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Effects Of Peer Mentoring On High-Achieving, Low-Income First Year College Students

Ronda D. Taylor
Indiana State University

EFFECTS OF PEER MENTORING ON HIGH-ACHIEVING, LOW-INCOME FIRST YEAR COLLEGE STUDENTS

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Ronda D. Taylor

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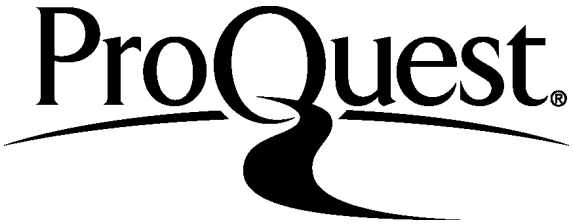

COMMITTEE MEMBERS

Committee Chair: Joshua Powers, Ph.D.

Professor of Higher Education Leadership

Indiana State University

Committee Member: Lloyd Benjamin, III, Ph.D.

President Emeritus and Trustee Professor

Indiana State University

Committee Member: Arlene Coleman, Ph.D.

Associate Professor

Elementary Education

Ivy Tech Community College

ABSTRACT

This dissertation examined the impact a peer mentoring program had on student success as it related to self-efficacy and level of engagement. Unfortunately, graduation rates have fallen dramatically or have remained stagnant for many years. Institutions of higher education are feeling the pressure from the government, employers, and students to improve their retention and graduation numbers. By enacting a peer mentoring program, especially for first-time, low-income students, students may be better equipped to navigate the higher education system, have a support mechanism on campus, and be connected to various campus resources. Through peer involvement, level of engagement, and a better connection with the institution, students may be positioned to experience higher self-efficacy.

This dissertation used a mixed methods approach. Data were collected from institutional records, pre- and post-program surveys, and interviews of select participants at the conclusion of the program. Results revealed the benefits of such a program while also revealing where opportunities exist to strengthen impact.

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CHAPTER 1

INTRODUCTION

The percentage of Americans who hold a postsecondary degree has been stagnant at under 40% for the last 40 years, causing the United States to fall from first to second in international rankings (Hull, 2012). This is because other countries are increasing their national postsecondary completion rates while the United States is not, despite the influx student enrollments over a 10-year period. According to the National Center for Education Statistics (NCES, p. 94, 2010), undergraduate enrollment in public institutions,

> increased from 10.5 million students in 2000 to 12.6 million in 2008, a 19% increase. Private institutions experienced a higher rate of growth over this time period, as their enrollments grew from 2.6 to 3.8 million students, a 44% increase. (p. 36)

Higher enrollments rates often result in higher graduation rates. Of the approximate 157 million total students enrolled in postsecondary institutions between 1999-2009, only 1.4 million received a bachelor's degree (NCES, 2010). Of the 1.4 million conferred bachelor's degrees received, about 73% were awarded to Caucasian students, but only about 9% were awarded to African American students, about 6.5% to each Hispanic and Asian Pacific students, and less than 10% to American Indian students. The rest of this population are either still pursuing their bachelor's degree (in excess of the 150% allowed timeframe), have dropped out, or otherwise stopped their education for one reason or another. Going deeper, NCES (2010) reports that

between 1989 and 2004, approximately 25% of students enrolled in higher education institutions were low-income. Table 1 illustrates persistence and attainment for low-income students in their cohorts spanning over a five-year period.

Table 1

Persistence and Attainment of Low-income Students

Low-income Student Cohort Year	Percent No Longer Enrolled	Percent No Degree, Still Enrolled	Total Percent Attained (certificate, Associate's degree, or Bachelor's degree)
1990-1994	38.6	14.9	46.5
1996-2000	37.2	18.4	44.4
2004-2008	41.2	21.5	37.4

Adopted: NCES (2011).

Less than 50% of students who were identified as low-income graduated with a certificate, associate's degree, or bachelor's degree. The rest either dropped out of school or are still pursuing their degree. In sum, the United States is slipping behind international counterparts in terms of postsecondary education readiness. Due to the drastic shift of the U.S. economy from primarily manufacturing based to more of a service economy, the knowledge and skill level of its citizens are at risk (Lumina Foundation, 2009).

According to the Lumina Foundation (2009), "the knowledge economy requires Americans to develop the skills that are demanded in a globally competitive environment. As a result, increasing higher education attainment is critical to the U.S. economy" (p. 1). The NCES (2007) stated,

> If we continue on our current course, and the number of nations outpacing us in the education race continues to grow at its current rate, the American standard of living will steadily fall relative to those nations, rich and poor, that are doing a better job. (p. 8)

Without the proper level of education, the gap between social classes also widens. Furthermore, there are less qualified candidates for high-skilled positions, and the country as a whole suffers economically (NCES, 2007). The Lumina Foundation (2009), one of the biggest advocates for higher education in the country, has at its goal to increase "the percentage of Americans with high-quality degrees and credentials from the longstanding rate of 39 percent to 60 percent by the year 2025" (p. 1). President Barack Obama also added his support to this initiative, indicating, "America will once again have the highest proportion of college graduates in the world" by 2020 (The White House, n.d., p. 1).

With the attention placed on increasing U.S. standing in the world with regard to the proportion of its citizens with a postsecondary degree or certificate (Lumina Foundation, 2009), most higher education institutions are intensely focused on not only retaining their students but also increasing their likelihood of graduating. Furthermore, state legislators are moving towards a performance-based funding (PBF) model "as a means of improving institutional effectiveness" (Harnisch, 2011, p. 1). It is an education finance strategy that provides more funding for higher performing institutions. PBF represents a fundamental shift in higher education finance—a shift from state inputs to campus outcomes, and from institutional needs to state priorities (Harnisch, 2011). Therefore, before students decide to enroll in a college or university, some may start to review these statistics and enroll in an institution that has the best numbers, the normative pressure incentive that state policymakers hope will raise the bar on student retention and success. Some have suggested that the national goal for postsecondary completion will be enormously challenging, and is even "audacious" (Lumina Foundation, 2009). Given that our system of postsecondary education has moved from what was largely white male and

homogeneous even 50 years ago to a much more diverse one in terms of the makeup of the student body, this challenge is indeed likely to be formidable (Thelin, 2004).

Academic failure leaves a negative impact on both the student and the higher educational institution and recovery from such a blow can be difficult. "As many as 25% of all students may be on academic probation at some time in their college careers with numbers even higher for community college students" (Tovar & Simon, 2006, p. 549). This academic probation status ultimately can lead to a student giving up and dropping out of college permanently. "In the United States, the most significant dropout occurs at two-year, associate degree-granting public colleges (i.e., community colleges) – a sector that enrolls almost one-half of all undergraduate students in the United States" (Barefoot, 2004, p. 10). The effect is also felt within the first two years of four-year, bachelor degree-granting institutions. These are staggering numbers and institutions are feeling the effects of these dropouts more now than ever. Administrators are intensely focused on addressing this situation and increasing their retention and graduation rates in part because it is among the best ways to improve revenue flows. Some institutions are also tightening up on their grade point average (GPA) standards, increasing the required GPA of students who have attained a certain number of credit hours attempted. Others have implemented from very simple to very complex academic intervention programs to help students who are on academic probation attain academic success. However, the knowledge base on what works most effectively in what circumstance is limited (Barefoot, 2004).

Another focus concerns dropout rates of students. There are a myriad of challenges associated with degree attainment in this country, ranging from high dropout rates, to lack of financial assistance for schools and for students, to institutional culture and structure, to personal goals of students, among others (Wyner, Bridgeland, & Diiulio, 2007). However, of the issues

mentioned, the dropout rate or low graduation rate is the one that is receiving the most attention lately, some of it associated with low-income students. Many poor children grow up with the notion that if they go to college after their K-12 experience, that many doors will open for them in terms of career, money, and in general, lead to a positive and attractive future. This motivation can stimulate them to work hard in high school and achieve success so that they can get into the best schools and earn the best degrees in their chosen field. Many of these high-achieving, low-income students succeed in college; however, some fail. This particular group of students tends to have a significant decrease in GPA or even fail within the first two years of college, which leads to personal issues for the student and a negative impact on the institution and the economy. This concern affects both two-year and four-year institutions. Higher education institutions are starting to see the importance of retention to their financial status, prestige, and overall contribution of qualified workers to the community. A focus on low-income, high-achieving students is emerging and becoming a topic of growing concern for administrators (Wyner et al., 2007).

Studies show that low-income students identified as high-achieving in primary and secondary education diminish as they progress through each grade level (Wyner et al., 2007). Many of those who do make it to the college level still struggle and there is a percentage that again drop off, thus further decreasing the number of graduates who by all accounts were optimally poised to succeed (National Center for Education Statistics, 2012). There are a number of reasons why a student might not persist at a college or university. Some of these reasons include short-term stop out, transfer to another institution, change in personal goals, financial challenges, lack of support from the institution and/or family/friends, being unprepared

academically, and the inability to properly navigate the many obstacles faced in higher education (Barefoot, 2004).

Many of these factors are external and not within the institution's purview to control. Though these factors may be uncontrollable by the institution, it is possible to manage these factors by providing students with the proper tools and support such that they can achieve the necessary control to be successful. For example, how a student feels about himself or herself (self-efficacy) often can determine the path that student will take in spite of resources or actual ability. John Dewey and Albert Bandura both posited that individuals use self-reflection to evaluate their experiences, which is a distinct human characteristic (Pajares, 2000). Self-efficacy refers to the "beliefs that we hold about our capability to organize and execute the course of action required to manage perspective situations" (Pajares, 2000, p. 3). In short, it is the level of confidence one has in his/her own abilities. The degree to which an individual feels he/she is capable and/or is in control of situational by extension, then, could have a dramatic impact on their academic success or failure. If institutions could tap into that knowledge and provide programs and support that identifies and nurtures the affective part of the collegiate experience, it may be possible to substantially improve the academic success rate of students.

Statement of the Problem

There is a renewed focus on accountability for higher education institutions from not only policy makers, but also from students, parents, and the community at large (Harnisch, 2011; Lumina Foundation, 2009). With PBF, the Lumina 2025 goal, and Obama's 2020 college completion goal, administrators are fighting an uphill battle to educate and graduate their students at a higher rate. Graduation rates are now being more transparently published for the public to scrutinize. Students are using college ranking statistics and graduation rates like those

found in the *U.S. News & World Report* to determine which college they want to attend, thus putting many institutions in the spotlight based on performance or nonperformance.

The retention and graduation rates at many higher education institutions are weak at best (Wyner et al., 2007). Massive amounts of taxpayer, government, and private organizations' dollars have been spent seeking to rectify this problem with arguably limited results. The negative effects of this problem reach from the student, to the higher education institutions, to the society and ultimately the economy. It perpetuates unemployment or under-employment, key factors that harm national vitality. High-achieving, low-income students in high school but underperformers in college, represent what may be an important focus of attention since ostensibly they have the tools to be successful, or at least beyond the more marginal but poor student.

Purpose of the Study

Framed by the need for identifying promising practices that aid student retention and by extension, an increase in the proportion of citizens with a postsecondary degree, the broad intent of this study was to empirically investigate the mechanisms of student peer mentoring as a tool for student success. More specifically, the purpose of this mixed method study was to explore the effects that a student peer mentoring program has on self-efficacy and ultimately the academic success of low-income, first-time college students who entered college as high-achieving (i.e., admission GPA above 3.0) but are currently underperforming with a GPA below 2.0 for at least one semester. This study helped to illuminate factors and contexts that help low-income students overcome personal adversity and challenging socioeconomic circumstances to excel academically. It also provided a deeper understanding of the issues they confront that can be used to design programs and interventions that will help more low-income students identified as

high achieving early in their primary and secondary school years to sustain their academic achievement levels through college.

Research Questions

Informed by the purpose of the study, the specific research questions were as follows:

1. Are there differences in self-efficacy and academic performance of high-achieving but low performing students who did and did not participate in a peer mentoring program?
2. What effect does level of engagement in a peer mentoring program have on the self-efficacy and academic performance of student participants?
3. How do participants who completed a peer mentoring program describe it in regard to its impact on their ability to be academically successful?

Significance of the Study

Much attention has focused on the means and mechanisms by which at-risk students struggle and succeed in college. Little research has explored what leads high achieving, low-income students to underperform to the point of danger of dropping out or of academic dismissal. A study of interventions for this particular population can be valuable for informing practice. Research on peer interventions in particular suggest its potential as an especially effective way of helping to aid struggling students and via what is typically a more cost effective program deployment than one more heavily dependent on full-time professional staff. Hence, this study can evidence how such programs might be optimally structured and deployed.

Definition of Terms

The following definitions are presented for terms that are especially relevant to this study.

At-Risk. Selected groups of students who historically have been less successful in college than their more traditional peers (Berkner, He, & Cataldi, 2002), namely low-income

dependent students, students whose parents did not attend college, students with dependents, students who work full-time, and/or Black and Hispanic students (NCES, 2011).

Academically under-prepared. Any student whose academic skills fall below those determined to be necessary for college success and/or any student whose "college readiness skills" do not adequately prepare them for the rigors of college study and learning (Duckworth, 2008).

High achieving. Students who are strong scorers on the ACT/SAT (26 Composite ACT/ 1170 SAT or above), National Merit semifinalists/finalists, Who's Who students, National Honor Roll students, Academic Excellence awardees, AP students, Youth Options participants, Illinois Scholars, Chancellors Awardees, New Directions Awardees and others locally, regionally or nationally recognized for strong academic high school performance (Steinmayr & Spinath, 2009).

Probation. When a student's cumulative GPA falls below a 2.0 and is placed on warning that his/her grades must improve in order to continue as a student (University of Minnesota, n.d.).

Retention. The number of full-time students who return the following year (Craig & Ward, 2008).

Persistence. Measured from semester to semester, how many students enroll in class each consecutive semester.

Self-efficacy. "The belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2).

CHAPTER 2

LITERATURE REVIEW

College student success, retention, and graduation rates are current buzzwords in the academic community. These are all major issues to policy makers and "as President Obama stresses, the number of students with a college education is not as high as it should be, and college student retention rates are not as high as any educator would want them to be" (American Federation of Teachers, 2011, p. 3). With this throughput challenge, the economy as whole shares in this suffrage as the numbers of graduates does not keep pace with growing needs for a citizenry with a postsecondary education. Hence, policy debates have shifted from access to what happens to students after they enter college (American Federation of Teacher, 2011). Some institutions are tightening up on their retention standards by increasing the required GPA of students who have attained a certain number of credit hours attempted (Barefoot, 2004). Others have implemented from very simple to very complex academic intervention programs to help students who are on academic probation attain academic success. The government even has its share of the retention pie by tightening the financial belt on institutions, particularly for-profits, that fail to graduate students at an acceptable rate. "The general emphasis has been on holding institutions accountable for achieving measurable outputs – like high graduation rates and standardized test scores – and on developing various curriculum frameworks" (American Federation of Teachers, 2011, p. 3).

To contextualize this dissertation research, I first explore the literature in depth as it pertains to retention and strategies to diminish college student drop out rates and to implement intervention programs. An initial search of articles, reports, and reviews was conducted to develop a comprehensive list of topics and pertinent questions related to the theme of this study. Next, these topics were grouped into similar categories and used repeated key words to conduct a deeper literature search of electronic databases as well as a search of germinal texts and journals in higher education including *The Journal of College Student Development, The Review of Higher Education,* and *The Journal of Higher Education* among others.

In reviewing the gathered literature, all that was no more than 10 years old and pertained to retention, academic failure/probation, or academic intervention were kept. All other sources were discarded unless the content was imperative to the nature of this study. It was important for this review to have the most recent data available given the considerable expansion in scholarship in recent years to inform practice and because data on retention and academic failure more than 10 years ago is not necessarily reflective of trends today. The literature was organized by themes and grouped together in the following meta-categories: retention/student persistence, academic failure/probation, and academic intervention.

Building from this organizing framework, this chapter is divided into six sections. The chapter begins with a case for why student retention and success is important, followed by a historical overview of retention and the scholarship of retention. From there, the chapter focuses on the student failure scholarship, followed by Tinto's (1993) model of student departure, perhaps the most well-known and researched theory of student departure. At that point, the literature review switches to student self-efficacy and student engagement, two core concepts germinal to this study. Finally, the chapter looks at the scholarship of student interventions and

what is known about programs and activities designed to encourage student retention and success.

A Case for Student Retention and Success

> As the average age of the U.S. population increases, as that population continues to participate in a growing global economic community, and as technology advances, people are discovering that continuous learning may be not only desirable but also necessary. Those unwilling or unable to obtain the necessary skills to compete in an ever-complex workplace are doomed to stay in low-skill, low-paying jobs. (Seidman, 2005, p. xi)

The above statement is a harsh reality in today's society. More companies are focused on hiring employees that have a degree, and in some cases, a higher degree than a bachelor's. However, the supply of qualified candidates seems to not be keeping pace with demand, at least in high technology types of industry. "Nearly two-thirds of employers—62 percent—said that they have 'difficulty in finding qualified applicants to fill vacancies,' while 65 percent said most of the people they hire over the next four years will need at least an associate's degree" (Schoeff, 2009, ¶3). As mentioned in Chapter 1, there seems to be an epidemic of concern focused on poor retention numbers and a new focus on retention and strategies to graduate students within a certain amount of time from college. "The unwritten pact between society and higher education that provided expanding resources in return for greater access for students as well as research and services to society has broken down, with significant implications for both higher education and society" (Altbach, Berdahl, & Gumport, 2005, p. 15).

There are a number of studies and reports that discuss retention rates of higher education institutions over the past 10-20 years. The UNITED STATES ACCOUNTING OFFICE Report

(2003) indicated that 48% of college students do not attain a bachelor's degree within six years. This means that students are either still pursuing a bachelor's degree after six years of being enrolled in an institution of higher education or have stopped going altogether. According to Mann, Hunt, and Alford (2003),

> Nearly 40% of the students who enter higher education will leave after three years before earning a degree or certificate and that attrition is greatest during the freshman year when over one-third of the students drop out of public universities and colleges annually. (p. 245)

These numbers are staggering and can be detrimental to not only the affected student, but the institution, the community, and the economy as well. It affects the institution both financially and by reputation. For every student lost, there is revenue taken away from that institution which may cause operational issues due to a constrained budget. Also, if a college has a reputation of not graduating students within a reasonable amount of time (or at all), students will choose not to attend that institution and thus, take revenue away from the institution. Furthermore, when students do not graduate with a degree, it is a bad mark against the community for there is one more potential unemployable person who now may not be able to make a contribution to society to the level they could with a degree.

> A college degree is a key ingredient for success in the job market. Those with postsecondary degrees on average earn more than those without such degree and bring important skills to the workplace. Completing college can serve as a means for disadvantaged students to improve their economic and social circumstances. (United States Accounting Office, 2003, p. 1)

Without postsecondary education, the economy is harmed due to unskilled labor, increased unemployment, and an increased number of persons of low socioeconomic status. This translates into decreased buying power for individuals, which hurt businesses in the end and ultimately the economy.

History of Retention in Higher Education

To understand retention efforts of higher education institutions, it is first important to gain an understanding of the nature and history of retention as it relates to why students leave. According to Longden (2002),

> The outcome of the association between a student and higher education may result in either a successful completion of a course, or the student failing to satisfy course requirements and being required to leave (involuntary departure), or leaving early without achieving the intended qualification aim of the course (voluntary departure). It may be the case that not only does the student leave the institution (institutional departure) but may also decide to leave higher education altogether (system departure). (p. 3)

Over time, the demographics of student populations has changed from small, privileged white males to a wider range of ethnicities, genders, and total numbers of students overall (Seidman, 2005; Thelin, 2004). Retention issues have grown and their study as diversified as the current student populations. In the early history of higher education, the demand for higher education was relatively low and earning a degree was more of a formality than a necessity (Seidman, 2005; Thelin, 2004). As a result, retention was unimportant. Over the last few decades, however, as student demand for higher education has increased and student bodies diversified, retention became more important – as a general concern at first, but then as a focused and specific strategy to retain the most diverse and talented students (Altbach et al., 2005;

Seidman, 2005). “Levels of preparation, motivations, and other individual characteristics shape the reasons why students attend college and directly impact the chances that students will be retained at particular types of institutions and ultimately persist to earn a postsecondary degree” (Seidman, 2005, p. 2).

According to Berger and Lyon (2005), the definition of retention is “the ability of a particular college or university to successfully graduate the students that initially enroll at that institution” (p. 3). Berger and Lyon also explained that certain types of campuses tend to attract certain types of students. For example, highly selective institutions recruit and enroll students that are most likely to be retained based on their family background and level of educational preparedness. Conversely, institutions that are less selective, such as community colleges, tend to attract students who are less likely to be retained given their backgrounds. The faculty and other campus staff also have an impact on retention since these are the individuals that are in constant contact with the students. Berger and Lyon described how the faculty role has evolved from the all-encompassing faculty member who handled both academic and administrative activities. Now faculty members are often specialized within his or her own discipline and administrative roles distinct. For example, the establishment of student affairs administrators was a result of retention efforts; however, recent trends have placed the responsibility of retention on both faculty and staff (Berger & Lyon, 2005).

Over time, the societal demand for college graduates has grown. “This pattern of increasing importance for individuals to possess a college degree has led to increased concern about retention as higher education has grown on one hand and become a more competitive market for students on the other” (Berger & Lyon, 2005, p. 4). According to Berger and Lyon (2005),

> Demographic and economic shifts have accounted for much of the increased attention to retention over the last thirty years or so. Institutions are now more concerned with the students they already have in terms of retention, revenue, and class size than they are new freshmen coming in the door. From an economic standpoint, when there is a downturn in the economy, enrollment numbers increase and in times of prosperity, more value is placed on earning a degree to increase an individual's competitive edge. State-funded public postsecondary educational systems have also been paying more attention to retention as policymakers have increased demands for publicly funded systems and institutions strive for and document better performance on outcome indicators such as retention. (p. 5)

Additionally, due to publications such as *U.S. News and World Report* which publish retention rates of higher education institutions, campuses across the nation have become "increasingly concerned about retention rates as a source of prestige that can be translated into other kinds of symbolic, material, and human resources – particularly in the competition for more and better students" (Berger & Lyon, 2005, p. 5).

Finally, new policies and interventions have helped to fuel the campaign for retention. A number of initiatives have been implemented by the federal government over the years and include policies such as the Morrill Act, GI Bill, and a variety of grant and loan programs since the 1950s in particular (Berger & Lyon, 2005). With students in college under these and other programs, the desire for earning a degree has increased and the government has increased the pressure for institutions to aid these students in realizing that goal. Where government has historically taken a back seat, they have now implemented "accountability systems in which

retention has been used as a key criterion for success and [in the case of state governments] often as a factor in determining funding for state campuses" (Berger & Lyon, 2005, p. 5).

Research on Student Failure in Higher Education

An understanding of what factors influence student voluntary departure, and possibly without ever returning, is necessary and key for developing a plan that will be effective in reducing the phenomenon. "According to a study compiled by Coleman and Freedman (1996), a considerable number of students who either voluntarily or involuntarily left a four year college before graduating had, at some point, been on academic probation" (Balduf, 2009, p. 277). According to Tinto (2006), student retention was a function of individual attributes, skills, and motivation. "Students who did not stay were thought to be less able, less motivated, and less willing to defer the benefits that college graduation was believed to bestow. Students failed, not institutions" (p. 2). The next section of the literature review discusses reasons for academic failure in college students and why some students succeed and others fail.

Academic Failure

As mentioned in the previous section, academic failure is a major reason why students do not graduate from college within five years or at all. "Many of these students can be classified as 'educationally at-risk,' those who enter lacking the important educational skills needed for academic success" (Mann et al., 2003, p. 246). However, many researchers have discovered that those identified as "at-risk" are not the only ones experiencing academic failure. Barefoot (2004) noted that "because dropout has so many potential root causes, average or even above-average students may also benefit from special assistance during the sometimes difficult transition to higher education" (p. 13). Tovar and Simon (2006) added, "Some well-prepared students attain a

probationary status, whereas some who have financial, personal, and work responsibilities are high achievers" (p. 549).

What is academic failure? Balduf (2009) offered the following comprehensive definition: "Underachievers are students who exhibit a severe discrepancy between expected achievement (as measured by standardized achievement test scores or cognitive or intellectual ability assessments) and actual achievement (as measured by class grades and teacher evaluations)" (p. 276). Any student can fall into this category and therefore efforts to help students on academic probation often target all students and not just those who are considered "at-risk." Many of these students share the same type of circumstance, which contributes to their academic failure in higher education. There have been an abundance of research conducted on the reason why students fail and core themes emerge from all of the research. These reasons have been identified as: academically underprepared students, lack of financial resources, employment obligations, family responsibility, personal issues, poor institutional fit, and trouble adjusting to college life (Balduf, 2009; Barefoot, 2004; Kamphoff, Hutson, Amundsen, & Atwood 2007; Mann et al., 2004; Smith, 2005; Tovar & Simon, 2006).

Often students will enter college not prepared academically to deal with the course work. Many often need remedial classes, prolonging their stay at the college or university and often discouraging them from continuing due to the added time to graduate. For underprepared students that do not need remedial classes, they sometimes are unable to handle the course work as well. Lack of financial resources can weigh on a student very heavily. Even if the student is afforded financial aid to help pay for classes, often times students will not have enough for books which causes them to struggle in class without a text. Others may have personal financial issues, which may cause them to not eat, not have reliable transportation, or even be homeless. This can

vastly affect the success of a student in college. In relation to employment, Kamphoff et al. (2007) noted, "most college students have responsibilities outside the classroom. For example, about three-quarters of all four-year college students earn a paycheck, and about one-quarter of them work full-time" (p. 398). Family responsibility includes challenges finding affordable childcare, handling the pressure of being a single parent, taking care of an elderly parent, and more. Personal issues refer to perhaps psychological problems, learning disabilities, and abuse. Finally, adjusting to college life includes dealing with the culture shock of transitioning from a high school environment to college, navigating the bureaucracy of higher education, fitting in and making "friends" or contacts, and getting along with instructors. While this is not an exhaustive list, these are the most common reasons that have been identified and associated with academic failure in college students.

Since institutions of higher education have an idea as to why students fail, developing an intervention program to counteract it is critical. Of course, it may not be feasible for institutions to try to address all of the issues affecting student success, so a comprehensive program that touches on the most prevalent issues is often what is pursued. To help students improve their grades and persist in college, many colleges offer learning skills assistance through academic support programs such as tutoring, study skills courses, learning centers, supplemental instruction, and remedial courses. Research indicates that these support systems have been successful in improving academic performance as well as retention of educationally at-risk students (Mann et al., 2003, p. 246).

Tinto's Model of Student Departure

There have been many studies on student departure and the events that lead to the decision for a student to leave college. According to Tinto (1993), "of nearly 2.4 million students

who in 1993 entered higher education for the first-time . . . approximately 1.1 million will leave higher education altogether, without ever completing either a two- or a four-year degree program" (p. 1). Tinto's model of student departure, a culmination of over two decades of research and influenced by other scholars' work, describes one theory of why students either stay in college or drop out. The model below is "intended to speak to the longitudinal process of departure as it occurs within an institution of higher education" (Tinto, 1993, p. 112).

Tinto's (1993) model is "primarily sociological in character and looks to the social and intellectual context of the institution as playing a central role in the longitudinal process of individual departure within the critical first year of college" (p. 113). Although students own a large part of the decision to leave college, the social and intellectual impact of the institution must not be ignored. Whether a student feels included and adequate socially within an institution weighs heavily on this decision-making process. "The model also aims at being policy relevant in the sense that it can be employed by institutional officials as a guide for institutional actions to retain more students until degree completion" (Tinto, 1993, p. 113).

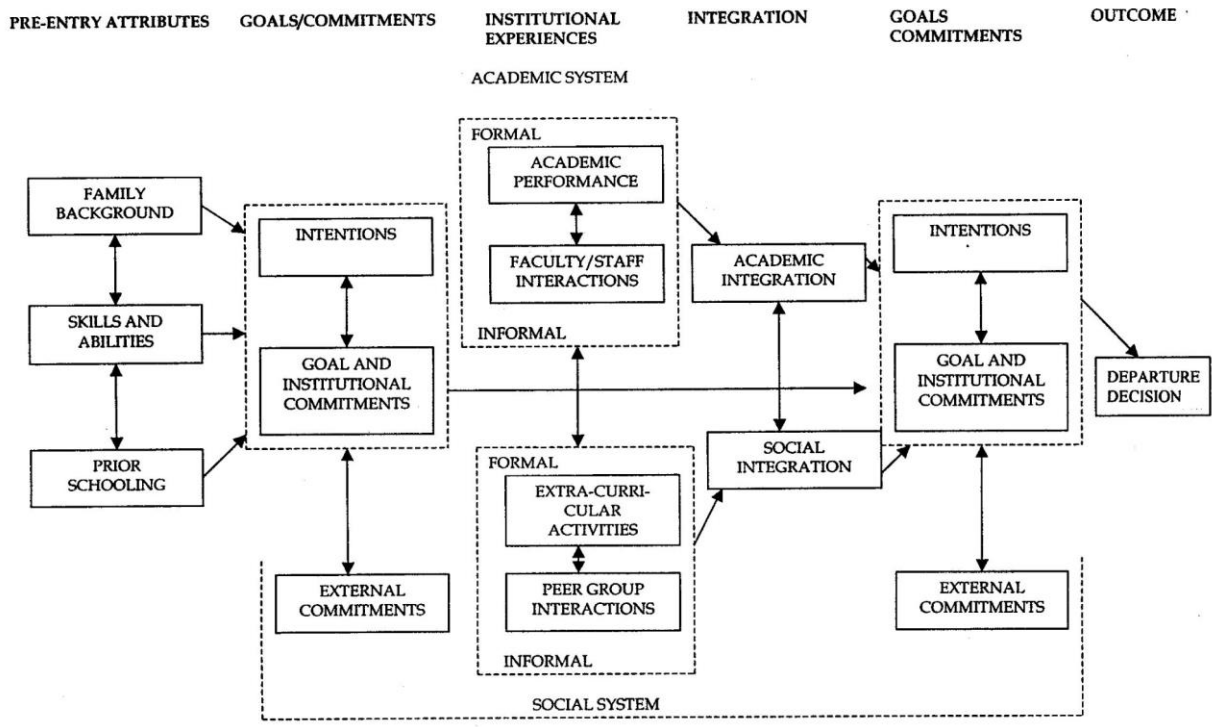

Figure 1. Tinto's model of student departure (1993). Used with permission.

In looking at Tinto's model (1993), there are six core elements depicted that attempt to explain why students ultimately leave college. These core elements include pre-entry attributes, goals/commitments (personal life), institutional experiences, integration, institutional goals/commitments, and outcomes, which, according to Tinto, impact a student's decision to depart or persist at a university. While this is not an absolute model, it is an important aspect and should be considered when reviewing student departure. The following subsections detail each element and its impact on persistence.

Pre-Entry Attributes

These are the attributes that the student enters higher education with from his or her background, which include family background, skills and abilities, and prior schooling. Students enter college with a range of differing backgrounds, educational abilities, skills, and varying types of pre-college educational experiences and achievements (Tinto, 1993). Family factors

such as parents' level of education and how higher education is viewed in the family subunit can have a major impact on a student's view of education. All of these aspects impact a student's choice of whether or not to attend college and perhaps even the type of university based on perceived skill and ability. These factors may also impact a student's willingness to continue in college when faced with personal challenges or challenges with the university.

Tinto (1993) also suggested that a student's academic achievement in high school may also impact college success and persistence. Those students who were high achievers in high school tend to also be high achievers in college, however; only 57.5% of them graduate with a bachelor's degree. There is an even bigger disparity with those students in the lowest quartile; only about 17.6% graduate with a bachelor's degree from that category (Tinto, 1993). Socioeconomic status also impacts persistence in that 55.4% of university those who graduate from college come from high socioeconomic status backgrounds whereas those from the lowest socioeconomic status make up only about 30.1% of college graduates (Tinto, 1993). The same holds true with ethnicity. Tinto's (1993) research indicated that over 50% of White students earned a bachelor's degree while only about 44% of Black students graduated with a bachelor's degree. Hispanics fell into the 22% range for achieving a bachelor's degree.

Goals/Commitments

The next core element includes goals and commitments and focuses on the aspirations of the student his or her intentions to act on these particular goals. Initially, these intentions affect the student's college choice and decision to enroll. A student's external commitments also play a part in his or her commitment to higher education depending on how many or involved these commitments are. For example, a single parent working full-time may have a different commitment level than a person who is single, has no children, and works part-time (Pascarella

& Terenzini, 2005). Tinto (1993) described how all these elements continually modify a student's intentions and commitments. For example, going to college for many students is just one of many external commitments. Therefore, "external commitments are seen as altering the person's intentions and goals and institutional commitments at entry and throughout the college career" (Tinto, 1993, p. 115).

Institutional Experiences

The third core element is institutional experience and is divided into two aspects, academic and social. A student's experience in one or both of these aspects will affect persistence. On the academic side there is the academic performance of the student and the faculty/staff interaction. Whether a student is successful in the classroom or not and the level of interaction with the faculty affects persistence. The other half includes extracurricular activities and peer group interactions. A student's interactions and experiences with his or her faculty and peers have an impact on the decision to leave college. "Positive experiences . . . reinforce persistence whereas negative experiences serve to weaken intentions and commitments, especially commitment to the institution, and thereby enhance the likelihood of leaving" (Tinto, 1993, p. 115). Ultimately, if a student has a positive experience when interacting socially with his peers, the probability of him succeeding and staying in college is higher than if he were to have a negative experience. Coupling this social aspect with the academic experience, two positive experiences will most likely increase academic success, thus positively affecting retention and graduation rates. Project DEEP (Documenting Effective Educational Practice), a collaboration of the National Survey of Student Engagement (NSSE) and the American Association for Higher Education (AAHE) with support from the Lumina foundation identified

best practices for higher education institutions by using data collected from institutions that had higher than expected graduation rates and scores on the NSSE survey (NSSE, 2012).

The results from this project support Tinto's (1993) model of student departure and provide relevant links between student engagement and college success. Evidence of this is documented in other works by Kinzie and Kuh (2004) in their article, "Going DEEP", and by Kuh, Kinzie, Schuh, and Whitt's (2010) book *Student Success in College: Creating Conditions that Matter* and that Tinto highlighted earlier.

> Given individual attributes and dispositions at entry, the model argues that subsequent experiences within the institution, primarily those arising out of interactions between the individual and other members of the college, student, staff, and faculty, are centrally related to further continuance in that institution. (Tinto, 1993, p. 116)

The more the institution attempts to interact in a positive way with the student and the student's social and intellectual integration grows and become stronger, it enhances the likelihood a student will continue in school.

Integration

Tinto's (1993) model reflects integration on two dimensions, academic and social. How well a student integrates into an institution in both dimensions affects persistence and his or her decision to leave college. Integration is directly related to experiences a student has academically, with faculty and staff, and socially with peers. If a student does not integrate well on either of these dimensions or neither, persistence can be negatively affected. Current mentoring programs recognize this conundrum and supports the theory that proper integration into an institution both academically and socially can have a positive effect on student

persistence and ultimately can increase retention and graduation rates (Barefoot, 2004; Goodman & Pascarella, 2006; Kamphoff et al., 2007).

Goals/commitments. Once a student is in college, new goals and commitments are formed and are affected by pre-entry attributes and personal goals and external commitments. A student's institutional goals could include excelling academically and achieving a certain GPA. When this goal is not met, it has a negative impact on persistence. Commitments within the institution could include participation in an organization or club, or even employment on campus. These goals and commitments along with the experiences (academic, social, and integration) of the student directly affect persistence and the student's decision to leave. Significant life events or financial struggles can also have a negative or positive effect on a student's decision to leave.

Outcomes

Seidman (2005) reflected on Astin's theory of involvement as it relates to Tinto's (1993) model of student departure. Astin's theory states "involvement pertains to the behaviors students engage in while attending college, which influence student outcomes, including persistence" (as cited by Seidman, 2005, p. 64). Astin's theory is based on five basic tenets: involvement can be generalized or specific, involvement occurs along a continuum that is different for each student at any given time, involvement is qualitative and quantitative, learning and personal development is associated with the quality and quantity of student involvement, and educational policy and practice is directly affects student involvement (Seidman, 2005). In whole, Tinto (1993) suggested, as a complete model, all of the different aspects, pre-entry attributes, goals and commitments (personal and institutional), institutional expectations and integration of his model work together in a web of interactions and guides a student to the final outcome to depart or

persist in college. The model reveals a complex system of interactions, experiences, reactions, and decisions, which are all things that affect persistence.

Ultimately, there are a variety of elements at a number of levels that may prompt a student to leave higher education or to stay. If institutions could understand these elements and provide support where relevant and possible, it may foster an environment that would entice students to stay and complete their degrees. The next section speaks to a specific element that can impact a student's decision to persist or not in higher education.

Critiques of Tinto

Tinto's (1993) model of student departure is widely accepted and cited in literature by other researchers and emulated in other retention models. However, his work and the empirical validity of his theory has been criticized by many as there are significant differences between residential and commuter colleges and universities (Seidman, 2005). Tierney (1992) criticized Tinto's model stating that it seems to view college participation as a rite of passage "where academic and social integration is essential for student persistence" (p. 603). Tierney (1992) further argued that Tinto had "created a theoretical construct with practical implications that hold potentially harmful consequences for racial and ethnic minorities" (p. 603).

Braxton (2000) recently assessed Tinto's model and found that Tinto's theory is partially supported and lacks empirical internal consistency. Braxton (2000) suggested a revision of Tinto's model or a complete abandonment of the theory and new theoretical perspectives presented. Others have accused Tinto's model of excluding two-year college students (Metz, 2002) and older, returning students (McCubbin, 2003).

Though Tinto seems to be a target of criticism for his theory on student departure, this most likely is a result of the widespread use of his model and being on the forefront of other

models. More research is needed in this area and no model currently addresses every possible aspect of student departure. Tinto's model gives relevant theories for a targeted population and supplemental theories and models should be reviewed and utilized for support and confirmation.

Research on Student Self-Efficacy

There has been plenty of research on why students succeed or fail in higher education. There has been study after study conducted on such things as socioeconomic status, ability of the student, and institutional support and their effects on student success. However, there has not been much concentrated focus on a student's inner feelings and perception of self as it relates to student success. The humanistic element of student success may account for the gaps in unexplained student departure for those students who seem to do well in school. Albert Bandura, a clinical psychologists and former professor at Stanford University, conducted some significant research and made great strides in trying to explain the humanistic element of personal success commonly called self-efficacy. Bandura (1995) posited that self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). Generally speaking, it is a person's belief in his or her own ability to succeed in any particular situation. The more one believes he or she can achieve something; the more likely he or she is to achieve it. The converse is true for those who believe they cannot succeed; these individuals are more likely to not succeed at their tasks. Self-efficacy can be strong for certain areas of an individual's life and weak in other areas.

Self-efficacy itself has been studied in great detail by Bandura and many other researchers in which they have shown that "self-efficacy can have an impact on everything from psychological states, to behavior, to motivation" (Cherry, 2012, p. 1). When a person is setting goals and making plans for achievement, self-efficacy plays a role in how these goals are

approached. Bandura (1994) noted that those with a strong sense of self-efficacy tend to recover more quickly from setbacks, have a deeper commitment to their interests and activities, and views challenges as something to be mastered. Those with a weak sense of self-efficacy tend to not recover as quickly, lose confidence easily in personal abilities, avoid challenging situations, focus on failures, and believe that difficult tasks are beyond their own capabilities (Bandura, 1994). A person's self-efficacy is formed during childhood and is developed well into a person's adulthood based on experiences, the procurement of new skills, and a heightened understanding of situations and life (Bandura, 1992).

Self-efficacy has been woven into retention models such as Bean and Eaton's (2001) psychological model of college student retention. This model integrates four psychological theories, student entry characteristics, interactions with institutional environment, the psychological process (self-efficacy, locus of control), and the student's experiences (Seidman, 2005). In this model "the psychological processes lead to academic and social integration, institutional fit and loyalty, intent to persist, and persistence" (Seidman, 2005, p. 64).

There are four distinct sources that fuel self-efficacy (Bandura, 1994; Pajares, 2002). The first is mastery experiences where succeeding in a task strengthens self-efficacy and not succeeding can weaken self-efficacy. The second, social modeling (vicarious experience) refers to one observing his/her peers successfully completing a task and believes he/she too can be successful at such a task. The third is social persuasion. This refers to one receiving verbal encouragement that might come from a parent, friend, or mentor. This verbal encouragement persuades the individual that he/she can be successful and ultimately, believe he/she can be successful. The fourth and final is psychological responses. Bandura (1994) noted here that one's own emotional and physical response to situations can affect self-efficacy. He also stressed that

it is not a person's emotional and/or physical reaction alone that impacts self-efficacy but also how these reactions are perceived and interpreted. The following is Bandura's theoretical model of self-efficacy and the four sources of self-efficacy.

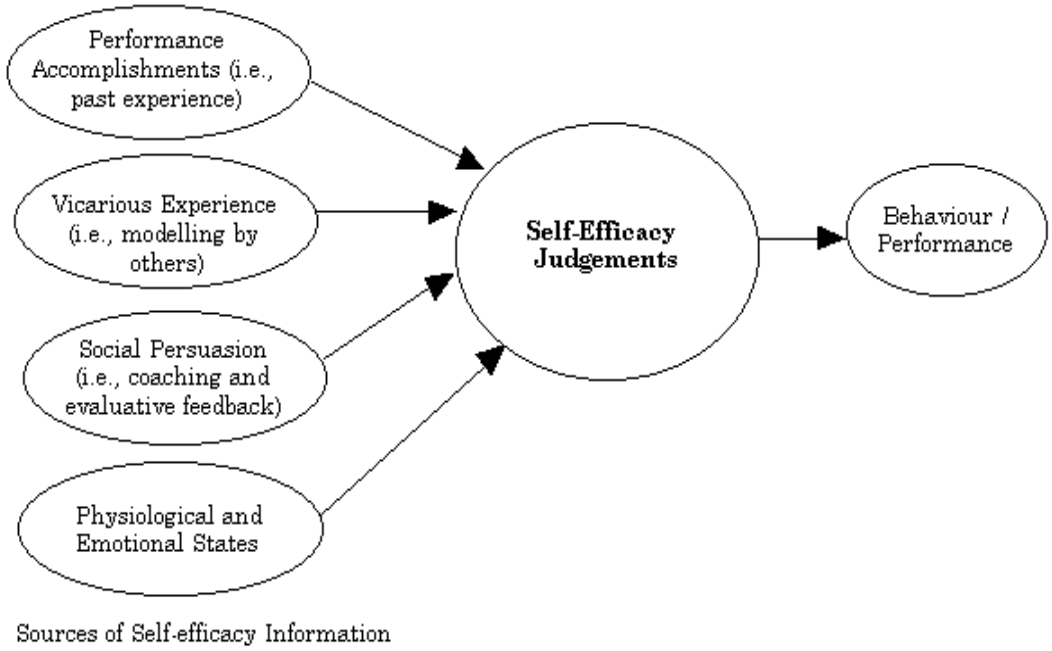

Figure 2. Bandura model of self-efficacy (1994). Used with permission.

Pajares (2002) offered an example of how this model manifests in an educational setting.

> In school, for example, the beliefs that students develop about their academic capabilities help determine what they do with the knowledge and skills they possess. Consequently, their academic performances are in large part the result of what students actually come to believe that they have accomplished, are accomplishing, and can accomplish in the future. (p. 7)

According to Pajares (2002) "these self-beliefs may play a mediational role in relation to cognitive engagement and that enhancing them might lead to increased use of cognitive

strategies that, in turn, lead to improved performance" (p. 7). This helps to explain why students of similar ability and talent have different levels of performance and is consistent with the view of numerous scholars and theorists.

As previously mentioned, self-efficacy can vary within one individual depending on the task or goal. An entrepreneur may have a high sense of business efficacy but have low social efficacy. Likewise, a student may have high math efficacy but low science efficacy. "Although efficacy beliefs are multifaceted, social cognitive theory identifies several conditions under which they may co-vary even across distinct domains of functioning" (Bandura, 2006, p. 308). Certain situations can have an impact on self-efficacy within an individual or group of individuals. For example, "students are likely to develop similarly high perceived self-efficacy in dissimilar academic subjects, such as language and mathematics in superior schools, but similarly low perceived efficacy in ineffective schools, which do not promote much academic learning in any subject matter" (Bandura, 2006, p. 308).

The study of self-efficacy and its impact on academic achievement has increased since the 1990s. There have been three distinct areas of focus according to Pajares (2002). The first is the "link between efficacy beliefs and college major and career choices, particularly in science and mathematics" (Pajares, 2002, p. 2). Findings in this realm reveal that self-efficacy beliefs are key in the choice of majors, and students tend to choose majors in which they feel most competent and avoid those in which they feel they are less able to compete. The second realm, according to Pajares (2002), highlighted the efficacy beliefs of teachers and the relation to their instructional practices and to various student outcomes. "Teachers' beliefs of personal efficacy affect their instructional activities and their orientation toward the educational process" (Pajares, 2002, para 69). It also predicts "student achievement and students' achievement beliefs across

various areas and levels" (Pajares, 2002, para 69). Likewise, Ajzen (2002) offered a similar theory that human behavior is guided by three different considerations: "beliefs about the likely consequences or other attributes of the behavior (behavioral beliefs), beliefs about the normative expectations of other people (normative beliefs), and beliefs about the presence of factors that may further or hinder performance of the behavior (control beliefs)" (p. 665).

In the third realm, Pajares (2002) noted "students' academic self-efficacy beliefs are correlated with other motivation constructs and with students' academic performances and achievement" (p. 2). Constructs in these studies have included such things as goal setting, modeling, test and domain-specific anxiety, and varied academic performances across domains. Based on a combination of these attributes and self-efficacy belief, a student will perform to the level he/she believes is possible rather than what his/her true ability may be. "Self-efficacy beliefs influence these attainments by influencing effort, persistence, and perseverance" (Pajares, 2002, p. 2). Therefore, if a student believes that he/she is capable of passing a course in college, he/she will put forth more effort and determination in this course as opposed to another student who believes the opposite of him or herself. This provides a direct link to student persistence in higher education and may explain why some students continue to fail regardless of actual academic ability. All of these combined lead to the formation of behavioral intentions, which lead to actions. Those students who believe they are capable and have stronger academic self-efficacy use tend to have a higher persistence rate than those who not have this belief.

The power of self-efficacy is so strong that is can really cripple a student who has great potential but cannot see or believe it for himself. Ultimately, if a student enters higher education with the belief that he or she does not belong there, and this notion is reinforced by a negative experience (e.g., lack of financial resources, social rejection, strained relationship with faculty)

the possibility of that student departing is much higher than that of a student who may not have as high an ability but believes he belongs there and has a different outlook on both positive and negative happenings while in college. Adding in the ingredients of childhood experiences, peer interaction and observation, self-perception, and personal successes and failures make a powerful combination of issues to be reckoned with when taking on the forces of higher education.

Research on Student Engagement

Early works on student retention gave birth to the age of involvement and "we learned that involvement matters and that it matters most during the critical first year of college" (Tinto, 2006, p. 3). Zepke and Leach (2010) offered the following definition of student engagement: **"**students' cognitive investment in, active participation in, and emotional commitment to their learning" (p. 168). This definition, one of many, will be used as the basis for this section and overall study. "Concepts of student engagement...were based on the simple, but powerful, premise that students learn from what they do in college. Research has strongly supported this assumption, indicating that engagement is positively linked to grades and persistence rates" (Pike & Kuh, 2005). In other words, the level of involvement a student has with his or her education affects the outcome of grades, persistence, and ultimately completion. "Even though the focus is on *student* engagement, institutional policies and practices influence levels of engagement on campus" (Pike & Kuh, 2005, p. 186). This means that the institution itself has a key role in student engagement, which fuels persistence levels and student success.

Zepke and Leach (2010) added that "student engagement involves many actors: certainly students, teachers, administrators – but also locations, structures, cultures, technologies, buildings and equipment" (p. 174). The relationships between such varied "actors will differ between jurisdictions, subjects, sites, buildings, and student populations" (Zepke & Leach, 2010,

p. 174). It is a dual effort on both the student and institution's part to ensure the success of the student, which, in turn, will help to ensure the success of the institution. Research has not been conclusive concerning the "relationships between students' pre-college characteristics (e.g., gender, minority status and entering ability levels) and engagement during college. Studies . . . have found that students' background characteristics generally account for 1–5% of the variance in levels of engagement" (Pike & Kuh, 2005, p. 186). This could mean that more emphasis is placed on the student's environment, institution, and level of engagement than the student's background, though this is not completely found to be true in the research.

There are a number of elements that affect level of student engagement within an institution. Pike and Kuh (2005) suggested that size of the institution can have a small effect on student engagement, but it is really those institutions that implement policies and practices that make the campus feel small that see a significant improvement in student engagement. The students, therefore, must receive the proper institutional support in various forms such as mentoring, faculty advising, active student organizations, and more to serve as a catalyst for higher levels of engagement and this must be embedded into the mission and policies of the institution (Pike & Kuh, 2005; Zepke & Leach, 2010).

In a study conducted by Zepke and Leach (2010), a conceptual organizer for student engagement was created and is shown below. The concepts in this table highlight four dimensions, motivation and agency, transactional engagement, institutional support, and active citizenship, and the elements that correspond with each dimension. Motivation and agency focus on the linkage intrinsic motivation has with action on such motivation. Transactional engagement emphasizes the didactic relationship between teacher and student. Institutional support notes the importance of the institutional context in which engagement occurs. Active

citizenship focuses on the developmental importance of college in which students are challenged on their social beliefs and seeing themselves in a broader, heterogeneous environment.

Table 2

A Conceptual Organizer for Student Engagement

Research Perspectives	Proposals for Action
Motivation and Agency (Engaged students are intrinsically motivated and want to exercise their agency)	1. Enhance students' self-belief 2. Enable students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives
Transactional Engagement (Students and teachers engage with each other)	3. Recognize that teaching and teachers are central to engagement 4. Create learning that is active, collaborative and fosters learning relationships 5. Create educational experiences for students that are challenging, enriching and extend their academic abilities
Institutional Support (Institutions provide an environment conducive to learning)	6. Ensure institutional cultures are welcoming to students from diverse backgrounds 7. Invest in a variety of support services 8. Adapt to changing student expectations
Active Citizenship (Students and institutions work together to enable challenges to social beliefs and practices)	9. Enable students to become active citizens 10. Enable students to develop their social and cultural capital

Source: Zepke and Leach (2010). Used with permission.

Motivation and Agency

Self-belief is reported as a key attribute in motivation. Zepke, & Leach (2010) found that "the self-theories learners bring to their learning impact motivation, agency, and engagement" (p. 167). Researchers such as Bandura and others noted that a person's self-belief or self-efficacy is directly related to their own success or failure. Those with a high self-belief tend to stay engaged, independent of their performance (Zepke & Leach, 2010). Llorens, Schaufeli, Bakker, and

Salanova (2007) found that where learners believed they had the personal resources to complete a task, their self-efficacy grew and consequently so did their engagement. Ultimately, "institutions must both create and take opportunities to enhance students' self-belief" (Zepke & Leach, 2010, p. 170). The environment that is provided for the student has as much of an effect on the student as his own self-beliefs. If the environment is an unsupportive labyrinth of unspoken rules, misdirection, and misinformation, and the student never learns the secret code to breakthrough this curtain, then it can set the stage for ultimate student departure.

Transactional Engagement

Kuh, Kinzie, and Buckley (2006) noted that teaching and teachers were the heart of engagement in higher education. The research reveals a variety of engagement-encouraging attitudes and behaviors for educators. Zepke and Leach (2010) noted that students tend to work harder, learn more, and are more willing to participate if a teacher is perceived to be sensitive to student needs, approachable, and well prepared. Bryson and Hand (2007) included students engage more when they are supported by teachers who are available to discuss academic progress, who establish an environment conducive to learning and demand high standards.

"Findings acknowledge that active learning in groups, peer relationships, and social skills are important for engaging learners" (Zepke & Leach, 2010, p. 171). Simply put, students' learning can improve when actively interacting with their peers. Sharing ideas, commonalities in experiences and life situations, and being similar in age all affect a student's potential success. "In a study examining the extent to which student–teacher interaction, quality of student effort, and peer interaction contributed to students' perception of engagement,...peer interaction had the strongest predictive capacity for engagement and outcomes" (Zepke & Leach, 2010, p. 171).

Kuh et al. (2006) found that challenging students with 'tough' assessment tasks actually promotes engagement as long as there is detailed, timely, and focused feedback. The timely feedback gives the student real time information on what they have learned as well as what needs to be worked on. It creates a dialogue between the teacher and the student and promotes a deeper level of understanding.

Institutional Support

The literature suggests that institutional cultures are critical in aiding students feel they are accepted and belong (Zepke & Leach, 2010; Kuh et al., 2006). "As the student body diversifies and socio-cultural contexts change, institutions need to change and do more to create cultures that welcome and adapt to diversity" (Zepke & Leach, 2010, p. 172). When students feel welcomed and that they belong, they tend to be engaged more and this aids success. Institutions that are successful in doing this use a proactive approach and exposes the diverse student, faculty, and staff members a different way of thinking (Kuh et al., 2006). This should not be left up to the students to seek out a sense of belonging within the institution, rather the institution should take steps to adapt their cultures to the needs of their diverse student body (Zepke & Leach, 2005).

Active Citizenship

There is a disagreement between researchers concerning the discourse of engagement and whether it is too conservative. Zepke and Leach (2010) postulates,

> Conservative views interpret engagement as psychological dispositions and academic achievement leading to learning that lacks social context. While student-centered conceptions of engagement do recognize context, require engagement by teachers as well as learners, and are nested in the relationships they share, this view too is narrowly

> focused on operational matters. What is needed is a democratic–critical conception of engagement that goes beyond strategies, techniques, or behaviors, a conception in which engagement is participatory, dialogic, and leads not only to academic achievement, but to success as an active citizen. (p. 173)

Ultimately the focus is on student success through community, institutional support, and student engagement. Zepke and Leach (2010) notes that minority students need help in building that social and cultural capital that has been identified as being necessary for engagement and success beyond the classroom. "To help build social and cultural capital of 'minority' students, institutions must adapt to the ways, knowledge, and ontologies of other than mainstream groups and negotiate how students engage" (Zepke & Leach, 2010, p. 173).

Academic Interventions

As retention becomes more critical for higher education institutions, a number of strategies have been developed to address the growing problem. Some strategies include better student activities, early alert systems, counseling, and tutoring. "These strategies vary widely across institutional types and are often a function of perceived student needs as well as available resources" (Barefoot, 2004, p. 13). The important thing is for the institution to first understand what resources they have to utilize and make efforts to secure more resources (i.e., people, funding) to make their program work. Once this is complete, then an appropriate program can be implemented within the institution. Often times, an institution would start an academic intervention program without fully understanding the cost of maintaining such a program long term. The program effectively dies and students are left right where they started. Barefoot (2004) as well as L. Patton, Morelon, Whitehead, and Hossler (2006) gave a general outline of several programs actively being used in some higher education institutions today.

Early Alert/Intervention Initiatives

"The majority of American campuses offer what are termed 'early-alert' initiatives – intrusive attention to students who perform poorly on assessments during the first few weeks of the term" (Barefoot, 2004, p. 13). The University of Phoenix is an excellent example and model of a successful early alert system. As an adjunct faculty member at the University of Phoenix, I have first-hand experience with the system and procedures. Faculty members are instructed to monitor all students in each class. If a student falls within a certain category from a list of items, the faculty member is to report it through the early alert system to academic affairs. From there, depending on the nature of the situation, academic affairs will either send the student a letter discussing the situation and offer assistance, or will forward the information along to an academic advisor. The academic advisor will then call the student to discuss the issue and try to assist the student in the identified areas needed for improvement. This system works well for many reasons. First, it gets the faculty directly involved. Faculty would be considered the first line of defense once the students are in class. Next, administration is involved and then the academic advisors. All of this is for the success of the student. The student is less likely to feel alone and less likely to not utilize the services provided. Therefore, the student is less likely to fail and/or drop out.

In addition to early alert, there is early intervention. This is where a student's progress is tracked within the first semester, and those who do not fare well are flagged and put through a program that following semester so as to get the student back on track. The Pennsylvania College of Technology has a comprehensive program that identifies students within the first semester of academic failure and allows them the opportunity to participate in an academic success program to help increase their GPA. This program, designed specifically for first-year students who have

been placed on academic probation, involves both academic affairs and student affairs (National On-Campus Report, 2005). In January, all students who had a semester GPA of less than a 2.0 receive a letter requesting their presence at a mandatory academic success meeting (National On-Campus Report, 2005). "The session explores why students did not succeed academically in the first semester and how they can succeed in the second" (National On-Campus Report, 2005, p. 2). After the session, students are referred to a residence life coordinator where they can participate in a non-mandatory mentoring program to help the student even further with their issues. Students on this program increased their GPA by .31 and participation is viewed positively in favor of the student even if the student performs marginally the following semester (National Oo-Campus Report, 2005).

First-Year Seminar

"A commonly used, but more ambitious, retention tool is a special term-length, first-year course called a first-year seminar (i.e., freshman seminar, student success course), which is currently offered in some form by over 90% of American colleges and universities" (Barefoot, 2004, p. 14). These first-year seminars are meant to increase social and academic integration of first-year students by focusing on their study skills, time management, and use of campus resources, which hopefully leads to increased retention (Barefoot, 2004). Many institutions offer this as a one-credit course during the first semester of a student's college career. On occasion, one might find a course like this offered for three credits. "In order to be an effective retention tool, first-year seminars should be small in size (15-20 students) and characterized by high levels of interaction" (Barefoot, 2004, p. 14). Mary Louise Peterson, a professor of higher education and co-director for Research on Undergraduate Education at the University of Iowa, believed that these programs are vital to student achievement (Goodman & Pascarella, 2006). Important

characteristics of the program included regularly scheduled meetings between the instructors and students, a discussion about content, class meeting times, grades and credit hours, and training for faculty on pedagogy and structure (Goodman & Pascarella, 2006).

Learning Communities

Learning communities, which consist of small cohorts of students (<25), have been known for its significant retention improvements (Barefoot, 2004). Instructors across courses collaborate in connecting course content and students form bonds and friendships with each other in the cohort.

> Learning communities have enjoyed special success in commuter institutions because they facilitate student interaction and involvement during the classes themselves. Simply attending two or more classes with the same 24 or so other students almost inevitably results in the development of friendships and a stronger sense of 'belonging' at the institution. (Barefoot, 2004, p. 4)

One example of a learning community in action is at Long Beach City College in California. "The Students and Teachers Achieving Results (STAR) program emphasizes making connections across classes, with students forming cohorts and participating together in a series of related coursework" (Kamphoff et al., 2007, p. 398).

Retention Director

According to Barefoot (2004), some institutions now utilize a retention director who is primarily responsible for retention issues and developing solutions. Those retention directors who have actual authority have realized major success in responding to student, instructor, and institutional needs whereas others who do not have such power operate in name only and do little to improve retention (Barefoot, 2004). Midwest College where I work is currently in the process

of obtaining a retention specialist for each academic area. These individuals will be responsible for identifying issues that affect retention and producing and implementing solutions to those problems.

Student-Faculty Interaction

Of all the different types of intervention programs, intentional student-faculty interaction initiatives are comparably less common. However, this method could prove to be one of the most successful when properly implemented.

> Posited as a form of academic integration, the concept of student-faculty interaction espouses both in-class and out-of-class activities with faculty members as a method of facilitating the development of meaningful relationships between students and their professors, which in turn enhances persistence. (L. Patton et al., 2006, p. 17).

Considering that faculty members tend to have the most contact with students, it only makes sense to involve them in the effort to retain students. “Student persistence can be enhanced by developing campus-based initiatives that facilitate student-faculty interaction” (L. Patton et al., 2006, p. 18). Since many students tend to not confide in their professors when they are having a problem, especially of a personal nature, universities like the University of Phoenix use faculty to help identify students who are not doing well early so that efforts can be made to correct their path. Other institutions use faculty as advisors and even mentors to their students. This faculty interaction is imperative and helps students to feel connected to the faculty and the institution as well.

Mentoring/Counseling Programs

According to Budge (2006), over the past few decades, the concept of mentoring has become increasingly popular. Mentoring is believed to be necessary in order for students to

flourish in their environment and is becoming an essential aspect of student life in higher education (Budge, 2006; Quinn, Muldoon, & Hollingsworth, 2002). Unfortunately, there is a lack of research that supports this theory. “Mentoring programs provide students with resources and get them actively involved in their own learning” (L. Patton et al., 2006, p. 12). Mentors in these programs can either be student peers, academic advisors/student affairs, faculty, or any combination of the three. These program focus building up the student’s confidence, increasing the student’s knowledge of campus resources, and holding the student accountable for his or her actions (Budge, 2006). Budge noted that traditional mentoring in higher education was informal and included faculty and staff mentoring graduate students.

Jacobi (1991) noted that “within higher education, undergraduates are being more frequently used as peer mentors, calling into question the value traditionally placed on a large age difference between mentors and mentees” (p. 515). Mentoring programs offer the humanistic aspect of the academic environment. It is widely believed that students are more successful in higher education when they have personal interactions with faculty, staff, and their peers. This can be through class activities, campus activities, guided advising/counseling, mentoring, or any combination of these.

“At Ohio University, the ExCEL program matches students on academic probation with peer advisors who assist individually in developing goals and time management plans” (Kamphoff et al., 2007, p. 399).

> Mentoring of at-risk and/or minority students has been used since the 1980s in the United States, and increasingly in Australia. Jacobi listed five generally agreed upon components of mentoring. These components describe mentoring as “a helping personal relationship focused on achievement, where the mentor provides emotional/psychological support,

> direct assistance with professional development, or role modeling, in direct interaction with the mentee, in return for emotional or tangible benefits" (p. 513). Under this description (especially direct, personal interaction aimed at helping the student), "many aspects of academic advising under the 'remedial' model of one-to-one study skills support in tertiary institutions can be viewed as mentoring activities." (Quinn et al., 2002, p. 23)

Peer Mentoring

Increased retention rates is one major reason why mentoring has been implemented in the university setting (Budge, 2006). "Institutions with mentoring programs that offer support and encouragement to students with academic deficiencies and adaptation problems during their freshmen year have seen increases in their retention and graduation rates" (Budge, 2006, p. 75). Peer mentoring programs have had a number of positive effects on both the mentees and mentors (Vaidya, 1994). Advanced interpersonal and communication skills were the most important outcomes for mentors; both mentors and mentees specified having more patience and compassion (Budge, 2006). Maturation, time management, and greater responsibility have also been noted as beneficial aspects of mentoring (McLean, 2004).

An academic or peer mentor might also increase a college student's self-esteem and academic self-efficacy, as well as general satisfaction with their academic program (Ferrari, 2004). While the effects fall under a psychosocial category, there are also many academic benefits of mentoring. Mentoring can positively influence the career choices students make, their perseverance in following their educational goals, and their achievement in higher education (Brown, David, & McClendon, 1999; Ferrari, 2004; Packard, 2003).

Conclusion

In this chapter, a case for why student retention and success is important to higher education was explored. The highlighted importance to students, institutions, and society were offered. The chapter continued with the history and scholarship of retention, which included works from Tinto and other researchers on the subject. A link between Tinto's model of student departure, Bandura's theory of self-efficacy, and Kuh's et al representation of student engagement was explored as it relates to persistence and retention. After the retention problem and possible sources of the problem were thoroughly discussed, applied interventions and theories of interventions were discussed in length with a pointed focus on student peer mentoring. As discussed above, student peer mentoring seems to have a positive effect on students in that it helps to increase persistence and ultimately retention. Unfortunately, due to the lack of sound research, lack of funds within institutions, and a lack of understanding of such a program, many institutions are not willing to implement such a program without sound evidence of success. Chapter 3 will outline the basis for a study involving the implementation of a peer mentoring program, the data collection method, and expected results of the study.

CHAPTER 3

METHODOLOGY

"Methodology refers to a design whereby the researcher selects data collection and analysis procedures to investigate a specific research problem" (McMillan & Schumacher, 2014, p. 10). Chapter 3 describes the method for this study, designed to understand how a student peer mentoring program affects the academic success of high-achieving, low-income first year college students. A combination of quantitative and qualitative approaches will be used with quantitative inquiry for collecting and analyzing pertinent data to answer research questions one and two and qualitative inquiry used to answer research question three. The combined research designs, quasi-experimental with pretest-posttest, followed by interviews of student participants, provides a valuable mixed-methods means of understanding the impact of a peer mentoring program both in breadth and in depth, the core contribution of a mixed-method study. In this chapter, the details of the design, population, sample, interview participants, and the mechanisms of data collection and analysis are presented.

Research Design

Most research embodies one of the two main types of research, quantitative or quantitative. Each type offer a unique perspective and data results to the researcher that may be suitable for generalization (quantitative) or understanding the underlying perspectives of a study

participant in rich detail (qualitative). In the case of the former, research questions are formulated for empirical testing following a deductive logic, often, but not always, through formalized hypothesis testing, while in the latter, research questions are framed through an inductive logic or emergent perspective, typically without a-priori arguments for testing (McMillan & Schumacher, 2014; Sandelowski, 2000). A third method of research, one that combines the two approaches is known as the mixed method, a discussion that is presented in the next section.

Mixed Method

As defined by Creswell (2009), "mixed methods research is an approach to inquiry that combines or associates both qualitative and quantitative forms of research. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study" (p. 4). Johnson, Onwuegbuzie, and Turner (2007) noted that mixed methods research is now recognized as the third major research approach. An historical analysis of mixed methods positions this type of research between the philosophy of Plato who was quantitative and Sophists who was qualitative (Johnson et al., 2007). The purpose is to consider multiple viewpoints and perspectives of a study that otherwise would not be adequately presented. According to Johnson et al., "For the first 60 years or so of the 20th century, 'mixed research"... can be seen in the work of cultural anthropologists and, especially, the fieldwork sociologists" (p. 113). However, it is only recently that the name *mixed methods* was coined. In this method, a mixing of the data (quantitative and qualitative) occurs. "The goal of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies" (Johnson & Onwuegbuzie, 2004, pp. 14-15). The triangulation method was used in this study using both qualitative and quantitative data to interpret the data.

Creswell (2009) posited that by mixing the datasets, the researcher provides a better understanding of the problem than if either dataset had been used alone. Though there has been some debate over the effectiveness of mixed methods, there has been an increasing "growth of interest in this research method as indicated in a multitude of books, journal articles, diverse disciplines, and funded projects" (Creswell, 2009, p. 205). With any research design, however, mixed methods has its strengths as well as weaknesses. Johnson and Onwuegbuzie (2004) provided helpful insights on these strengths and limitations, the most salient presented in Table 3 below.

Table 3

Strengths and Weaknesses of the Mixed Method Research Design

Strengths	Weaknesses
Can answer a broader and more complete range of research questions because the researcher is not confined to a single method or approach.	Some of the details of mixed research remain to be worked out fully by research methodologists (e.g., problems of paradigm mixing, how to qualitatively analyze quantitative data, how to interpret conflicting results).
Can provide stronger evidence for a conclusion through convergence and corroboration of findings.	Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team.
Numbers can be used to add precision to words, pictures, and narrative.	Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately.
Words, pictures, and narrative can be used to add meaning to numbers.	More time consuming and expensive.

Source: Johnson and Onwuegbuzie (2004).

Quantitative Design Method Used in this Study

The specific design method used in the quantitative portion of the study will be the quasi-experimental, pretest-posttest design. This approach to conducting a field experiment will be

utilized because randomization will not be possible for placing study participants in a planned treatment and control group (i.e., what makes it quasi rather than true experimental). It will enable the researcher to determine whether or not the treatment (peer mentoring) made a difference in self-efficacy and academic performance for students who go through a peer mentoring experience versus those who do not and in which a set of control variables will also be considered (discussed later in this chapter). It will also enable a focus on the level of engagement that the program has on those who participate.

Qualitative Design Method Used in this Study

For the qualitative portion of the study, a phenomenological design will be utilized. "Phenomenology as a philosophical tradition was first used in the development of a rigorous science by the German philosopher Edmund H. Husserl. By phenomenology Husserl meant the study of how people describe things and experience them through their senses" (Patton, 2002, p. 105). Patton (2002) noted the importance of Alfred Schultz's work in establishing phenomenology as a major social science perspective. More recently, in certain psychotherapy approaches, phenomenology is an important influence (Patton, 2002).

It is appropriate to use this method due to the nature of this study. The lived experiences were through participation in a peer mentoring program for the treatment group. For this study, the treatment group was participation in a comprehensive peer mentoring program as they attend classes. Each mentee was assigned a mentor who engaged with them throughout the course of a semester to help support their mentee's academic success. Certain activities were provided to the mentees in which they were encouraged to participate. In addition to the students' previous experiences, a measure of each student's self-efficacy was obtained. Personal interviews of a subset of participants were conducted to recount the essence of their lived experiences. The use

of this strategy shaped the types of questions asked during the interview by using observations throughout the study. Advantages of observations include having first-hand experience with the participants, the researcher could record data in real time, and unusual aspects could be noted (Creswell, 2009). Some disadvantages according to Creswell (2009) included researcher seeming to be intrusive, the researcher not having good observation skills, and participants presenting with special issues for attention. These observations helped to formulate the questions for the interviews (see Appendix A). Interviews were used to gain insight on the lived experiences and because the participants were not observed during the entire study.

The choice for the use of phenomenology was important to this study because of the desire to understand in depth how the study participants made sense/drew meaning from their experience as a high-achieving yet low performing college student, and as it regarded their participation in the peer mentoring program and how that involvement bracketed and/or impacted how they felt about themselves and their potential for future success.

Population, Sample, and Interview Participants

The population of interest for this study was traditional-aged students who entered an institution and were identified as high-achieving (i.e., they held a GPA of 3.0 or higher or performed in some other noteworthy way to evidence strong potential for success) but that found themselves on academic probation after their first or second semester/term of coursework. The specific sample for this study was traditional-aged students who entered Midwest College in Indiana and were defined as high achieving (had a high school GPA above 3.0) but found themselves on academic probation in their second or third semesters with a GPA below 2.0. Midwest College was chosen because of its diverse student population. Students vary widely in various demographic areas such as background, income level, ethnicity, race, academic

achievement, academic potential, lifestyle, work and family status, and even goals and purpose of attending Midwest College. Midwest College is also a feeder school into a variety of four-year institutions.

Midwest College, the nation's largest state-wide public post-secondary institution, serves nearly 200,000 students a year (Midwest College, 2013). Students enjoy personal attention in smaller classrooms with more than 30 convenient locations close to home or work. According to the Midwest College website, students can earn a degree for around $3,000 a year and take care of the first two years of a four -ear degree by transferring their credits. This saves students money and time, therefore making Midwest College an affordable and efficient option. The North Central Association of Colleges and Schools accredit Midwest College of Indiana. Midwest College's mission is as follows:

> Midwest College prepares Indiana residents to learn, live, and work in a diverse and globally competitive environment by delivering professional, technical, transfer, and lifelong education. Through its affordable, open-access education and training programs, the College enhances the development of Indiana's citizens and communities and strengthens its economy. (Midwest College, 2013, ¶2)

Of the sample population, 50 students were selected for participation, 25 who were participants in a semester-long peer mentoring experience and 25 who were participants in a control group in which no intervention was provided. The actual invitations to participate were facilitated by the involvement of professional staff at the focal host institution who assisted the researcher in extending invitations to salient students to participate.

For the qualitative portion of the study, five students were selected from the treatment group to participate in interviews at the end of the semester. The selection process was not

random but purposeful to seek maximum variation, namely to ensure a broad demographic of participants. The selection criteria sought to ensure that both men and women were represented as well as reflected racial/ethnic diversity and a range of majors or intended majors.

Appropriate human subjects safeguards were integrated into the study as per the expectations of the Indiana State University Institutional Review Board as well as those of the host institution. This included providing subjects/participants with an informed consent form that explained the study and their rights as a participant that they were asked to sign. Furthermore, no identifying information traceable to a specific subject/participant was included in the write-up of findings; participants were only referred to via pseudonyms.

Data Collection

Permission was obtained from Midwest College administration to interview subjects, review FAFSA data including estimated family contribution (EFC) to determine socioeconomic status, gender and race, and review the current and new GPA of participants before and after the treatment. Data were collected through three sources: university records (FAFSA and GPA), pre and posttests, and personal interviews. As the researcher, I initially contacted potential participants through a campus wide e-mail and then an information session explaining the mentoring program. At the information session, those who expressed an interest in the program were given a Participant Consent Form. Once completed, participants were given a pretest to establish a baseline for the study. Mentors and mentees were separated during this time and paired up based on demographic and academic information gathered. All data collected were coded to protect the identity of all participants and kept in a secured and locked location. At the conclusion of the study, a posttest was administered to all participants and the five selected

individuals from the treatment group participated in a personal interview. A sample of the pre/posttest can be found in Appendix B.

Some features of this program included a personal mentor for each mentee, a coordinator who had academic advising knowledge, customized assignment and weekly planners for each participant, and open access to campus and community resources. The requirements to be a qualified mentor was to have a GPA of at least a 2.8, have at least one year of classes left to take, and a passion for helping others. The idea behind having mentors with a GPA of at least a 2.8 was to attract mentors who had been through some similar struggles the study participants were experiencing at that time. The mentees would hopefully see the mentors as less intimidating and be inspired knowing that success can come after failure. The goals of this program are improvement in self-efficacy and locus of control, improved study habits, better decision-making skills, more control over daily schedule and time management, improved knowledge of campus resources and contacts, improved communication and networking skills, all with the intent of enabling a student to realize better course grades, GPA, and ultimately graduation. The program itself was strategically planned to stair step the mentee into being more independent in his or her decision-making while making informed decisions, and learning when to lean on others for support and when to be independent.

Once the mentors and mentees were paired, each pair had an initial meeting in the first week, first in a group setting with the other mentors and mentees, and then one-on-one. The group meeting introduced all participants to the program, covered expectations and the weekly schedule, answered any outstanding questions, and served as an icebreaker. The initial one-on-one session served as an opportunity for the mentor and mentee to get to know each other a little better, review expectations, goals, challenges, and strengths, as well as created an overall plan

for academic success for the semester. All participants were required to complete a SWOT analysis that highlighted their strengths, weaknesses, opportunities, and threats. They were also required to complete a weekly plan schedule where they documented everything they did on a daily and weekly basis. In this planner, they included their work schedule, church, downtime, meal time, travel time, study time (calculating 2 hours of study for every credit hour being taken), class time, and anything else that took their time during the day. The purpose of this was two-fold. First, the student had an opportunity to see on paper how busy he or she really was. Some who felt they were too busy and therefore overwhelmed with school and studying could find pockets of time that they had not been utilizing properly. Others find that some days are much heavier than others and that a balanced schedule is necessary to prevent overload on any given day. The second purpose was for the student to actually sit down and think about how his or her time was being spent. Does this student spend too much time with family and friends rather than studying and going to class? Perhaps the student's outside obligations are simply too great or demanding at this time in his or her life and school just does not currently fit.

In a typical 16-week semester, the program structure allowed time for one-on-one meetings and collaboration, group meetings, individual reflection, and rest periods. The following is a brief outline of what each week looked like:

WEEK 1: Introduction, SWOT, Weekly Plan, One-on-one meeting.

WEEK 2: One-on-one follow up meeting--textbook and schedule check, review weekly planner, assignments calendar, instructor contact information, plan for next two weeks.

WEEK 3: Mentor e-mail or call to touch base and answer questions, preventative measures, attendance check.

WEEK 4: Group meeting--how is it going? Challenges? Overcoming challenges workshop, attendance check.

WEEK 5: Reflection week for all.

WEEK 6: One-on-one meeting--Goals review and tracking--assignments calendar check, attendance check, coaching on how to communicate with professor.

WEEK 7: Mentor meeting with coordinator--additional training, preparing for final weeks and how to overcome challenges.

WEEK 8: Group meeting--College resources scavenger hunt, assignment calendar check, Goals and SWOT review, progress report, Networking workshop, attendance check.

WEEK 9: Reflection week for all.

WEEK 10: Mentor e-mail or call to check in with mentee, attendance check.

WEEK 11: Mentor final stretch meeting with coordinator--How to keep mentee motivated, giving support without enabling.

WEEK 12: One-on-one meeting--attendance and assignment calendar check, temperature check, goals review, plan for remainder of semester.

WEEK 13: Reflection week for all.

WEEK 14: Mentor call to follow up with mentee, attendance check, final thoughts on semester.

WEEK 15: Final group meeting--progress report, discussion of finals week strategy, grade check, attendance check, and scholarship workshop.

Each week had a deliberate purpose and was designed to draw the mentee's attention to a particular aspect of college and his or her challenges. Some weeks were more impactful than others for each participant. There was a coordinator to oversee the program. This individual had

academic advising knowledge and was qualified to train and coach the mentors in what was needed to help his or her mentee. The coordinator led all group meetings and facilitated communications between mentors and mentees when necessary.

Data Analysis

Quantitative Study Component

The data analysis for the quantitative portion of this study was conducted using ordinary least squares (OLS) regression. This method was used as it optimally examines the effect of a set of independent variables on a singular outcome, or dependent variable, operationalized as a continuous one. The appropriate tools for testing the assumptions for OLS regression were deployed prior to the actual statistical analysis answering each of the two quantitative research questions.

In this study, a set of control variables was included. They were socioeconomic status, gender, and race. Socio-economic status was drawn from institutional data and operationalized on an interval scale as a set of family income brackets. Gender was a dichotomous variable with a 1 = female and 0 = male. Race was also operationalized as a dichotomous variable with 1 = minority (all races other than White) and 0 = White. Although greater differentiation by race would have been ideal, cell size constraints precluded being able to do analysis in that more fine grained manner.

To answer Research Question 1 comparing outcomes for student participants and non-participants in peer mentoring, the set of control variables were entered as a first step. In the second step, a singular independent variable was entered, operationalized as a dichotomous one (1 = participant in mentoring program; 0 = non-participant). The dependent variable was self-efficacy. Self-efficacy was measured using the College Academic Self-Efficacy Scale (Owen &

Froman, 1988) and found in Appendix B. It was operationalized as a continuous measure and the sum of all submitted answers on the instrument (posttest) less the sum on the pretest. In other words, this dependent variable was a measure of change in self-efficacy in study participants. Each of the 33 answers had a 5-point rating scale ranging from 1 = *a lot of confidence* to 5 = *little confidence* in performing certain behaviors related to academics in higher education. The self-efficacy total score hence ranged from 33 to 165. Permission was granted by the author to use this scale in this study. Dependent variable two was operationalized as the difference between the cumulative GPA at the start of the term and the cumulative GPA at the end of the term to obtain a measure of GPA change (either up, down, or unchanged). GPA was used since by definition it is linked to retention given policies on academic probation and dismissal. GPA was measured on a standard 0-4.0 continuous scale and drawn from institutional records.

To answer Research Question 2, the research focused on just the participants in the peer mentoring program. The control variables were again entered in a OLS regression step, followed by an independent variable, in this case level of engagement in the program since the data this time was only on program participants. Level of engagement was operationalized as the sum of points earned in the program and that consisted of 10 points for every peer mentoring session attended (there were a total of seven) and a total of 30 points spread across a series of six assignments. Total points possible were 100. The same two dependent variables from Research Question 1 were again utilized.

Qualitative Study Component

Personal interviews were the method of data collection for the qualitative portion of this study. Using the phenomenological approach, the collected data were analyzed and triangulated using the quantitative findings. The phenomenon of interest was the experience of high-

achieving, low-income students in the student peer mentoring program. Specifically, the level of involvement of participants in the program activities, with their mentor, and with each other, and their perceived linkages with academic performance were the focal issues of interest. “From the philosophy of phenomenology comes a focus on the experience itself and how experiencing something is transformed into consciousness” (Merriam, 2009, p. 24). Individual experiences are bracketed to be analyzed and then are compared to identify the essence of a phenomenon (Patton, 2002). Phenomenological interviews were used as the primary method of data collection after the researcher explored her own experiences to highlight personal prejudices, viewpoints, and assumptions (Merriam, 2009).

Researcher Perspective

As a former first generation, high-achieving, low-income college student, I have personal experience and knowledge of the dissertation topic. During the time I was pursuing my undergraduate degree, I was unaware that I had been identified and catalogued as high-achieving and low-income. In fact, throughout most of my undergraduate and graduate academic career, I participated in either a formal or informal mentoring and cohort based program. In my undergraduate mentoring program specifically, I had a director who gave us our goals for the semester, coordinated study sessions and free tutoring, assigned peer mentors, and coordinated social events throughout the semester in which we were asked to participate. At that time, I assumed that all programs and colleges functioned in this manner and was a requirement for college. I later found that to be a misconception and that I was chosen because of my identified status.

I personally feel that I gained an enormous amount of knowledge about college, social norms, academics, and navigating the higher education labyrinth that I would otherwise not have

learned. The peer mentoring program gave me the tools to ultimately be a successful college student on my own by knowing which questions to ask, how to follow up on certain issues, how to choose and schedule classes, who to speak to in certain situations, and how to work the social aspect of college without losing focus of my ultimate goal--graduation. In retrospect, I feel as if I was part of a secret society that afforded me the pass key to success in higher education and without this membership, I may have failed at achieving my goals. For me, being in this program was a Godsend, and I cannot imagine what my experience would have been without it. It is this that drove my passion for this study. I believe that every student, especially those who are at high-risk of failing and those who are not readily invited into the "secret society," should be afforded the same opportunity that I had as an undergraduate. I feel this would bridge the gap and ease the transition from high school to college for many students who participate, particularly those who are first generation or have little insight into what college is all about.

As the researcher in this quasi-experimental study, I was an observer (of the mentees and mentors), trainer (of the coordinator and mentors), and coach (of coordinators and mentors). I created and coordinated a similar mentor program at my current college of employment. I have been a faculty member, academic advisor, and/or enrollment counselor for 10 years. During this time, I have seen numerous students and issues that impede their success as a student. Some of these issues are self-inflicted by the student; however, many others are a culmination of being unprepared, being under informed, personal tragedy or crisis, lack of institutional support, and an inability to properly balance work, life, and school. I bring my experience in dealing with these issues first-hand and through my work.

Summary

The methodology of this study outlined in this chapter examined how the research

questions guided the tools and processes for doing the analyses. The pros and cons of the mixed methods approach were examined first and a discussion of the qualitative and quantitative portions of the study with a focus on the participants, data collection, and data analysis were included next. Chapter 3 concluded with a discussion of the method specifics, informed by a discussion of how the variables were operationalized in the quantitative portion of the study.

CHAPTER 4

RESULTS

The purpose of this mixed method study was to explore the effects that a student peer mentoring program had on participant self-efficacy and ultimately the academic success of low-income, first-time college students who entered college as high-achieving (i.e., admission GPA above 3.0) but are currently underperforming with a GPA below 2.0 for at least one semester. Informed by the purpose of the study, the specific research questions were as follows:

1. Are there differences in self-efficacy and academic performance of high-achieving but low performing students who did and did not participate in a peer mentoring program?
2. What effect does level of engagement in a peer mentoring program have on the self-efficacy and academic performance of student participants?
3. How do participants who completed a peer mentoring program describe it in regard to its impact on their ability to be academically successful?

In this chapter, I report the results of the study. The first section presents the descriptive results from the data collected from the surveys and the institution's database on the focal students for this study. The second section presents the results of the inferential analyses. The second section begins with a discussion of the statistical examination of the data for suitability for OLS regression analysis followed by the actual regression results. The third section presents

the qualitative results from the interviews of five students that had completed the peer mentoring program and includes a description of each study participant and a presentation of their perspective on the experience, organized around the topics of (a) the program and its features, (b) the peer mentors, and (c) the impact on their success. The final section of this chapter is a summary of the collective results.

Descriptive Results

As noted in Chapter 3, the data from this study were drawn from two sources. The first source was from the survey itself that consisted of a 33-item academic self-efficacy instrument with each item rated on a five-point scale (equating to the letters A to E) with a A = 1 and a E = 5, implying that a lower number equates to a higher level of academic self-efficacy. These numbers were summed to a total academic self-efficacy score. Given that the instrument was provide to the students at the start and at the end of the experience, the actual variable of interest was the change in academic self-efficacy, calculate as the difference between the pre- and post-test scores. The change in academic self-efficacy from T1 to T2 was one of the two dependent variables in the study. A negative number for the change variable would infer an increase in academic self-efficacy.

The other data source was the college's student information database. These data contained the requisite demographic information (gender, race, and socioeconomic status) as well as the GPA information of interest. With respect to the demographic information (control variables), gender was coded 1 = Female and 0 = Male. Race was coded 1 = Minority and 0 = White. Socioeconomic status was coded based on family income range per year. Specifically, 1 = $0-$14,999; 2 = $15,000 - $24,999; 3 = $25,000 - $34,999; 4 = $35,000 - $44,999; and 5 = $45,000 or higher. The GPA variable was operationalized as the difference between the

cumulative GPA at the start of the term and the cumulative GPA at the end of the term. This was the second of the two dependent variables.

The final two variables were the independent variables of interest. The first independent variable was whether or not a student participated in the peer mentoring program, coded a 1 = participated and a 0 = did not participate. The second independent variable was the level of engagement of students who participated in the peer mentoring program. This variable was the sum of points earned in the program and that consisted of 10 points for every peer mentoring session attended (there were a total of seven) and a total of 30 points spread across a series of six assignments. Total points possible were 100. The actual variable was transformed to a percentage of the total points received.

Table 4 presents the descriptive results and includes the averages, standard deviations, range values, frequencies where applicable, and total *n* for each variable. They are in the order of dependent variables, control variables, and independent variables. Note that there were 25 students in the treatment group (i.e., who participated in the peer mentoring program) and 25 students in the control group (i.e., who did not participate in the peer mentoring program) for a total of 50 students in the study.

Table 4

Descriptive Data Results

Variable	Mean	Standard Deviation	Range Values or Frequencies	*n*
Change in Self-Efficacy	-8.82	16.95	29 to -67	50
Change in Cumulative GPA	.54	1.21	4.0 to -1.38	50
Gender	.56	.50	F=28; M=22	50
Race	.56	.50	M=28; NM=22	50
Income	2.20	1.47	1=23; 2=9; 3=4; 4=8; 5=5	50
Participant in Peer Mentoring	.50	.51	1=25; 0=25	50
Level of Engagement in Peer Mentoring	73%	29%	14% to 100%	25

With respect to the dependent variables of interest, the descriptive results revealed that the average student in the total sample realized almost a 9-point increase in academic self-efficacy, although the standard deviation was sizeable as was the range values. In regard to the change in cumulative GPA, the average student in the total sample realized a .54 increase in cumulative GPA, although again the standard deviation and range values were quite substantial. In terms of the control variables, the total sample was slightly skewed toward women and to minority students at the same levels. The average income level fell between the $15,000 - $24,999 and $25,000 - $34,999 ranges, although closer to the former than the latter. It was also notable to see that nearly half of the total sample had an income level in the lowest range ($0 - $14,999). With respect to the independent variables, one-half of the students in the sample participated in peer mentoring while the other one-half did not. Finally, among the 25 students that did participate in peer mentoring, the average percentage of total points earned in the course was 73% with once more a fairly sizable standard deviation and range values.

Inferential Results

Data Suitability Assessment

Prior to conducting any inferential analysis, it is necessary to first examine the assumptions for that procedure and if the assumptions are met within reasonable bounds of acceptability. A first order of analysis is to visually examine the data for the potential impact of collinearity. Collinearity is a circumstance when two or more independent variables are highly correlated with each other and when present, can cause erroneous results (Fox, 1991). A general rule of thumb is that independent variable correlations above .8 are usually considered problematic, although collinearity can be present in data with correlations as low as .4 (Lewis-Beck, 1980).

To visually inspect correlations for possible collinearity, it is appropriate to present the data in the form of a correlation matrix. The correlation matrix for the data in this study is presented in Table 5.

Table 5

Correlation Matrix

Variable	1	2	3	4	5	6	7
Change in Self-Efficacy (1)							
Change in Cum. GPA (2)	-.26						
Gender (3)	-.20	.24					
Race (4)	-.19	-.03	-.06				
Income (5)	-.15	.43**	.09	-.13			
Participant in Peer Mentoring (6)	-.51**	.39**	.08	.24	.47**		
Level Eng. in Peer Mentoring (7)	-.06	.59**	-.09	.31	-.20	.00	

**p<.01.

The correlation matrix revealed only one independent variable pair relationship that was significant and it was between participation in peer mentoring and income. Because it was above the rule of thumb .4, additional analyses for collinearity were conducted and examined. These included an analysis of variance inflation factors (VIFs) and the condition index statistic. The VIF results revealed a highest value of 1.46 and with the participating in peer mentoring variable. However, it was well below the threshold of 10 considering indicative of collinearity (Von Eye & Schuster, 1998). Furthermore, the condition indices also examined were well within acceptable ranges, suggesting the absence of excessive collinearity.

Next, a series of data diagnostics were performed to investigate suitability of the data for ordinary least squares (OLS) regression analysis. A series of histograms and scatterplots were produced and examined (not shown) that indicated no need for data transformations to address excessive skewness in the data. Furthermore residual and normal probability plots were investigated and all plots displayed the appropriate shape to indicate suitability for OLS

regression, namely a roughly uncorrelated cloud when plotting the residuals and linearity with the normal probability plots.

OLS Regression Analysis

Once it was clear that the data could be reasonably analyzed using OLS regression, analyses were conducted for each of the research questions. Table 6 presents the results associated with Research Question 1 that investigated if there was a difference in the change in self-efficacy and cumulative GPA based on participation (or not) in the peer mentoring program. A block step regression procedure was utilized in which the three control variables were entered in the partial model followed by the addition of the independent variable of interest in the full model.

Table 6

OLS Regressions Results: Research Question 1

	Model 1: Change in Self-Efficacy		Model 2: Change in Cum. GPA	
Variables	Partial Model	Full Model	Partial Model	Full Model
Gender	-.20	-.17	.20	.19
Race	-.22	-.05	.03	-.05
Income	-.16	.12	.41**	.28+
Part. in Peer Mentoring		-.54**		.25
F-Value	1.76	4.91**	4.33**	4.03**
Adjusted-R^2	.04	.24	.17	.20

**p<.01; ^{+}p=.07.

The results shown in Table 6 revealed that in Model 1, the partial model *F*-value was not significant but in the full model, it was significant, suggesting that the set of variables was useful in predicting variance in self-efficacy in the full model but not in the partial one. Furthermore, Model 1 explained 24% of the variance in the full model as evidenced by the adjusted-R^2 value. With respect to the variable coefficients, the singular variable that was significant was participating in peer mentoring at -.54 (p < .01). This result, given how the variable was coded,

infers that students in the treatment group realized greater gains in academic self-efficacy than students in the control, or non-participant group.

With regard to Model 2, both the partial and the full model were significant as evidenced by the significant *F*-values. The partial and full model variance explained by the variable sets was 17% and 20% respectively. The focal factor in the partial model was income, a factor that approached, but did not fully reach, significance in the full model ($p = .07$). No other variables were significant in Model 2.

Table 7 presents the results associated with Research Question 2 that investigated the affect, if any, of the level of engagement in peer mentoring among those in the program, after controlling for gender, race, and income. A block-step regression procedure was again deployed with the three control variables entered in the partial model and all of the variables (the three controls and the one independent variable) entered in the full model.

Table 7

OLS Regressions Results: Research Question 2

	Model 3: Change in Self-Efficacy		Model 4: Change in Cum. GPA	
Variables	Partial Model	Full Model	Partial Model	Full Model
Gender	-.33	-.33	.27	.29*
Race	-.213	-.13	.05	-.15
Income	.15	.14	.34	.44**
Level of Engagement		-.02		.75***
F-Value	1.10	.79	1.57	10.62***
Adjusted-R^2	.01	.04	.07	.62

*$p<.05$; **$p<.01$; ***$p<.001$.

The Table 7 results for Model 3 revealed that neither the partial nor the full models were significant for the *F*-value suggesting that the set of variables were not useful in predicting variances in self-efficacy. This implies that the level of engagement was not significantly relevant to the change in self-efficacy for participants in the treatment group.

Model 4 shows no significance for the partial model *F*-value, however it was significant in the full model. This suggests that the variable were useful in predicting variance in GPA as it relates to level of engagement in the full model but not in the partial model. Additionally, Model 4 explained 62% of the variance in the full model as evidenced by the adjusted-R^2 value. The following variables were significant, level of engagement at .75 ($p < .001$), income at .44 ($p < .01$), and gender at .29 ($p < .05$). These results indicate that the treatment group's GPA was more positively affected by the level of engagement than was the participants in the control group.

Qualitative Results

This mixed method dissertation study enabled not only results to be examined in breadth (the quantitative) but also in depth (the qualitative), resulting in a richer treatment to understand the full range of impact of the peer mentoring program. Research Question 3 required the qualitative study design and was pursued. Utilizing a phenomenological approach, a description of each of the study participants is first presented, followed by a discussion of participant insights in the three areas of the mentoring program itself, peer mentors specifically, and impact on their success.

Participant Descriptions

Charlie Brown was a 31 year old, single, African-American father of two and worked two part-time jobs. He was a part-time student and his income level fell in the $25,000 - $34,999 range. Mr. Brown's rocky background puts him in the mindset that he should try to give his children a better childhood, but has trouble believing that he is able to accomplish this. Mr. Brown grew up without an active father in his life. His life lessons were more about survival rather than sustainability. "I was not brought up to value education. Learning just came easy to me. My main goal was to put food on the table. Everything else was second." Though he was a

good student in high school, he was never encouraged to continue his education beyond high school. Mr. Brown's first two semesters at Midwest Community College were just below average overall, but he showed promise in some classes as he had a few Bs and Cs. His main issue academically appeared to be not finishing courses and not properly withdrawing which resulted in an F grade. Mr. Brown started the Peer Mentoring Program with a cumulative GPA of a 1.14. His semester GPA at the end of the mentoring program was 0.00 as he did not finish any of his classes. This left Mr. Brown's final cumulative GPA a 0.42. Mr. Brown's motivation for finishing school was his two children. However, he seemed to face roadblocks such as frequent car trouble, work schedules conflicting with his school schedule, and confidence in his own ability.

Jessica Miller was a 21 year old, single, Caucasian, woman with one child. Ms. Miller works one job part-time while she attended Midwest Community College as a full-time student. Her income level was in the lowest range, $0 - $14,999 annually. Ms. Miller had very little confidence in her academic ability and needed constant reassurance and guidance. Ms. Miller had dreams of opening her own business and she loved to laugh. She was very friendly and a person with whom it was easy to get along. An academically respectable student in high school, Ms. Miller never thought that college could be for her. "I didn't want to go to one of those big schools with thousands of people. The thought of that terrified me. But a friend said that going to Midwest would get me some knowledge on starting a business." Ms. Miller's motivation for finishing school was being able to open her business. Her first semester was difficult since she was pregnant when she started and had the baby in the middle of the semester. Dealing with a new baby, a full class load, and the ups and downs of motherhood was more than she could handle, and therefore, her classes suffered. Ms. Miller started the Peer Mentoring Program with a

cumulative GPA of 0.00. Her semester GPA while in the program was a 1.30 which left her with a cumulative GPA of a 1.30 at the end of the mentoring program.

Alan Michaels was a 22 year old, Caucasian, single man with no children. Mr. Michaels was a high-achieving student in high school but fell short his first year in college. Mr. Michaels attended Midwest College as a full-time student and did not hold a job. Mr. Michaels' academic skills were above average. However, the guidance and personal attention he was used to in high school was lacking at the college level. "I really don't know what I was doing. I guess having that much freedom was not good for me. I chose hanging out with my buddies over going to class." Mr. Michaels was highly motivated and when given the proper instructions, seemed to be able to do most anything well based on how he performed in the mentoring program and his previous performance in his courses. His growing up experience did not appeared to be from a stable family and while going to college was not a frequent topic of conversation in his household, it was certainly clear to him that going to college was a strong possibility. Mr. Michaels' family income was estimated at $45,000+ since he is still considered a dependent and his parent's income was used. Mr. Michaels' cumulative GPA was 1.71 at the beginning of the Peer Mentoring Program. His semester GPA was a 3.33 which gave him a final cumulative GPA of 2.75. Mr. Michaels did retake a couple of classes and received a higher grade which contributed to the increase in his GPA.

Daisy Hall was a 22 year old, African-American, widowed woman with no children. Ms. Hall has ambitions to work in corporate America. As a part-time student at Midwest College, she worked as many hours as she could to earn money and experience. She was above average in high school, but an onset of tragic events in her personal life left her lost and unfocused on school after enrolling in college. Her eagerness and ambition were often overcast by the recent

tragic events in her personal life. Ms. Hall's husband and her father were killed in a car accident the year she started at Midwest Community College. Ms. Hall was often late or absent from class as she was still personally dealing with the tragedy. "I just couldn't focus. I knew that I needed to pull myself together and get on with my life, but it was very hard." Ms. Hall took advantage of the extra support that the Peer Mentoring program gave her. Academics was not necessarily her primary issue in her life as discussed, but still suffered despite being in the program. Ms. Hall was introduced to a number of resources at Midwest to not only help her focus on her academic goals, but to cope with her recent loss. "I had no idea that I could ask for an incomplete in a class due to tragedy. I also didn't know that I could repeat a class for a better grade!" Ms. Hall's income level is between $0 - $14,999. She started the Peer Mentoring Program with a cumulative GPA of 1.75. Her semester GPA was a 2.00 leaving her with a final cumulative GPA of a 2.60.

Katie Rogers was a 35 year old single woman with two children. Ms. Rogers worked full-time while trying to go to school part-time. Ms. Rogers had previous college experience and transferred in with a 2.20 GPA. Her previous college experience was more than 10 years ago. Ms. Rogers decided to go back to school to finish her associate's degree for personal gain and to possibly be promoted within her company. "I really just wanted to finish what I started. I hate leaving things unfinished." Ms. Rogers struggled to fit into the Midwest environment and keep up with the fast pace of the classroom. Being out of school for so long left her unpolished and inexperienced with the new technology used in the classrooms. "My first couple of classes were online since I work full-time. I failed them both because I just couldn't keep up. The technology escaped me." Ms. Rogers started the Peer Mentoring Program with a cumulative GPA of 0.00. Her semester GPA was still 0.00 as she did not finish her classes nor did she complete the peer mentoring program. This left her with a final cumulative GPA of 0.00. The fact that Ms. Rogers

worked full-time was a contributing factor to her lack of academic success. She often missed classes due to projects or staff meetings or simply because she was tired. Towards the end of the semester, she felt that she was so far behind that she would never catch up so she stopped going to classes altogether.

Participant Perspectives

As part of the phenomenological approach, interviews of five treatment group participants were conducted. Specific questions were asked concerning the overall peer mentoring program, the peer mentors, an assessment of their involvement, and the impact this experience had on their academic success. As the researcher, I attempted to provide a diverse group for the interview in terms of level of engagement, background history, age, race, income, and completion of the program. The purpose of this maximum variation effort was to obtain a range of responses to adequately cover the different issues related to academic failure and success.

Peer mentoring program. The interview participants were asked several questions regarding the overall peer mentoring program. In reviewing the responses to the question concerning the program's structure, four out of five gave good reviews. Mr. Michaels stated that the program was well organized and he felt at ease and welcomed. He felt that his particular mentor/mentee pairing was good. Mr. Brown finished the program, but was absent or late to many of the meetings. Ms. Rogers did not complete the program so she was unable to adequately comment on this question. Most of the mentees felt that the activities were well-structured and offered valuable information and experiences. For example, one activity that all mentees were required to complete was a weekly planner that gave a snapshot of their weekly activities hour by hour on one sheet of paper. Mr. Michaels stated,

> This was the best thing ever! I was able to put all of my activities on one sheet of paper. My mentor told me that I was not utilizing my time effectively and we reworked my weekly plan so that I had a good balance of activities each day. The best part was I was still able to hang out with my friends while still getting my work done. I just needed time management.

Both Ms. Hall and Ms. Miller felt that the program helped in the sense that they received support and confidence to continue in their studies. Ms. Hall said the following:

> I think for me it was helpful to know that I was not the only going through the things I was going through. I was having a hard time dealing with a lot of personal issues in my life. I really felt alone and was actually considering dropping out of school. My mentor was very positive and we were about the same age so that helped me relate to her a bit. I don't know that this program really helped my grades, but it gave me the confidence to stay in school. I just needed to focus on my work and I was unable to do that before joining the program.

It appears that the general consensus of the five participants is that the program was sound, well organized, and helped them to focus on their academics. Even for those who did not participate at 100%, the program was viewed as helpful. Next, the interviewees were probed on their views of the mentors and their effectiveness in the program.

Peer mentors. The peer mentors were in place to play a critical role in the peer mentoring program, were there as catalysts for many of the activities, and served as a link between the students and their academic success. The peer mentors were carefully selected not only based on their academic ability, but also by their interpersonal skills and their willingness to help others. The minimum GPA requirement for the peer mentors was a 2.8. This was purposeful

as there was a desire to have some mentors that had a few academic issues as some point, but had been able to work through them and are now successful. It was determined that the mentees would be able to better connect with mentors who could related to what the mentees had been through rather than having a mentor with a 4.0 GPA. Mentors and mentees were paired not only based on gender, but also based on background and geography in terms of which campus they preferred to take classes. Due to the mentor/mentee ratios, a perfect match was not always possible. Ms. Rogers stated, "I didn't like my mentor. He kept giving me all of these tasks to do. I'm already working a full-time job and trying to go to school at the same time." Ms. Rogers was paired up with a male mentor who did not have children and worked part-time. Ms. Rogers felt that he could not relate to her struggles since he did not have a similar background. On the contrary, Ms. Miller had the exact opposite experience. "My mentor was the best thing that ever happened to me. Not only were we in the same class, but we didn't live that far from each other." Ms. Miller was paired with another female who had a very similar background and was close to her age. Even their personalities were rather similar.

A final part of the interview asked the mentees to reflect on their own involvement in the program. Having a structured program with strong mentors was only part of the equation for success. The mentees also had to contribute in a major way in order to see positive results from the program. This contribution came in the form of attending meetings, participating in the various required activities, and holding oneself accountable for his or her actions.

Impact on their success. The first goal of the program was to identify any barriers to success for each mentee. During the interview, mentees revealed such barriers as inconsistent transportation, personal issues, poor time management, working full-time, lack of confidence, and lack of direction. When asked, "how effective was your participation in this program in

helping you to overcome those barriers and achieve academic success?", the replies varied. Some felt that the program was great and that participating in it directly resulted in their academic improvement over the past semester.

> My participation was effective and very important. If I hadn't joined this program, I don't know that I would have survived another semester. I think I would have had to sit out for academic probation. I already knew that I could do the work. I just wasn't doing it. I know it sounds silly, but I just wasn't in the right mindset. Having the mentor, coming to the meetings, and being held accountable was important for me and helped me to get it together.

Others felt that although the program was good, it did not help them academically. However, the program did give them the confidence and resources to continue on.

> I don't really think that this program helped me academically. I did learn how to organize my time properly. I also learned how to say "no" and stay focused on what I'm trying to do. I also feel like I can stay in school and things are not so overwhelming for me.

Still, others felt that this program was of no help at all on any front.

> My participation in this program did not change my situation one bit. I am not at a good spot in my life right now and I see now that I have taken on too much at once and I had to let something go and that something was school. I do hope to get back into it when I can focus a bit more.

Overall, it appears that the program was helpful to most of the participants in a variety of ways such as direct impact on grades, helping the students to deal with challenging outside forces, and support to help them focus in class. The program ultimately helped many students to

be aware of the many resources that were available to them and restore lost confidence they may have had in their abilities.

Conclusion

The findings from both the quantitative and qualitative results were informative for understanding that effects of the mentoring program. With respect to the dependent variables of interest, the descriptive results revealed that the average student in the total sample realized almost a 9-point increase in academic self-efficacy and the average student in the total sample realized a .54 increase in cumulative GPA. From an inferential perspective, students in the treatment group realized greater gains in academic self-efficacy than students in the control, or non-participant group. Though level of engagement was not significantly relevant to the change in self-efficacy, it did positively affect the treatment group's overall GPA.

The qualitative portion of this study provided helpful insight to the quantitative findings. As noted by the interview participants, they felt the mentoring program was helpful in restoring their confidence and having a mentor and additional resources reinforced their belief that they could succeed. While some did improve their overall GPA, most felt that their academic success had sources not just as a result of participating in the program. However, it is clear that increased self-efficacy, available resources, and mentors who serve as guides helped to create an environment conducive to their academic success.

CHAPTER 5

DISCUSSION

The purpose of this mixed method study was to explore the effects that a student peer mentoring program had on self-efficacy and ultimately the academic success of low-income, first-time college students who entered college as high-achieving (i.e., admission GPA above 3.0) but currently underperforming with a GPA below 2.0 for at least one semester. The study was designed to help illuminate factors and contexts that may help low-income students overcome personal adversity and challenging socioeconomic circumstances to excel academically. It was also designed to provide a deeper understanding of the issues such students confront that can be used to develop programs and interventions that may help more low-income students identified as high achieving upon entering college to sustain their academic achievement levels through college.

The research questions that shaped this study were as follows:

1. Are there differences in self-efficacy and academic performance of high-achieving but low performing students who did and did not participate in a peer mentoring program?
2. What effect does level of engagement in a peer mentoring program have on the self-efficacy and academic performance of student participants?

3. How do participants who completed a peer mentoring program describe it in regard to its impact on their ability to be academically successful?

Methods and Procedures

A combination of quantitative and qualitative approaches was used for this study. Quantitative inquiry was deployed for the purpose of collecting and analyzing pertinent data to answer Research Questions 1 and 2. Qualitative inquiry was used to answer Research Question 3. The combined research designs, quasi-experimental, pretest-posttest, followed by interviews of student participants, provided a valuable means of understanding the impact of a peer mentoring program both in breadth and in depth, the core contribution of a mixed-method study. "The goal of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies" (Johnson & Onwuegbuzie, 2004, pp. 14-15). The mixed method approach thus enables greater richness of insight on the findings. The respective quantitative and qualitative findings will be discussed in temporal order, with the latter enabling deeper as well as extended insight on the quantitative results.

Quantitative Method

The specific design method used in the quantitative portion of the study was, as mentioned, the quasi-experimental, pretest-posttest design. This approach to conducting a field experiment was utilized because randomization was not possible for placing study participants in a planned treatment and control group (i.e., what makes it quasi rather than true experimental). It enabled the researcher to determine whether or not the treatment (peer mentoring) made a difference in self-efficacy and academic performance for students who go through a peer mentoring experience versus those who do not after controlling for a set of specific demographic

and circumstance factors. It also enabled a focus on the impact level of engagement with the program on those who participated. The specific approach used for the quantitative portion of this study was ordinary least squares multiple linear regression analysis. "Multiple linear regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data" (Grace-Martin & Sweet, 2012, p. 161).

Qualitative Method

For the qualitative portion of the study, a phenomenological design was be utilized. "Phenomenology as a philosophical tradition was first used in the development of a rigorous science by the German philosopher Edmund H. Husserl. By phenomenology Husserl meant the study of how people describe things and experience them through their senses" (Patton, 2002, p. 105). This approach enabled the deep understanding of an experience, in this case the peer mentoring program, from the perspective of participants who were in it rather than researcher observation or other third-person observation of persons engaged in the phenomenon.

Quantitative Findings--Self-Efficacy

Participation in Peer Mentoring

As presented Chapter 4, the analysis for Research Question 1 revealed that after controlling for gender, race, and income (none of which that were significant in the partial or full model (Model 1), students who participated in the Peer Mentoring Program were significantly more likely to evidence an increase in self-efficacy than those who did not participate in the program ($p < .01$). Hence, there did appear to be a benefit with respect to enhanced self-efficacy, a benefit that previous research shows has a number of downstream benefits (Bandura, 2006; Pajares, 2002).

Bandura (1995) defined self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). Artino (2012) broke down two aspects of this definition. The first aspect to be explained is self-efficacy as being one having a certain belief of one's capability, which does not necessarily match the actual capability.

> In fact, research findings have suggested that most individuals actually overestimate their academic capabilities. Bandura argued, however, that the most useful efficacy judgments are those that slightly exceed one's actual capabilities, as this modest overestimation can actually increase effort and persistence during difficult times. (Artino, 2012, p. 77)

Artino (2012) went on to evaluate the second important aspect of Bandura's definition of self-efficacy, which involves how individuals make use of their efficacy judgments. Individuals, according to Artino, "use these self-efficacy judgments as a measure of reaching a goal, which reflects both the task- and situation-specific nature of efficacy beliefs" (p. 77). People who have low self-efficacy for accomplishing a specific task may avoid it (e.g., missing class, late or missing assignments, lack of participation in the peer mentoring program), while those who believe they are capable are more likely to participate (e.g., turning in homework on time, class participation, high level of engagement, participation in a peer mentoring program; Artino, 2012).

Students on academic probation can certainly benefit from improved self-efficacy as indicated by this study. Bandura (1995) posited that how one perceives how well one can accomplish a task will effectively determine level of success. Ultimately, the as one's self-efficacy increases, students therefore experience more success. As participants in this study experienced an increase in their self-efficacy, they also experienced better academic

performance. Seeing an improvement in their academic performance only solidified their newfound confidence in their abilities.

The findings in this study align with other researchers who have sought to develop student self-efficacy and further the understanding of the literature as it demonstrates how students who have increased confidence through mentoring, support, and access to resources improved overall in self-efficacy. This study measures the self-efficacy of students who were high-performing in high school, but dropped off academically in college. Bandura and many others noted that positive and negative experiences can affect one's self-efficacy (Atrino, 2012; Bandura, 1995). The more positive experiences and successes a student has, the higher the self-efficacy. In this study, student participants were paired with a mentor whose sole purpose was to act as a support system and cheerleader for the participants. The idea behind this was to help increase self-confidence and ultimately self-efficacy. Feldhusen (1996) reinforced this theory stating, "Praising specific talented behavior gives a student a sense of self-efficacy in that talent and encourages its growth" (p. 69).

Level of Engagement in Peer Mentoring

With respect to Research Question 2, the Model 2 results showed that after controlling for gender, race, and income, from among those who participated in the peer mentoring program, a student's level of engagement in the program was not associated with self-efficacy. In other words, greater engagement in the program as defined as attendance at sessions and assignments completed was not statistically associated with higher levels of self-efficacy.

This was intriguing and a finding that was not expected. The peer mentoring program was set up in such a way that by engaging more deeply in the activities provided, students were afforded practical opportunities to expand their knowledge and insights with respect to doing

well in college. Previous research on such programs has reinforced the value of such skills for all students, but especially for underprepared or historically marginalized students who may already question their ability to be successful in college (Rendón, 2006). According to Rendón (2006), student success has traditionally been considered a function of focusing on intellectual and academic indicators--a one-dimensional viewpoint. This study focused on coupling students with vital resources within the institution in order to increase academic performance with the theory that level of engagement would drive academic performance. The more engaged the participants were in the given activities (free study resources, scholarship programs, academic counseling, career services, and proper scheduling), theoretically the better their academic performance. However, it was not the level of engagement that was the driving force. In this study it did not seem to matter how intensively students were engaged in the content, yet, as a total group, the students developed stronger self-efficacy than non-participants.

Rendón (2006) described a theory of educating the whole person using a multidimensional viewpoint. Using this approach, one could expect students' outcomes to include intellectual (e.g., GPA, degree attainment, critical thinking skills), social (e.g., leadership skills, ability to work in diverse settings and with diverse people), emotional (e.g., maturity, able to handle conflict, self-confidence), spiritual (e.g., sense of purpose, ability to see larger meanings of issues) among others (Rendón, 2006). The peer mentoring part of the study attempted to harness this theory and it is apparent that the personal relationships formed between the mentor and the mentee as described later in the qualitative discussion were more powerful than the level of engagement in the program itself. The mentor served as that emotional and spiritual connection for the participants, which appears to be what was missing in their circle of success. "Each student brings strengths as well as deficits, all of which affect student success"

(Rendón, 2006, p. 20). For many of these students, emotional support was a deficit that was fulfilled by the mentors in the program. This helps to explain the level of engagement phenomenon for this study not being a significant factor in self-efficacy growth. Some of the explanation may also be the limited sample size since it was not possible to randomly assign students to the treatment vs. control. This topic will be expanded upon further in the limitations and opportunities for future research sections of this chapter.

Quantitative Findings--Academic Performance

Participating in Peer Mentoring

As shown in Chapter 4, participation in peer mentoring was not significantly associated with academic performance with regard to students who did not participate in peer mentoring in the full Model 2. In other words, after controlling for gender, race, and income, students in the program did not academically outperform students who were not in the program with respect to their change in cumulative GPA at the start versus the end of the term. Furthermore, neither gender, race, nor income was significant in the full model, although income approached significance ($p = .07$) in a positive direction in the full model and was positively significant in the partial model ($p < .01$) suggesting that level of income may be channeling something with respect to how these particular students as a group did academically in college.

Deeper analysis of the data revealed that 100% ($n = 14$) of the participants whose level of engagement was high experienced an increase in their overall GPA. Additionally, of the students who did not actively participate in the program ($n = 11$), three of them still experienced an overall increase in GPA bringing the overall GPA improvement totals to 68% ($n = 17$). However, the overall increase was not statistically significant in terms of outperforming the control group. There are a number of reasons that could explain this outcome including the idea that these

findings could possibly be an anomaly. However, it is important to note here that many of these students, being on academic probation, were repeating courses previously not successfully completed with a "C" or better in an attempt to improve overall GPA. Performing better in these courses will certainly improve overall GPA by replacing the old grade with the new one. However, performing the same or worse holds no consequence to the GPA as this attempt would not be calculated in the GPA at all. Therefore a student repeating one course and improving from a D grade to a C grade could affect the cumulative GPA only by a small margin depending on the total number of credit hours previously taken.

Another possibility concerns the control group. The control group consisted of all online students, which could contribute to their level of self-efficacy considering that online classes can be more challenging due to the lack of personal touch a face-to-face course offers. Students who take online classes sometimes have a higher self-efficacy, better study habits, and ultimately perform higher academically (Fish & Snodgrass, 2014). Though the students in the control group were also on academic probation, it is possible that their previous performance was strong enough such that a scenario as indicated above might increase their GPA over the treatment group's GPA. This study did not account for the academic history of the participants in either group, which provides yet another limitation for the study and could explain the insignificant change in cumulative GPA of the treatment group as compared to the control group.

Level of Engagement in Peer Mentoring

The Chapter 4 results revealed that with respect to students that participated in peer mentoring (Model 4), the change in cumulative GPA was significant in the full model ($p < .001$). In addition, in the full model gender was positively significant ($p < .05$) inferring based on coding that women outperformed men across the two groups. Income was also positively

significant in the full model ($p < .01$), again suggesting that it channeled some aspect(s) of the pre-college or in-college experience that impacts students in either group with respect to their change in academic performance over the term. This full model sheds some light on the impact that peer mentoring had on the participants in the study. Deeper analysis of the data revealed that the treatment group at the start of the program entered it with an average of 1.00 of a higher cumulative GPA over the control group who only earned an average of .07. At the beginning of the study, the average semester GPA of the treatment group was 1.72 while the control group averaged only a .07 for the semester. Of those in the treatment group that showed significant improvement ($n = 17$), only three of them were not actively engaged with the program. This could mean that these three students found some other support system, repeated courses previously failed, or just decided to work at being successful in this semester amongst a myriad of other possibilities.

"Student engagement represents both the time and energy students invest in educationally purposeful activities (i.e., level of participation in peer-mentor program) and the effort institutions devote to using effective educational practices (i.e., providing peer mentor program and resources)" (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008, p. 542). When students are actively engaged in a class or activity, the student tends to perform better. The peer mentoring program provided a variety of activities for the participants including group meetings, one-on-one meetings with mentors, scavenger hunts, and social gatherings.

Participants were also encouraged to create and maintain a weekly plan. This plan was an activity calendar that plotted out every activity from work to school to meal, study, and travel times. This put the participants' weekly schedules at their fingertips in a visual format. The students could easily see their heavy days versus light days and identify pockets of time where

extra or unexpected things could be placed if needed. This weekly plan empowered students to take control of their time and pre-plan how that time was going to be spent to optimize their chances for success. Kuh et al (2008) noted, "When students are required to take responsibility for activities that require daily decisions and tasks, they become invested in the activity and more committed to the college and their studies" (p. 557).

Qualitative Findings

Five participants from the treatment group were asked to participate in an interview to explore their "lived experiences" through the peer mentoring program. Several questions were asked concerning the overall program, the effectiveness of the mentors, and value perceived by the mentees. Of the five participants interviewed, two were male and three were female. Three were minorities and two were non-minorities. Most of them had children and all of them worked either part-time or full-time. Two of the five interview participants did not experience the full peer mentoring program as they either missed too many meetings or activities, or dropped out of the program. The other three interview participants finished the program to the end.

In the following sub-sections, themes that emerged across the interviews to varying degrees are described. These are identified not only to help inform the quantitative findings but also to provide insight that were not captured either through the instrument or the institutional data on the students or their performance. The intent as noted before was to provide deeper insight on the experience of the participants and for collectively with the quantitative findings, to help inform the design and management of peer mentoring programs (discussed later in this chapter).

Theme 1: Personal Issues

As stated in Chapter 2 of this study, there are a number of reasons why a student might

not persist at a college or university. Some of these reasons include short-term stop out, transfer to another institution, change in personal goals, financial challenges, personal issues, lack of support from the institution and/or family/friends, being unprepared academically, and the inability to properly navigate the many obstacles faced in higher education (Barefoot, 2004). All of the interview participants had some sort of personal issue(s) that they identified as a barrier(s) to their success in college. The personal issues included inconsistent transportation, demanding work schedules, lack of time management skills, and not having enough confidence among others.

There were many identified barriers among the interview participants including lack of direction and lack time management, which were reflected in the interview participants' responses. For Daisy Hall, she had this comment: "I think for me it was helpful to know that I was not the only one going through the things I was going through. I was having a hard time dealing with a lot of personal issues in my life." Miss Hall goes on to state that she felt alone and was ready to withdraw from school before joining the program. She felt that her mentor was positive and helpful in keeping her focused. "I don't know that this program really helped my grades, but it gave me the confidence to stay in school. I just needed to focus on my work, and I was unable to do that before joining the program."

Alan Michaels spoke to his lack of motivation and time management. "I really didn't know what I was doing. I guess having that much freedom was not good for me. I chose hanging out with my buddies over going to class." Mr. Michaels seemed to have enjoyed his new found freedom a bit more than needed as his lack of attention to his classes caused him to be placed on academic probation within his first semester. Mr. Michaels revealed that he would forgo completing homework and/or going to class to hang out. Again, being a high-achieving student

in high school, the potential was there for success in higher education. His mentor gave him direction and the program helped him with time management. He was excited to see that he could still hang out with his friends and get his work done for school. All of this gave him the motivation he needed to be successful at Midwest College.

Although a student's personal issues are not always recognized by institutional professionals, nor can institutions always solve them, it is an issue that should be attended to when trying to assist students in succeeding in higher education. Personal issues such as the ones mentioned above also can negatively affect self-efficacy as students start to feel overwhelmed when their personal issues spill over into the classroom. A personal failure outside the classroom may diminish a student's confidence of success within the classroom with the thought of if he or she cannot succeed at this task, how can he or she succeed at another perceived equally challenging or more challenging task? "Because excessive physiological and emotional arousal can often negatively impact performance, individuals tend to expect success, to a greater extent, when they are not overcome by stress reactions than if they are 'tense and viscerally agitated'" (Artino, 2012, p. 79). If a student comes to class stressed because of a recent personal issue (e.g., car not starting, trouble at home, problems at child's school, etc.), these emotions can negatively affect the student's ability to be successful in that moment and could have a trickle down affect throughout the semester.

The students in this study could arguably be viewed as those who do not fit in well with the rest of the student body, are not focused or driven to succeed academically, or are simply not ready for college life. Rendón (2006) addressed this when she stated "notions of fit, as well as social and academic integration, do not take into account the fact that most postsecondary environments are normally not fully set up for underserved students" (p. 20), making it a

challenge for students to make the transition to college. Participation in the peer mentoring program helped some of the interview participants overcome their personal issues. Jessica Miller, had this to say, for instance; "The mentoring program served as a sounding board and support system for me. I have a lot of struggles to deal with and this program really helped me to deal with some of this." Many students in college have personal issues to overcome. Some can deal with these issues better than others and that is where a peer mentoring program can be effective in helping those students to address personal issues, or at least to compartmentalize them.

Theme 2: Goal Setting

Another common theme salient to most interview participants focused on setting goals and sticking to them. Based on the comments, it appeared that much of this was due to improper time management skills and lack of proper prioritization. Some scholarship on this subject is illustrative of the issue. "Academic self-regulation is concerned with the degree to which students are metacognitively, motivationally, and behaviorally proactive regulators of their own learning process" (Zimmerman, et al, 1992, p. 664). This refers to how engaged a student is in his or her own success. The higher their engagement, the more successful they could expect to be. "From a social cognitive perspective, self-regulated learners direct their learning processes and attainments by setting challenging goals for themselves, by applying appropriate strategies to achieve their goals, and by enlisting self-regular ice influences that motivate and guide their efforts" (Zimmerman, et al, 1992, p. 664). Bandura's (1991) social cognitive theory suggests that goals increase a person's cognitive and affective reactions to performance outcomes because goals ultimately specify the requirements for personal success.

The interview participants described their experience with setting goals while in the peer mentoring program. Charlie Brown had this to say on the subject:

> We set a lot of goals in the beginning. I was excited to finally have some structure... However, I was unable to meet any of those goals though because life became very difficult for me part way into the semester.

Mr. Brown did indeed experience some personal difficulties at some point in the semester, which he allowed to prevent him from finishing the program and the semester. Reflecting on self-efficacy as it relates to goal-setting, Mr. Brown's experienced setback, diminishing his self-efficacy and belief that he could finish the semester and therefore, he did not finish. "Self-regulation of motivation depends on self-efficacy beliefs as well as on personal goals. Perceived self-efficacy influences the level of goal challenge people set for themselves, the amount of effort they mobilize, and their persistence in the face of difficulties" (Zimmerman, et al, 1992, p. 665).

Daisy Hall had this to say with respect to goals: "It was hard for me to set goals because I never knew what my day was going to look like. I was always dealing with something new." Goals also prompt self-monitoring and self-judgments of performance attainments (Bandura & Cervone, 1986). Miss Hall did not benefit from self-monitoring because she did not set consistent and attainable goals. Her life was a vicious cycle of missing deadlines, being caught up, and missing opportunities due to crossed wires or simply forgetting.

Another student misused her mentor as a personal crutch instead of learning the process so that she could be independent. Jessica Miller stated, "We didn't really set too many goals. I would just come to her when I needed something." This caused her to not gain much of anything from the program that she could use in the future to achieve and maintain academic success. "Experimental studies have shown that teaching low-achieving students to set proximal goals for themselves enhances their sense of cognitive efficacy, their academic achievement, and their

intrinsic interest in the subject matter" (Zimmerman et al., 1992, p. 664). Miss Miller did not take advantage of what participation in the program was trying to teach her. Overall, in this study, more than half of the interview participants struggled with goal-setting and time management. Many reasons can be assumed including self-sabotage, lack of preparedness from high school, fear of success, and lack of motivation.

Theme 3: Academic Ability and Belief in Their Capability

> People judge their capability depending on the particular domain of functioning. Personal efficacy, then, is not a general disposition void of context, but rather a self-judgment that is specific to the activity domain. As such, high self-efficacy in one domain does not necessarily mean high efficacy in another. (Artino, 2012, p. 79)

All five of the interview participants were asked if they felt more confident in their academic ability since being in the peer mentor program. The general consensus was that each had no doubts of their academic ability, which most likely stems from the fact that they were high-achieving in high school. However, many of them noted that outside forces were mostly the cause of their academic failure in college. Katie Rogers confirmed that her views on her academic ability have not changed due to the program. "No. Nothing has changed. I think I'm just going to have to choose between work and school at this point. I can't do both and keep my sanity." Charlie Brown said, "I don't think me failing is a result of my academic ability but more due to my circumstances. If I had more time to dedicate to school, I think I could do better." This affected their belief that they could balance personal life and college at the same time. In short, it was not necessarily the academics that deterred these students from success but rather their belief in their ability to overcome life's issues.

One student, Alan Michaels, admitted that he simply chose having fun with his friends

over being successful in his college classes. “I really don’t know what I was doing. I guess having that much freedom was not good for me. I chose hanging out with my buddies over going to class.” Mr. Michaels went on to say, “I never doubted my academic ability. I know that I can do the work. I was very successful in high school. I think what I needed was direction and accountability and I got that with this program.” Yet another interviewee, Daisy Hall, felt the program had restored her confidence in being able to successfully complete college. “I definitely feel more confident that I can finish school now that I’ve been in this program.”

Given that academic ability is not the source of the issue as to why these students did poorly academically prior to participating in the mentoring program, a look into deeper factors in their lives is informative for helping to explain underperformance.

> Contrary to popular belief, intelligence and ability are not the only determinants of students’ classroom successes. Even talented young people may fail to achieve at levels that are consistent with their academic potentials, they may lower their academic expectations and they may either not go to college or, if they do, drop out prior to graduating. These students become known as “lost talent,” and they are at a distinct disadvantage in today’s difficult job market. (Snyder et al., 2002, p. 820)

This concept is prevalent with the students who participated in the interview portion of the study. All of the participants, including those who participated in the interviews, were identified as high-achieving students in high school. For some of them, the idea of going off to college seemed like a daunting task, which, in turn, could have thwarted their confidence in their academic ability, causing them to lower their personal standards for achievement. Jessica Miller said, “I didn’t want to go to one of those big schools with thousands of people. The thought of that terrified me.”

According to Gerdes and Mallinckrodt (1994) academic performance explained no more than half the variance in dropout decisions and concepts such as motivation to learn and taking action to do so should also be considered as important components of academic adjustments. Students must take an active role in their academic success and purposefully decide to take the necessary steps to succeed rather than allowing fate to take control. “Students who have made relatively early decisions to identify clear, purposeful educational goals tend to persist as compared with those who delay academic planning” (Gerdes & Mallinckrodt, 1994, p. 281). The peer mentoring program attempted to introduce the students to this concept through the weekly planner, the SWOT analysis, goal setting, and periodic meetings with a mentor.

Gerdes and Mallinckrodt (1994) expanded on their observations about academic performance by introducing three dimensions for consideration when reviewing impact factors on academic success: institutional commitment, social adjustment, and personal or emotional problems. Institutional commitment involves having a strong determination to complete a degree and has been found to have a “strong direct effect on persistence, whereas demographic variables such as age, sex, or SES tend to have more indirect effects (as demonstrated by the quantitative data previously explained in this study) that interact with social and academic integration or institutional commitment to predict persistence” (Gerdes & Mallinckrodt, 1994, p. 281). The interview participants admitted to not being committed to the institution due to outside obligations and personal issues. “I’m already working a full-time job and trying to go to school at the same time. I have children as well” according to Katie Rogers. For Charlie Brown, “It was difficult to get to some of the meetings due to work, or my car being down.”

Social adjustment of students, the second dimension, relates to a student’s integration into the social environment as a crucial element in commitment to a particular academic institution

(Gerdes & Mallinckrodt, 1994). “Important elements of social adjustment include becoming integrated into the social life of college, forming a support network, and managing new social freedoms” (Gerdes& Mallinckrodt, 1994, p. 281). One interview participant, Alan Michaels, explained that he lost sight of his academic goals due to not taking college serious enough.

> For me, I was just slacking off at the beginning of my educational career. I think I just didn’t take college seriously enough and I didn’t work as hard as I knew I could. My grades were a painful reflection of my efforts and I knew I had to turn things around. Being in this program helped me to get focused, gave me the resources I needed to be successful, and most importantly, held me responsible for my actions. This is exactly what I needed to get back on track.

Gerdes and Mallinckrodt (1994) posited that social support networks are critical to proper college adjustment and “perceptions of insufficient social support have been shown to predict attrition” (p. 281). The interview participants were not involved in any college related extracurricular activities. Some of them had a sense of detachment and a feeling of being lost within the institution. Having a mentor, someone to talk to, appeared to make a huge difference in many of the interviewees lives, particularly their outlook of the institution and their ability to succeed. Jessica Miller captured this sentiment expressed in different ways by others too:

> My mentor was the best thing that ever happened to me. Not only were we in the same class, but we didn’t live that far from each other. She was always there for me and when I was having a difficult time personally, I knew she would be there for me. She is always understanding and has some really good advice for me. I don’t think I would have made it through this semester without her. I’m so happy that we met and that we were paired together on this program.

The third dimension involves personal or emotional problems as described in the above section labeled “Personal Issues.” Gerdes and Mallinckrodt (1994) suggested that students tend to question relationships, direction in life, and self-worth during their transition into college. Personal or emotional problems, may be manifested as a number of psychological issues including anxiety, low-self esteem, and depression (Gerdes & Mallinckrodt, 1994). Neither the researcher nor any participant is or was a medical doctor with training in psychiatry, nor was there a psychiatric evaluation conducted for the purposes of this study. However, it was observed that there were at least two, perhaps three interview participants, who were in a near depressed state due to personal home issues. The lack of confidence of being able to handle home life bled into their belief of being able to succeed at college. College took a back seat to their other issues. One interview participant, Daisy Hall, did actually reveal that she was clinically depressed and on medication due the recent tragic events in her life. “I just couldn’t focus. I knew that I needed to pull myself together and get on with my life, but it was very hard.”

Delving deeper into the social aspect of achievement, it is necessary to consider a student’s predisposition towards higher education. Studies have shown that family life cycle, culture, socioeconomic status, gender, and race can all play a role in whether a student believes he or she will be successful in college (Rendón, 2006; Tinto, 1993; Wyner et al., 2007). Even the type of high school could be a precursor to academic achievement views of the student, as Hoxby and Turner (2013) spoke to in the following quote in reference to historically marginalized students:

> Because they come from high schools and communities where students with their achievement are rare, they could have formed preferences or relationships that make them averse to attending postsecondary institutions that differ from those that many of

their high school classmates attend. (p. 3)

For Charlie Brown, he captured this sentiment in this way: "I was not brought up to value education. Learning just came easy to me. My main goal was to put food on the table. Everything else was second."

Academic ability is only one of the many factors that contribute to academic success. The issues that the interviews raised with respect to what can block one's true capability is informative for not only institutions of higher education, but of the importance of addressing it at the K-12 level. Starting early to provide a structure for support of whole student needs can have positive downstream benefits.

Theme 4: Engagement

"Success is influenced by the degree to which students become engaged and involved in academic and other activities of college life. These engagement approaches emphasize what individuals do and what institutions do to encourage and support individual student involvement" (Svanum & Bigatti, 2009, p. 120). Zepke and Leach (2010) offered the following definition of student engagement: "students' cognitive investment in, active participation in, and emotional commitment to their learning" (p. 168). Level of engagement for the purpose of this study was measured as attendance to mentoring sessions and assignment completion.

Handelsman, Briggs, Sullivan, and Towler (2005) conducted a study to measure course engagement of college students and identified four distinct factors they posited are directly related to engagement. These factors include skills engagement (taking good notes, studying notes), emotional engagement (applying course material to the student's life, desiring to learn the material), participation/interaction engagement (asking questions in class, helping fellow students), and performance engagement (being confident in learning abilities, doing well

academically).

Although all of these elements were present within the peer mentor program to promote engagement; however, some participants simply did not comply. For Katie Rogers, "I didn't finish the program really. I just couldn't meet with my mentor like he wanted and I don't feel like he was really helping me." Charlie Brown said, "my participation in this program did not change my situation one bit. I am not at a good spot in my life right now and I had to let something go and that something was school." Others in the program, however, were able to apply the above concepts towards their success in the program. Alan Michaels had this to say: "My participation was effective and very important. I already knew that I could do the work. I just wasn't doing it. I know it sounds silly, but I just wasn't in the right mindset. Being held accountable was important for me."

Dovetailing this with the quantitative findings, simply being a part of the peer mentoring program was not enough. Students needed to have active engagement, participation in goal setting, and a strong sense of wanting to be successful and therefore mapping a plan conducive to success. The quantitative findings in the partial models revealed that level of engagement had no significant impact on self-efficacy, and increased self-efficacy had no significant impact on GPA. One factor the quantitative model could not account for were the personal issues as detailed and revealed by the qualitative portion of this study. Adding in this factor changes the dynamics on a dramatic scale and helps explain the variance in success of the students given the same treatment.

Implications and Recommendations

Implications

Studies show that low-income students identified as high achieving in primary and

secondary education diminish as they progress through each grade level (Wyner et al., 2007). Many of those who do make it to the college level still struggle and there is a percentage who again drop off, thus further decreasing the number of graduates who by all accounts were optimally poised to succeed (National Center for Education Statistics, 2011). Students might not persist at a college or university for a variety of reasons. Some of these reasons include short-term stop out, transfer to another institution, change in personal goals, financial challenges, lack of support from the institution and/or family/friends, being unprepared academically, and the inability to properly navigate the many obstacles faced in higher education (Barefoot, 2004).

It is often difficult for institutions to pinpoint individual students' needs for academic success and therefore increasing retention in higher education. Barefoot (2004) indicated that there are a number of reasons why students do not persist. However, this dissertation study has revealed that personal issues (unstable home life, work, children, tragedy, etc.) were the most prevalent in the reasons why students performed poorly or ultimately decided to stop out. Most students will not readily reveal these issues to a faculty member or academic advisor, and even if they reached out to a school counselor, often times the institution does not have effective programs to assist (Artino, 2012) thereby forcing the student to find help elsewhere. Institutions may find it challenging to implement proper programs that will address such issues in students on a large enough scale to be academically effective. Additionally, it is important to consider whether a student is attending classes on a full-time or part-time basis. This can significantly impact a student's level of success when outside forces are considered. Students who are taking a full load may react differently than those who are attending classes part-time. Students attending full-time may become overwhelmed when faced with external issues and feel as if there is no way out while those attending part-time may feel less overwhelmed and have more flexibility to

maneuver around certain obstacles. Conversely, those attending full-time may be more invested and focused on the end goal and when faced with issues, attempt to deal with them quickly so as to not lose that focus. Those attending part-time may not be as focused or feel they have less to lose when faced with issues and thus find they end up doing poorly.

Of additional insight as an implication of the findings is a reminder that the students in this study were identified as high-achieving in high school, but found themselves underperforming in college. This is a unique situation as it is believed that students who are high-achieving in high school usually will do well in higher education (Rendón, 2006). In a sense, the aptitude of these students is taken for granted and therefore the opportunity to avoid a potential academic problem is overlooked. An effective peer mentoring program can help deter this situation by identifying early potential issues and helping all students to put an effective plan in place for success.

Peer mentoring can be a complex model to implement and must be done so with careful design consideration. It takes a great deal of effort, and a certain finesse, to be successful. Many institutions struggle financially already (Porter, 2006) and are barely able to keep afloat in critical areas. However, a peer mentoring program or something similar can be vital to student success. This study also revealed that by simply participating in the peer mentoring program, students' self-efficacy increased which made some participants feel empowered and therefore able to handle life's issues. It was revealed that having someone to talk to, someone who cared, was pivotal in the change in attitude for some students. The Hawthorne Effect has been defined as an increase in worker productivity produced by the psychological stimulus of being singled out and made to feel important (McCarney et al., 2007). This theory can be applied in this study given that students were paid attention to and cared about. The mentors did not just focus on

grades but more on the student and what challenges the student was currently facing. The mentors cared about the students' wellbeing overall and did not only focus on academic success. Because the students felt important, cared for, and had someone they could confide in, their overall self-efficacy scores increased.

Recommendations

Change institutional thinking. Institutions must stop looking at student success as a linear function and realize that student success is multidimensional encompassing a broad range of factors with academic ability being only one variable. Due to the steady drop in retention and average GPA in schools across the nation (NCES, 2011) policy debates have shifted from institutional access to what happens to students after they enter college (American Federation of Teachers, 2011). Chapter 2 of this study articulated that some institutions are tightening up on their retention standards by increasing the required GPA of students who have attained a certain number of credit hours attempted (Barefoot, 2004). Others have implemented from very simple to very complex academic intervention programs to help students who are on academic probation attain academic success. The government even has its share of the retention pie by tightening the financial belt on institutions, particularly for-profits, that fail to graduate students at an acceptable rate. However, the goal should be to help prevent students from being on academic probation or dismissal status in the first place.

Rendón (2006) suggested if institutions change the way student success is viewed and focus on the whole student and not just the academic part, they will be more successful in increasing retention numbers and graduating students – especially those from low socioeconomic backgrounds. "Having an inclusive, multicultural curriculum and using pedagogical strategies such as learning communities, active learning, and connecting content to students lives or 'real

work' experiences have been found to make a difference for low-income, first generation students" (Rendón, 2006, p. 7). As indicated by this study, when students feel excluded and lost, some tend to perform poorly and perhaps separate from the institution. As such, institutions need to take the initiative to validate students as capable learners and to embrace them as valuable members of the academic and social learning community. Further, institutions must find ways to transform their belief systems about underserved students and the way they work with these students (Rendón, 2006). Rendón, (2006) presented a model (Figure 3) that illustrates an effective system, one where all of the student's "worlds" are moving and touching simultaneously in multiple ways and at multiple times. The student experiences all worlds simultaneously, moving back and forth among them and having both positive and negative experiences (Rendón, 2006).

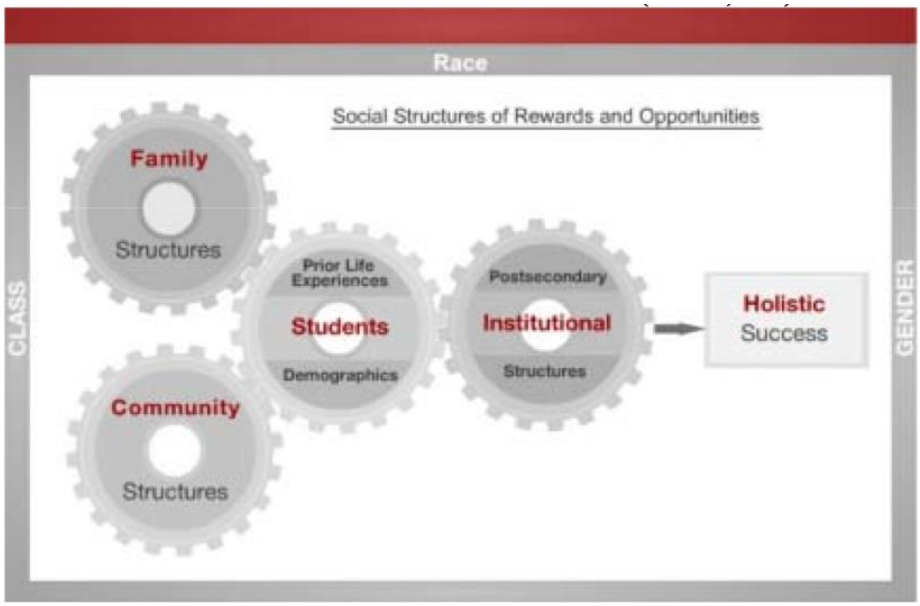

Figure 3. Interactive model of success for underserved students (Rendón, 2006). Used with permission.

Greene (1993) offered an explanation of each "world" with which a student would interact. Family structures might include family support and expectations, parenting styles, and family financial resources. Community structures might include faith-based organizations, role models, peer networks, work, and educational opportunities. Postsecondary educational structures include diverse faculty, staff, and student body, multicultural curricula, a validating and engaging campus climate, and core values (Greene, 1993). In this model, institutions view the student as a whole, one who has hopes and dreams, faults and talents, and not just a product of environmental forces or as a computer generated number that lends to the institution's statistical legitimacy (or not). Additionally, institutions should consider those who attend full-time versus part-time and attempt to provide resources to assist students in their academic success. This can include, but is not limited to, providing proper advising in terms of number of credit hours suggested based on hours working each week, alternative modalities of classes (online, hybrid, evening, weekend), or even corporate college where students can take classes right at work.

Training for faculty and staff. It has been long studied and validated that interaction between faculty and students is critical to student learning, development, and success (Barkley, Cross, & Major, 2014; Fuentes, Alvarado, Berdan, & DeAngelo, 2014; Hagenauer & Volet, 2014). As previously mentioned, learning is a function of a social process and therefore relationships, especially with faculty, serve as powerful tools for student success. Researchers, scholars, and theorists "credit faculty interaction with improving students' development as thinkers and scholars, confidence in their own abilities, integration into the campus community, and interest in graduate education" (Baker & Griffin, 2010, p. 2). As indicated by this study, students' backgrounds, needs, and expectations are much different from a decade ago. There are

more women in college, the classrooms have become more diverse with students from different races, socioeconomic backgrounds, and beliefs, and there are an increasing number of first-generation students entering high education. Along with this, according to Baker and Griffin (2010), these changes have been accompanied with fiscal changes where college has become more expensive and students and families expect a level of service that matches their investment. Baker and Griffin also mentioned that educators are teaching in a different environment where student interaction is not encouraged as much as it was in the past and where full-time faculty are being replaced with part-time faculty, thus making connecting with students outside the classroom a challenge.

With all of the changes in the demographics of students and the teaching environment, institutions should train their faculty and staff to equip them to better deal with students who need guidance beyond the classroom. This study revealed that students do not appear to confide in faculty on issues beyond academics. Even some students choose not to even discuss academic issues with their faculty. Therefore, faculty must be able to spot conditions with students that can help them to avoid academic failure. Baker and Griffin (2010) offered three roles faculty can play in the student retention and academic success initiative, namely the faculty advisor, the mentor, and the developer. In terms of advising,

> a reliable source of accurate information on how to fulfill degree and general education requirements and an individual to engage with in academic planning is a valuable asset, especially as students strive to save valuable tuition dollars and complete college as efficiently as possible. (Baker & Griffin, 2010, p. 4)

A healthy partnership with the advising staff is critical to a peer mentoring program as these individuals will help to shape the pathway students will take to graduation.

Mentorship is described by Baker and Griffin (2010) as being an "emotional commitment that extends beyond sharing degree requirements and academic information; mentoring relationships are rooted in a mentor's long-term caring about a student's personal and professional development" (p. 4). This notion echoes that of this study in terms of defining mentorship, but extends beyond peers and to faculty. This would take mentoring to a different level since age and backgrounds might vary more than with a peer mentor. Finally, the developer "extends the kinds of support provided through a mentoring relationship; however, in addition to career and psychological support, a developer engages in knowledge development, information sharing, and support as students set and achieve goals" (Baker & Griffin, 2010, p. 5). Future outcomes would be the focus of a developer through a collaborative relationship with the student. Marrying these three functions together, and training all faculty members to engage in these practices, can be instrumental in helping students reach their academic goals, persist in school, and graduate with their degrees.

Implement a well designed peer mentoring program. This study evidenced the value of a peer mentoring program, as well as its challenges. Institutions of higher education can implement a peer mentoring model that caters to all first year students to help them acclimate to the campus environment, introduce them to important resources, and assist them to familiarize themselves with the social environment. An effective peer mentoring program also assists students with academic tasks such as note taking strategies, how to effectively communicate with instructors, and how to set and prioritize goals properly. Whether it is the desire of the instructors or not, often times students teach each other, whether it is the subject matter or other things such as how to study, organization tips, life lessons and more. "This sort of peer teaching may have an even greater impact than teaching in the classroom" (Colvin & Ashman, 2010, p. 121). Many

students tend to relate better to others of the same age, background, and situation rather than an authority figure. Institutions can capitalize on this relationship to help more students stay connected and increase student success and retention.

> Because peers have such an impact on one another, over the years there have been many attempts to harness and utilize this influence more formally. Undergraduate students on college and university campuses have been assisting peers academically since the 1700s. (Colvin & Ashman, 2010, p. 121)

For a peer mentoring program to be successful, it is critical that the institution takes great care to ensure it is set up properly. The exact nature of expectations and boundaries must be clarified in supporting peer mentors and the relationship between mentor and mentee. Additionally, "in order for mentoring relationships to be successful, there must be clarity and consensus of roles, otherwise mentors will find it difficult to maintain any sort of self-efficacy" (Colvin & Ashman, 2010, p. 122). One interview participant in this dissertation study developed a parasitic relationship with her mentor. Instead of using this program and her mentor as a way of becoming empowered, she appeared to use it as a crutch and that further crippled her ability to be successful on her own. There should also be a symbiotic relationship between the mentor, mentee, faculty, and even staff with all designed to help the student see the bigger picture. Open communication is critical and procedures in place to ensure a smooth program. In this study, the mentees were asked to get a signature from their instructor each time they attended class. The faculty was informed beforehand of the program and of their expectations. The faculty had freedom to add comments on the mentees' progress citing whether the student was tardy, turning in homework, and/or turning in homework. These reports were then discussed with the mentor and accountability was placed on the student to improve self-destructive behavior or accolades

were given for self-empowerment. In this, the institution must ensure that everyone is onboard and knows what part to play. The benefits are three-fold to the mentee, mentor, and institution.

The selection process and criteria for mentors is critical to the success of the program. An institution may consider academic achievement, personality, well-roundedness, maturity, life experience and more when choosing mentors. There is a certain set of characteristics a mentor must possess to be successful in a peer mentoring program. Terrion and Leonard (2007) identified five criteria for peer mentors as: ability and willingness to commit time, gender and race, university experience, academic achievement, and prior mentoring experience.

Terrion and Leonard (2007) noted that mentors must be able to give the appropriate amount of time to the mentee while in the program. This is especially important as college students often are still in the learning phase of juggling all of their responsibilities. "Programs that rely on university students as mentors tend to be more successful when mentors are required to show how they intend to fit the mentoring hours into their schedules" (Terrion & Leonard, 2007, p. 152). Each mentee in this study was required to complete a weekly plan detailing out all of their academic, professional, and personal activities including times. The times then left over, if any, were allocated for mentoring. The requirement was one hour per week. The weekly plan helped to identify the mentee's ability to commit time. The mentee also, after having the program described to them in detail, signed a participation commitment agreement to indicate their willingness to commit their time to the program.

Terrion and Leonard (2007) contextualized that race and gender may or may not have a positive effect on the mentor/mentee relationship due to conflicting research on the matter. However, it is important to have a diverse group as studies have shown, matching mentors and mentees that are the same in gender, race, and backgrounds tends to more often make for a better

relationship than not (Colvin & Ashman 2010; Fuentes et al., 2014; Greene, 1993). The interview participants chosen represented a range of mixing and matching. Two pairs were of the same gender and background, but not race. However, the mentees felt they were matched well and their relationship thrived. Two pairs were of the same gender, age, race, and background and while one pair thrived, the other was not so successful. Finally, one pair were of the same race but had nothing else obviously in common. This relationship never developed as the mentee and mentor never seemed to find common ground. Given that matching in this way is not always possible, training to assist mentors to be effective in cross-gender or cross-race mentoring relationships is important.

Mentors need to have a working knowledge of the university in order to be able to effectively assist a peer student. Without this knowledge, it would be difficult to help another student to successfully navigate the university environment (Terrion & Leonard, 2007). Mentors should also have a certain level of life experience. As identified by this study and other research, one of the barriers to success in academia relates to personal life issues. It would be difficult for a mentor who has not experienced certain things in life to give adequate advice to someone who has. The relatability is greatly diminished. "A mentor's diversity of experience and background is essential to establishing a successful mentoring relationship. Excellent mentors must typically be more experienced than their mentees" (Terrion & Leonard, 2007, p. 153).

Academic achievement is important to a peer mentoring program; however, it is not critical. This study purposely chose mentors with imperfect GPAs whenever possible. Only a minimum of a 2.8 GPA was required. It was the purpose of the researcher to have mentors who have had some academic troubles in the past, but were able to rise above it and be successful. The mentors then could possibly better relate to their mentees and give genuine tips on how to

rise above whatever adversity the mentee is experiencing. This strategy helped to humanize the mentors and they were viewed as people who have made the same or similar mistakes as the mentees and not over achievers who seem to have no issues and thus the reason for their success. Students who had some struggle but were now back on track where chosen because "student peer mentors should have achieved a level of academic success that gives them credibility in the eyes of the students they will be mentoring" (Terrion & Leonard, 2007, p. 154). Of course mentors with consistently high GPAs were also welcomed into the program as all mentors have experiences and knowledge on different levels to share.

The final piece shared by Terrion and Leonard (2007) was prior mentoring experiences. It is not necessarily required that the mentors have such experience, but it is helpful in the motivation of the mentor. "One study found that mentees who have had a positive experience in their mentoring relationship are likely to be more willing to become mentors in the future" (Terrion & Leonard, 2007, p. 154). There were some mentors who had been mentored before or had mentored someone else prior to this study. Their expertise was valuable to the program. However, the majority of the mentors was new to the experience on both sides, but with a comprehensive training program, proved to be just as valuable as their experienced counterparts. Therefore, prior experience should not be a requirement for choosing mentors but rather a plus if the mentor did have such an experience.

An effective peer mentoring program should also have connections in the community if not already on campus to help assist students with external issues that go beyond the reach and scope of the program and institution. For example, students with mental or legal issues may not be able to receive the level of help they need within a mentoring program. Therefore, these outside connections will be critical to such a program.

A comprehensive training program is critical for mentors, faculty, and support staff. All must understand the structure of the program and what role each will play. This study had an informational meeting for faculty to understand what their expectations were and to prepare them for the requests their students would be making. The mentors participated in a two-day training (four hours each day) that put them through the basics of mentoring. They also completed all of the same work the mentee would be expected to complete so that they understood the requirements of the work, the level of difficulty, and time spent, and so that they could give sound advice when asked by the mentee. Having this experience and information upfront allowed the mentors to be more comfortable in their roles and gave them a boost in confidence. In this study, the mentors were also required to participate in an additional four hours of training at one hour intervals throughout the semester. This allowed them to brush up on skills, ask questions, and prepare for upcoming milestones for the mentees. This helped the mentors, especially those with less experience, to keep one step ahead of the mentees.

Overall, the implementation of an effective peer mentoring program can be extensive. However, the benefits are worth it. The bottom line is to increase student performance, retention, and ultimately graduation, and this is possible through a peer mentoring program. A program of this nature benefits the mentee, the mentor, the faculty and support staff, and the institution by getting students involved with the institution and each other, encouraging and empowering faculty to go beyond the classroom to reach students, not only where course work is concerned, but also with personal issues, and making the environment a better place all around for everyone.

Limitations and Opportunities for Future Research

Although the mixed-method was a valuable approach to understanding this topic both in breadth and depth (Rendón, 2006), there were limitations and should be investigated further to

reveal full effects of a peer mentoring program. One limitation was the study design. This study was conducted over a period of only one semester, which is arguably not enough time to see a true change in student self-efficacy and academic performance. Two or more semesters would give a more accurate measure of the peer mentoring program's effectiveness as more data could be collected over time and evaluated. Information such as persistence and retention could then be measured more robustly and inform the work of retention and completion.

A second limitation is the study was that it focused on just one small program at a singular community college. Whereas it helped to inform factors that impact program success, the sample size was limited to 25 participants and 25 non-participants and at one campus of an institution. The sample was one of convenience with the 25 participants (treatment group) all being from face-to-face classes and the 25 non-participants (control group) all being online students. These groups were, therefore, not completely random and should be considered in the impact of this study. Further research exploring if such findings hold in other institutional contexts, and with a larger sample, would be useful to nuance what works and does not work.

A third limitation is sourced in the specific variable operationalization associated with the quantitative aspect of the study. More specifically, it treated GPA as if it were a monolith with no consideration of the nature of the course schedule a student confronted that term. Some may have taken more courses than others, for instance, a circumstance that would have potentially greater impact on one's GPA than taking fewer courses. Students also likely had different levels of credit hours completed and thus different degrees of potential impact on one's GPA. These issues may not have been evenly distributed across the treatment and control groups and hence other factors may have explained some, or the majority, of variance in the GPA measure. Follow-up research would be valuable that controls for such factors, or ideally, enables a

random-control study design.

A fourth limitation focuses on the qualitative element in the study. Interviews were conducted with the students, but not with the mentors. Although I did have active engagement with the mentors, I did not conduct formal interviews of them about their insights on the program. Subsequent research would be valuable to explore from their perspective as well.

A fifth limitation also centers on the qualitative study. The interviews were conducted at the end of the experience. While that was a natural, and informative retrospective way to do the study, it does not capture sentiment and perspective at the time a student started the program and at designated times during the program. Such an approach to qualitative research can be valuable and would be worthwhile to explore in follow-on research.

Since the factors measured for impact on self-efficacy in this study had relatively low explanatory power in explaining variance, further research should be conducted to investigate other factors such as locus of control to determine whether students feels what happens to them is due to internal (self) or external (environment) forces. Further research using the grit scale (Duckworth, Peterson, Matthews, & Kelly, 2007) can be beneficial in predicting achievement. Grit, according to Duckworth et al. (2007), is the tendency to sustain interest in and have continued effort toward very long-term goals. Dovetailing these two scales together might help better predict how well a student might do in higher education when faced with problems and give mentors and facilitators a better understanding of how to prepare these students for academic success.

Finally, this study did not explore the matter of cost effectiveness. Precious little research assesses the degree to which a program benefit comes at a small, moderate, or high cost and hence is of potentially limited use to administrators. Hence, for example, what are the costs-

benefits of a small versus large mentor load, or the reasonableness of extensive training, or of how broadly inclusive such a program can realistically be. While we know from decades of research that relationships matter, such individualized attention comes at a cost, something that may be in limited supply, particularly at a community college.

Conclusion

As noted at the start of this dissertation, considerable attention is focused on the importance of college completion, and not just of access. This dissertation study investigated how one program impacts students that participate through two lenses, a quantitative one and a qualitative one. The results showed not only the benefits, but also where such programs may not have the imagined, or hoped for, impact that they do. Nevertheless, many of the findings do support was has been previously found in the literature, while extending that knowledge into the socio-emotional domain that surfaced how personal issues can be transcendent and overpowering to the good intentions of mentors and program goals. Further research on peer mentoring programs as a student success strategy is warranted.

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APPENDIX A

STUDENT PEER MENTORING PROGRAM INTERVIEW QUESTIONS

Goals of Peer Mentoring Program:

1. Improve overall GPA (tangible)
2. Improve self-confidence/self-efficacy (intangible)
3. Improve overall persistence and retention rates (tangible)
4. Improve student knowledge of campus resources (intangible)

End of Program Interview Questions

The Program

1. What did you think overall of the mentoring program in terms of the structure, the meetings, and activities?
2. What role did the mentoring program play in your success this semester and overcoming your barriers?
3. Rate the activities below that you felt were valuable and were instrumental in your academic success. (list activities)

The Mentor

1. How effective was your peer mentor in helping you overcome barriers and achieve academic success?
2. How effective was your peer mentor in helping you set goals and accomplish tasks?

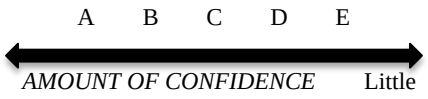
The Mentee

1. What are the top three things you've identified as a barrier to your academic success?
2. How effective was your participation in this program in helping you to overcome those barriers and achieve academic success?
3. Do you feel you would have been more successful last semester if you had this program available to you then?
4. Do you feel more confident about your academic ability this semester?
5. Do you feel that you have a better understanding of college resources after completing the peer mentoring program?

APPENDIX B

COLLEGE ACADEMIC SELF-EFFICACY SCALE

Directions: How much confidence do you have about each of the behaviors listed below? For each statement below, circle the letter that best represents your confidence.



Lot	Little	
A B C D	E..... 1.	Taking well-organized notes during a lecture.
A B C D	E..... 2.	Participating in a class discussion.
A B C D	E..... 3.	Answering a question in a large class.
A B C D	E..... 4.	Answering a question in a small class.
A B C D	E..... 5.	Taking "objective" tests (multiple-choice, T-F, matching).
A B C D	E..... 6.	Taking essay tests.
A B C D	E..... 7.	Writing a high quality term paper.
A B C D	E..... 8.	Listening carefully during a lecture on a difficult topic.
A B C D	E..... 9.	Tutoring another student.
A B C D	E..... 10.	Explaining a concept to another student.
A B C D	E..... 11.	Asking a professor in class to review a concept you don't understand.
A B C D	E..... 12.	Earning good marks in most courses.
A B C D	E..... 13.	Studying enough to understand content thoroughly.
A B C D	E..... 14.	Running for student government office.
A B C D	E..... 15.	Participating in extracurricular events (sports, clubs).
A B C D	E..... 16.	Making professors respect you.
A B C D	E..... 17.	Attending class regularly.
A B C D	E..... 18.	Attending class consistently in a dull course.
A B C D	E..... 19.	Making a professor think you're paying attention in class.
A B C D	E..... 20.	Understanding most ideas you read in your tests.
A B C D	E..... 21.	Understanding most ideas presented in class.
A B C D	E..... 22.	Performing simple math computations.
A B C D	E..... 23.	Using a computer.
A B C D	E..... 24.	Mastering most content in a math course.
A B C D	E..... 25.	Talking to a professor privately to get to know him or her.
A B C D	E..... 26.	Relating course content to material in other courses.
A B C D	E..... 27.	Challenging a professor's opinion in class.
A B C D	E..... 28.	Applying lecture content to a laboratory session.
A B C D	E..... 29.	Making good use of the library.
A B C D	E..... 30.	Getting good grades.
A B C D	E..... 31.	Spreading out studying instead of cramming.
A B C D	E..... 32.	Understanding difficult passages in textbooks.
A B C D	E..... 33.	Mastering content in a course you're not interested in.

APPENDIX C

PERMISSION TO USE WORK: DR. ALBERT BANDURA

Ronda D. Taylor

From: Albert Bandura
Sent: Wednesday, November 04, 2015 8:21 PM
To: Ronda D. Taylor
Subject: Re: Permission to Use Your Work

Permission granted.

Professor Albert Bandura

Please take the time to look at my new book, ***Moral Disengagement: How People Do Harm and Live with Themselves*** now available on pre-order at Amazon and Barnes and Noble here.

From: Ronda D. Taylor <rtaylor141@ivytech.edu>
Sent: Wednesday, November 04, 2015 5:09 AM
To: Albert Bandura
Subject: Permission to Use Your Work

Hello Dr. Bandura,

My name is Ronda Taylor and I am finishing up my dissertation on the impact peer mentoring has on first time college students in higher education. I have reviewed much of your work on self-efficacy and its effect on student success. Your work has truly inspired my writing and had guided my research in related areas. I found a very relevant self-efficacy model created by you that I would like your permission to use in my dissertation. I have attached it for your convenience. I was hoping that you would grant me permission to use this in my dissertation.

If you could please respond to me ASAP with an answer, I would deeply appreciate it.

Thank you in advance for your time and consideration.

Sincerely,

Ronda Taylor
Associate Professor
Ivy Tech Community College
9501 E 59th ST
Indianapolis, IN 46234
(317) 917-7147
rtaylor141@ivytech.edu

APPENDIX D

PERMISSION TO USE WORK: DR. LIND LEACH

Ronda D. Taylor

From: Leach, Linda
Sent: Tuesday, March 22, 2016 3:00 PM
To: Ronda D. Taylor
Cc: Zepke, Nick
Subject: RE: Permission to use your work

Hello Ronda

Thank you for your message and your very kind comments about our work. They are appreciated.

We happily give our permission for you to use the conceptual organiser in your dissertation.

Best wishes for your dissertation and for your on-going work with students.

Regards

Linda & Nick

From: Ronda D. Taylor [rtaylor141@ivytech.edu]
Sent: Wednesday, 23 March 2016 4:35 a.m.
To: Zepke, Nick; Leach, Linda
Subject: Permission to use your work

Dr. Zepke and Dr. Leach,

My name is Ronda Taylor and I am finishing my dissertation on peer mentoring and the impact it has on retention and graduation rates. Your work has truly inspired my writing and has guided my research in related areas. I found a very relevant model for student engagement authored by the both of you and I was hoping you would grant me permission to use it in my dissertation. Included you will find a copy of what I've extracted from your work.

If you could please respond to me ASAP with an answer, I would deeply appreciate it.

Thank you in advance for your time and consideration.

A Conceptual Organizer for Student Engagement

Research Perspectives	Proposals for Action
Motivation and Agency (Engaged students are intrinsically motivated and want to exercise their agency)	1. Enhance students' self-belief 2. Enable students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives
Transactional Engagement (Students and teachers engage with each other)	3. Recognize that teaching and teachers are central to engagement 4. Create learning that is active, collaborative and fosters learning relationships

APPENDIX E

PERMISSION TO USE WORK: DR. STEVEN OWEN

Ronda D. Taylor

From: Owen, Steven
Sent: Wednesday, March 23, 2016 11:20 AM
To: Ronda D. Taylor; Froman, Robin
Cc: Robin F
Subject: Re: Permission to use your work

Dear Ronda,

Thank you for your comments. You remarked about an "attached copy," but there was no attachment to your email.

You certainly have our permission to use CASES in your research. Let me know if you or Ivy Tech needs a formal letter of permission.

Best wishes,
steve

Steven V. Owen
University Professor Emeritus
Educational Psychology

From: Ronda D. Taylor <rtaylor141@ivytech.edu>
Sent: Tuesday, March 22, 2016 11:34 AM
To: Owen, Steven; Froman, Robin
Subject: Permission to use your work

Drs. Owen and Froman,

My name is Ronda Taylor and I am finishing my dissertation on peer mentoring and the impact it has on retention and graduation rates. Your work has truly inspired my writing and has guided my research in related areas. I found a very useful self-efficacy scale created by the two of you and I was hoping you would grant me permission to use it in my dissertation. Attached you will find a copy of what I've extracted from your work.

If you could please respond to me ASAP with an answer, I would deeply appreciate it.

Thank you in advance for your time and consideration.

Directions: How much confidence do you have about each of the behaviors listed below? For each statement below, circle the letter that best represents your confidence.

A B C D E

Quite Very

APPENDIX F

PERMISSION TO USE WORK: DR. LAURA RENDÓN

Ronda D. Taylor

From: Laura Rendon
Sent: Thursday, November 05, 2015 12:35 PM
To: Ronda D. Taylor
Subject: Re: Permission to Use Your Work

Ronda—thanks so much for your interest in my work. Yes, you may use in your dissertation as many doctoral students have done so. All the best for every success! lr

Laura I Rendon
Professor & Co-Director
Center for Research & Policy in Education
University of Texas-San Antonio
501 W. Cesar E. Chavez Blvd
San Antonio, TX 78207
210-458-6503 (o)
210-458-5848 (f)

From: "Ronda D. Taylor" <rtaylor141@ivytech.edu>
Date: Wednesday, November 4, 2015 at 9:47 PM
To: Laura Rendon <Laura.Rendon@utsa.edu>
Subject: Permission to Use Your Work

Hello Dr. Rendón,

My name is Ronda Taylor and I am finishing up my dissertation on the impact peer mentoring has on first time, low income college students in higher education. I have reviewed much of your work on self-efficacy and its effect on student success. Your work has truly inspired my writing and had guided my research in related areas. I found a very relevant model of success for underserved students created by you that I would like your permission to use in my dissertation. I have attached it for your convenience. I was hoping that you would grant me permission to use this in my dissertation.

If you could please respond to me ASAP with an answer, I would deeply appreciate it.

Thank you in advance for your time and consideration.

Sincerely,

Ronda Taylor
Associate Professor
Ivy Tech Community College
9501 E 59th ST
Indianapolis, IN 46234