbers. At the end of November, participants were asked to take the General Self-Efficacy survey again. Data were collected through the Qualtrics system and results were analyzed using an analysis of covariance (ANCOVA) controlling for GPA, registration date, and socio-economic status.

Significance of the Study

An aim of the proposed study was to fill in the gaps in the literature regarding academic success coaching in higher education. At present, very few studies have been done at the college or university level evaluating the effects of coaching on first-year students. There are a few qualitative coaching studies in the field of higher education (Diedrich, 1996; Vansickel-Peterson, 2010), but robust quantitative studies are even more rare (Bettinger & Baker, 2011). As higher

education institutions continue to be evaluated on their effectiveness in retaining and graduating students, understanding the impact academic success coaching has on student success will have a dramatic effect on the use of this intervention as a possible retention strategy.

Theoretical Framework

Grant (2013) indicated that in the last decade of research, peer coaching relationships have had a positive impact on student achievement. A few instrumental theories were used in order to frame the context of this study.

Bandura's (1997) self-efficacy theory described one's ability to develop a set of actions in order to attain a particular outcome. Self-efficacy is a necessary construct in the coach-coachee relationships and may play a significant role in the academic achievement of students. Past performances, vicarious experiences, verbal persuasion, and emotional cues are all different sources of self-efficacy and can have a direct impact on a student's ability to complete a task. Another theoretical framework used in the study is self-regulation. Stober and Grant (2006) explained that self-regulation involves a series of steps: (1) identify the issue, (2) set a goal, (3) develop an action plan, (4) act, (5) monitor, and (6) evaluate. The steps in this progression allow students to determine their performance-based standard. The standard is used to evaluate the progress toward the intended goal and is used to determine if adjustments are needed in order to increase the probability of goal attainment.

Goal setting is another essential element in aiding students in achieving a desired outcome. Locke and Latham's (2006) goal-setting theory stated that, as long as there are no conflicting goals, specific, high goals have a positive, linear relationship with task performance. The coaching relationship needs to have a direction in order to have a positive outcome. Goal

setting provides a concrete plan for achieving directed outcomes and gives the coach and coachee an agreed-upon roadmap to gauge success.

Although self-efficacy, self-regulation, and goal setting play a major role in the practice of academic success coaching, positive psychology has proven to be an essential approach in working with students (Ben-Yehuda, 2015). As with positive psychology, the individual in the coaching process is the central figure in the intervention and focusing on students' strengths is a key aspect. Building on these strengths is the method used in order to reach goals set by the student. The person-centered approach of positive psychology helps frame the relationship between the coach and student to build a strength-based model to help students to grow to their full potential.

Assumptions, Limitations, and Delimitations

Several underlying assumptions and limitations affected the implementation of the research design of the study. First, it was assumed that students would respond honestly to the General Self-Efficacy survey (Schwarzer & Jerusalem, 1995) research instrument in data collection. Second, it was assumed that students would be working with coaches on a regular basis and that a reasonable academic goal would be set by the student that could be attained in the timeframe of the academic success coaching experience. Third, although it was assumed that academic success coaching is a standardized process for most programs, training of academic success coaches was a limitation of the study. A delimitation of the study was that coaching was only offered to the UCOL-U110: First-Year Seminar course. Although the focus of the study was on coaching first-year students, the specific sample used in the study investigated only students enrolled in specific sections of the course.

Definition of Terms

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

Academic self-efficacy is a student's belief (confidence) that they can achieve success on an academic goal by utilizing resources at their disposal.

Academic success coaching is a series of self-regulated steps facilitated by a coach to develop goals and action plans that focus on solutions and results (Grant, 2001).

Peer assisted learning is "the acquisition of knowledge and skill through active helping and supporting amounts of equals or matched companions" (Topping, 2005, p. 631).

Retention is defined as students' progression toward completing their programs in a determined period of time (Hewitt & Rose-Adams, 2013).

Self-efficacy is "the beliefs in one's capabilities to organize and execute the courses of action required to produce those given attainments" (Bandura, 1997, p. 3).

Implications

Through the research reviewed in this paper, a few implications emerged that will have great significance in the field of coaching. In order for researchers to examine similar constructs, it is imperative for the research community to use similar terms and characteristics in their studies. Mentoring and coaching have been synonymous for professionals in the higher education and have been used interchangeably. Unfortunately, each role has specific goals and characteristics that need to be considered in program development and peer trainings. In order to make sure the construct measured for the proposed study is specific, definitions were operationalize of academic success coaching to ensure that characteristics unique to coaching were measured. In addition, academic success was further operationalized for instruments to measure accurately the intended constructs.

Another important implication from the research was to advance the research in the field of coaching by implementing more quantitative studies in the higher education community. Very little germinal research has been conducted at the collegiate level, and building on that work would help to add to the dearth of literature. One research study exists that examined the effect of student persistence to graduation of a commercially outsourced coaching model (Bettinger & Baker, 2011). More information needs to be gathered on in-house coaching programs in higher education institutions to investigate whether institutional coaching interventions have similar effects.

Summary

The information introduced in this chapter described the primary purpose, significance, and need for a quantitative study on the effects of academic success coaching on first-year students in higher education. Specifically, a working definition for academic success coaching was identified, the concept of self-efficacy was explored to put it in context of coaching, and theoretical frameworks were discussed to provide direction for the study. The information derived from the literature helped to focus the proposed study and legitimize the need for more quantitative research in the field of success coaching. Academic support programs used in the higher education landscape to help student persist to graduation are becoming common interventions. The research done on success coaching seems to have promise as a means of helping students achieve their goals.

CHAPTER 2

LITERATURE REVIEW

Introduction

Over the last decade, researchers of academic coaching have presented findings that indicate the coach-coachee relationship can have a positive impact on student achievement (Andreanoff, 2016; Bettinger & Baker, 2011; Franklin & Franklin, 2012; Grant, 2013; Short, Kinman, & Baker, 2010). The purpose of this study was to determine if there are significant effects on the academic success of first-year college students who participate in a coaching intervention program. A thorough review of existing literature was necessary on a few key research topics that demonstrate how they were used to frame the study. Topics addressed in the literature review include (a) how student retention has been used as an assessment marker higher education, (b) why a sense of belonging is an important construct of student retention, (c) a discussion of the profession of personal coaching, (d) an understanding of the academic coaching process, and (e) an introduction to the peer-assisted learning model. Also, Bandura's self-efficacy theory, Zimmerman's self-regulated learning theory, Locke and Latham's goal-setting theory, and positive psychology will be presented to understand fully how this framework undergirds the success coaching process. In addition, the assessment of coaching program effectiveness will be discussed.

Student Retention

Accrediting agencies and state departments have asked leaders in higher education to be more accountable for student outcomes, and as such, these agencies have charged administrators of institutions to become more data-driven organizations (Dougherty & Reddy, 2013; J. Martin, & Samels, 2015). The imperative has forced administrators to gain a deeper perspective of institutional data and have firsthand knowledge of "key performance indicators, such as student retention and completion data, and transfer and employment data of graduates" (J. Martin, & Samels, 2015, p. 41). As J. Martin and Samels (2015) stated, academic leaders who "live" in the data on these important issues can assist their college or university in reaching institutional goals. Also, the information can help administrators explain the current challenges and successes to external constituencies who are calling for more accountability.

The attrition rate "amongst first-year college students in the United States has been found to be between 30 and 50 %" (American Institutes for Research, 2010, p. 16). Administrators of higher education are deeply interested in increasing student retention rates of their colleges and universities and helping students succeed in their educational pursuits, as well as assisting students with acclimating to college life (Grant-Vallone, Reid, Umali, & Pohlert, 2003). Slanger, Berg, Fisk, and Hanson (2015) added that there are many different constituencies calling for accountability from colleges and universities. "Pressure from students, legislators, and taypayers" (Slanger et al., 2005, p. 279) have centralized the focus of institutions on improving retention and graduation rates. The issue of student retention for postsecondary institutions can be costly and problematic.

W. E. Hudson (2005) noted that if a student is not retained in their first year of baccalaureate studies at an institution, the financial loss for the college or university is not just

for one year. The actual cost of the loss of revenue is for the three to four years of attendance. Consequently, it is much less costly for an institution to retain a student than it is to recruit a new student for admissions to the university (W. E. Hudson, 2005). As Watson and Jones (1990) commented, institutions in higher education are grappling with low retention rates of students, which directly affects the process of fiscal and strategic planning. A decreased student enrollment results in colleges and universities being more mindful of addressing the by-products of student attrition, such as under-utilized classrooms and low course enrollments. Pfleging (2002) elaborated that due to the fact that financial difficulty is one key risk factor in retaining students, the cost of retention becomes a "self-perpetuating cycle" (p. 2). Although higher education researchers have been interested in topic retention, rates of student persistence and graduation have remained relatively stagnant over the last 20 years. The call to action of effective strategies to address retention issues has never been more of a priority for colleges and universities (D. F. Allen & Bir, 2012).

Beginning in the 1930s through the 1950s, researchers began to investigate factors of student retention, but a more concentrated research agenda arose from many publications focusing on the topic in the 1960s (K. A. Feldman & Newcomb, 1969; Gekoski & Schwartz, 1961; Panos & Astin, 1968). The current national dialogue on student retention is a direct result of Tinto's (1975) seminal student integration model. This model has postulated that the connections a student has for a college or university will greatly increase the chances of that student's retention and graduation. Even though Tinto's (1975) model has garnered both praise and criticism over the past 30 years, there can be no denying that his research has added to the study of student retention, led to thousands of studies on the topic, and made undergraduate

retention one of the most studied topics in higher education (Berger & Lyon, 2005; Swail, 2004; Tinto, 2007).

Tinto (1993) stated that the reasons each student leaves college are unique, but there are some common risk factors that institutions can take into consideration in order to help address student attrition. Some high-risk factors that affect student retention at colleges include having family obligations or financial concerns, working full-time, having a low high school GPA, attending college part-time, or being part of an ethnic group other than White or Asian (Brawer, 1996). S. A. Martin (1999) pointed out other risk factors such as belonging to one of the following groups: first-generation college students, athletes, international students, or disabled students. In addition to the aforementioned risk factors, having limited interaction between students and faculty outside the classroom and having little involvement in the activities on campus play a significant role in student retention (Mohammadi, 1994).

O'Keeffe (2013) mentioned many areas of stress that can have an impact on retention. Acclimation to college life, expectations of faculty and staff, and the need to make new friends can all have an effect on students' successful transition to college. Freshmen can experience heightened levels of emotions and stress while transitioning to college which can affect their ability to integrate successfully into college life (Gibney, Moore, Murphy, & O'Sullivan, 2011; Tinto, 1982). Researchers have investigated the transitional demands of students who have not succeeded in integrating into higher educational settings and have correlated academic performance and high dropout rates to this deficient coping mechanism (Gillock & Reyes, 1999; Murtaugh, Burns, & Schuster, 1999). During the first semester of college, students can struggle with greater levels of autonomy, initiative, and self-regulation, all

which can have a significant impact on decisions to exit the college or university setting (Brinkworth, McCann, Matthews, & Nordström, 2009; Hussey & Smith, 2010; Wingate, 2007).

Even though the risk factor may be an impediment to the successful completion of a baccalaureate degree, there are many possible approaches to help in a student's transition to the university culture. Providing "academic and social support services" (Grant-Vallone et al., 2003, p. 255) when students arrive on campus for their first year can be an effective way to help them develop a connection to campus and integrate them successfully to campus life. Grant-Vallone et al. (2003) offered that successful transition from high school to college is most likely for students who are intellectually and socially integrated into the university environment. Developing relationships with faculty, staff and peers is one way to help improve integration and ensure a smooth acclimation. Blankenship (2017) stated that college and universities face a "complex and difficult" (p. 14) situation in determining the formula to keep students matriculating at their institutions in an environment where students are able to compare higher education organizations like never before. Factors such as affordability and "high quality degree programs" (Blankenship, 2017, p. 14) give students the ease of which to transfer to school that can better meet their needs. With the ever-increasing cost of a college education, students are assuming a "consumer mentality" (Blankenship, 2017, p. 14) in deciding from which institutions they will get the most benefit. In addition, students are exploring enrollment in online institutions at a growing rate.

One retention area that universities were focusing their efforts in terms of student success is the development of targeted retention initiatives. Gray and Herr (1998) identified that only 30% of high school graduates have the necessary academic skill to be successful in the college environment. H. Fox (2015) contended that colleges and universities have an obligation to

support students who lack the background in order to succeed. One intervention program that has increased in popularity to address these students is academic success coaching.

Sense of Belonging

Colleges and universities across the nation hope that students are able to transition successfully both socially and academically to the collegiate environment (Hurtado & Carter, 1997). Turner, Chandler, and Heffer (2009) concluded that first-year students who have the support from their family and community are more likely to persist and that support is a strong contributing factor for retention. Additionally, higher performance levels and graduation rates are a result of high levels of family support. Students who are able to connect with their campus environment stand a greater chance of succeeding in their academic pursuits (Hausmann, Schofield, & Woods, 2007; Yasin & Dzulkifi, 2010). The transition from high school to college can be an extremely stressful time for many students. Having a strong social support network helps students experience less stress in this transition and helps them cope with stressful events during their first year in college (DeBerard, Spielmans, & Julka, 2004).

O'Brien (2002) stated that one of the most critical factors in order for students to succeed in college is to develop a "sense of belonging" (p. 2), especially for individuals who have high risk factors for non-completion. However, a sense of belonging factor can be very elusive for many students in postsecondary institutions. O'Brien (2002) cited a few factors that can lead to the disconnection of students from their institutions:

- Part time students and those working long hours in paid employment are less likely to see themselves as students and demonstrate a pattern of less attachment and commitment to aspects of university life and study

- Diversity means increased numbers of students with family responsibilities and/or extra-curricular activities
- Advanced technology enabling remote access learning decreases the amount of time students need to spend on-campus. (p. 2)

Even though many first-year students are negatively impacted by isolation and an adequate sense of belonging (Baumeister & Leary, 1995), sophomores, juniors, and seniors can be similarly impacted by not feeling the connection to the university. Sense of belonging is often cited as "a critical component for success for these students" (Pearson, 2012, p. 191). The disconnection of these students may be partly caused by colleges and universities, or at least be enablers of the phenomenon (O'Keeffe, 2013). Some of the reasons cited by O'Brien (2002) are based on the many financial pressures encountered by the university. The pressures have led to "larger class sizes, higher teacher-student ratios and the extensive use of online learning materials have exacerbated this disconnection" (O'Brien, 2002, p. 2). O'Brien stated that this connection gap of students to the institutions can develop from instructors not being able to give intentional and supportive feedback. The chances of a student deciding to withdraw from an institution are intensified by the fact that meaningful interactions and connections by faculty outside the classroom are not made, which reinforces a student's low sense of belonging (O'Brien, 2002).

Strayhorn (2019) posited that having educationally meaningful connections with peers in and out of the classroom is an essential element bolstering a student's sense of belonging and increases the likelihood student retention. Gloria, Castellanos, Lopez, and Rosales (2005) indicated that having a strong perceived social network of friends and peer mentors has a positive effect on a student's decision to remain with their institution. Peer-assisted learning interventions can serve as an important retention tool and mechanism in helping first-year

students develop an extensive social support system and create a sense of belonging necessary for student persistence.

Personal Coaching

As higher education institutions try to address the retention of students and successful completion of a degree, many colleges and universities are considering different interventions. One of those interventions that has gained limited attention in the higher education arena is based off a personal coaching methodology. Griffiths (2012) offered that higher education has yet to realize personal coaching as a potential retention strategy. Slowly, colleges and universities are understanding that coaching psychology incorporates learning as a core element of the process and can be a very effective means by which students can grow (Griffiths, 2012).

There is much debate regarding when the philosophy of coaching began. Most agree that outside the context of sports, little was heard about the practice until the mid- to late 1980s (McLean, 2012). As the field of coaching continues to evolve today, many organizations are recognizing this methodology as a means to help with the development of leaders no matter what position the hold. The "multimillion-dollar business" (McLean, 2012, p. 4) of coaching helps individuals work through many of life's common changes (McLean, 2012).

The rise in coaching has been deeply influenced by the field of psychology (Grant, 2007). Grant (2007) explained that as psychology has continued to advance, there were a few areas that had a strong influence with the development of coaching as a legitimate field of research. "The humanistic perspective, positive psychology (Seligman & Csikszentmihalyi, 2000), and the Human Potential Movement were all driving forces in the beginning of a coaching

framework" (Grant, 2007, p. 264). Many other disciplines have had influence on the movement as well, including business, sports, health care, and adult education (Brock, 2008).

There are a multitude of applications of coaching that have emerged out of the philosophy. Grant (2015) explained that "there are many types of coaching that are used in the modern world, that all have their respective part to play" (p. 12). Some of these types include "personal/life coaching, career coaching, group coaching, performance coaching, leadership coaching, relationship coaching, high-potential or developmental coaching, and behavioral coaching" (Grant, 2015, p. 12). As the coaching discipline has continued to evolve, researchers have questioned the definition of what coaching is (Grant, 2007; Ives, 2008; Jacobi, 1991; Kilburg, 1996; Parsloe & Wray, 2000). Grant (2013) noted that during the last two decades, the literature of academic coaching has increased dramatically, giving rise to a plethora of research in the field. Much of the literature during the 1990s narrowed in on "delineating and defining coaching" (Grant, 2013, p. 36). This difficulty in defining coaching may be a contributing factor as to why higher education has been so slow to incorporate coaching as a legitimate intervention for retention.

Varying definitions of coaching have added to the difficulty of how researchers measure activities and quantify results. D'Abate, Eddy and Tannenbaum (2003) researched a total of 227 construct descriptions from over 182 different sources in order to find similarities and differences to analyze systematically all of the characteristics to help explain the existing constructs. Additionally, Douglas and McCauley (1999) research advanced the field by studying over 300 American firms and relating those practices under the umbrella of developmental relationships. Riley and Wrench (1985) commented that the use of different terms in describing developmental relationships has led to multiple studies measuring different constructs due to the

fact that researchers are studying different characteristics. In doing so, it has become difficult to build a summary of knowledge gained since constructs differ among various studies. D'Abate et al.'s (2003) research categorized a number of different types of developmental relationships (p. 362). A few of the more common types include (a) apprenticeship, (b) coaching, (c) distance mentoring, (d) group mentoring, and (e) tutoring. Even when researchers are using similar labels, they may be examining different constructs, which can convolute findings and make it challenging to generalize those findings to others' work in the field (Chao, 1998). D'Abate et al. recommended that further research in the field of developmental relationships can clarify the characteristics of the labels used and tie them to a construct's meaning.

As stated, the effort to use a common language when discussing developmental relationships will help to ensure similar research is being conducted with common constructs identified. To ensure the use of common terms in this study, general definitions of mentoring and coaching will be explored due to the fact that a majority of writers in the field of education has argued that the two are essentially the same activity (D'Abate et al., 2003). Although each describes a partnership role with the student, D'Abate et al. (2003) discussed that mentoring has a more general focus on the development of an individual and coaching is more concerned with a specific objective. Some of the main characteristics associated with mentors include modeling, counseling, advocating, and supporting. Coaching is more concerned with setting goals, envisioning practical application, and providing feedback.

Druckman and Bjork (1991) offered the following definition: "Coaching consists of observing students and offering hints, feedback, reminders, new tasks, or redirecting a student's attention to a salient feature" (p. 61). The researchers situated the definition of the peer coach as a facilitating agent focused on developing skills needed to remain task–focused. F. M. Hudson

(1999) postulated that “a coach is someone trained and devoted to guiding others into increased competence, commitment, and confidence” (p. 6). F. M. Hudson’s research provided another definition that emphasizes the facilitating position of a coach but also indicates the need for training to help with the facilitation. From the many other definitions in the literature, the definition by Grant (2001) aligns well with a definitive coaching purpose:

> Personal or life coaching is a collaborative solution-focused, results-orientated systematic process . . . in which the coach facilitates the enhancement of the coachee’s life experience and performance in various domains (as determined by the coachee), and fosters the self-directed learning and personal growth of the coachee. (p. 20)

The aforementioned definition creates a specific, short-term focus on the coaching relationship as well as the goal-setting nature of the process with focus on the end result of a solution to the coachee’s situations. Grant’s definition gives a clear purpose of coaching and helps to further researchers’ investigation in order to generalize the results to similar studies.

Grant and Cavanagh (2014) explained that even with the trend of using the coaching methodology in a number of fields, coaching psychology was linked "in the public's mind, with mental illness and the treatment of distress, rather than the promotion of well-being” (p. 329). Grant (2007) found that public perception may be a reason that the field of higher education is reluctant to implement coaching as a viable intervention to help students. While the roles of coaching and counseling work with similar goals of helping individuals overcome specific barriers, each focuses on different clientele. Typically, counseling works with individuals who are dysfunctional, while the coaching methodology assists well-functioning individuals in their pursuit of attaining goals that have been mutually set and helps them achieve fuller lives. Similarly, Wade, Marks, and Hetzel (2015) commented that personal coaching

contains overlapping functions with other helping professions such as counseling and therapy. The work of professional counselors can include individuals who are experiencing ordinary life struggles to mental health issues. However, the main difference between counseling and coaching is that coaches do not work with individuals "who are experiencing psychological issues that are impairing their functioning" (Wade et al., 2015, p. 323). Wade et al. said that the personal coaching professional's main goals are to help individuals further enhance their growth and development and to continue where counseling would typically leave off.

In the early inception of personal coaching practice, there was no regulating agency to certify individuals as coaches. Anyone could proclaim themselves coaches and open up a practice. Fortunately, a regulating body has emerged that focuses on certification, best practices, assessment, and training. The International Coaching Federation (ICF, 2018b) "seeks to advance the art, science, and practice of professional coaching" (para. 1). As such, the ICF has defined 11 core competencies that define effective coaching practice. To obtain certification as a professional coach, individuals must demonstrate proficiency in each of these 11 competencies. The core competencies are outlined in Table 1.

Table 1.

International Coaching Federation Core Competencies

Coaching Phase and Core Competency	Description
Phase I: Setting the Foundation	
1. Meeting Ethical Guidelines and Professional Standards	Applying developed coaching standards appropriately in all coaching interactions.
2. Establishing the Coaching Agreement	Administering a document of agreed upon expectations for the coaching relationship between client and coach.

Coaching Phase and Core Competency	Description
Phase II: Co-creating the Relationship	
3. Establishing Trust & Intimacy with the Client	Creating an atmosphere where a client can feel supported and fosters respect and trust between client and coach.
4. Coaching Presence	Understanding that the coach must be fully conscious and open so clients feel heard and safe to communicate.
Phase III: Communicating Effectively	
5. Active Listening	Fully engaging in what the client is conveying verbally and non-verbally to understand the full context of the interaction.
6. Powerful Questioning	Asking questions that emote information that can investigate deeper meaning, explore possibilities, and engage in moving the conversation forward.
7. Direct Communication	Communicating authentically with clients to elicit honest conversations.
Phase IV: Facilitating Learning and Results	
8. Creating Awareness	Helping clients make connections and evaluate information in order to bring to light new understanding.
9. Designing Actions	Developing with the client new opportunities for changes that will lead to goals set by the coaching relationship.
10. Planning and Goal Setting	Collaboratively constructing a coaching plan to achieve predetermined goals.
11. Managing Progress and Accountability	Understanding what is important to focus on for the client and holding the client responsible for action.

Note. Adapted from "Core Competencies," by International Coach Federation, 2018b, paras 7-17 (https://coachfederation.org/core-competencies). Copyright 2018 by LifeBound LLC.

With this international organization serving as a resource and accreditation agency, the coaching profession has garnered a new respect in terms of accountability and clarification regarding roles and outcomes.

As the coaching literature started to expand beyond role clarification, studies were conducted to situate coaching as an effective practice for change (D. C. Feldman & Lankau, 2005; Greif, 2007; Passmore & Gibbes, 2007). Grant (2013) argued that although assessment of the coaching methodology was gaining more attention, more robust methodologies were needed in order to support previous research. In particular, more quantitative and randomized controlled studies were in demand. Researchers are beginning to address this call to action by using the specified methodologies recommended (Gyllensten & Palmer, 2005; Miller, Yahne, Moyers, Martinez, & Pirritano, 2004; Spence & Grant, 2007).

Academic Coaching

Using coaching in colleges and universities is a student support method that has just started to be implemented (Dansinger, 2000; Griffiths, 2012; Knight, 2012). Similar to some of the most common academic interventions used in academia, academic coaching has struggled to differentiate itself from those interventions. Advising, mentoring, and tutoring are just a few of the areas in which researchers have found overlap and have tried to come up with a definition for the coaching process to set it apart (Crisp & Cruz, 2009; Jacobi, 1991; Nora & Crisp, 2007).

Since academic coaching involves some of the same activities as academic advising, this new role has become increasingly of interest to the advising profession. As such, the National Academic Advising Association (NACADA) has worked to develop its own definition for academic coaching that sets the process apart from advising.

> Academic coaching is an interactive process that focuses on the personal relationship created between the student and the coach. The coach challenges the student to think about his or her personal and/or professional goals in order to relate them to his or her academic/educational goals. In this learning process, it is important for the coach to encourage the student to become more self-aware by understanding his or her strengths, values, interests, purpose, and passion. (NACADA, 2018, para 1)

Also, the role of academic coaching has been incorporated into the advising process as a way for the academic advisor and the academic coach to work in tandem to focus on student success.

Mentoring is another academic support for student success where roles and characteristics of the position are often confused with academic coaching. Some of the roles associated with mentoring include modeling, counseling, advocating, and supporting. LifeBound (2018) clarified the role confusion by offering the model in Figure 2. Simply stated, students encounter different support roles in their higher education tenure. Four such supports involve informing, educating, mentoring, and coaching.

If students lack critical information in order to make decisions, they seek out individuals who are in roles to help with that. If students engage in classroom activities, they are working with individuals who help facilitate the process of learning something domain-specific. Additionally, if students need advice from more experienced peers, they engage with students who use their mentor's expertise to model the way. In contrast to the first three roles, coaching involves the coach eliciting resourcefulness that the student has or knows within himself or herself. The first three roles are based on the fact the faculty, staff, or peer is the expert; the coaching role puts the students at the center of the relationship and the coaching process depends on the student as the expert (Lifebound, 2018).

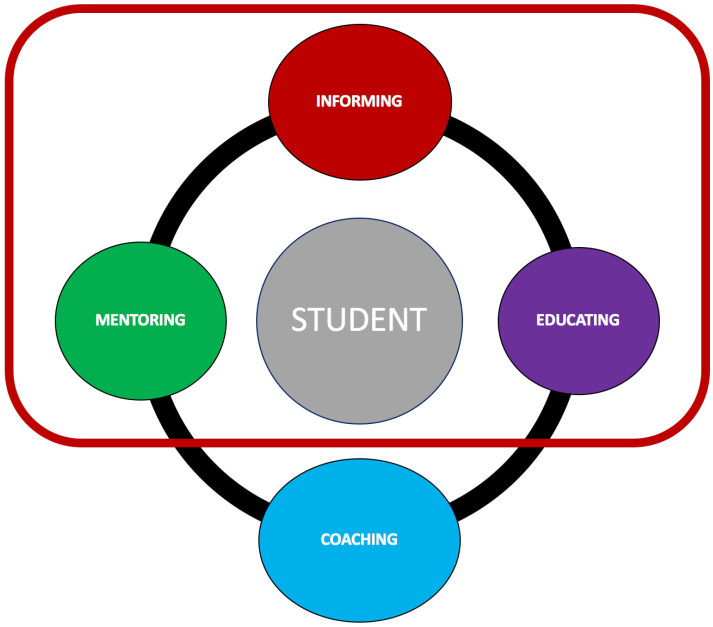

Figure 1. Facilitation roles in higher education. Adapted from "LifeBound Academic Coaching Training," by G. Fairfield, 2018, [Lecture]. Presented at Indiana University Purdue University Indianapolis, Indianapolis, IN. Copyright 2018 by LifeBound LLC. Used with permission.

Similarly, LifeBound (2018), a training organization for general academic coaching, defined the process of coaching as "an ongoing partnership to help students produce fulfilling results in their lives. Through the process of coaching, students deepen their learning, take responsibility for their actions, improve their effectiveness and consciously create their outcomes in life" (p. 16). Both of these organizations structure the academic coaching process by focusing in on the strength-based, appreciative advising, and solution-focused framework for the coach to engage with their student.

At the heart of the process is for the coach to engage students by asking powerful questions (Grant, 2007; LifeBound, 2018). LifeBound (2018) explained powerful questions are a way to help students to reflect deeply on what is happening to them and use the information that is gained from these questions to advance the students to meaningful action. As educators

are trained on powerful questions, a great connection can be formed between the coach and student. Challenging life events happen to students in their tenure in higher education, and coaches have the opportunity to help students see that potential growth that can happen when faced with hardships. Grant (2006) clarified that rather than telling people what to do, coaching is more about approaching the conversation with a sense of curiosity and asking the right questions. Subject-matter expertise and advice giving is not part of the coaching model. A metaphor used to clarify the process of coaching would be like a basketball coach on the sidelines making players aware of the forces at play. It is the player's role to use his or her skills to achieve his or her goals, but the basketball coach is the guide on the side. Carter (2018) commented that the coaching model facilitates growth using powerful questions by asking students (a) to assess their progress on their goals, (b) articulate their steps, (c) explain what results were achieved, and (d) explore how they might improve in the future. The ICF (2018a) offered that in the process of asking powerful questions, individuals can reveal essential information that can directly benefit the coaching relationship.

The use of academic coaching as an intervention in higher education is relatively new. As such, very few studies have investigated the effectiveness of the intervention in an academic setting. Although the research on academic coaching is limited, the following gives a comprehensive view of some of the current literature. Short et al. (2010) discovered that upper-level undergraduate psychology students who participated in peer coaching interventions had reduced stress and psychological distress. The coaches who were used in this study were undergraduate students as well, so that distinction could be a limitation of the study since the peer coaches had limited training and life experience to aid them in their position.

Another study on peer coaching was researched by Asghar (2010). Results indicated that self-regulations skills and self-efficacy were increased in first-year undergraduate students as a result of their participation in peer coaching. Andreanoff (2016) echoed those findings in a mixed-method study at a higher education institution in the United Kingdom. The researcher studied a peer coaching intervention program that measured the impact on academic achievement and academic confidence. There was a significant increase in academic confidence and an increase in academic achievement. Other contemporary researchers have found that students who participate in peer coaching interventions show significant increases in academic performance (Andreanoff, 2016; Bettinger & Baker, 2011; Franklin & Franklin, 2012; Short et al., 2010).

Together, the studies highlighted demonstrate empirical evidence that establishes personal coaching as an appropriate and effective intervention for helping individuals to enhance growth and development. As colleges and universities look for more effective methods to address retention issues, personal coaching is being seen as a promising intervention.

Peer-Assisted Learning

Since student retention has become a paramount concern for colleges and universities, many higher education institutions have increased funding for retention initiatives. To help make a connection with students early in the beginning of their academic career, institutional personnel are utilizing peers to help with retention efforts (Dennis, Phinney, & Chuateco, 2005; Goff, 2011; Leidenfrost, Strassnig, Schütz, Carbon, & Schabmann, 2014; Newton & Ender, 2010; Topping, 2005).

According to Topping (2005), utilizing peers as a method of addressing student support has a long history. "It is possibly as old as any form of collaborative or community action, and

probably has always taken place, sometimes implicitly and vicariously" (Topping, 2005, p. 631). In the last two decades, the use of peer educators in higher education has grown at an exponential level. Researchers have identified that over 75% of colleges and universities are using undergraduates as peer educators in some capacity (Brack, Millard, & Shah, 2008; Carns, Carns, & Wright, 1993). Newton and Ender (2010) determined that peer educators are a precious commodity in the higher education environment due to the fact that they are economically friendly, relatable to students, experienced with the campus system, and effective. Not only do students benefit from the relationship, but also the peer assistant realizes benefits in terms of an expanded skill set, relevant work experience, and community connections (Newton & Ender, 2010).

Goff (2011) explained that there are various factors that can lead to students' persistence in higher education. Although academic ability is an important aspect related to student retention, research continues to point to the powerful influence of academic assistance from peer interactions as something that can affect retention positively and students seeks this interaction out.

It is necessary to clarify exactly what is meant by the term peer-assisted learning. Topping (2005) defined the term as

> the acquisition of knowledge and skill through active helping and supporting amount status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing. (p. 631)

Typically, there was an assumption made that the peer learning student needed to be an individual who was the "best of the best," but that dynamic tended to under-stimulate the helper

who may not gain from the interaction. In more recent years, it has been more advantageous to enlist helpers whose “capabilities are nearer to those of the helped, so that both members of the pair find some cognitive challenge in their joint venture” (Topping, 2005, p. 632). Newton and Ender (2010) posited that "students seek advice from and are influenced by the expectations, attitudes, and behaviors of their peer group" (p. 9). In many situations that students face, peer influence can be stronger than the influence of teachers, parents, or other experts (Mellanby, Rees, & Tripp, 2000).

In contemporary research, peer-assisted learning has been shown to have a positive effect on academic achievement (Coe, McDougal, & McKeown, 1999; Kenney & Kallison, 1994; Lundenberg, 1990). In a study by Ashwin (2003), the researcher investigated the approaches to studying and the academic outcomes of students who participated in a supplemental instruction peer support scheme. Findings indicated that students who attended the program regularly significantly benefitted in terms of their academic performance.

Similarly, Hammond, Bithell, Jones, and Bidgood (2010) assessed the design of a peer-assisted program. Participants in the study engaged in a voluntary time-tabled, peer-led session that focused on active and collaborative learning with peers. Results from the study confirmed previous research demonstrating that peer-assisted learning correlates with social aspects of the learning process. However, participants did not find that actively engaging in the program helped with improved study skills or assignment management (Hammond et al., 2010).

Conversely, Sims (2014) conducted a study in which a questionnaire was distributed to 40 second- and third year students studying an English course to determine how useful they found peer facilitation of course material. Results indicated that participants felt that peer learning in tutorials may not be useful. The researcher offered student unpreparedness as a

reason peer facilitation was not helpful. Although the facilitating peers had active and collaborative activities in which students could participate, students did not come to class with the sufficient knowledge base to be active members of those activities (Sims, 2014).

The popularity of using peers-assisted interventions in higher education as an effective means of academic support has increased in the last few decades. The common forms of these interventions include peer tutoring, peer mentoring, collaborative learning, peer education, and peer counseling (Topping & Ehly, 1998). In particular, peer counseling has received renewed attention due to the popularity of society's focus on life coaching. Topping and Ehly (1998) offered a definition for peer counseling that mirrors many aspects of life coaching in a collegiate setting. Simply stated, peer counselors are "people from similar groupings . . . who help clarify general life problems and identify solutions by listening, feeding back, summarizing, and being positive and supportive" (Topping & Ehly, 1998, p. 17). The new type of success coaching has increased in popularity over the last 10 years, but not much assessment has been completed to measure its effectiveness.

Theoretical Frameworks

This section will explore the many theories that serve as a framework to support the academic success coaching process. Self-efficacy theory, self-regulation theory, goal-setting theory, and positive psychology all are important elements that undergird academic success coaching.

Bandura's Self-Efficacy Theory

Academic self-efficacy is defined as a student's belief that he or she can succeed at an academic task by using resources available to him or her (Bandura, 1997; Linebrink & Pintrich, 2002; Schunk & Pájares, 2002). Linebrink and Pintrich (2002) noted that academic self-efficacy

beliefs are situational, which can vary with the task attempted. Some students may believe in their confidence level to achieve a difficult task, while others may have that same belief on easier tasks. Bandura (1995) emphasized that how individuals feel, think, motivate themselves, and behave are all affected by self-efficacy, and these beliefs are underpinning human motivation, well-being, and personal achievement. If individuals are under the belief that any action they take cannot translate into a desired outcome, difficulties encountered will deter them from their ultimate goal.

Building on self-efficacy beliefs is the main focus for many coaching programs. Programs emphasize that individuals can have tremendous influence over what can be accomplished (Bandura, 1994; Jenson, Petri, Day, Truman, & Duffy, 2011; Pájares, 1996; Phan, 2009; Schunk, 1984; Schunk & Pájares, 2002). Maddux (2013) explained that social cognitive theory focuses on the fact that individuals have the ability to engage in self-reflection and self-regulation, thereby being able to have agency to control aspects of their lives. In essence, individuals have in their power the ability to shape their own futures. Similarly, Bandura (1997) noted that although the way in which an individual behaves in certain situations is determined by many different factors, an individual play a big part in what happens to them. If an individual has no belief that he or she has power to change his or her current situation, he or she will not. Social cognitive theory explains that having a sense of self- efficacy is a propositional belief to having agency in life (Bandura, 1997). As such, the concept of self-efficacy plays an important role in the coaching relationship.

Bandura (1997) described personal self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce those given attainments" (p. 3). The notion that people can exercise influence over their behaviors is defined as agency. A key

factor in human agency is personal self-efficacy. Schunk (1985) stated that the level of individuals' sense of self-efficacy will influence how they approach a learning task. The higher the sense of self-efficacy, the more they see the task as a challenge and will fully engage in overcoming the task. Conversely, individuals with a low sense of self-efficacy may avoid the same learning task. When individuals are of the mindset that they have no power to make things happen, they will not attempt the task (Bandura, 1997). Phan (2009) noted that self-efficacy can influence an individual's performance in both direct and indirect ways, depending on the many cognitive and non-cognitive factors at play. Phan also reported that self-efficacy can facilitate a very important role in effort. Increases in self-efficacy beliefs affect resiliency, persistence, and effort expenditure (Pájares, 1996). Putwain, Sander, and Larkin (2013) agreed that how students perform academically in college is strongly influenced by their level of academic self-efficacy.

Bandura (1997) described four different sources of self-efficacy: (a) past performances, (b) vicarious experiences, (c) verbal persuasion, and (d) emotional cues. Each of the sources has a direct effect on the confidence a student has to complete a task. First, mastery experiences are past performances that can impact self-efficacy based on the learning outcome. Students' successful performances can increase self-efficacy, while student failures can decrease it. Of all the sources of self-efficacy, mastery experiences tend to have the biggest influence on an individual's self-efficacy due to the fact that successful completion of a task provides solid proof that a student has the ability to succeed (Bandura, 1997).

The second source of self-efficacy is vicarious experiences. Personal self-efficacy can be increased by imitating experiences of peers. Individual capabilities for some activities are easy to judge, but most activities have no absolute measure of advocacy. As such, individuals tend to measure their performance against their accomplishment of their peer group to gauge their own

confidence in achieving a given task (Bandura, 1997). A student observing a peer successfully complete a task can help to strengthen the ability of the student.

Verbal persuasion is the third source of self-efficacy. Bandura (1997) posited that encouragement from individuals is a form of social persuasion that can help bolster the self-efficacy of individuals and increase the likelihood the accomplishment of a goal. Peer coaches can serve as a means of boosting the self-efficacy of their students by means of feedback to help guide students in their task and motivate them to do their best.

The final source of self-efficacy is emotional cues. Emotional states can have an incredible impact on self-efficacy. An individual who is trying a new task but expects to fail at the endeavor, or finds the task exceedingly taxing, may feel several signs of anxiety which could impact self-efficacy. A student who fosters a positive mood may serve to boost his or her self-efficacy, while anxiety can have the opposite effect (Bandura, 1997).

Self-efficacy is different from other related views of the construct, such as self-concept and self-esteem. Researchers sometimes use these terms synonymously, but operational definitions are presented to clarify constructs and put self-efficacy in context. Bandura (1997) explained that "self-concept is a composite view of oneself that is presumed to be formed through direct experiences and evaluations adopted from significant others" (p. 10). Self-concepts are multidimensional and hierarchical. General self-concept has been broken down in education into other dimensions of self-concept (e.g., reading self-concept, science self-concept, and math self-concept). Additionally, self-concept can be hierarchical by grouping some self-concepts together, such as academic self-concept or social self-concept (Bandura, 1997).

Rosenberg (1979) defined global self-esteem as an overall evaluation of the self as a person of worth. This construct is more about how you feel about yourself than how good you

are in a particular domain. As such, self-efficacy is domain specific and is how confident you are at completing a task, for example, how confident you are at completing a trigonometry problem or completing a long division or any other task-specific areas related to math self-concept. Bandura (1997) stated that in order for individuals to do well at a given task, having a high self-esteem is not enough. Self-esteem does not affect personal goals or performance, but an individual's perceived self-efficacy is a direct predictor of goal accomplishment (Bandura, 1997).

There have been many studies that have shown an increase in persistence and effort in students' academic learning and performance of students who have a high sense of academic self-efficacy (Schunk, 1984, 1989). Jenson et al. (2011) researched the self-efficacy perceptions of STEM students with disabilities. In this study researchers postulated that self-efficacy was a key element in positive outcomes for postsecondary students. Bandura (1997) contended that "perceived self-efficacy is concerned with judgments of personal capability, whereas self-esteem is concerned with judgments of self-worth" (p. 11).

Jenson et al. (2011) organized focus groups around Bandura's (1997) leading factors of self-efficacy which included mastery experiences, vicarious experiences, social persuasion, and physiological reaction. In this qualitative study, small focus groups on the topic of self-efficacy were conducted that engaged 20 college students with disabilities. Two central themes emerged from the data. First, students reported a positive relationship between success in their science, technology, engineering, and math (STEM) classes and their overall sense of self-efficacy in college. Second, students who had a vicarious experience increased their own self-efficacy. At conclusion of the study, results indicated that students who had a positive self-image translated into higher self-efficacy perceptions (Jenson et al., 2011). Jenson et al. suggested that findings

be used to incorporate the concept of self-efficacy into student support programs that work with students with disabilities, but the results can be generalized to the peer mentors, course instructors, and academic support programs.

Zimmerman's Self-Regulation Theory

Another important framework that undergirds the academic coaching process is the concept of self-regulation. This construct gained in popularity with researchers in the late 20th century (Corno, 1989; Harris, 1990; Paris & Newman, 1990; Zimmerman & Schunk, 1989). Studies have demonstrated that self-regulated learning results in higher academic performance and achievement in higher education (Barato, Alexander, & Rodríguez-Moneo, 2016; Hofer, Yu, & Pintrich, 1998; Schunk & Ertmer, 2012). There is a basic belief that students who use self-regulating behaviors can control their cognition, motivation, and behavior and, in doing so, can achieve their goals and perform at a higher level (Hofer et al., 1998; Zimmerman, 1990; Zimmerman & Martinez-Pons, 1986).

Bandura (1989) and Schunk (1990) stated that students who are self-regulated learners are very adept at directing their learning process and achievement through setting goals which are challenging. These students are skilled at using strategies which are appropriate to help them achieve their goals (Zimmerman, 1989, 1990). Zimmerman (1989, 1990) concluded that high levels of self-efficacy in self-regulators' capabilities have a strong effect on skill goals they set for themselves and how they achieve these high standards. Stober and Grant (2006) explained that as an individual engages in the process of goal setting, self-regulation is a key concept that is integral with this process. At each step in the cycle, the individual is evaluating his or her performance on a set standard and making adjustments "and based on this evaluation, changes their action to further enhance their performance and better reach their goals" (Stober & Grant,

2006, p. 153). In the self-regulation cycle, the peer coach is responsible for facilitating the individual's progress through the model. Figure 3 represents the generic goal-directed self-regulation model.

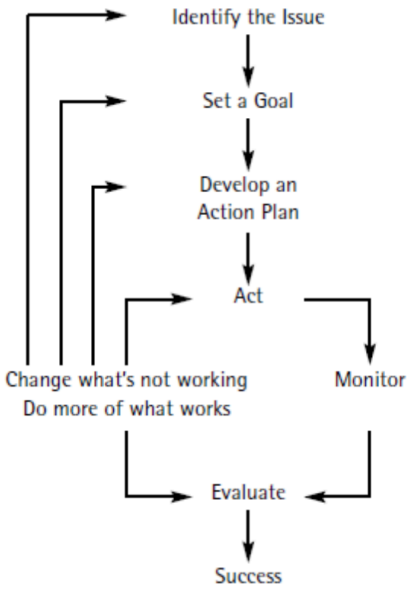

Figure 2. Generic model of goal-directed self-regulation. Adapted from "The Impact of Life Coaching on Goal Attainment, Metacognition, and Mental Health," by A. M. Grant, 2003, *Social Behavior and Personality: An International Journal, 31*(3), p. 255. Copyright 2003 Society for Personality Research. Reprinted with permission.

Goals are an important step in self-regulating behaviors. The process of goal setting can increase the effectiveness of self-regulated learning by engaging students in self-reflection and concentrating on motivation, learning, and self-efficacious behaviors (Bandura, 1997; Schunk, 1995). Locke and Latham (1990) explained that students must make a concerted effort to commit to a goal in order for that goal to affect performance. Goals are helpful to self-regulated learners in two ways: motivating students to exert effort necessary to meet those goals

and helping students focus on the task by using strategies that align well to address the task and evaluate their progress.

Students' feeling of self-efficacy in using skills to achieve tasks is a key determinant of effective self-regulation (Bandura, 1986; Schunk, 1995; Zimmerman, 1989). Schunk and Zimmerman (1998) noted that self-efficacy is an important factor in the self-regulation process. When individuals, who have developed a strong self-regulating skillset, are faced with a challenging situation, they usually are very good at monitoring their progress to determine if they are achieving their goals. This self-reflection and self-evaluation "of acceptable progress lead to continued use of effective strategies, motivation for improvement, and positive achievement beliefs" (Zimmerman, 1998, pp. 141-142).

Bandura (1997) indicated that self-regulation is an important factor in setting meaningful goals and promoting self-efficacy. Similarly, Parker, Hoffman, Sawilowsky, and Rolands (2013) indicated in their study, on support for students with attention deficit hyperactivity disorder, that a major theme in the results was the impact coaching had on students' perception of their self-regulating behaviors. Students expressed how support helped them with time management tasks and positive self-talk.

A study by Uzuntiryaki-Kondakci and Capa-Aydin (2013) discussed the relationship between metacognitive self-regulation, chemistry self-efficacy, and critical thinking. The participants in the study included 365 university students taking a general chemistry class and used a convenience sampling technique. The data collected through the study employed the Motivated Strategies for Learning questionnaire and the College Chemistry Self-Efficacy scale. Findings from the study suggested that there is a positive and significant link between metacognitive self-regulation and chemistry self-efficacy, and metacognitive self-regulation

played a key role in critical thinking. Although the study did not use a random sampling technique, the findings indicated the need to use self-regulatory processes as a key component of enhancing self-efficacy (Uzuntiryaki-Kondakci & Capa-Aydin, 2013).

Self-regulation is a key component of the academic coaching process. Grant (2001) argued that "the process of coaching is essentially about helping individuals regulate and direct their interpersonal and intrapersonal resources to better attain their goals" (p. 40). Researchers (Bandura, 1986; S. Fox & Spector, 2000; Rosenbaum, 1990) have studied the process of self-regulation in psychology for many years, but little research exists in the coaching literature regarding the construct (Grant, 2001).

Locke and Lathem's Goal-Setting Theory

One important component in the coaching process is goal setting. Asking individuals to set goals for the coaching session helps to give direction and an achievement metric. Zimmerman and Martinez-Pon (1986) explained that powerful influences on academic achievement are goal setting and self-efficacy. An individual's self-efficacy is enhanced better with learning goals that are specific, short-term, and viewed as attainable. If individuals believe they can achieve the goal, they have a clear metric by which to gauge their success. Learning goals that are long-term, general, and not viewed by the individual as attainable are less effective in the enhancement of self-efficacy. Individuals working on tasks toward a particular goal use the goal as a means of comparison of their progress. If there is a sense of advancement, self-efficacy is strengthened and it motivates the individual to continue to improve on his or her progress (Schunk, 1995).

Many potential motivation variables can be mediated by the use of the goals along with self-efficacy. Some of these can include personality traits, feedback, job autonomy, and

monetary incentives (Locke & Latham, 2006). Locke and Latham (1990) developed the theory of goal setting as part of the industrial/organizational field of psychology and have contributed to the literature by researching over 400 laboratory and field studies in the time span of 25 years. In these research studies, Locke and Latham (2006) found that the specificity at which a goal is set has a direct effect on the outcome of the task. Goals which are developed that are explicit and difficult have the greatest chance of delivering positive results. Goals that are unclear have the least chance of success. There are certain factors that need to be present in order for an individual to achieve high levels of a positive outcome. Goal commitment, task ability, and no goal conflicts all produce "a positive, linear relationship between goal difficulty and task performance" (Locke & Latham, 2006, p. 265).

Previous research has found that self-efficacy, past performance, and various social influences can affect the level at which an individual sets their goal choice (Locke & Latham, 2006). Additionally, goal setting is a foundational piece of effective self-regulation. Goals from various sources can be very effective: assigned by others, set jointly, or self-set. When the individual is responsible for setting the goals themselves, self-regulation is an important step in goal attainment (Locke & Latham, 2006).

Recent evidence suggested that there is a two-path model toward high-level motivation and goal commitment. Anderson, Griego, and Stevens (2010) conducted a study with students at a private university in southern California. Sixty-two participants took part in the study training and were given a survey at the completion of the course. The results from the study indicated that one path to motivation and goal commitment was through self-efficacy. The research also found that peer support was helpful toward motivation and goal dedication. Similarly, Spence and Grant (2007) conducted an exploratory study on life coaching and the enhancement of goal

striving and well-being. Results from their study suggest that while having a supportive peer in the coaching relationship is important, the expertise of the coach may be even more beneficial for the goal-setting process (Spence & Grant, 2007).

The implications of evidence gathered from the aforementioned studies emphasized the need for coaching to include goal setting as an important framework to guide effective practice. The coach is an important aspect as a facilitator of the goal-setting conversation, but having the individual set the goal will help with the self-regulation process and greater goal commitment.

Positive Psychology

A key theoretical approach that underpins the work of academic success coaching is that of positive psychology (Cox, Bachkirova, & Clutterbuck, 2014; Grant, 2006, Grant & Cavanaugh, 2007). Cox et al. (2014) identified coaching as "the natural home for positive psychology, suggesting that coaching is the ideal vehicle through which the science of positive psychology can be applied" (p. 158). Humanistic psychology also relates closely with the coaching philosophy as both paradigms focus on the development of "talents, building self-efficacy, and moving individuals toward self-actualizing goals" (Cox et al., 2014, p. 158).

The history of positive psychology began in the 1900s through the 20th century. Beer (1908), in his germinal piece of work entitled *A Mind That Found Itself,* posited a call to action for the general public to understand that psychology could be used for more than just a recovery from mental illness, but also for individuals that could utilize the strengths they possess to help with that recovery process (Ben-Yehuda, 2015; Wade et al., 2015). Menninger, Mayman, and Pruyser (1963) agreed and called on researchers to aim efforts on the process of prevention and not remediation. They encouraged mental health professionals to view mental illness as

something not fixed but adaptive to change. Throughout the 20th century, a primary focus of the literature consisted of identifying how individuals could achieve their "best selves." Some of the popular studies at the time examined gifted children, marital satisfaction, positive parenting skills, healthy development, and mental health which helped further the research on positive psychology (Wade et al., 2015).

Principles of positive psychology were pioneered by Seligman and Csikszentmihalyi (2000). As discussed in their research, they felt that much of the work of psychologists at the time was focused on treating mental health disorders and the negative bias related to those disorders. They encouraged the return to the study of well-being, happiness, and human flourishing. Although these constructs had been researched before (Diener, Suh, Lucas, & Smith, 1999; Maslow, 1969; Veenhoven, 1988), there was a lack of evidence-based interventions (Bolier et al., 2013).

Seligman (2007), the father of positive psychology, defined the philosophy as “a psychological approach that focuses on the study of positive emotion, of engagement, and of meaning, the three aspects that make sense out of the scientifically unwieldy notion of happiness” (p. 266). The goal of the approach used by positive psychology is to build on the positive qualities that a person has and to focus efforts moving forward on to growth of the individual toward their goals (Ben-Yehuda, 2015). Conversely, Kauffman and Scoular (2004) elaborated that most of the psychological language used by assessment in the psychology field views the client through a lens of pathology and problems that inhibits the use of a strengths theory.

Many researchers have built off of Seligman’s work by focusing in on strength theory which concentrates on managing individuals’ weaknesses while capitalizing on their strengths.

Specific philosophies that fall under the umbrella of strength theory include strength-based approaches (Clifton & Nelson, 1992), appreciative inquiry (Gordon, 2008), and hope theory (Snyder, 1994).

The central character in positive psychology is the individual, and the therapy is person-based. Academic success coaching draws on the principles at the core of the positive psychology approach where the student is at the center of the process and building on their strengths is the focus in achieving attainable goals. Practitioners of the positive psychology framework encourage interventions that promote well-being of clients and facilitating long and lasting change as their main goals (Cox et al., 2014). Conversely, Held (2002) criticized positive psychologist researchers for focusing solely on the individual, placing the responsibility for circumstances on the client. Similarly, Boniwell, Kauffman, and Silberman (2014) concurred that by focusing only on the individual, without being aware of the many external factors such as socioeconomic and psychological issues, professional counselors may assign blame to the client for their current situation. When positive psychologists do not explore these contributing factors to an individual's situation, a large part of the equation is excluded in which clients are blamed for their failures when they may have just been a victim of circumstance.

A large and growing body of literature has investigated the effects of positive psychology interventions. Bolier et al. (2013) conducted a meta-analysis of randomized controlled studies to determine the effectiveness of the use of this approach. The researchers conducted a systematic literature search of 40 articles, detailing 39 different studies that encompassed 6,139 participants. Although there was considerable variety in the quality and designs of the studies, the accumulated research indicated that subjective well-being, psychological well-being, and depression all indicated small effects for positive psychology interventions. Additionally,

interventions with a longer duration were typically more effective. The results suggested that interventions rooted in a positive psychology approach can reduce depression and have a positive effect on subjective and psychological well-being (Bolier et al., 2013).

Cox et al. (2014) argued that, as opposed to traditional psychological paradigms, positive psychology aims to narrow the focus to well-being, character strengths, and happiness. Positive psychology and the practice of coaching focus on the same aspects of individual well-being and human potential. Each philosophy complements the other in working with clients who are striving for optimal performance in their lives (Cox et al., 2014).

Assessment

The call for administrators of universities and colleges to present more evidence of effectiveness has become louder in the last decade. As institutions are facing shrinking resources and escalating costs, the demand for accountability has never been greater (Crissman & Upcraft, 2001; W. E. Hudson, 2005; Jaeger & Eagan, 2011; J. Martin & Samels, 2015; Slanger et al., 2015). College and university administration and faculty work yearly to increase efforts to enhance the classroom experience so that students meet highly crafted assessment outcomes. The accountability demand is not solely focused on the academic side of the house. The demand is institution-wide. As such, the programming for student affairs is under the microscope as well.

Professionals in student affairs have helped to ensure that learning happens outside the context of the classroom experience. Since most academic success coaching programs are housed under the umbrella of student affairs, the work of this unit, as well as academic affairs, is essential to deliver assessment tools in a systematic fashion. Working with academic units to ensure the integration of their programming to help expand learning has always been a key focus

of the field (Barham & Scott, 2006). According to Crissman and Upcraft (2001), pressure exists for student affairs divisions and professionals to demonstrate their worth and importance in the student learning process. In doing so, deeper assessment methods must be used. Whitt and Miller (1999) called for student affairs professionals to move their institutions forward with transparent assessment of student learning and development. Barham and Scott (2006) expressed that many student affairs programs use a variety of metrics to gain feedback on how their programs are having an effect on students' learning. The metrics largely are based on student visitation and customer satisfaction. A small percentage of student affairs professionals are using student learning outcomes or student development outcomes as a direct measure of effectiveness. As the area of student affairs strives to demonstrate effectiveness of programming in its area, a comprehensive assessment model is needed (Barham & Scott, 2006).

Since the emergence of student assessment in student affairs programs has been identified as a priority for the student affairs field, a brief discussion of the literature is warranted. Doyle (2004) surveyed chief student affairs officers and found that the practice of assessment was an afterthought of most student affairs professional. This finding is consistent with Upcraft and Schuh's (1996) assertion that most student affairs practitioners see assessment as a process where many staff are unfamiliar with and in which much training is needed. Without the proper training, many assessment methods can be misused, and evaluation data compromised. Factors that have led to this slow rise in assessment awareness include the assessment movement in higher education and research on student learning (Kirksy, 2011). Kirksy (2011) suggested that learning occurs both inside and outside the classroom and services in the area of student affairs are a strong contributor to student development. In an effort to evaluate programming outside the classroom, many student affairs offices have tried to use student visitation and benchmarking

as their main assessment methods. The main outcomes gleaned from this assessment were student attendance and student satisfaction (Bresciani, Zelna, & Anderson, 2004). The aforementioned forms of assessment are important, but a look into more advanced assessment techniques is required. Schroeder (1999) suggested that for student affairs to help legitimize its role in higher education, it should focus on learning outcomes assessment.

Kirksy (2011) stated the goal of assessment in student affairs has two primary purposes: (a) to be able to provide clear evidence that the activities and services in student affairs programs are integrated and impactful in terms in student learning and development and (b) to improve the practice of student affairs and for program improvement for students and the institution. M. K. Smith and Mather (2000) commented that in order to show evidence of the impact they are having on student learning to administrators, student affairs professionals are documenting effective practices. Even though the body of literature on assessment in student affairs is growing, Peterson and Einarson (2001) stated that an increase in information is needed to determine what assessment methods are used by professionals to ascertain what effect programming is having on student growth and development. As student affairs units continue to grow beyond simple attendance counts and satisfaction surveys, more advanced methods of assessment will need to be implemented to demonstrate how programming has an effect on students.

Coaching Program Effectiveness

The use of coaching support programs to assist students in persisting to graduation has become a way for the administration of colleges and universities to foster developmental relationships. Many factors have contributed to using coaching as an intervention, one of the main factors being lack of academic preparation (Bettinger & Baker, 2011). In addition, students

are in need of assistance in completing complex tasks. Thaler and Sunstein (2008) commented that student coaching may be the nudge students need to help with motivational factors in finishing those tasks. Even though the use of coaching as a mainstream intervention is relatively new, higher education is interested in the effectiveness of such programs as financial resources are becoming much more limited.

In a study by Richman, Rademacher, and Maitland (2014), researchers investigated how participation in coaching affected areas such as executive functioning, self-determination, and academic success skills in students with learning disabled/attention deficit hyperactivity disorder (LD/ADHD). Participants in this qualitative study were undergraduate and graduate students with LD/ADHD disabilities chosen based on a self-selected convenience sample. Study participants received between 12 and 24 sessions of coaching throughout a two-semester time period. Coaches were certified and had been practicing for several years and helped with goal setting and action plans used to achieve those goals. Before students could participate in the study, they were asked to complete three surveys: Self-Determination Student Scale, Behavior Rating Inventory of Executive Function, and the Learning and Study Strategies Inventory (Richman et al., 2014). Richman et al. (2014) stated that results of the study reinforced the fact that coaching holds promise as an effective means for students with LD/ADHD to succeed in higher educational institutions by increasing executive functioning and self-determinations skills. Curtis and Kelly (2013) agreed with the study by grounding their research study in self-determination theory. Autonomy, relatedness, and competency were all increased by embedding self-determination components into their model for coaching.

Institutional coaching programs are not the only area in which university administrators are interested. Over the course of the last 10 years, commercial coaching programs have been

established in the landscape of higher education with the goal of providing higher persistence rates at a much lower cost than can be achieved compared to in-house coaching interventions. InsideTrack is a provider of coaching services in which students receive one-on-one assistance. Coaches contact their students on a consistent basis and evaluate how each student is doing academically and socially. Discussions are centered around how students are performing in and outside the classroom (U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse, 2012). InsideTrack began offering its services to higher education in 2000 and the organization has coached more than 250,000 students.

To examine the effectiveness of this commercially offered service, Bettinger and Baker (2011) conducted a study analyzing student persistence to graduation. Administrators from eight higher education institutions provided lists of students who had participated in coaching with InsideTrack during the 2003-2004 and 2007-2008 academic years to the researchers. Altogether, 8,049 students were assigned to the intervention group (Bettinger & Baker, 2011).

Participants were randomly assigned to the intervention group by 17 lotteries. As part of the intervention, coaches meet with students through email, phone calls, or text and talked about lives outside of school, personal time commitments, financial obligations, and caregiving responsibilities (Bettinger & Baker, 2011). Bettinger and Baker (2011) reported that students who participated in the coaching intervention were about five percentage points more likely to persist in college. This translated into a 9-12% increase in retention. Researchers also found that coached students had graduation rates four percentage points higher than students who did not receive the intervention (Bettinger & Baker, 2011). This was the first comprehensive, quantitative, randomized study in which researchers found positive effectiveness of coaching programs at colleges and universities. One critique regarding the study is that the researchers did

not list the research questions they wanted to answer, and the setup of the study did not seem as streamlined as it could have been. A positive characteristic of the study was the fact that the U.S. Department of Education vetted the validity of the research.

As coaches work with students, the main objective is for the student to drive the goal-setting process. As such, motivation is a key factor in goal attainment and is facilitated by three types of influences: self-evaluation of performance, perceived self-efficacy for gain completion, and adjustment of goals based on evaluation (Bandura, 1997). Much evidence exists in goal theory that involving students in goal-setting behaviors and action plans improves performance and helps with goal attainment (Gollwitzer, 1999; Locke, 1996). As such, understanding the effective coach-coachee relationship can be expanded by using goal theory (I. M. Smith & Brummel, 2013).

Through the research reviewed, a few implications have emerged that will have great significance in the field of coaching. In order for researchers to examine similar constructs, it is imperative for the research community to use similar terms and characteristics in their studies. Mentoring and coaching have been synonymous for professionals in the higher education and have been used interchangeably. Unfortunately, each role has specific goals and characteristics that need to be considered in program development and peer trainings. Future researchers will need to operationalize the definition of academic success coaching to ensure that characteristics unique to coaching will be measured. In addition, further operationalizing academic success will need to be discerned for instruments to measure accurately the intended constructs.

Another important implication from the review is to advance the research in the field of coaching by implementing more quantitative studies in the higher education community. Very little germinal research has been conducted at the collegiate level, and expanding this research

would help to add to the dearth of literature. One research study exists that examined the effect of student persistence to graduation of a commercially outsourced professional coaching model (Bettinger & Baker, 2011). More information needs to be gathered of in-house coaching programs in higher education institutions that use peers as coaches, instead of professional coaches, to determine whether institutional coaching interventions have similar effects.

Summary

The review of the literature helped to highlight some of the key studies in the coaching literature to help frame the study proposed. Specifically, a working definition for academic success coaching was identified; the concepts of self-efficacy, self-regulation, goal setting, and positive psychology were explored to put them into the context of coaching; and the general effectiveness of current coaching programs was detailed. The information derived from the literature will help to focus the proposed study and legitimize the need for more quantitative research in the field of success coaching. Academic support programs used in the higher education landscape to help students persist to graduation are becoming common interventions. The research done on success coaching seems to have promise as a means of helping students achieve their goals.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study was to determine the effects of academic success coaching programs on student success in students' first year in college. Academic coaching programs have become an important retention support in helping students to develop goals for their academic year and elicit the help of a seasoned peer to guide them along the way. Barkley (2011) stated that the process of academic coaching involves a self-learning intervention strategy based on reciprocal relationships that encourages students to reflect on and monitor learning activities through the encouragement of a peer support. The problem is determining assessment methods to gauge the effect this type of program has on retention. As such, program effectiveness of current coaching models is increasingly important.

This chapter describes the methodology and research setting that was used to achieve the purpose. The subsections are (a) design of the research, (b) research questions, (c) population and sample, (d) variables to be studied, (e) instrumentation, (f) data collection procedures, (g) data analysis, and (h) controls for bias and confounds.

Research Design

The design used for this quantitative study was a quasi-experimental, nonequivalent groups pretest-posttest control design. McMillan and Schumacher (2010) stated that this design

is “very prevalent and useful in education, because it is often impossible to randomly assign subjects” (p. 278). I used already established groups of subjects, gave a pretest at the beginning of the semester, and gave the posttest at the end of the semester. I used Bandura’s (1994) construct of self-efficacy to determine if students who participate in academic success coaching programs increase their self-efficacy by virtue of attending success coaching sessions throughout a semester compared to students who did not take part in the program. In addition, academic success factors of semester GPA and persistence rates were evaluated to see if significant differences occurred between participants and non-participants from Fall 2018 to Spring 2019.

This design was selected due to the fact that the selection of individuals for the study did not use random selection since students were already enrolled in one of the 13 sections of a UCOL U110: First-Year Seminar. Table 2 illustrates the two groups that participated in the study. Six sections were assigned to the coaching group and seven sections were assigned to the non-coaching group. All students took the pretest and posttest, but only students in the coaching intervention received the coaching.

Table 2.

Nonequivalent Groups Pretest-Posttest Control Group Design

Group	Pretest	Intervention	Posttest
Coaching Intervention	O	X	O
Control Group	O		O

Campbell and Stanley (1963) explained that the use of a quasi-experimental design can produce extraneous variables that the research cannot control. Extraneous variables in the proposed experiment might include: ACT score, high school GPA, and socio-economic status. I used an ANCOVA to help control for these variables in the study. The variables analyzed in this

study included (a) self-efficacy score, (b) semester GPA, and (c) persistence. The independent variable was the coaching intervention. Table 3 provides a summary of the variables. It is organized into the three variable types, dependent, independent, and control.

Table 3

Summary of Variables

Dependent Variables	Operational Definition
Self-efficacy score	Measured on a continuous scale from 0-40
Semester grade point average	Measured on a continuous scale from 0.0-4.0
Persistence	Measured on a dichotomous scale where 1 = *Enrolled in Spring semester* and 0 = *Not Enrolled in Spring semester*
Independent Variables	**Operational Definition**
Coaching intervention	Measured on a dichotomous scale where 1 = *Participation in Coaching* and 0 = *No Participation in Coaching*
Gender	Measured on a dichotomous scale
Women	where 1 = *marked*, 0 = *otherwise*
Men	where 1 = *marked*, 0 = *otherwise*
Race	Measured on a dichotomous scale
Asian	where 1 = *marked*, 0 = *otherwise*
Black/African American	where 1 = *marked*, 0 = *otherwise*
Hispanic/Latino	where 1 = *marked*, 0 = *otherwise*
NR-Alien	where 1 = *marked*, 0 = *otherwise*
Two or More Races	where 1 = *marked*, 0 = *otherwise*
White	where 1 = *marked*, 0 = *otherwise*

Control Variables	Operational Definition
High school grade point average	Measured on a continuous scale from 0.0-4.0
Socio-economic status	Measured on a dichotomous scale where 1 = *Pell Grant recipient* and 0 = *Not a Pell Grant recipient*

Research Questions

The study was designed to investigate the effectiveness of academic success coaching on student success for first-year students. The research was guided by four research questions:

1. Do students who participate in academic success coaching increase their self-efficacy?
2. Do student participants in coaching perform better than non-participants on their semester GPA as a result?
3. Are there statistically significant differences in gender or ethnicity between participants and non-participants in coaching?
4. Do students who participate in academic success coaching programs persist at a higher rate than non-participants?

Participants

The study focused on students who attended Indiana University Purdue University Indianapolis (IUPUI) in Indiana, were enrolled in a stand-alone UCOL U110: First-Year Seminar course, and were in their first year of college. Participation in academic success coaching programs was a service offered to students during the fall semester. The sample of students who agreed to take part in the academic success coaching program for First-Year Seminar was obtained without random selection. A total of 13 sections were included in the

study (six sections received the academic success coaching intervention and seven sections were mentored by a first-year seminar mentor not trained in the new hybrid InsideTrack/LifeBound coaching model). Each section included in the study was a stand-alone First-Year Seminar section not linked to any other intervention used by IUPUI for entering students (e.g., Themed Learning Communities, Gateway Learning Communities, or Residential Based Learning Communities). The sample population include 284 incoming freshmen.

The primary role for the peer mentor was to be a bridge for the students to the instructional team, to the other students in class, and to the IUPUI community. In accordance with the template for the UCOL U110: First-Year Seminar, the peer mentor's role and responsibilities focused on increasing new students' sense of belongingness to the campus, supporting and easing their transition to college life, and helping them make plans for success in their first semester.

Students who participated in the hybrid InsideTrack/LifeBound coaching model engaged in the following methodology of the coaching process:

1. Frame to engage–to create a context to establish rapport or review history from previous visits to connect on earlier established goals.
2. Assess the student's situation–using powerful questions to determine meeting agenda and listen for gap words. Additionally, explore at least three areas on the student focus wheel categories: (a) academics, (b) health, (c) career, (d) graduation, (e) commitments, (f) effectiveness, (g) school community, and (h) finances.
3. Identify the topic most of concern to the student.
4. Discuss to advance–determine the needs, set up next steps, and develop SMART goals.

5. Summarize to motivate–recap the conversation, develop an action plan, and use positive reinforcement to motivate.

Instrumentation (Validity and Reliability)

The instrument used in this study was the General Self-Efficacy scale (Schwarzer & Jerusalem, 1995). This was a 10-item psychometric scale that was specifically designed to measure confidence and optimistic self-beliefs used to cope with demanding tasks that occur during the semester. This scale has been used with hundreds of thousands of participants and the scale has an acceptable reliability and validity (Schwarzer & Jerusalem, 1995). The purpose of the scale was to access a general sense of perceived self-efficacy. An overall objective was to predict coping with daily hassles and how well individuals adapted while they encountered stressors of daily life. The scale's target population was designed for adults. Schwarzer and Jerusalem (1995) stated that perceived self-efficacy reflects the "belief that one can perform a novel or difficult task. . . .Perceived self-efficacy facilitates goal setting, effort investment, persistence in the face of barriers and recovery from setbacks" (p. 35).

The instrument was found to have a high internal consistency rating on five samples studied and the alphas ranged from 0.82 to 0.93. Additionally, in criterion-related validity studies, positive correlations on the measures of self-esteem (0.52), internal control beliefs (0.40), and optimism (0.49) were found, and negative correlations on measures of general anxiety (-0.54), performance anxiety (-0.42), shyness (-0.58), and pessimism (-0.28) were also established (Schwarzer & Jerusalem, 1995). The reliability of the scale on Cronbach's alphas ranged from .76 to .90, with the majority in the high .80s.

Data Collection Procedures

The Institutional Review Board (IRB) packet was submitted, approval was granted, and the study was conducted. As part of the UCOL U110: First-Year Seminar course, students were expected to meet with their mentor four times during the semester. During the first meeting in September, student mentors read the provided script (Appendix A) to students detailing the research study and informing students they would be receiving an online survey email invitation (Appendix B) and given the opportunity to participate. An email was sent out to all students in the 13 identified sections of the UCOL U110: First-Year Seminar course. The link to the General Self-Efficacy survey (Appendix C) was included for potential participants to click. The General Self-Efficacy scale was a self-test scale that took up to 20 minutes for participants to complete, and the survey responses range from *Not at all true* (1) to *Exactly true* (4).

Informed consent information (Appendix C) appeared on the first screen and the participant agreed to continue with the survey. Near the end of November, student participants were sent out a second online survey email invitation (Appendix D) and were asked to fill out the online General Self-Efficacy survey once more. Informed consent was obtained from all students who participated in academic success coaching. The informed consent section of the survey stressed the voluntary nature of participating in the study and that the participant could withdraw from the study at any time. Additionally, the informed consent section emphasized that the data gathered as part of the study would be used in aggregate to determine the effects of the academic success coaching model. To increase survey response rates, a drawing was held for all participants who complete both surveys for a chance to win a $50 gift card.

Data Analysis

Data were analyzed with the Statistical Package for the Social Sciences (SPSS) for analysis of all descriptive and inferential statistics to determine if participation in the program results in an increase in self-efficacy. Data measuring the effects of academic success coaching on participants' and non-participants' self-efficacy scores, academic performance, and semester-to-semester persistence were compared and contrasted using inferential statistics.

An ANCOVA was used to address Research Questions 1, 2, and 3 McMillan and Schumacher (2010) explained that using an "ANCOVA has two major purposes: (1) to adjust initial group differences statistically on one or more variables that are related to the dependent variable but uncontrolled and (2) to increase the likelihood of finding a significant difference between group means" (p. 308). The ANCOVA was used to identify any possible statistically significant difference on outcome measures (self-efficacy, semester GPA, and persistence) between groups by controlling for high school GPA and socio-economic status as covariates. Socio-economic status was determined by students coded as Pell Grant recipients or unmet financial need. The persistence rates of participants and non-participants were evaluated by comparing and contrasting the students who registered for class the following semester.

Research Question 4 was analyzed by using a bivariate logistic regression to determine if participating in academic success coaching can predict enrollment in the following semester. Bivariate regressions are used to make predictions based on the dichotomous prediction variable. This statistical method is used to determine "how well score of an independent variable predicts scores on the dependent variable" (McMillan & Schumacher, 2010, p. 227). As such, a bivariate regression analysis was used with coaching participation being the predictor variable and enrollment in the following semester as the criterion variable.

Control for Bias and Confounds

First, participants for the study came from one institution in Indiana which engages in academic success coaching. As a result, perceptions and experiences of the participants are germane to the participants from the Indiana geographic region. Another confound was the responses of students on the self-administered General Self-Efficacy survey. Students were asked to fill out a survey upon their completion of the academic success coaching process.

I have been in the field of academic support programs for over 25 years and have seen positive results of students' participation in these support programs. One bias I controlled for was confirmation bias. Using a quantitative methodology helped to reduce that bias. I made sure to re-evaluate impressions of respondents and challenge preexisting assumptions.

Summary

Chapter 3 detailed the research methodology that was implemented in the study to address the research design, research questions, and sample population. In addition, variables studied were discussed. Validity and reliability of the General Self-Efficacy scale were addressed as well as the data collection and analyses that were used. Finally, controls for bias and confounds were detailed.

The research conducted provided measurable information for education leaders in search of quality intervention programs, initiatives, and strategies to improve the academic success of students in higher education. The results from this study provided administrators assessment data that can be used to institute effective retention strategies in order to assist students to persist to graduation.

CHAPTER 4

RESULTS

Introduction

The issue of student retention is a topic of paramount concern to colleges and universities over the course of the past four decades. First-year student attrition ranges from 30 to 50% in the United States (American Institutes for Research, 2010). The retention problem can be costly and as such, state agencies continue to cut budgets in relation to higher education institutions, and new allocations of funding are based off of student success efforts (Jaeger & Eagan, 2011).

Intervention programs can have a significant impact on addressing the retention problem (Barkely, 2011). These programs can help students with their acclimation to college and assist with an increase in student performance (Bonner & Tolhurst, 2002). The positive effect of student intervention programs realized are mostly based off of empirical data and qualitative research. The call for more quantitative research to determine the effectiveness of student interventions are needed (Grant, 2013). Therefore, the present study examined factors that are associated with retention and the student intervention of peer academic success coaching. In particular, self-efficacy, GPA, and persistence were all outcome variables that were investigated to determine an influence in retention at IUPUI.

Several research questions provided the framework for this study. Research Question 1 was, Do students who participate in academic success coaching increase their self-efficacy? In

past studies, increased self-efficacy and self-regulation skills were increased as result of participation in the academic success coaching intervention (Asghar, 2010; Short et al., 2010). As such, it was hypothesized that students involved in an academic success coaching intervention would increase in their self-efficacy.

Research Question 2 was, Do student participants in coaching perform better than non-participants on their semester GPA as a result? Many research studies have reported that students involved an academic success coaching program led to increased academic performance (Andreanoff, 2016; Bettinger & Baker, 2011; Bonner & Tollhurst, 2002; 2010; Franklin & Franklin, 2012; Short et al., 2010). Thereby, the hypothesis of greater academic achievement by participants in the coaching intervention was postulated.

The third research question was, Are there statistically significant differences in gender between participants and non-participants in coaching? Studies indicated that gender plays a factor in academic achievement and have reported that women tend to do better than men academically (N. S. Cole, 1997; Hartley & Sutton, 2013). Since gender has been shown to have an effect on academic performance, gender differences were analyzed to determine if there were mean differences between women and men.

Research Question 4 was, Do students who participate in academic success coaching programs persist at a higher rate than non-participants? Since academic success coaching is relatively new to the higher education environment, a hypothesis was postulated that students in coaching interventions will persist to the Spring 2019 semester at higher rates than students who did not received academic success coaching. Bettinger and Baker's (2011) research study has shown increased retention of students who participated in a coaching intervention. Therefore, it

was hypothesized that participation in coaching would be a significant predictor in whether a student persisted to the next semester.

This quantitative study used a quasi-experimental, nonequivalent groups pretest-posttest control design. All descriptive and inferential statistics were analyzed in SPSS. Data measuring the effects of academic success coaching on participant and non-participants self-efficacy scores, academic performance, and persistence were compared and contrasted using inferential statistics.

Descriptive Statistics

The data in the research study were collected from IUPUI and focused on the introductory course of UCOL U110: First-Year Seminar in the fall semester of 2018. Thirteen sections of the course were identified for inclusion in the study which accounted for 284 students. Six sections of the course, 140 (49.3%) students, were included in the academic success coaching intervention group, and seven sections of the course, 144 (50.7%) students, were included in the control group. Each section used in the study was a stand-alone section of the UCOL U110: First-Year Seminar course, meaning that these sections were not linked to a Themed Learning Community, a Gateway Learning Community, or a Residential Based Learning Community.

Students who were part of the study had the following characteristics. Women accounted for 211 (74.3%) students in the study, and 98 (68.1%) and 113 (80.7%) students were in the control group and coaching group, respectively (Table 4). Men in the study accounted of 73 (25.7%) students, and 46 (31.9%) were in the control group and 27 (19.3%) in the coaching intervention group. A breakdown of ethnicity by control and coaching intervention are included in Table 4.

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Table 4.

Description of Control Group and Coaching Intervention by Ethnicity

Ethnicity Group	*n*	Group Membership		Percentage
		Control Group *n* (%)	Coaching Intervention *n* (%)	
Asian	19	8 (5.6)	11 (7.9)	6.7
Black/African American	18	10 (6.9)	8 (5.7)	6.3
Hispanic/Latino	29	14 (9.7)	15 (10.7)	10.2
Non-Resident Alien	2	1 (0.7)	1 (0.7)	0.7
Two or More Races	14	9 (6.3)	5 (3.6)	4.9
White	202	102 (70.8)	100 (71.4)	71.1
Total (*N*)	284	144 (50.7)	140 (49.3)	

Inferential Results

Research Question 1: Do students who participate in academic success coaching increase their self-efficacy? The administration of the General Self-Efficacy survey was sent out to students in both the control group and the coaching intervention at the beginning and end of the semester. Of the two administrations, 32% of the population filled out either the first administration or the second administration. Data from students who completed both administrations of the survey were included in the final analysis, totaling 13% of the study population.

In order to compare self-efficacy changes, an analysis was needed between the control group and the coaching intervention regarding of the General Self-Efficacy survey that was administered at the beginning and end of the semester. The results of an independent samples *t* test reveal a non-significant difference between the two groups, $t(37) = .16$; $p = .874$, for the

beginning of the semester administration and $t(37) = -.48$; $p = .633$, for the end of the semester administration.

As displayed in Table 5, the control group and coaching intervention self-efficacy mean scores on the beginning of the semester administration were similar. On the final survey administration, control group mean self-efficacy scores were lower than the coaching intervention self-efficacy scores, 33.33 and 34.11, respectively

Although students who were involved in academic success coaching did increase in their self-efficacy scores during the Fall 2018 semester, the results were not statistically significant.

Table 5.

Comparisons of Self-Efficacy Score by Group Membership and Survey Completion Period

	Survey Completion Period							
	Beginning of Semester[a]				End of Semester[b]			
Group Membership	*n*	*M*	*SD*	*t*	*n*	*M*	*SD*	*t*
Control Group	21	33.24	5.06	.16[c]	21	33.33	5.20	-.48[d]
Coaching Intervention	18	33.00	4.12		18	34.11	4.82	

Note. [a]The first administration of the General Self-Efficacy survey was distributed electronically the second week of August. [b]The second administration of the General Self-Efficacy survey was disturbed near the last week of November. [c]$p = .874$. [d]$p = .633$.

Research Question 2: Do student participants in coaching perform better than non-participants on their semester GPA as a result? Table 6 reports descriptive statistics in regard to the mean and standard deviation of the GPA outcome variable that illustrate the central tendency and dispersion categorized by control group and coaching intervention. The data indicated that students who were part of the control group had a mean score of 2.57 and a

standard deviation of 1.14 at the end of the 2018 Fall semester and students in the coaching intervention had a mean score of 2.73 with a standard deviation of 1.07. Results from the descriptive statistics indicate that students in the coaching intervention outperformed students who were part of the control group.

Table 6.

Descriptive Statistics for Fall 2018 GPA by Control Group and Coaching Intervention

Group Membership	*n*	*M (SD)*	CI_{95}	Min - Max	Skewness	Kurtosis
Control Group	142	2.57 (1.14)	(2.38, 2.75)	0.0 – 4.0	-.76	-.25
Coaching Intervention	138	2.73 (1.07)	(2.55, 2.91)	0.0 – 4.0	-1.07	.66
Total	280	2.65 (1.11)	(2.52, 2.78)	0.0 – 4.0	-.90	.11

Note. CI_{95} = 95% confidence interval.

To analyze further these data, an ANCOVA was conducted to determine if there was a significant difference in the mean between the control group, who received no academic success coaching, and the coaching intervention, who received periodic meetings with an academic success coach. Fall semester GPA was the dependent variable, while the group (control or coaching) served as the independent variable. High school GPA and Pell grant recipients were controlled for in the analysis. Preliminary checks were conducted prior to analysis to ensure that there were no violations of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate.

The means and standard deviations fort the ANCOVA are presented in Table 7. Results indicated that means from the control group and the coaching intervention had non-significant effect on Fall semester GPA, $F(0.11, 1) = 0.01$, $p = .917$. However, the covariates revealed significant results. High school GPA, $F(158.98, 1) = 117.75$, $p = .000$), and

Pell grant recipient, $F(6.05, 1) = 4.48$, $p = .015$, explained 37% and 2.2% of the error in the equation respectively. Levin's test revealed a non-significant result which indicated that the data fit well with the model, $F(1, 273) = .535$, $p = .455$.

Table 7.

Fixed-Effects ANCOVA Results Using Group Membership as the Criterion Variable

Predictor	Sum of Squares	*df*	Mean Square	*F*	*p*	Partial η^2	Partial η^2 CI_{95} [LL, UL)
(Intercept)	37.57	1	37.57	50.72	.000*	.40	[-4.72, -2.64]
HSGPA	117.76	1	117.76	158.98	.000**	.37	[1.56, 2.13]
Pell grant	4.48	1	4.48	6.05	.015*	.02	[-0.52, -0.06]
Group Membership	.008	1	.008	.01	.917	.00	[-0.22, 0.20]
Error	200.74	275	.74				

Note. Pell grant and High School GPA were control variables.

* $p < .05$. p < .001.

Additionally, Table 8 describes final Fall semester GPA mean scores by group membership and persistence status. Of those individuals who persisted to the Spring 2019 semester, students who received academic success coaching performed slightly better ($M = 3.01$, $SD = 0.74$) compared to students in the control group ($M = 2.94$, $SD = 0.82$).

Table 8.

Descriptive Statistics for Fall Semester 2018 GPA by Group Membership and Retention Status

	n	*M (SD)*	CI_{95}	*n*	*M (SD)*	CI_{95}
Retention Status[a]		Returned			Did Not Return	
Control Group	110	2.94 (0.82)	[2.78, 3.10]	32	1.28 (1.15)	[0.86, 1.69]
Coaching Intervention	119	3.01 (0.74)	[2.88, 3.15]	19	0.98 (1.17)	[0.42, 1.54]
Total	229	2.98 (0.78)	[2.88, 3.08]	51	1.17 (1.15)	[0.84, 1.49]

Note. CI = 95% confidence interval. [a]Retention status: 1 = returned for Spring 2019, 0 = did not return for Spring 2019 semester.

Research Question 3: Are there statistically significant differences in gender between participants and non-participants in coaching? For Research Question 3, an analysis of the means was conducted using SPSS to determine if differences existed in the means for gender in regard to coaching intervention. The total population in the analysis was comprised of 207 women and 73 men. The control group consisting of women had a Fall semester GPA of 2.71 and a standard deviation of 1.07 and men had a Fall semester GPA of 2.27 and a standard deviation of 1.23). By comparison, the coaching intervention group had Fall semester GPA for women of 2.72 and a standard deviation of 1.11 and men Fall semester GPA of 2.77 and a standard deviation of 0.93. In order to test whether there were statistically significant differences associated with gender, a means comparison was conducted. As seen in Table 10, the means comparison was associated with a moderately statistically significant effect, F (1, 278) = 3.13, p = 078. Thus, women were associated with larger Fall semester GPA scores than men. Cohen's d was estimated to be .15, which is a small effect size.

Research Question 4: Do students who participate in academic success coaching programs persist at a higher rate than non-participants? The number of students and

percentages of students who persisted to the Spring 2019 semester are displayed in Table 9. The 13 sections in the study had an overall persistence rate of 80.6% ($N = 284$). The students who received academic success coaching persisted at a rate of 85.0% ($n = 119$). This is an 8.6% difference compared to students who were in the control group (76.4%, $n = 110$) and 4.4% difference compared to the overall persistence rate of the population. Although the coaching intervention persisted at a greater rate the control group, results from Table 9 revealed that the Fall semester GPA between the coaching intervention and the control group were not statistically significant ($p = .112$).

Table 9.

Coaching Intervention and Control Group by Percentage of Student Persistence

		Spring 2019			
Group Membership	*n*	# of students retained	Persistence Rate	# of students not retained	Drop Out Rate
Coaching Intervention[a]	140	119	85.0	21	15.0
Control Group[b]	144	110	76.4	34	23.6
Total (*N*)	284	229	80.6	55	19.4

Note. $p > .05$. [a]Six sections were included in the Coaching intervention. [b]Seven sections were included in the Control group.

In order to analyze these data in regard to predicted persistence of students to the Spring 2019 semester, a binomial logistic regression was conducted with six factors included in the analysis: Fall semester GPA, group affiliation, high school GPA, Pell grant recipient, gender, and ethnicity. A binomial logistic regression was the appropriate statistical test to use with the data due to the outcome variable being dichotomous (0 = did not persist and 1 = did persist) and the independent variables being categorical or continuous (Field et al., 2012).

Using this test requires that these data meet certain assumptions, such as minimum sample size, normality, and multicollinearity. First, Table 10 displays the results for the minimum sample size for those data. The sample size for the population data is 285 which exceeds the quota of 60 and meets the first assumption. Second, the assumption is met by Fall semester GPA and high school GPA being normally distributed.

Table 10.

Minimum Sample Size Required to Run a Robust Logistical Regression for Research Study

Variable	Type	Categorical (Categories = 1 x 10)	Continuous 10
Fall semester GPA	Continuous		10
High school GPA	Continuous		10
Group Membership	Categorical		
Pell grant	Categorical	10	
Gender	Categorical	10	
Ethnicity	Categorical	10	
Total *n* quota[a] = 60		30	30

Note. [a]Total *n* quota = total categorical variables + continuous variables.

Third, a check for multicollinearity was conducted on all variables to investigate if any variable was too highly correlated to ensure that the variables are statistically unique (Field et al., 2012). An analysis revealed a high and significant correlation between Fall semester GPA and high school GPA of 0.62 ($p < .001$). Even though the correlation was high, it is still in between the -.90 and +.90 acceptability range, so the assumption of no multicollinearity is met.

Since all assumptions had been satisfied, a binomial logistic regression was run to analyze to see if the variables contributed to a viable predictive model. The model explained

35% to 56% (Cox & Snell R^2 and Nagelkerke R^2, respectively) of the error by including the aforementioned variables and the model was moderately significant, χ^2 (8, n = 285) = 14.68, p = .066) which indicated an adequate fit model. Also, the model correctly predicted 90.5% of the cases as opposed to 81.5% without any of the variable included. Table 11 displays the effects of the variables in the logistic regression equation. Only the Fall semester GPA variable was a significant predictor in the model (Wald = 43.32, $p < .001$, odds ratio = 6.96). To interpret the odds ratio of Fall semester GPA variable, an increase of one GPA point increases the odds of a student persisting to the next semester by a factor of 6.95 while holding all of the other variables constant. All other variables, group, high school GPA, Pell grant recipient, gender, and ethnicity, were found to not be significant predictors in the model.

Table 11. Model 1:

Model 1: Logistic Regression of Variables Predicting Persistence to Spring 2019

Predictor	β	SE β	Wald's Test	e^b (Odds Ratio)	CI_{95} for e^b [LL, UL]
Fall Semester GPA	1.94	.30	43.32*	6.95	[3.90, 12.38]
Group Membership[a]	-.74	.46	2.59	.48	[0.20, 1.18]
High School GPA	-.30	.75	.16	.74	[0.17, 3.23]
Pell Grant[b]	-.76	.50	2.816	2.28	[0.18, 1.25]
Gender[c]	.17	.49	.13	1.19	[0.46, 3.09]
Ethnicity[d]	.40	.52	.60	1.49	[0.54, 4.11]
Constant	-0.96	2.38	0.15	6.95	

Note. n = 285. *$p < .05$ (two-tailed); [a]Coaching intervention = 1, Control group = 0; [b]Received = 1, Not Received = 0; [c]Women = 1, Men = 0; [d]Not Underrepresented = 1, Underrepresented = 0; β is the unstandardized coefficient; e^b is the factor change in odds for a unit increase in the Independent Variable (IV).

To illustrate an example of the model's prediction of persistence to the Spring 2019 semester, the following student characteristics were entered into the model: Fall semester GPA = 2.94, coaching intervention = yes, high school GPA = 2.00, Pell grant = no, gender = women, and ethnicity = underrepresented. The following equation is used to predict the probability of this student persisting to the Spring 2019 semester.

$$P(persistence) = \frac{e^{b0 + b1(Fall\ semester\ GPA) + b2\ (group) + b3\ (high\ school\ GPA) + b4\ (Pell\ grant) + b5\ (gender) + b6\ (ethnicity)}}{1 + e^{b0 + b1(Fall\ semester\ GPA) + b2\ (group) + b3\ (high\ school\ GPA) + b4\ (Pell\ grant) + b5\ (gender) + b6\ (ethnicity)}}$$

$$P(persistence) = \frac{e^{-.925 + 1.94(Fall\ semester\ GPA) + -.74\ (group) + -.30\ (high\ school\ GPA) + -.76\ (Pell\ grant) + .17\ (gender) + -.40\ (ethnicity)}}{1 + e^{-.925 + 1.94(Fall\ semester\ GPA) + -.74\ (group) + -.30\ (high\ school\ GPA) + -.76\ (Pell\ grant) + .17\ (gender) + -.40\ (ethnicity)}}$$

$$P(persistence) = \frac{e^{-.925 + 1.94(2.94) + -.74\ (1) + -.30\ (2.00) + -.76\ (0) + .17\ (1) + -.40\ (1)}}{1 + e^{-.925 + 1.94(2.94) + -.74\ (1) + -.30\ (2.00) + -.76\ (0) + .17\ (1) + -.40\ (1)}} = .83$$

Based on the calculations from the equation, this student would have a probability of .83 of persisting to the next semester. Put another way, the student would have a probability of .17 of not persisting to the next semester. Based on odds ratio for group membership in persistence to the Spring 2019 semester, the student would be 4.88 times more likely to persist than not to persist.

Since Fall semester GPA was a significant predictor to Spring 2019 retention, a moderated logistic regression was conducted to discover if there were any significant interactions on two variables. Gender and coaching intervention were entered into the moderated logistic regression to see if there was an interaction with Fall semester GPA. Table 12 reports the results of the analysis.

Table 12.

Model 2: Moderated Logistic Regression of Interaction Effects of Variables Predicting Retention

Predictor	β	SE β	Wald's Test	e^b (Odds Ratio)
Constant	-2.60	2.41	1.16	0.08
Group Membership[a]	-.04	1.17	.00	0.96
Fall Semester GPA	1.40	.86	2.66	4.06
High School GPA	-.23	76	.09	0.80
Pell Grant Received[b]	.73	.50	2.09	2.06
Gender[c]	.45	1.24	.13	1.56
Ethnicity[d]	.41	.52	.62	1.51
Fall Semester GPA x Gender	.37	.60	.25	1.35
Fall Semester GPA x Coaching Intervention	.37	.52	49	1.45

Note. $n = 285$. *$p < .05$ (two-tailed); [a]Coaching intervention = 1, Control group = 0; [b]Received = 1, Not Received = 0; [c]Women = 1, Men = 0; [d]Not Underrepresented = 1, Underrepresented = 0; β is the unstandardized coefficient; e^b is the factor change in odds for a unit increase in the Independent Variable (IV).

The moderated logistic regression model correctly predicted 90.5% of the cases which is the same amount as the logistic regression model without the moderator of Fall semester GPA. The Hosmer-Lemeshow goodness of fit statistic was not significant ($p = .21$), which indicated that the moderator model also fit well. The model explained 35% (Cox & Snell R^2) to 57% (Nagelkerke R^2) of the error in the data. Additionally, the model was statistically significant, $\chi^2 (8, n = 285) = 118.01, p < .001$.

The results of the overall model (Table 12) did not show any significant main or interactive effects in the moderated logistic regression. Therefore, controlling for the two main effects of the predictor variables were not statistically significant. Fall semester GPA and gender

did not interactively predict retention, nor did the interactive effect of Fall semester and coaching intervention.

Summary

Chapter 4 gave a summary of the results from the statistical tests used to analyze these data from the four research questions that guided the study. The General Self-Efficacy survey and the data provided on student characteristics by the Office Institutional Research and Decision Support were analyzed using the following statistical tests: means comparison, ANCOVA, and binomial logistic regression.

Results for Research Question 1 indicated that students who were involved in academic success coaching did increase their self-efficacy scores, but not to a statistically significant level. Next, Research Question 2 results indicated that coaching intervention students outperformed control group students, but results were not significant. The analysis of the third research question revealed that women were associated with larger Fall semester GPA scores than men. Data analyzed for the fourth research question indicated that students in the coaching intervention group did have higher Fall semester GPAs, but group membership was not statistically significant. Finally, results from the binomial logistic regression indicated that Fall semester GPA was a significant predictor of persistence in Model 1. After running a moderated logistic regression for Model 2 of Fall semester GPA to investigate interactive effects on gender and group membership, no significant interactions were found.

The implications of the results that were analyzed, research questions, and hypotheses will be discussed in Chapter 5. In addition, strengths and limitations will be addressed as well as recommendations for future research.

CHAPTER 5

DISCUSSION

Introduction

The aim of this quasi-experimental study was to determine the effects of academic success coaching on freshmen undergraduate students in terms of academic success factors, such as semester GPA and persistence to the Spring semester at IUPUI. Since very little research has been conducted on peer academic success coaching at the collegiate level, researching the effects of this fairly new academic intervention was seen as a valuable undertaking. Contributions to the dearth of literature will provide much needed quantitative research to the field.

Chapter 5 is divided into seven sections: a summary of the study, a findings and conclusion summary, study strengths, limitations, recommendations, implications for practice, and conclusion. The summary of the study section will detail the purpose of the study, a review of relevant literature, a discussion of the methodology, and a summary of results. Then, a detailed discussion of research questions and results from analyses performed will be explored. Next, study strengths will be noted to demonstrate how the present study adds to the literature in a meaningful way. Also, limitations of the study will be addressed to determine how those factors may have affected the interpretation of the results. Recommendations will be proposed for future research, and implications for the practice of academic success coaching at IUPUI will be discussed. Finally, Chapter 5 will conclude with a brief summary.

Summary of Study

Chapter 1 described the purpose, significance, and the need to undertake a quantitative study to explore the effects of coaching interventions on undergraduate students in a first-year seminar course at IUPUI. Definitions for concepts that related to academic success coaching and retention were identified, and theoretical frameworks that undergird the study were discussed. Research literature was presented to give context to the study and that information helped to validate the study as a worthwhile pursuit to add to the literature regarding the need for more quantitative assessment methods in academic success coaching. Additionally, information was presented to situate success coaching as a legitimate strategy to assist students in achieving academic success.

The literature review highlighted major research studies to help put academic success coaching in perspective to the field as a whole. Topics such as assessment of student retention, sense of belonging as an important construct of retention, professional and personal coaching, and the academic coaching process were discussed. Additionally, theoretical frameworks were detailed: (a) Bandura's self-efficacy theory, (b) Zimmerman's self-regulated theory, (c) Lock and Latham's goal-setting theory, and (d) positive psychology. Assessment of coaching programs were also explored.

Chapter 3 detailed the study design, research questions, and sample population that comprise the methodology proposed for the study. Also, dependent, independent, and control variables were discussed. The General Self-Efficacy's scale validity and reliability were addressed, and the data collection and analyses were discussed. Additionally, controls and bias were identified.

Chapter 4 provided a summary of all the results from the analysis of the data for the four research questions that were used as a framework to guide the research study. Data on outcome variables and demographic variables were obtained from the Office of Institutional Research and Decision Support, as well as the survey data pulled from both administrations of the General Self-efficacy survey. Data were analyzed by using means comparison, ANCOVA, and binomial logistic regression.

A brief summary of the results was as follows: (a) Research Question 1 provided evidence that students who were involved in a coaching intervention increased their self-efficacy scores, but that increase did not produce a significant result; (b) Research Question 2 results indicated that students in the coaching intervention had higher Fall semester GPAs than students in the control group, however, the results did not show a significant effect; (c) the third research question revealed that women in the study population realized higher Fall semester GPA scores than men; (d) and the fourth research question explained that although group membership was not statistically significant, coaching intervention students scored better on Fall semester GPA than control group students for Research Question 4, and results indicated that Fall semester GPA was a significant predictor for persistence.

Summary of Findings and Conclusions

This chapter will seek to provide a more in-depth analysis of the results presented in Chapter 4 and discuss additional analyses that can help understand the results in a deeper way. The results from each research question will be evaluated and compared and contrasted with previous studies.

The first research question in this study sought to determine if students who received a coaching intervention increased in their self-efficacy score by the end of the semester. During

the Fall 2018 semester, the General Self-Efficacy survey was administered two time to students in a coaching intervention group and students in a control group. One administration of the survey was at the beginning of the semester and the second administration was near the end of the semester. Of the 13 groups that were included in the study, 32% of the sample population completed one administration of the survey. Since this study used a pretest–posttest design, only students who completed both administrations were included in the analysis of the data. This accounted for 13% of the population surveyed.

Coaching intervention students had a mean score of 33.00 and a standard deviation of 4.12 for administration one and a mean score of 34.11 and a standard deviation of 4.82 on the second administration. These scores totaled a 1.11 point change in self-efficacy score, or a 3.03% change in the mean score. Individuals in the control group had a mean score of 33.24 and a standard deviation of 5.06 on the first administration of the survey and a mean score of 33.33 and a standard deviation of 5.20 on the second survey administration. The change in the mean self-efficacy score was 0.09, or .27% change.

Students who were participants in the coaching intervention (n = 18) did increase their self-efficacy score on the General Self-Efficacy survey as compared to those who were in the control group (n = 21). Even though larger increases in mean self-efficacy scores were realized for the coaching group, these increases were not of a statistically significant nature. The findings from this study contradict research that has been conducted on self-efficacy. McKenzie and Schweitzer (2001) reported that students who scored higher on self-efficacy scores received GPAs significantly higher that students with low self-efficacy scores. Although students in the coaching intervention did score higher than those students without coaching, the increase in score was not significant.

Gore (2010) stated that self-efficacy, evaluated at the beginning of a student's college career, could be a weak predictor of academic success, and results from the Chapter 4 seem to align with this conclusion. Also, overestimation of performance could be another reason why self-efficacy scores on the second administration of the survey were not that much higher than the first administration. Galyon, Blondin, Yaw, Nalls, and Williams (2012) commented that an inflated sense of self-worth may lead to students indicating a higher self-efficacy score regardless of their effort. Additionally, students whose high school's curriculum was of lower academic rigor could have a false sense of confidence at the beginning of college and their confidence may be shaken during the semester when effort is required to achieve academic success.

These finding from Research Question 1 contradict Finney and Schraw's (2003) research in which students in a 12-week study had two different testing occasions when self-efficacy scores were measured before and after a study skills intervention. The study indicated greater increases in self-efficacy scores and self-efficacy was a better indicator of academic performance. Gore (2010) agreed that a pretest-posttest design is the best method in using self-efficacy as a predictor success.

It was hypothesized for Research Question 2 that students who received academic success coaching during their first semester of their freshman year would outperform students who did not receive the coaching intervention. A total of 280 students received grades for the Fall 2018 semester as recorded by the IUPUI Registrar, and the Office of Informational Research and Data Support (IRDS) compiled a data file for analysis by merging the data sets with students who did and did not received coaching (0 = received no coaching intervention and 1 = received a coaching intervention). Results from the analysis indicated that students in the academic success

coaching group (n = 138) had a mean Fall semester GPA of 2.73 (SD = 1.07). This mean score is 6.2% greater than students in the control group and 3% greater than the general student population. Thus, as a result of students who participated in academic success coaching, their mean Fall semester GPA was higher than students who did not receive coaching as an academic support.

After running an ANCOVA to analyze if the means for the coaching intervention and the control group were significantly different, it was discovered that the difference in the Fall semester GPAs were non-significant. Additionally, analyses were run on Fall semester GPA taking into account persistence. Coaching intervention students performed better than control group students based off of their persistence, but not in a statistically significant way.

Another factor that was analyzed was the number of meetings students in the coaching intervention had with their coach. Based off of the results, students who had the following number of meetings achieved the denoted mean Fall semester GPA: one meeting (n = 16, M = 1.77, SD = 1.50) two meetings (n = 25, M = 2.68, SD = 0.95) three meetings (n = 66, M = 2.85, SD = 0.91) four meetings (n = 12, M = 3.12, SD = 0.63) and five meetings (n = 4, M = 2.92, SD = 0.57). The results indicate that the greater the frequency of meetings a student had with a coach, the higher the Fall semester GPA plateauing at the fourth meeting.

The results from the current study confirm the findings from Walton and Cohen's (2011) study regarding social belonging interventions, such as coaching. Their research found that retention and success outcomes (GPA) were positively impacted by students in interventions that fostered a sense of belonging to college communities. Additionally, Wolf, Perkins, Butler-Barns, and Walker's (2017) quasi-experimental study also found that sense of belonging interventions helped to advance students' academic performance and had effects long after the

intervention had ceased. As these studies showcase, the possibility of designing sense of belonging interventions demonstrate promise in helping students achieve greater academic success.

Research Question 3 investigated the hypothesis that there were statistically significant differences in gender between participants and non-participants in academic success coaching based off of their Fall semester GPA. The population of the sample consisted of 207 women and 73 men. In comparing the coaching intervention group with the control group by Fall semester GPA, both genders who received academic success coaching had a higher Fall semester GPA (women, $M = 2.72$; men, $M = 2.77$) compared with students in the control group (women, $M = 2.71$; men, $M = 2.27$). To analyze if a difference in the mean Fall semester GPA scores by gender existed, mean comparisons were used. The results indicated that women performed better than men to a moderately statistically significant effect. Although the effect size was small, men Fall semester GPA scores were less than women scores.

The findings of the present study concur with findings from Duckworth and Seligman's (2006) study on academic achievement and gender. Results from their research indicated that women earn higher GPAs than men due to the fact of increased self-discipline. Spencer, Steele, and Quinn (1996) reported in a study investigating tutoring on gender that women earned significantly higher GPAs than men regardless of their participation in tutoring sessions. Additionally, Astin's (1993) and Ishler and Upcraft's (2005) research aligns well with the notion that women tend to perform slightly better than their male counterparts in terms of academic achievement.

Research Question 4 in the study examined whether students who participated in academic coaching persisted at higher rates than non-participants. Results were based off of the

retention numbers of IUPUI students in the study's 13 sections of the UCOL U110: First-Year Seminar. Students were coded as 0 = did not return and 1 = returned. From the analysis conducted in Chapter 4, a total of 229 students returned for the Spring 2019 semester (80.6%). Students who were in the coaching intervention group (n = 119) persisted at a rate of 85%, compared to the control group without coaching at 76.4% (n = 110). Based on the comparison, the coaching intervention group persisted at 8.6 percentage points greater than students without the coaching intervention and 4.4 percentage points greater than students in the general study population.

The results from this study confirm research from Astin (1993) and Pascarella and Terenzini (1991) that student interaction with peers in and outside the classroom can have positive and powerful impact for persistence. Delleville's (2014) study of online coaching supports the significant effect coaching can have on student persistence. Students in the coaching group persisted 6.6% points better than students in the control group. There are many studies that have reported positive student outcomes with peer-to-peer interactions (Andreanoff, 2016; Bettinger & Baker, 2011; Franklin & Franklin, 2012; Grant, 2013; Short et al., 2010). The findings have important implications in using peer academic success coaching as a possible intervention to help in student persistence.

Additionally, the analysis used to test this hypothesis for Research Questions 4 was a binomial logistic regression to determine if coaching was a significant predictor of persistence. The following variables were entered into the equation to determine the predictive power of each: Fall semester GPA, high school GPA, group membership, Pell grant, gender, and ethnicity. Only the Fall semester GPA variable was found to be a significant predictor in the model (Wald = 43.32, $p < .001$, odds ratio = 6.96).

To comprehend better the odds ratio for Fall semester GPA, an increase of one point in GPA would increase the odds of a student persisting to the next semester by a factor of 6.95 while holding all other variables in the equation constant. The other variables entered into the equation were found not to be significant predictors in the model which included the group membership variable (0 = control group and 1 = coaching intervention). With this finding, participation in academic success coaching was not a predictor of persistence to the Spring 2019 semester. This finding was unexpected and contradicts previous studies on the topic. (Andreanoff, 2016; Bettinger & Baker, 2011; Franklin & Franklin, 2012; Short et al., 2010). Possible explanations of the result will be discussed in the limitations section of this chapter.

Since Fall semester GPA was such a significant predictor to student persistence, a moderated binomial logistic regression was conducted to see if there were any significant interactions on two other variables in the equation, gender and coaching. The results of the analysis did not show any significant main or interactive effects for gender and Fall semester GPA or for group membership and Fall semester GPA. The moderated binomial logistic regression indicated that Fall semester GPA and gender did not interactively predict retention nor did the interactive effect for Fall semester GPA and coaching intervention.

The findings in this study concur with Clark's (2007) research that there is a statistically significant relationship of first semester GPA and persistence to the second semester of freshmen year. If a student had a high GPA, the likelihood that they would return for the Spring semester was high. Other research points to the fact that high first semester GPA is one of the best academic performance predictors of student persistence (Belcheir, 1997, Pascarella & Terenzini, 2005).

An interesting finding in the current study was the fact that high school GPA was not a significant predictor in the equation. This is contradictory to many studies in retention literature. Astin (1997) and Pascarella and Terenzini, (2005) discussed in their research that a student's academic success in their first year of college is directly affected by their high school GPA, which is the most significant predictor of performance. Research has found that after the two variables of high school GPA and semester GPA were included in analysis, most other variables had little to no effect as predictors in persistence (Purdie, 2007). Purdie's (2007) research could explain the non-significant effect of the coaching intervention on persistence. Even though academic success coaching was not a significant predictor in student persistence for the current study, more research needs to be done.

Study Strengths

In examining the current research as a whole, strengths of the overall study were identified. One of the strengths of the present study was the use of a quantitative design in order to add to the dearth of the literature on academic success coaching. Evaluation of academic success coaching in higher education have produced limited research on the effectiveness of the intervention on first-semester undergraduate students. Even though there are a few studies that analyze academic success coaching using a qualitative approach (Diedrich, 1996; Vansickel-Peterson, 2010), that number far outweighs the number of studies that approach the academic success coaching topic from a quantitative methodology (Bettinger & Baker, 2011). The use of the quantitative approach will add to the collective literature and give evidence to the direct effect the intervention has on retention and academic achievement. Also, the results will produce evidence on the legitimacy of using academic success coaching as a viable retention strategy.

Another strength of this study is to add to the research done on coaching at the university level. Coaching is a relatively new academic support intervention in the field of higher education. Support programs that help in the development of self-efficacy, sense of belonging, and academic achievement are in demand to help students succeed in their freshman year (Astin, 1993). As universities begin to develop home-grown academic success coaching interventions, commercial coaching programs have become more prevalent in higher education. With the use of either, college and university administrators are looking for evidence of their worth in order to increase funding for such endeavors.

A final strength of the study was the quasi-experimental design that was used. Having a truly randomized, experimental design would have been ideal to implement as part of this study. Unfortunately, in educational research, classes cannot be reorganized and schedules rearranged for the sole purpose of research (Ary, Jacobs, Sorensen, & Razavieh, 2010). Quasi-experimental designs are used when randomization cannot be applied in assigning individuals to the treatment group. Ary et al. (2010) stated that "although true experiments are preferred, quasi-experimental designs are considered worthwhile because they permit researchers to reach reasonable conclusions even though full control is not possible" (p. 316).

Study Limitations

Although there were a number of strengths associated with the current study, some limitations need to be acknowledged. One limitation of the current study was the General Self-Efficacy survey self-report. Self-efficacy was measured over time by one data collection at the beginning of the semester and the other data collection at the end of the semester. The data collection method used in the study was an electronic survey link sent to students in an email.

Only 13% of the students in the 13 sections of the UCOL U110: First-Year Seminar course completed both administrations of the survey which limits the power of the analysis.

To increase the survey response, it is recommended that students could complete the survey in class for both data collection times. Although the amount of time to cover material in the UCOL U110: First-Year Seminar is limited, setting aside a specified day and time to administer both survey administrations would be of great benefit to increasing the survey response rate.

Another limitation was the timeframe used to determine persistence of students. The present study defined persistence as students from the Fall 2018 semester enrolling in the Spring 2019 semester. This one semester persistence rate may limit the time period for the coaching intervention to achieve the most impact for students. Increasing the timeframe of the study to a year-long intervention could have a greater impact and change the results of the study.

A third limitation is that this study only took into account one university that had academic success coaching as an intervention. The analysis of only one university may make the results of the study hard to generalize those results to other institutions. Even if common predictive variables are used, specific nuances germane to a university may make it difficult to apply results in a generalizable way.

A fourth limitation was the gender composite of the study. Although the differences in gender for the current study had moderately significant effects, the sample size had a disproportionate number of women compared to men which may have skewed the analysis. The sample was taken from already established sections of the UCOL U110: First Year Seminar class and students were not allowed to opt in to the study. Additionally, significant effects of coaching were difficult to ascertain in ethnicity due to similar factors of pre-established groups. Due to

this limitation, more research related to gender, ethnicity, and academic achievement is warranted in the area of academic success coaching to determine if the effects from this study can be replicated or expanded upon.

A final limitation to the current study is confounding variables such as IUPUI's first-year experience. IUPUI has been recognized for many interventions that have been put in place to enhance the first-year experience of students. For each UCOL U110: First-Year Seminar, students have an instructional team (instructor, academic advisor, and mentor) who help with course instruction throughout the semester to deliver course content. The mentor in the course is available to meet with students outside of class to discuss academic-related issues. Six of the 13 sections used in the study replaced the course mentor with an academic success coach who would meet outside the class to discuss issues in the following areas: academic, community, health, career, commitments, commitment to graduation, effectiveness, and finances. Even though the discussions of the mentor and the academic success coach were different, and the frequency of meetings differed, the mentor could have affected the impact of the coaching intervention on students.

Recommendations

The present study adds to the literature on retention and peer academic success coaching, but further examination of the topics needs to be pursued. As a result of the study, the following recommendations are offered as suggestions for further research for both researchers and practitioners.

One recommendation based off of the results of the current study would be a concerted effort to increase the diversity of the population for the study. Currently, women outnumbered men, 74.3% to 25.7%, respectively. Also, ethnic diversity in the study was low as well. The

ethnic breakdown of the study was as follows: Asian, 6.7%; Black/African American, 6.3%; Hispanic/Latino, 10.2%; non-resident alien, 0.7%; two or more races, 4.9%; and White, 71.1%. To try to accommodate for a lack of ethnic diversity, the ethnicity variable was recoded as 1 = not underrepresented (White and Asian) and 0 = underrepresented (Black/African. American, Hispanic/Latino, non-resident alien, and two or more races). Even with the recoding of the variable, the results of this study indicated that ethnicity was not a significant factor in predicting persistence.

Due to the lack of diversity in gender and ethnicity, the results could have been impacted. The increase in a diverse population would provide a greater variety in the data collected and that data could produce more significant results for students in coaching interventions. Using a randomized methodology would help with achieving more diversity in the sample in regard to gender and ethnicity than using pre-established sections of the UCOL U110: First Year Seminar course.

Another recommendation would be to increase the number of institutions involved in the study. Bettinger and Baker (2011) conducted a multi-institutional study to ascertain the effects of coaching at various colleges and universities to take into account the many environmental factors of those institutions. Braxton, Sullivan, and Johnson (1997) stated that a campus culture can have a significant influence on prediction variables. Expanding the research study to a variety of institutions would help to take such factors into account and explain institutional differences.

A third recommendation would be to use a true experimental model for academic success coaching. A randomized subject, pretest-posttest control group design has a few strengths. First, the randomization used in creating groups would ensure that the control and experimental group

were statistically equivalent prior to the experiment (Ary et al., 2010). Another strength of the design is that many extraneous variables are controlled in the study and threats to internal validity are reduced. Bettinger and Baker's (2011) study was able to ensure randomization by randomly dividing students from each institution they worked with into two groups. Then each institution decided which of the two groups would receive the coaching intervention. The "pseudo-lotteries enable us to compare the set of students who received coaching to those who did not and to create unbiased estimates of the impact of the services" (Bettinger & Baker, 2011, p. 3). A similar methodology could be implemented in future studies to eliminate any bias.

A fourth recommendation for further research would be to use a mixed methods approach to investigate quantitative and qualitative results. The current study used a quantitative approach to examine the effect of academic success coaching on first-year undergraduate students. Johnson and Onwuegbuzie (2004) posited that a mixed methods approach, as opposed to a strictly quantitative or qualitative method, "draws from the strengths and minimize the weaknesses of both in single research studies and across studies" (pp. 14-15). Although the results of this study have produced some significant and non-significant results, including some qualitative measures would have produced some richer data and aided in seeing a broader picture of effects.

A final recommendation would be for future research to increase the alpha level used to report statistical significance to .10. As part of medical research, where the lives of individuals are on the line, a much smaller probability of .05, .01, or .001 is justified. Using a less conservative probability value of .10 in social science and educational research can be very helpful in identifying trends in research with smaller sample sizes (Schumm, Pratt, Hartenstein, Jenkins, & Johnson, 2013).

Schumm et al. (2013) reported that recent researchers have chosen to use flexibility in alpha levels when reporting statistical results. "Some scholars have argued that in situations involving (1) small samples, (2) samples with low statistical power, (3) studies with one-sided hypotheses, or (4) studies attempting to affirm a null hypothesis, there are sound reasons to consider adopting a less conservative alpha" (Schumm et al., 2013, p. 1). As further research is done on academic success coaching in the future, a more conservative probability value is suggested to report on trends in the research since academic success coaching is a relatively new area of study.

Implications of Practice for Academic Success Coaching at IUPUI

As this study adds to the few studies that have addressed the topic of peer academic success coaching in higher education, there are implications for IUPUI regarding the future of a coaching intervention program at the institution. One implication is how the current coaching intervention is integrated into an already well-established first-semester experience support for students. Even though the current study did not find that students in coaching interventions did significantly better academically than students who were not coached, more investigation into the intervention is warranted. With the use of mentoring to support undergraduate during their first semester at the university, the possibility of being over-supported may happen and the duplication of services could have a negative effect on students.

Since the first semester at IUPUI is filled with ample experiences to help support students during their transition from high school (Themed Learning Communities, Gateway Learning Communities, or Residential Based Learning Communities), a second semester experience could be an opportunity for the coaching intervention. Currently, support during the second semester is limited, and this type of intervention could fill a pressing need to continue the support of

undergraduate students throughout their first year of college. Once the first semester concludes, students are left with no meaningful interventions to help them navigate through the second semester. An academic success coach could serve as a guide to bridge the gap in support and help students transition through the full academic year.

Another possible implication from the study on coaching interventions is the further exploration of common success factors, such as high school GPA, semester GPA, ACT/SAT scores, etc. With more research conducted on how these variables are used at IUPUI, a better understanding could be achieved into the use of those variables with coaching interventions. If academic success coaching is a viable academic support intervention for the second semester, the aforementioned variables could be optimal in predicting students who would need additional support to help link the first- and second-semester experiences.

Conclusion

Student retention has been of increasing concern for college and university administrators over the last 20 years, but the need for more effective strategies to address retention issues has never been more of a pressing matter than it is today (D. F. Allen & Bir, 2012). Some research (Bettinger & Baker, 2011; Dansinger, 2000; Griffiths, 2012; Knight, 2012) have identified peer success coaching as an intervention strategy to address the retention issue in higher education.

As such, the use of peer coaching interventions has slowly been integrated into first-year programs to help students with the transition from high school to college (Bettinger & Baker, 2011). According to a limited number of studies, students who participate in coaching interventions show significant increases in academic performance (Andreanoff, 2016; Bettinger & Baker, 2011; Franklin & Franklin, 2012; Short et al., 2010). Even with the aforementioned

studies, assessment of these interventions has been limited in the literature and more robust, quantitative studies are needed (Grant, 2013).

This study explored the effectiveness of peer academic success coaching for first-year undergraduate students related to their academic success. Even though some of the findings in this study agrees with previous research, more questions remain. As academic success coaching holds much promise as a strategy to assist with the success of students in higher education, further analysis is needed to explore the effectiveness of coaching interventions.

The results from this study make a valuable addition to the few studies on academic success coaching in higher education and that knowledge gained can be used to further understand how coaching interventions can play a pivotal role in student success. There is not one magic bullet that will solve all retention issues on all campuses, but this new intervention is an approach that could have a significant impact on students' academic tenure.

EPILOGUE

One of the main concepts that was explored as part of this dissertation was the idea of sense of belonging. As students transition from high school to their higher education pursuits, having a strong social support network helps students experience less stress in the transition and helps them cope with stressful events during the first year in college, which in turn contributes to academic success (DeBerard et al., 2004). Additionally, Hausmann et al. (2007) and Yasin and Dzulkifi (2010) stated that students who are able to connect with their campus environment stand a greater chance of succeeding. In this brief epilogue, I would like to discuss some of the challenges I experienced in my journey as a doctoral student in a higher education program and how those challenges parallel to what first-year students go through in making their transition to a college or university.

A critical factor in order for students to be successful in higher education is the development of a sense of belonging at the institution they attend (O'Brien, 2002). O'Brien (2002) identified three areas that could be barriers to students making that connection to their campuses. Those barriers are part-time enrollment status, family responsibilities, and distance learning technology. Each of these barriers were especially challenging for me and could have added to the feeling of disconnection from Indiana State University (ISU) during my doctoral studies.

First, my main priority in looking for a doctoral program was one that I could engage in while being a full-time employee. As ISU Educational Leadership curriculum is tailored to

accommodate working adults, the program fit well into my vision of an ideal program in which to earn my doctoral degree. Although the nine credit hours required each semester for two years was a full-time student load, the three classes only meet four times a semester on-campus. This little exposure to the ISU campus led me to feel less connected to the campus and more connected to my doctoral program as that is what I had the most interaction with during my tenure at ISU. I feel like this parallels the connections issues that most part-time students have during their first year of college. The more time you spend on the college campus, the more connections you make with faculty, staff, and students and create a campus community of your own.

Second, my family responsibilities were another critical factor that could have lessened my sense of belonging at ISU and my doctoral program. Being the primary care-taker for my family competed for my time as a doctoral student. The amount of work necessary to be successful in a doctoral program (readings, papers, internships, etc.) can seem overwhelming at times. Without a connection with my instructors and peers, this could have been isolating and ended in me dropping out of the program. I was fortunate that I did have that encouragement and support, but first-year students with major family responsibilities and who have not made connections with the campus community are at high risk for non-completion of their degrees.

Finally, the advances in technology have contributed to students spending less and less time physically on college campuses. My doctoral program was a hybrid model that used weekly distance-learning sessions and campus attendance four times per semester. Each week, I could see and interact with my instructors and peers, so I felt a continuous connection with that format of the program. But only stepping foot on the ISU campus four times a semester definitely led to disconnection with the campus and a greater connection with the doctoral

program. As colleges and universities explore online degree programs to help expand their availability to more and more students, a decreased sense of belonging for students may be the end result of this new initiative.

In the Educational Leadership doctoral program at ISU, a sense of belonging is being fostered by the use of a cohort model. A cohort model is best described as a group (students or participants) who take all of their courses in sequential order throughout the entirety of the program (Rausch & Crawford, 2012). Saltiel and Russo (2001) contended that this powerful model of learning enhances students' interpersonal relationships, both with peers and instructors, and provides additional support as students move through their program. The use of the cohort model in my doctoral education has provided a means for me to establish extremely close peer relationships and provided a greater connection to faculty in the program. Moving through the curriculum with the same group of students in my cohort helped me to develop a sense of community and support that pulled me through in times where barriers to persisting would have potentially ended my tenure in the program. Also, the faculty provided endless support due to the fact that there was a bond formed early in the program that persisted throughout the years of my studies. The cohort model definitely helped me create a sense of belonging to the Educational Leadership program and reach my ultimate goal of graduation.

A similar cohort model that has been used at the undergraduate level is the concept of learning communities. D. G. Cole, Newman, and Wheaton (2017) described learning communities as a series of two to three courses first-year students enroll in through smaller sections to build interpersonal relationships and develop a stronger sense of community. Results from their research indicated that student participants in learning communities increased their

sense of belonging to their college campuses compared to students who did not participate in the program.

The concept of a sense of belonging has become a critical factor in the area of retention and interventions that can foster a greater connection to campuses and programs. My doctoral experiences with the cohort model illustrate the benefits of using that model to create a stronger sense of belonging and an expanded support system during times of difficulty. My experiences parallel some of the challenges first-year students encounter making those essential connections to their campuses. The use of a learning community model is a similar cohort strategy that is a useful tool in developing a sense of belonging at the undergraduate level. As challenges to engaging on campus community increase, infusing intentional strategy to foster a sense of belonging in intervention programs becomes more important in helping our students on their pathway to success.

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APPENDIX A: SCRIPT FOR STUDENT MENTORS

(This was given to student mentors to read at the first and last meeting they had with students enrolled in the UCOL U110, First-Year Seminar course)

Student Mentor:

You will be receiving a request to participate in a survey for a research project of a doctoral student, Mark Minglin from Indiana State University, looking at success factors of students who enrolled in First-Year Seminars.

The survey will be administered two times during the semester: once at the beginning and once at the end. Each time, the survey should take no longer than 20 minutes in order to complete it.

I will have no idea of your participation in this study, so please complete the survey if you wish. If you have questions about the survey, there will be contact on the Consent Form for Research Participation.

APPENDIX B: ONLINE SURVEY EMAIL INVITATION – FIRST CONTACT

Dear Prospective Survey Participant,

I am a doctoral student from Indiana State University, and I am conducting a research study as part of my doctoral degree requirements. My study is entitled, the Effects of Academic Success Coaching on First-Year Students. This is a letter of invitation to participate in this research study. The purpose of this study is to determine the effects of academic success factors on students who participate and do not participate in the academic success coaching intervention.

By agreeing to participate in the study, you will be giving your consent for the researcher or principal investigator to include your responses in his data analysis. Your participation in this research study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. You will be able to withdraw from the survey at any time and all survey responses will be deleted, including the informed consent agreement. An informed consent agreement will appear on the first screen page of the survey. To access success factors at the end of the semester, your student identification number will be collected. All results will be presented as aggregate, summary data.

There will be two administrations of the General Self-Efficacy survey: one at the beginning of the semester and one at the end of the semester. The survey will last no more than 20 minutes for each administration. Your participation will contribute to the current literature on the academic support interventions in higher education.

If you would like to know more information about this study, an information letter can be obtained by sending a request to mminglin@sycamores.indstate.edu. If you decide to participate after reading this letter, you can access the survey from a link.

Sincerely,

Mark A. Minglin
Indiana State University
Doctoral Student and Principal Investigator

General Self-Efficacy Survey Link
https://iu.co1.qualtrics.com/jfe/form/SV_3EgJX2ul58Ve96Z

APPENDIX C: CONSENT FORM FOR RESEARCH PARTICIPATION & GENERAL SELF-EFFICACY SURVEY

Survey Flow

Block: Default Question Block (12 Questions)

Start of Block: Default Question Block

Q1 **CONSENT FORM FOR RESEARCH PARTICIPATION**

Study Title: The Effects of Academic Success Coaching on First-Year Seminar Students

Principal Investigator: Mark A. Minglin

I am a doctoral candidate at Indiana State University in the School of Education. I am planning to conduct a research study, which I invite you to take part in. This form has important information about the reason for doing this study, what I will ask you to do if you decide to be in this study, and the way I would like to use information about you if you choose to be in the study.

Why are you doing this study?
The purpose of the study is to determine the effects of academic success coaching programs on student success in their first year in college.

What will I do if I choose to be in this study?
You will be asked to: Complete the consent form for research participation and complete an online survey twice during the semester (once week 2 of the semester and two weeks before the end of the semester).

Study time: Study participation will take approximately 20 minutes for each administration of the online survey.

Study location: The online survey can be taking on the second floor of Taylor Hall, or anywhere with an Internet connection.

What are the possible risks or discomforts?
To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

As with all research, there is a chance that confidentiality of the information we collect from you could be breached–we will take steps to minimize this risk, as discussed in more detail below in this form.

What are the possible benefits for me or others?
You are not likely to have any direct benefit from being in this research study. This study is designed to learn more about the effects of academic success coaching programs on student success in their first year in college. The study results may be used to help other students in the future.

How will you protect the information you collect about me, and how will that information be shared?
Results of this study may be used in publications and presentations. Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

To minimize the risks to confidentiality, we will employ the following security measures: the storage of survey results will be located on secure university servers, data will be encrypted for security, and limited access to study records will be maintained.

We may share the data we collect from you for use in future research studies or with other researchers–if we share the data that we collect about you, we will remove any information that could identify you before we share it.

If we think that you intend to harm yourself or others, we will notify the appropriate people with this information.

Financial Information
Participation in this study will involve no cost to you. If you fill out both administrations of the Online Survey, you will be entered into a drawing for a $50 gift certificate.

What are my rights as a research participant?
Participation in this study is voluntary. You do not have to answer any question you do not want to answer. If at any time and for any reason you would prefer not to participate in this study, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You may withdraw from this study at any time, and you will not be penalized in any way for deciding to stop participation.

If you decide to withdraw from this study, the researchers will ask you if the information already collected from you can be used.

Who can I contact if I have questions or concerns about this research study?
If you have questions, you may contact the researcher at:

Mark A. Minglin
IUPUI
815 W. Michigan St.
Taylor Hall, UC 2001C
Indianapolis, IN 46202
Phone: (317) 274-0231
Email: mminglin@iupui.edu

If you have any questions about your rights as a participant in this research, you can contact the following office at the Indiana State University:

Institutional Review Board
Office of Sponsored Programs
Holmstedt Hall 272
Indiana State University
Terre Haute, IN 47809
Phone: (812) 237-3088
Email: research@indstate.edu

Consent
I have read this form and the research study has been explained to me. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form.

Q2 I agree to participate in this research study.

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If I agree to participate in this research study. = No

Page Break

Q3 Instructions:

Please fill in the appropriate fields.

Q4 Student ID Number

_____

Q5 Gender

- ○ Male (1)
- ○ Female (2)
- ○ Transgender (3)
- ○ Gender-nonconforming (4)

Q6 Ethnicity

- ○ African American or Black (1)
- ○ Asian American or Asian (2)
- ○ European American or White (3)
- ○ Latino (4)
- ○ Other (5)

Q7 Chosen Major

▼ Click to write Choice 1 (1) ... Click to write Choice 22 (22)

Q8 Please select the mentor/coach for your First-Year Seminar class.

▼ Mentor 1 (1) ... Mentor 13 (13)

Q9 Are you participating in another support program this semester (i.e., 21st Century Scholars, DEAP Program, etc.)?

- ○ Yes (1)
- ○ No (2)

Q10 General Self-Efficacy Questions	Not at all true (1)	Hardly true (2)	Moderately true (3)	Exactly true (4)
I can always manage to solve difficult problems if I try hard enough. (1)	○	○	○	○
If someone opposes me, I can find the means and ways to get what I want. (2)	○	○	○	○
It is easy for me to stick to my aims and accomplish my goals. (3)	○	○	○	○
I am confident that I could deal efficiently with unexpected events. (4)	○	○	○	○
Thanks to my resourcefulness, I know how to handle unforeseen situations. (5)	○	○	○	○
I can solve most problems if I invest the necessary effort. (6)	○	○	○	○
I can remain calm when facing difficulties because I can rely on my coping abilities. (7)	○	○	○	○

	Not at all true (1)	Hardly true (2)	Moderately true (3)	Exactly true (4)
When I am confronted with a problem, I can usually find several solutions. (8)	○	○	○	○
When I am in trouble, I can usually think of a solution. (9)	○	○	○	○
I can usually handle whatever comes my way. (10)	○	○	○	○

Q11 Please describe the learning approach your instructor uses for your First-Year Seminar class.

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Q12 Please describe the engaging activities your instructor uses in your First-Year Seminar class to encourage participation.

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