A Summer Bridge Program's Impact: Social Engagement and the Building of Self-Efficacy

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This research is a product of the graduate program in College Student Affairs at Eastern Illinois University.

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A Summer Bridge Program's Impact:
Social Engagement and the Building of Self-Efficacy

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BY
Stephen L. Roach

THESIS
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
Master of Science in College Student Affairs
IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

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ABSTRACT

This two phase study sought to investigate the impact that a summer bridge program (SIHL) at a midsized, public institution had on participants’ academic success through an examination of its effect on their self-efficacy. In addition, this study sought to gain an increased understanding of how the program impacted self-efficacy, by providing a new conceptual model for examining the program and similar programs. Lastly, this study expanded on the research conducted by Lucas (2012), by incorporating both quantitative and qualitative methods. Participants in Phase 1, the quantitative phase, were 322 students of varying ages, races and ethnicities, genders, and some who had participated in the program as well as some who had not. Results suggested that the self-efficacy beliefs of program participants were similar to those who did not participate. Phase 2, or the qualitative phase, more closely examined the self-efficacy beliefs of 5 students who participated in the program. Through semi-structured interviews, these students recounted their experiences during their time in SIHL and how it impacted their self-efficacy beliefs. Further, students described retention and persistence behaviors as they were influenced through social and academic engagement.
DEDICATION

I dedicate this thesis to my wife, Amy. Your devotion to me and our future has given me the strength needed to take on such a task when I did not think it was possible. Urging me ahead with continued encouragement and a genuine interest in my undertakings, you were always there to ask me about this work. If it were not for you, my life would not nearly be as bright.
ACKNOWLEDGEMENT

The journey here has been long and challenging, yet I have had the help of many. My thanks and admiration will not be limited to those of you who have stood by me. Dr. Catherine Polydore, your drive and boundless energy have pushed me to produce and contemplate in ways that I have never. Cindy Boyer, you have been a great teacher and guide to me as I have entered the world of Student Affairs. Your dedication and devotion to those you help find success is my inspiration. Dr. Dena Kniess, you have provided me with many insights and engaging conversations that have enriched my learning and work. To you all, I give you my thanks. This work would not have been possible without you.
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CHAPTER I

Introduction

Before the advent of empirical science and peer reviewed journals, people had some inclination of how their own thoughts impacted their lives. This was illustrated in the words of Marcus Aurelius (2000), a Roman emperor from the 2nd century AD who said, “such as are thy habitual thoughts, such also will be the character of thy mind; for the soul is dyed by the thoughts” (Book Five, para. 17). Through the ages, this knowledge has grown and changed at a near glacial pace, until the beginnings of Psychology, and the scientific study of thought. During the latter half of the 20th century, theories began to gain prominence as evidence of the true impact of thought began to accumulate.

Understanding how something as non-corporeal as thought might impact the way a student approaches math homework has gained even greater importance as educational resources continue to become ever scarcer. Today, the words of Marcus Aurelius remain significant, because knowing how the thoughts of students will impact their performance is the first step towards influencing those thoughts in order to empower.

Yet, finding the point at which to start changing the way in which students think about themselves and their work is a most difficult challenge. Students typically begin their education at a young age, and are exposed to many influencers that might dictate certain standards or expected behaviors to them. This programming continues throughout early adolescence, until it comes time for students to make a choice. One of the most important choices is whether they should attend college? College attendance has been steadily growing (Renn & Reason, 2013). In fact, the National Center for Education Statistics' [NCSE] (2014) projects that by 2023 nearly 24 million students will be
enrolled in some form of higher education institution. This growth has been driven by the increasing demands of a more globalized job market that requires more competencies in a myriad of skills from workers (Carnevale, Smith & Strohl, 2010). According to a report from the Georgetown University Center on Education and the Workforce (2010), those who only earn a high school diploma can expect to make on average $1.76 million over their working lives. This stands in stark contrast to the average lifetime income of someone who possesses a bachelor’s degree which is around $3.38 million (Carnevale, Smith & Strohl, 2010). With many considering their future when the time comes to choose whether or not to go to college, the choice becomes imperative and may already be decided for the student before graduation from high school. This reality is driven by the economic necessity to increase the odds of a financially secure future which, for many, is done through education (Gallagher, 2016).

The transition from a less independent home life and compulsory education, to the more independent world of college can be abrasive and buffeting for some. This rocky start can sometimes lead to dropout, and understanding how to change this outcome is something that many in the world of education desire to know (Stephens, Hamedani, & Destin, 2014). Programs designed to mentally prepare students to undergo this change in setting have become more popular in recent decades (Kezar, 2000). Many of these programs focus on the summer between high school graduation and entrance into college and seek to instill a deeper sense of effectiveness within the participants about their own skills and abilities. These summer programs, in a sense, are literal bridges into the world of higher education for the uninitiated. One such program is the Summer Institute of Higher Learning (SIHL) at the institution of interest.
Purpose of the Study

The SIHL is meant to ease students into the university community. They participate in SIHL so that they may begin to understand that they are indeed capable of completing a college education. This understanding is built through class time, workshops, lectures, and exposure to university functions and services (Eastern Illinois University, 2015). But, is the program having an impact on students’ success? One concept that has received prodigious support as a good predictor of success is Bandura’s (1977) self-efficacy, defined as one’s own belief that they can effectively complete a task or be successful at something. A Previous study conducted by Lucas (2012) suggested participation in the program positively impacted student self-efficacy. However, since then, the program had undergone some changes including a decrease in the required ACT scores for acceptance and a change from an invitation-based model to open applications available to any potential student (EIU, 2015a). Therefore, the purpose of this study is three-fold. First this study seeks to investigate the impact that SIHL has on participants’ academic success through an examination of its effect on their self-efficacy. Secondly, this study seeks to gain an increased understanding of how the SIHL program impacts self-efficacy, by providing a new conceptual model for examining the program and similar programs. Lastly, this study serves to expand on the research conducted by Lucas (2012), by incorporating both quantitative and qualitative methods. This study not only examines this impact in the immediate aftermath of participation, but is designed to examine the longer term effects of participation. This was achieved with both qualitative and quantitative methods.
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Research Questions

1. What are the self-efficacy beliefs of students who have participated in the SIHL program? (Quantitative)

2. Is there a difference in the self-efficacy between undergraduate students who have participated in the SIHL program and those who have not? (Quantitative)

3. How do participants describe their experiences during their time in the SIHL program? (Qualitative)

4. How does the SIHL program impact participants' self-efficacy? (Qualitative)

Hypothesis

The following hypotheses were formulated for the quantitative research questions.

1. SIHL participants' self-efficacy beliefs are not significantly different from those found by Lucas (2012).

2. There will be a significant difference in the perceived self-efficacy, as measured by the CSEI, between the two groups with the EIU undergraduate population displaying a higher perceived self-efficacy than those who have participated in the SIHL program. (Quantitative)

The following propositions were formulated for the qualitative research questions.

There is some debate within the scientific and philosophical research worlds about the appropriateness of presenting propositions or hypotheses ad hoc (Hunt, 2012; King, Keohane, & Verba, 1994).

3. Participants will describe their experiences during their time within the SIHL program with a common positive thread that indicates the development of positive study skills, time management, and exposure to faculty and staff. (Qualitative)
4. SIHL participants will describe vicarious experience and verbal persuasion as important factors that impacted their self-efficacy. Through these factors, SIHL participants will outline the building of mastery experience founded on the observation of similar others undertaking the same challenges and the encouragement of faculty and staff. (Qualitative)

Significance of the Study

In an age of increasing competition, educational institutions across the nation are facing decreased funding. As of 2013, governmental spending on higher education has declined by 28% from 2008 funding levels, and every state except Wyoming and North Dakota have reduced aid to higher learning institutions (Oliff, Palacios, Johnson, & Leachman, 2013). This trend in the reduction of support to higher education has been coupled with a resurgence of interest in the concept of performance based funding which first became popular in the early 1980’s (Mclendon, & Hearn, 2013). Performance based funding, pioneered in Tennessee, has changed from a reliance on input metrics, or criteria such as enrollment, to output metrics, like degree completion. This realignment has created urgency for the further development of services like remediation, tutoring, and advising in an effort to boost completion and retention rates (Mclendon, & Hearn, 2013). Yet, understanding the true impact of programs designed to increase retention and remediate is paramount. Therefore, this study is significant in that it examines a program that is designed to better prepare at-risk, or underprepared students, entering college so that they may be more likely to be retained and obtain a degree. Understanding how this program may impact students and their success offers an economic argument as to why it’s continued existence and development is important.
In addition, this study expands upon the body of literature surrounding the empirical examination of the impact of self-efficacy on academic success. This is accomplished through the partial replication and expansion of a previous study. Lucas (2012) conducted a study on the first SIHL cohort utilizing the *College Student Self-Efficacy Inventory* in a pre and post-test design. The test in the Lucas (2012) study was participation within the SIHL program and how that participation impacted the perceptions of self-efficacy of the participants. While this study does not fully replicate the Lucas (2012) study, it will incorporate the remaining participants of the 2012 SIHL cohort and the use of the CSEI.

**Limitations of the Study**

Like any study, this study faced challenges that may have limited or threatened its validity. First, nonresponse bias in Phase 1 was identified as a potential limitation. Nonresponse bias was defined by Sax, Gilmartin, and Bryant (2003), as a “bias that exists when respondents to a survey are different from those who did not respond in terms of demographic or attitudinal variables” (p. 411). In other words, SIHL participants who elected to complete the study may have differed from those who completed it in ways that could have impacted the study's outcome. With regards to demographic variables, -- age, race, gender, and socioeconomic standing and background -- all have been shown to impact the response rates to surveys (Porter & Whitcomb, 2005). The survey instrument was distributed via email to the entire undergraduate student population of the target institution (n = 7,202), and was left open for four weeks; email reminders were sent at two week intervals in an attempt to combat nonresponse bias. In addition, respondents were offered an incentive of one of four $25 gift cards if they met certain criteria. These
efforts resulted in a response rate of 4.15% \( (n = 322) \), which leads to serious questions about the sample’s representativeness.

A second limitation on the study was its relatively small sample size, especially for the SIHL participants. This impacts the ability to generalize the findings to all SIHL participants. Finally, because of the nature of the development of self-efficacy, it is impossible to control for extraneous factors that may influence the development and perceptions of self-efficacy. To combat these limitations, instead of conducting a purely quantitative study, the primary investigator employed triangulation using a two-phase mixed methods design.

Definition of Terms

**Academic impact.** Academic impact describes the effect that a variable, like tutoring attendance, more hours spent studying, or career counseling influences the academic performance of an individual, either positively or negatively (Nonis & Hudson, 2006).

**First generation student.** First generation students are students entering college who have familial background lacking in collegiate experience. Often these students are the first members of their families to participate in college (Inkelas, Daver, Vogt & Leonard, 2007; Billson & Terry, 1982)

**Retention.** Retention is the ability of an institution to maintain a student from original enrollment through the time at which they graduate (Seidman, 2012).

**Self-efficacy.** Self-efficacy relates to one’s assessment of their own abilities to determine how likely it is that they will complete a certain task to reach a goal (Bandura, 1977; Zajacova, Lynch & Espenshade, 2005).
**Summer bridge program.** A summer bridge program is designed to assist students that may come from historically underrepresented populations with the transition to their undergraduate learning careers by providing some socialization and academic instruction during the summer (Garcia & Paz, 2009).

**Summary**

Chapter 1 of this study examined the main purpose of this research, its questions, and the hypotheses guiding it. These components are further explained by the terms defined and a brief view of history on the topic. The following chapters of this work detail the efforts to understand the research questions discussed. Specifically, chapter 2 focuses on the body of literature surrounding research on self-efficacy and its sources, the history of summer bridge programs and remedial education in the United States, and the theoretical framework of this study. Chapter 3 describes, in detail, the processes and methodologies utilized to answer the research questions of this study. Chapters 4 and 5 present the quantitative and qualitative findings, in order, of this study. Finally, chapter 6 concludes with a discussion of the major findings of this study, and outlines recommendations for future research, policy, and practice.
CHAPTER II

Review of the Literature

This chapter reviews some of the available literature on summer remedial programs in American higher education, the Summer Institute of Higher Learning at Eastern Illinois University, self-efficacy and its sources, and details the theoretical framework of this study. Through an examination of the literature available on these topics, an understanding of the purpose and direction of the current study is enhanced.

History of Summer Remedial Programs in U.S. Higher Education

In 1852, Henry P. Tappan gave his inaugural address as the newly appointed chancellor of the University of Michigan. In his address he outlined many of the challenges facing the young state of Michigan and its fledgling university system. More importantly, Tappan spent a moment in his speech to lament the fact that time must be spent to educate, “three hundred boys” in elementary learning (Tappan, 1852). This lamentation was an early reference to a type of remedial education within the United States. Over the succeeding 164 years, remedial education in its many forms has burgeoned, spanning the entire American education system.

Literature concerning the history of remedial education within the United States typically settles on the middle to late 19th century as the period when university administrators began to address the needs of underprepared students (Cohen, 2007; Garcia, 1991; Markus & Zeitlin, 1998). In 1869, the Office of Education began collecting data on the number of students enrolled in higher education institutions and found that almost 63,000 students were enrolled at 563 different campuses (Snyder, 1993). These students represented a mere one percent of the population of people
ranging in age from 18 to 24 (Snyder, 1993). By the end of the 19th century, the number of students attending American university campuses jumped to roughly 238,000 spread across 977 different campuses (Snyder, 1993). This nearly fourfold growth in the population of college students was mirrored by an increasing awareness of the need for preparatory, or remedial, education. An example of this can be seen when, in 1907, Columbia, Harvard, and Yale found that a slight majority of their students could not satisfy their entrance standards (Markus & Zeitlin, 1998). To remedy this, by 1915 over 350 institutions had created departments solely dedicated to better preparing incoming high school students (Markus & Zeitlin, 1998).

As the 20th century progressed, the demographic makeup and socioeconomic backgrounds of college students shifted from mostly Caucasian males from well-to-do agricultural backgrounds, to include more women by the middle of the century (Renn & Reason, 2012; Snyder, 1993). The passage of the GI Bill in 1949 made a college education easier to obtain for an entire generation of students (Markus & Zeitlin, 1998). It was around that period that some institutions began to examine the challenges that came with the incredible rise in the number of college students. These challenges included understanding why students leave higher education and how to better integrate students into the world of higher education in order to increase completion (Tinto, 1993). Tinto (1993) focused on construction of a theoretical model that better explained why students drop out of higher education, and the creation of a better definition for student behaviors surrounding the non-completion of college. Tinto’s work was the guiding light for one of the very first summer bridge programs (SBP) in the United States that focused on the utilization of a theoretical approach (Myers & Drevlow, 1982).
In 1978, The University of California at San Diego began to implement an SBP based on the work of Tinto and found that with the combined use of counseling and concentrated instruction, participants were 31% more likely to be retained by their institution (Myers & Drevlow, 1982). While the genesis of SBPs in the California university system can be traced to 1968, the mid to late 1970's seems to be the time period when the California university system began looking at the different programs throughout its various institutions (Garcia, 1991). This institutional soul searching found that SBPs showed promise, especially in helping to address issues with student retention and preparation and therefore warranted an expansion (Garcia, 1991). After some pilot programs that were unrelated to the individual institutional programs already in existence, the California university system implemented SBPs throughout 19 different campuses with the aim of helping students transition into university life (Garcia, 1991). This implementation was emulated around the United States as institution began to acknowledge that summer bridge programs could be utilized to better prepare and thus potentially better retain first year students (Kezar, 2000). Retention and completion were the ultimate goals of many of these programs; to meet these challenges, many focused on training new students in study skills, time management, and preparation for expectations of college level work (Kezar, 2000).

The demographic changes of the late 20th century accelerated into the early 21st century. By 2008, a much more socially and racially diverse 16.3 million students were enrolled in U.S. higher learning institutions, with the majority of them females (Renn & Reason, 2012). This huge increase in the number of college students brought with it the same issues that administrators had been dealing with since Tappan's 1852 address: What
is the best way to prepare underprepared high school students facing one of the most profound transitions of their young adult lives?

**The Summer Institute of Higher Learning at Eastern Illinois University**

The Summer Institute of Higher Learning (SIHL) at Eastern Illinois University (EIU) was a summer bridge program designed to assist students who do not meet the minimum qualifications for admission to the university (Eastern Illinois University, 2015). Typically, students wishing to attend EIU must have met one of three tiered criteria that combine standardized test scores, high school class ranking, and high school GPA (Eastern Illinois University, 2016). Accordingly, if a student successfully completed the coursework of the SIHL with a GPA of 2.5 or better, they were invited to attend EIU for the following fall semester (Lucas, 2012).

Students in the program are required to take at least two general education courses consisting of a compulsory English course as well as one of two social-behavioral courses (Eastern Illinois University, 2015). Further, students undergo workshops and team activities designed to help them learn about campus resources, form study groups, and receive assistance from faculty and staff (Lucas, 2012). Students are grouped into learning cohorts and mentored by a high-achieving student, or Peer Learning Assistant (PLA) (EIU, 2015). The inclusion of the PLA is designed to facilitate the transfer of institutional knowledge concerning the campus social and academic environments (Lucas, 2012). This process is almost akin to acculturation, as students transitioning from different geographical areas with different views, attitudes, and morays are exposed to the culture of EIU, albeit in a small dose.
Yet, SIHL and participation in it is ultimately meant to prepare incoming students with the faculties they will need to persist through their education until completion. Academic and social engagement are present, as students participating in SIHL must attend communal study times in both the evenings and mornings throughout the week (Eastern Illinois University, 2015). This shared experience among the participants works to build a social bond between them, and creates a ready network on day one of the fall semester. Further, students are encouraged to think about how they can achieve their goals through time spent in the classroom with faculty. Instead of starting their first semester with a 15-hour course load, students their academic experience with six hours of coursework.

The SIHL program has been shown to be beneficial to participating students, with a demonstrated positive effect on individual students' belief in their own academic and social performance (Lucas, 2012). Understanding how this effect may impact the overall persistence and retention among a group that has been socially and academically engaged with each other since before their first fall semester is one of the goals of this study. Understanding how these factors come together to enhance or improve the vaunted concept of "academic success", is perhaps this study's highest goal. Achieving this goal begins with and is built upon the literature reviewed here.

Perceived Self-Efficacy as a Personal Cognitive Factor of Academic Success

Self-efficacy can be described as one's assessment of their own abilities to judge the likelihood of success at a certain task or goal (Bandura, 1977; Zajacova, Lynch, & Espenshade, 2005). This description hints at how self-efficacy is perceived by an individual, rather than imbued by some outside force. One's perception, or thoughts and
feelings, of self-efficacy can either be a path or a barrier. If one thinks that they lack the skill or experience to complete a task, or obtain a goal, then perhaps that individual will not try (Chemers, Zurbriggen, Syed, Goza, & Bearman, 2011).

This study places the influence of perceived self-efficacy on par with environmental and behavioral influences. Self-efficacy, as a personal cognitive factor, influences both retention and persistence, and social and academic engagement through expectations. This connection relies on Bandura’s social cognitive theory which examines the concepts of agency and intentionality and how these two factors influence one’s perception of self-efficacy (Bandura, 2001). Without the ability of an individual to have the opportunity to make a choice intentionally, thereby becoming an agent acting on their own behalf, it would be impossible for that individual to influence their environment (Bandura, 2001). Further, an individual would be unable to build self-efficacy, because they would not be actively overcoming obstacles or challenges to gain experience to enrich their overall self-efficacy (Bandura, 2001).

Self-efficacy’s influence is demonstrated in a study by Vuong, Brown-Welty, and Tracz, (2010) that examined how first generation college students dealt with “the sophomore slump.” The researchers administered the College Self-Efficacy Inventory (CSEI) to a sample of 1,291 second year students at five different California State University system institutions. The results indicated that participants’ perception of their self-efficacy was the biggest predictor of GPA (Vuong et al., 2010). The importance of self-efficacy and how it is developed in students, and what impacts it, should be examined especially when considering how to further enhance summer bridge programs.
Another study of the influence of self-efficacy utilized quantitative methods and a sample of 271 liberal arts undergraduate students at Fordham University (Brady-Amoon & Fuertes, 2011). The authors examined five hypotheses that were centered on how individually rated self-efficacy and self-rated abilities correlated with one another. To do this, the researchers utilized three different instruments: The CSEI, the Self-Estimates subscale SDS, and the Student Adaptation to College Questionnaire (Brady-Amoon & Fuertes, 2011). The researchers also included an open-ended demographic questionnaire and collected information on the cumulative GPAs of the participants. Data showed a correlation between self-efficacy and self-rated abilities, yet self-efficacy and self-rated abilities remained two distinct constructs that only influenced one another (Brady-Amoon & Fuertes, 2011). They also found a significant, positive correlation between self-rated abilities and adjustment, and that higher rated self-efficacy showed a positive correlation to academic performance. The authors discussed the implications by detailing how self-efficacy, self-rated abilities, and adjustment may offer much better predictors of academic performance in college than high school GPA or standardized test scores could.

Sources of Self-efficacy

In describing how one develops self-efficacy, Albert Bandura (1986) defined four sources: mastery experience, vicarious experience, verbal and social persuasions, and physiological states. These sources are related to and dependent on one another; as people process the world around them and their experiences within it, they measure and grow to understand their own abilities (Usher & Pajares, 2008). What follows is a brief review of the literature surrounding sources of self-efficacy.
Mastery experience. Imagine a student who has been told throughout their academic career that they write well, and now imagine that this student has only ever received high grades for their writing. Bandura (1977; 1986; 2001) would assert that this student, through their experience, might think that they are a talented writer. This example demonstrates mastery experience, in that the student has completed tasks over time and measured their performance critically and found that they performed successfully again and again (Usher & Pajares, 2008). Each time they performed the task of writing successfully, they enriched their mastery experience. Inversely, mastery experience can be damaged when one is faced with failure, or can only be successful if they receive outside help (Usher & Pajares, 2008).

Vicarious experience. Vicarious experience is shaped through the observation of others and can be seen in the adage, “if they can do it, then so can I” (Usher & Pajares, 2008). Examples of vicarious experience can be summed up in the need to measure one’s own outcome against those of others. This illustrates the importance of the social landscape. According to Usher and Pajares (2008) vicarious experience plays a, “powerful role in the development of self-efficacy, especially when students are uncertain about their own abilities or have limited experience with the academic task at hand” (p.753). Further, coping models, or those who persevere through challenge, make better role models than mastery models, or those who do not acknowledge the errors they make (Schunk & Hanson, 1985). Finally, the social surroundings of students can be impacted by symbolic models, or models observed through media like television or the internet (Bandura, 2004).
**Verbal and social persuasions.** Verbal and social persuasions carry their own weight of importance, as encouragement from trusted family members, friends, and faculty can all offer powerful words that impact the students’ self-efficacy (Usher & Pajares, 2008). Further, students will often rely on the feedback of others to gauge their academic performance. On the other hand, negative social and verbal persuasions can decrease self-efficacy, and may do so in a longer lasting way than how positive verbal and social persuasions increases the self-efficacy of a student (Bandura, 1997). The importance of sound, timely, and constructive feedback cannot be understated in the development of one’s self-efficacy.

**Physiological states.** Flushed cheeks and sweaty palms can be visual clues to the emotional and physiological states of students. Said students may be nervous and know, through previous experience, that what they are feeling in that moment is based on their past performance in similar situations (Usher & Pajares, 2008). An example of this can be drawn from the dread, which many share, caused by public speaking situations. Feelings of dread, or apprehension, can signify to a student or individual that they lack the necessary skillset to perform a task competently and can therefore undermine their self-efficacy (Usher & Pajares, 2008). In the same way these aroused states may suggest a lack of skills and lower self-efficacy, “good mood, however, raises self-efficacy beliefs, motivation, and subsequent achievement, initiating a reciprocal process that enhances well-being” (Usher and Pajare, 2008, p.754).

**Theoretical and Conceptual Framework**

Self-efficacy, academic and social engagement, retention and persistence, and SBPs are necessary ingredients in the theoretical framework that guides this study.
Bandura's (1978) Triadic Reciprocal Model of Determinism states that behavior, "involves a continuous reciprocal interaction between [the] behavioral, cognitive, and environmental influences" (p. 344). Further, the complexity of interactions between people and environments mean that people do not simply react to environments but shape them (Bandura, 1978). An example of this environmental shaping can be seen in the social web built around people. This web is shaped by, and shapes, the behaviors of people. More importantly, the expectations of those shaping their environment can alter their shaping behaviors (Bandura, 1978). If one believes that their actions will have little outcome on their own environment they might be less likely to carry out a certain behavior that would ultimately change their environment.

This interaction between the environmental, personal cognitive, and behavioral characteristics provided the scaffolding on which the theoretical framework for this study was constructed. More specifically, a new conceptual model was hypothesized by relating the personal cognitive factors from the original framework to SBP participants' perceptions of self-efficacy, the environmental factors to the academic and social engagement of participants, and finally, the behavioral factors to the retention and persistence of participants. These three factors can influence one another continuously and without direction, while participation in an SBP impacts all the factors simultaneously and unidirectionally. This theoretical framework has been visualized as a triangular pyramid (Figure 1), with the original model forming the base, and the SIHL program at the apex with the edges showing the unidirectional impact of the SIHL program. This model places SBPs (in this case the SIHL) at a central role. Though there
may be other ways to envision this, this framework has been chosen for its clarity and simplicity.

Figure 1. Conceptual model of the impact of participation in the Summer Institute of Higher Learning. How participation in SIHL influences the behavioral, environmental, and cognitive characteristics of participants.

Retention and Persistence as Behavioral Factors of Academic Success

Retention, or the "institutional level goal of keeping students" until they graduate, highlights half of the mutually dependent nature of the relationship between students and their institutions (Renn & Reason, 2012, p. 175). The literature surrounding retention is considerable and contains works done by some of the best known names in educational research, including Astin, and Tinto (Cabrera, Nora & Castaneda 1993; Nonis & Hudson,
A SUMMER BRIDGE PROGRAM'S IMPACT

2006; Osegúera & Rhee, 2009; Turner & Thompson, 2014). Yet, much of the research on this topic interchangeably uses retention and persistence (Renn & Reason, 2012). This section seeks to highlight the balance between the higher level success of higher education institutions and the more personal nature of success of individual students (Renn & Reason, 2012). Since the success of students and their institutions are interdependent, understanding the challenges of retention is an important first step.

Astin’s (1964) groundbreaking study on retention explored the surveys of 6,660 undergraduate students and the reasons they drop out of college. This study examined institutional factors, and individual characteristics of the participants, to find a dropout rate of 10.4% (Astin, 1964). Pointing to the dated nature of this study, women are referred to as, “girls” and had a significantly higher dropout rate when compared to their male counterparts (Astin, 1964). In the discussion of these results, it is suggested that while the male participants were more concerned with their academic course, female participants were bound more by familial and monetary constraints. Yet, this study did begin to discuss the importance of factors such as socioeconomic standing and high school GPA and pointed to them as dependable predictors of continued retention (Astin, 1964).

Astin contributed to the understanding of reasons as to why students leave higher education, yet understanding the process of dropping out of higher education was theorized about by Tinto. Tinto (1993) compared “dropping out” to a theory explaining suicide, and how choosing to leave higher education is concerned with a lack of social integration within the higher education environment. Importantly, Tinto points to the difference between suicide and dropping out by underlining the differences between
social and academic integration and how some may be integrated socially, but not academically (Tinto, 1993). This lack of academic integration leads some to not actively choose dropping out, but they are forced to do so regardless of their desire through academic dismissal (Tinto, 1993). Those that choose to leave on their own do so because of "either low goal commitment, or institutional commitment" (1975, p. 96). In this instance, the goal to commit to would be graduation, and if commitment to this goal is high enough then a student might transfer to another institution. Yet, if an individual's commitment to the goal of graduation is not very high the departure from higher education altogether might occur (Tinto, 1993).

Another more recent study conducted by Turner and Thompson (2014) examined the challenges that were becoming apparent in maintaining retention rates for freshmen millennial students as they transitioned into college. Perhaps the largest of the challenges presented in this qualitative research dealt with the generational change in the needs of millennial students and their perceived lack of "critical thinking skills" coupled with a "want to spend less time on tasks and reach success with little effort" (Monaco & Martin, 2007, p. 42). To better understand these challenges the researchers interviewed 30 undergraduate students and found that 65% of them cited the development of effective methods of studying as their greatest obstacle and that 67% named "freshmen focused activities and events" as the greatest "enablers" of retention (Turner and Thompson, 2014, p.100). A commonality shared by many SBPs is the development of effective study skills in an environment that focuses entirely on incoming first time students through workshops, classroom time, and advising with faculty (Garcia, 1991; Kezar, 2000; Myers & Drevlow, 1982).
Social and Academic Engagement as Environmental Factors of Academic Success

Student engagement is considered to be an important component in the persistence of students in their pursuit of an education (Kahu, 2013; Kinzie, Gonyea, Shoup & Kuh, 2008; Kuh, 2009; Renn & Reason 2012). Kuh (2001) described student engagement as the amount educational effort measured in time and psychological energy that a student puts into their education. This effort is expended in pursuit of the personal goals of a student and might include degree attainment, or some other academically oriented goal. Four different approaches to the understanding of student engagement exist in the literature and include the behavioral, the psychological, the psycho-social, and the holistic perspectives (Kahu, 2013). This section frames these perspectives into social and academic engagement.

Social engagement. Vicarious learning, or experience, is undertaken through the process of observation (Usher & Pajares, 2008). Students are continuously comparing themselves to others in order to gauge their own skills and abilities when there might not be an, “absolute measure of proficiency” available (Usher & Pajares, 2008, p.753). This capacity to compare one’s abilities to another’s is significant to a pioneering quantitative study of self-efficacy completed by Lent, Lopez, and Bieschke (1991) that examined how students’ perceptions of their abilities in math impacted their performance.

The researchers recruited 138 mostly White (94%) students who were either in their first or second year at a large Midwestern university (Lent, Lopez, & Bieschke, 1991). They examined ACT math scores, and administered a 40 item Mathematics Self-Efficacy Index. This instrument consisted of four subscales that corresponded to the four different sources of self-efficacy described by Bandura (1986). Findings suggested that
the sources of self-efficacy were all significantly interconnected, and that there was a weak yet significant correlation between perceived self-efficacy, and gender (Lent et al., 1991). This correlation showed, after a regression analysis with gender considered last, that gender's effect on self-efficacy was particularly mediated by differences in the past efficacy experiences. Through the discussion of these results, the researchers commented on the limitations of their understanding of the histories of gender role socialization of the participants and their efficacy experiences concerning math. However, the researchers espoused the importance of efficacy building experiences for those who might lack suitable social support or role models.

Beyond math, living on or off campus can have a rather large impact on the experience that students have while in college (Pike & Kuh, 2005). A student who lives on campus is more likely to gain leadership skills, have a higher level of involvement with student organizations, and is more likely to fully persist through college to degree completion (Astin, 1984). A study completed by Turley and Wodtke (2010) examined who benefits the most from living on campus. The researchers scrutinized survey and personnel records to create a sample of 2,011 students from 372 institutions (Turley & Wodtke, 2010). They hypothesized that minority students would benefit more than their White counterparts from living on campus, female students would benefit even more than male students due to differing levels of involvement, and small, private, or research orientated institutions would have higher levels of on campus living. Their findings suggested those living on campus were more likely to have higher GPAs and SAT scores, work fewer hours in a week, and have parents who had college degrees and could afford to pay at least some tuition. While living on campus does seem to have positive benefits
for all, the impact on minority students, specifically Black students, is more robust (Turley & Wodtke, 2010). These results may be explained by higher levels of involvement associated with on campus living in institutional activations, more frequent interactions with faculty and staff, and a more developed concern for “being academically integrated” (p.527)

Turley and Wodtke’s (2010) study suggested that interactions with faculty and staff are important when the engagement of students is considered. According to Kuh (2001), the faculty and staff of an institution and the relationships that they form with students are both social and academic in nature. These relationships have been shown to be very important in the impact they have on a student’s willingness to invest the psychological and emotional energies of engagement (Kuh, 2001). As such, research examining student engagement typically discusses the shaping of institutional policies and goals to reflect and guide the fostering of positive and beneficial relationships between students, faculty, and staff (Astin, 1984; Kuh, 2001; Turley & Wodtke, 2010).

**Academic engagement.** Chickering and Gamson (1987) described seven principles for good practice in undergraduate education. These principles focus on different factors in educating students and work together in such a way that engagement will be increased, especially in educationally effective settings. Of the seven principles from Chickering and Gamson (1987), the third speaks to the nature of learning and declares that “learning is not a spectator sport” (p. 4). This principle discusses the use of active learning by utilizing structured activities and more importantly, writing. The end desire is that students who are engaged in this way will be more likely to assimilate the information they are given. These principles also discuss the importance of contact
between students and faculty, which is an important aspect of many different summer bridge programs as they introduce students to faculty and staff before many of the other pressures of a full semester are laid upon their shoulders (Kezar, 2000). The encouragement of this contact, as pointed out by Kinzie et al. (2008), enhances engagement in the classroom and can help foster a sense of belonging. This sense of belonging can help with persistence and retention (Chickering & Gamson, 1987; Kinzie et al., 2008; Kuh, 2001).

Summary

Early on in American higher education, it was understood that not all students came equally prepared to the hallowed halls of different institutions. At first this was not a large problem as the population of college students was small; yet inclusivity, access, and the educational development needs of an ever more competitive workforce helped this population to boom. The need to better prepare students in order to help them maintain and complete their educational goals became ever more important. This need led to more studies and theories on higher education and created a wealth of literature surrounding the history of summer bridge and remediation programs. As extensive as this body of literature is, it is duly important to understand self-efficacy, its sources, and its potential to impact the success of students. Building this basic understanding of the relationships between research, theory, and summer bridge programs is an important aspect of this study as it provides a foundation on which to proceed. The following research questions were borne out of the review of the literature about summer bridge programs in general and the program at the institution of interest, specifically:
1. What are the self-efficacy beliefs of students who have participated in the SIHL program? (Quantitative)

2. Is there a difference in the self-efficacy, between undergraduate students who have participated in the SIHL program and those who have not? (Quantitative)

3. How do participants describe their experiences during their time in the SIHL program? (Qualitative)

4. How does the SIHL program impact participants' self-efficacy? (Qualitative)
CHAPTER III

Methods

The three purposes of this study discussed in chapter 1 include the investigation of the impact that SIHL has on participants' academic success through an examination of its effect on their self-efficacy. In addition, this study seeks to gain an increased understanding of how the SIHL program impacts self-efficacy, by providing a new conceptual model for examining the program and similar programs. Lastly, this study serves to expand on the research conducted by Lucas (2012) by incorporating both quantitative and qualitative methods.

Design of Study

This study utilized an explanatory sequential mixed methods approach (Creswell, 2014). Since some SIHL participants have been outside of the program for a time, it is important to supplement any measure of self-efficacy with interviews from said participants to better examine the true nature of the influence SIHL has on participant's self-efficacy. This process was conducted in two phases; Phase 1 included a quantitative survey of all students, including the 2012-2015 cohorts of the SIHL. Phase 2 included a qualitative exploration of the self-efficacy beliefs of the cohorts of 2013, 2014, and 2015, who indicated an interest in participating of an interview during, Phase 2.

Participants

Participants were 322 students who completed all items of the CSEI scale during the spring semester of 2016 at the target institution. Tables 1 and 2 detail their demographic attributes. The target population of this study was all undergraduate students enrolled at the institution of interest in the spring of 2016. Students would have
to have been enrolled at the institution for the entirety of their undergraduate experience.

Transfer students were not included in the study. This is to reduce threat to internal
validity because of the instrument, and to minimize the chances that self-efficacy beliefs
were influenced by another institution.

Table 1

Descriptive Statistics for Gender and Race/Ethnicity for Participants (N = 322)

<table>
<thead>
<tr>
<th>Variable</th>
<th>SIHL</th>
<th>Non-SIHL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8 (36.3%)</td>
<td>68 (22.8%)</td>
<td>78 (24.1%)</td>
</tr>
<tr>
<td>Female</td>
<td>14 (63.6%)</td>
<td>229 (76.8%)</td>
<td>244 (75.5%)</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1 (0.3%)</td>
<td>1 (0.3%)</td>
</tr>
<tr>
<td>Race and Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White or Caucasian</td>
<td>16 (69.6%)</td>
<td>243 (81.3%)</td>
<td>259 (80.4%)</td>
</tr>
<tr>
<td>Black or African American</td>
<td>3 (13%)</td>
<td>25 (8.4%)</td>
<td>28 (8.7%)</td>
</tr>
<tr>
<td>Hispanic or Latino/a</td>
<td>2 (8.7%)</td>
<td>18 (6%)</td>
<td>20 (6.2%)</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>0</td>
<td>6 (2%)</td>
<td>6 (1.9%)</td>
</tr>
<tr>
<td>Other or Unknown</td>
<td>2 (8.7%)</td>
<td>7 (2.3%)</td>
<td>9 (2.8%)</td>
</tr>
</tbody>
</table>

Note. SIHL refers to the Summer Institute of Higher Learning, a summer bridge program at Eastern Illinois University.

Table 2

Age and Academic descriptive statistics of SIHL and Non-SIHL participants (N = 322)

<table>
<thead>
<tr>
<th>Variable</th>
<th>SIHL</th>
<th>Non-SIHL</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Age/years</td>
<td>22</td>
<td>20.36</td>
<td>1.84</td>
</tr>
<tr>
<td>ACT Score</td>
<td>22</td>
<td>21.18</td>
<td>2.06</td>
</tr>
<tr>
<td>High School GPA</td>
<td>22</td>
<td>2.59</td>
<td>0.51</td>
</tr>
<tr>
<td>College GPA</td>
<td>22</td>
<td>3.03</td>
<td>0.71</td>
</tr>
</tbody>
</table>
Research Site

The study was conducted at a public four-year regional university in the rural Midwest, which draws students from all over the region. The undergraduate population of the institution was approximately 68.4% White, 16.9% Black or African America, and 5.5% Latino/a at the time of this study (EIU, 2015b). The town has a population of approximately 21,000 residents, of which 88% report their race as White, 7% report as African American, and 3% report as Latino/a (QuickFacts, 2015). The institution itself has less than 10,000 students and offers both baccalaureate and graduate degrees. According to demographic information provided by the institution’s office of Planning and Institutional Research, there were 7,202 undergraduate students enrolled during the fall of 2015. Of these, 40.2% \((n = 2900)\) identified male, and 59.7% \((n = 4,302)\) as female. Most (67.6%) were White, with African Americans making up the second largest group at 18.8%, and Latino/a or Hispanic students represented the third largest group at 6.1%.

Quantitative Instrument

Phase 1 of this study utilized a survey created through Qualtrics, an online survey building software, and consisted of a demographics questionnaire, and the College Self-Efficacy Inventory (CSEI). Participants who indicated having participated in SIHL in (2013, 2014, and 2015) were also asked to provide contact information if they were interested in participating in a one-on-one interview.

Demographic questionnaire. The first part of this survey included a demographic questionnaire in which participants responded to questions about age, gender, race and ethnicity, and number of years spent studying in college. High school
GPA and ACT scores have both been shown to be predictors of first year success in higher education which in turn is predictor of continued academic success throughout college (Westrick, Le, Robbins, Radunzel, & Schmidt, 2015). Therefore, this information, along with college level GPA data were collected as well.

**Modified College Self-Efficacy Inventory.** The second part of the survey utilized the CSEI. The CSEI is a 20 item likert-type scale created by Solberg, O'Brien, Villareal, Kennel, and Davis (1993) to measure the level of confidence a student possesses concerning the completion of an academic task. The CSEI has three subscales measuring *academic or course, roommate*, and *social efficacy*. To assess this, the CSEI frames questions by asking participants, “How confident are you that you could successfully complete the following tasks...,” (p. 86). Some of the tasks listed include “Research a term paper”, “get a date when you want one”, and “talk to your professors” (See Appendix B). Participants rated on scale of 0 (“totally unconfident”) to 8 (“totally confident”). The CSEI scale used in this study was altered from the original by Lucas (2012). Originally, the Likert scale used in the CSEI was a 10-point scale with 0 (not at all confident) to 10 (extremely confident) (Solberg, et al., 1993). The same scale of 0 to 8 was used so that the results of could be compared to the results of Lucas (2012).

Cronbach alpha internal consistency was reported as .93 (Solberg, et al., 1993), and .91 in the current study.

**Qualitative Instrument**

Phase 2 utilized semi-structured interviews designed to elicit rich data about the experiences of those who participated in the SIHL program. Five students who answered affirmatively for participation in SIHL and indicated interest in being interviewed during
Phase 1 were selected to share their experiences in the SIHL program and their experiences after participation in the program. Examples of questions that were asked are, “How did you react when you were first invited to participate in SIHL?” and “What role do you think that the SIHL program played in your level of confidence today?” (See Appendix A, interview protocol).

**Data Collection**

**Quantitative.** The survey, from Phase 1, was distributed via email to all non-transfer students \( n = 4,436 \) at the university, during the spring semester of 2016, and was open for four weeks. Reminder emails were sent twice, at week 2 and week 4. An incentive of four $25 gift cards was offered to those taking the survey, but required voluntary registration. Those taking the survey were asked to read and agree to a statement concerning the voluntary nature of this registration, which occurred at the end of the survey regardless of their answers concerning participation in SIHL.

**Qualitative.** Once the survey period closed, participants who answered “yes” about their participation in the SIHL program, as well as signifying their desire to participate in an interview, were contacted via email. Five were selected for interviewing. Interviews took place at one location. Interviews took between 20-55 minutes to complete. Audio and video recordings were done with participants’ permission. Participants also signed an informed consent form, and were reminded of their rights before any data collection began.

**Data Analysis**

**Quantitative.** After the close of the data collection period in Phase 1, data was exported to Microsoft excel, where it was prepared for import to SPSS for analysis. This
included deleting all incomplete data and extraneous information that was collected by Qualtrics. Respondents who failed to complete all items on the CSEI scale were deleted and not included in further analysis. Descriptive statistics were conducted on the demographic data, as well as a single sample $t$-test to answer research question 1, what are the self-efficacy beliefs of students who have participated in the SIHL program? In addition, an independent samples $t$-test was conducted to answer research question 2, is there a difference in the self-efficacy, between undergraduate students who have participated in the SIHL program and those who have not? A single sample $t$-test was utilized to examine the differences between the data collected in this study and the Lucas (2012) study.

**Qualitative.** The analysis of data collected during Phase 2 utilized a coding scheme that examined data for common themes. The formation of these themes was driven by the theoretical framework guiding this study. The themes examined in this study included positive experiences in SIHL, impact on belief systems, the sources of self-efficacy, verbal and social persuaders, and retention and persistence behaviors. Interviews were transcribed from audio and video recordings made during the interview process. These transcriptions were then analyzed with a two cycle coding method (Saldaña, 2013). The two cycles used for the analysis of interview data started with a grand overview of the interviews through values coding, and eclectic coding. The second cycle, which refined the information further, used a thematic coding scheme that was shaped by the theoretical framework guiding this study. The coded interviews were then analyzed for similarities regarding themes surrounding participation in SIHL.
**Treatment of Data**

No identifying information was collected from participants in Phase 1 except their email address, which was voluntarily collected. This collected data was downloaded and stored in a separate data file. All data in Phase 1 was analyzed in the aggregate, and not linked to any individual. In order to protect the privacy of the participants in Phase 2, participants were asked to select a pseudonym which was used in data reporting. All data will be kept safely in a password protected cloud drive, with access only to the researcher and the researcher’s thesis advisor. All data will be destroyed or deleted after three years, as per IRB protocol.

**Summary**

This chapter discussed how the data needed to answer the research question guiding it would be collected, analyzed, and handled. Due to the nature of this two phase study, there were both quantitative and qualitative methods discussed. Phase 1 utilized the quantitative and demographic instrument through the online platform Qualtrics, while Phase 2 utilized semi-structured interviews conducted at a single location. All of the participants’ data has been anonymized.
CHAPTER IV
Quantitative Results and Findings

The Summer Institute of Higher Learning (SIHL) at Eastern Illinois University (EIU) is meant to help students transition into the university community and succeed academically. The purpose of this study was to gain insight into the impact that participation in SIHL has on participants’ self-efficacy beliefs not only in the immediate aftermath of participation, but also the longer term effects of participation. This purpose was achieved through the use of both qualitative and quantitative methods. This chapter presents the findings of the quantitative analyses designed to answer the quantitative research questions: As measured by the CSEI, what is the perceived self-efficacy of students who have participated in the SIHL program? Is there a difference in the perceived self-efficacy, as measured by the CSEI, between those who have participated in the SIHL program and EIU undergraduate students who have not?

Descriptive Statistics

Descriptive statistics were conducted to determine the self-efficacy beliefs of SIHL and Non-SIHL participants. The overall self-efficacy beliefs of SIHL participants was 5.79 ($SD = 1.57$) and non-SIHL participants was 5.84 ($SD = 1.08$). See Table 3 for more detailed results.

Research Question 1

A single sample $t$-test was conducted to answer the research question, what are the self-efficacy beliefs of SIHL participants? The first research question measuring the quantitative factors of this study examined the perceived self-efficacy of students who have participated in the SIHL program. The results are provided in Table 3. These results
are further sorted into the three subscales of the CSEI--academic efficacy, social efficacy, and roommate efficacy. The most highly ranked item from the CSEI results of the 23 SIHL participants was, “socialize with others you live with” ($M = 6.83, SD = 1.56$), while the lowest ranked item was “join an intermural sports team” ($M = 4.83, SD = 2.41$). The alternative hypothesis, represented as $H_0: \mu_1 \neq \mu_2$, states that there would be a significant difference in the self-efficacy scores, as measured by the CSEI, between the findings of this study and the findings of Lucas (2012). The null hypothesis is represented as $H_1: \mu_1 = \mu_2$, and states that there will be no significant differences between the self-efficacy beliefs captured by Lucas (2012) and the findings of this study. To test the null hypothesis, a single sample $t$-test was conducted using the test value of 6.88, which was the post-test mean from the study conducted by Lucas (2012). The results are presented in Table 4, and show that there was a significant difference between the posttest sample mean from the Lucas study and the data collected for this study. Therefore, the null hypothesis that there is no significant difference between the self-efficacy beliefs of the SIHL participants in this study and the study conducted by Lucas (2012) is rejected.

**Research Question 2**

Independent samples $t$-tests were conducted to answer the research question, is there a difference in the self-efficacy between undergraduate students who have participated in the SIHL program and those who have not? Null and alternative hypotheses were constructed. The null hypothesis is represented as $H_0: \mu_1 = \mu_2$ and states that the mean self-efficacy beliefs of SIHL participants will not be significantly different than the mean self-efficacy beliefs of the EIU undergraduate population. The alternative hypothesis is represented as $H_1: \mu_1 < \mu_2$ and asserts that SIHL participants will have lower
## Table 3

*CSEI Results from SIHL and Non-SIHL Participants Ranked and Sorted by Sub-Scale*

<table>
<thead>
<tr>
<th>Items</th>
<th>SIHL</th>
<th></th>
<th>Non-SIHL</th>
<th></th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank M SD</td>
<td>Rank M SD</td>
<td>t</td>
<td>df</td>
<td>p</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socialize with others you live with+</td>
<td>6.83 1.56</td>
<td>1</td>
<td>6.51 1.66</td>
<td>.89</td>
<td>320</td>
<td>.370</td>
<td></td>
</tr>
<tr>
<td>Get along with others you live with+</td>
<td>6.52 1.41</td>
<td>5</td>
<td>6.32 1.52</td>
<td>.62</td>
<td>320</td>
<td>.533</td>
<td></td>
</tr>
<tr>
<td>Make new friends at college+</td>
<td>6.52 1.73</td>
<td>14</td>
<td>5.74 1.87</td>
<td>1.94</td>
<td>320</td>
<td>.053</td>
<td></td>
</tr>
<tr>
<td>Divide space in your residence+</td>
<td>6.48 1.56</td>
<td>9</td>
<td>6.18 1.51</td>
<td>.92</td>
<td>320</td>
<td>.358</td>
<td></td>
</tr>
<tr>
<td>Talk to you professors+</td>
<td>6.30 2.30</td>
<td>3</td>
<td>6.41 1.54</td>
<td>-.29</td>
<td>320</td>
<td>.765</td>
<td></td>
</tr>
<tr>
<td>Ask a professor a question+</td>
<td>6.22 2.28</td>
<td>4</td>
<td>6.35 1.49</td>
<td>-.39</td>
<td>320</td>
<td>.692</td>
<td></td>
</tr>
<tr>
<td>Take good class notes*</td>
<td>6.22 1.86</td>
<td>2</td>
<td>6.43 1.56</td>
<td>-.64</td>
<td>320</td>
<td>.526</td>
<td></td>
</tr>
<tr>
<td>Write course papers*</td>
<td>6.13 1.91</td>
<td>8</td>
<td>6.20 1.60</td>
<td>-.20</td>
<td>320</td>
<td>.842</td>
<td></td>
</tr>
<tr>
<td>Talk to university staff+</td>
<td>6.09 2.04</td>
<td>6</td>
<td>6.23 1.58</td>
<td>-.41</td>
<td>320</td>
<td>.681</td>
<td></td>
</tr>
<tr>
<td>Understand your textbooks*</td>
<td>6.00 1.68</td>
<td>10</td>
<td>5.93 1.48</td>
<td>.23</td>
<td>320</td>
<td>.820</td>
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</tr>
<tr>
<td>Keep up to date with your schoolwork*</td>
<td>5.87 2.18</td>
<td>7</td>
<td>6.21 1.63</td>
<td>-.95</td>
<td>320</td>
<td>.342</td>
<td></td>
</tr>
<tr>
<td>Participate in class discussions+</td>
<td>5.61 2.66</td>
<td>18</td>
<td>5.55 2.00</td>
<td>.13</td>
<td>320</td>
<td>.898</td>
<td></td>
</tr>
<tr>
<td>Ask a question in class+</td>
<td>5.35 2.66</td>
<td>16</td>
<td>5.59 1.94</td>
<td>-.55</td>
<td>320</td>
<td>.584</td>
<td></td>
</tr>
<tr>
<td>Research term paper*</td>
<td>5.26 2.09</td>
<td>15</td>
<td>5.68 1.74</td>
<td>-1.09</td>
<td>320</td>
<td>.276</td>
<td></td>
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<tr>
<td>Divide chores with others +</td>
<td>5.26 2.07</td>
<td>13</td>
<td>5.75 1.67</td>
<td>-1.32</td>
<td>320</td>
<td>.188</td>
<td></td>
</tr>
<tr>
<td>Do well on your exams*</td>
<td>5.26 2.09</td>
<td>11</td>
<td>5.80 1.64</td>
<td>-1.49</td>
<td>320</td>
<td>.136</td>
<td></td>
</tr>
<tr>
<td>Manage time effectively*</td>
<td>5.13 2.24</td>
<td>17</td>
<td>5.57 1.87</td>
<td>-1.06</td>
<td>320</td>
<td>.288</td>
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<tr>
<td>Join a student organization+</td>
<td>5.04 2.23</td>
<td>12</td>
<td>5.78 1.96</td>
<td>-1.72</td>
<td>320</td>
<td>.086</td>
<td></td>
</tr>
<tr>
<td>Get a date when you want one+</td>
<td>4.83 2.23</td>
<td>19</td>
<td>4.52 2.29</td>
<td>.62</td>
<td>320</td>
<td>.538</td>
<td></td>
</tr>
<tr>
<td>Join an intramural sports team+</td>
<td>4.83 2.41</td>
<td>20</td>
<td>4.07 2.54</td>
<td>-1.72</td>
<td>320</td>
<td>.167</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Symbols indicate different subscales of CSEI; * denotes academic efficacy; † denotes social efficacy; + denotes roommate efficacy
Table 4

Results of Single Sample t-Tests for Undergraduate Students (N = 322)

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-SIHL Participants</td>
<td>299</td>
<td>5.84</td>
<td>1.08</td>
<td>-16.61</td>
<td>&lt;0.01</td>
<td>[-1.16, -0.92]</td>
</tr>
<tr>
<td>SIHL Participants</td>
<td>23</td>
<td>5.79</td>
<td>1.57</td>
<td>-3.34</td>
<td>0.03</td>
<td>[-1.77, -0.41]</td>
</tr>
</tbody>
</table>

Note. The test value was 6.88, the mean score of the post-test from Lucas (2012).

self-efficacy means than the EIU undergraduate population. Table 3 shows a direct comparison of the ranked means from the CSEI responses of SIHL and non-SIHL participants. As detailed in the results concerning research question 1, the three subscales of the CSEI are also present in the scores shown for non-SIHL participants. Similar to the results for research question 1, the top ranked item for non-SIHL participants was, “socialize with other you live with” (M = 6.51, SD = 1.66) and the lowest ranked item was “join an intermural sports team” (M = 4.07, SD = 2.54).

Understanding the differences in the efficacy beliefs between non-SIHL and SIHL participants was achieved through the use of an independent samples t-test of the collected CSEI scores. As can be seen in Table 3, this test returned no significant results on any of the twenty items of the CSEI. Therefore, the null hypothesis is not rejected and it is concluded that the SIHL participants are just as efficacious as the non-SIHL participants in their ability to execute certain college related tasks.

Summary of Quantitative Findings

The quantitative findings of this study sought to answer two questions. From the results, it is clear that the differences between SIHL cohort year participation are not as significant as was originally hoped. However, there are still some significant differences with the first cohort feeling more efficacious about certain tasks than their compatriots in
later cohorts. Further, the data show that there are some weak to moderate correlations between ACT scores, SIHL cohort year, and some of the items making up the CSEI. The results found in an attempt to answer the second research question of this study show that students who participated in SIHL felt the most efficacious about socially leaning tasks, specifically those dealing with roommate efficacy. Further, the gathered results show no statistically significant differences between the perceived self-efficacy of SIHL and non-SIHL participants as measured by the CSEI. These results stand in contrast to the hypothesis of this study.
Qualitative research can offer a richer and more personal glimpse into the thoughts and feelings of those participating in research. Chapter 5 is meant to examine the qualitative findings of this study through the presentation of the results from Phase 2. Phase 2 of this study was designed to answer the following qualitative research questions: How do participants describe their experiences during their time in the SIHL program, and how does the SIHL program impact participants' self-efficacy? The five participants spanned the entirety of the brief existence of the SBP at the institution of interest. They were all interviewed using a semi-structured interview protocol (Appendix A) in which they were asked to describe their experiences during their time in the SIHL program. They were also asked questions that were designed to capture the processes that may have impacted their self-efficacy beliefs.

**Description of Participants**

Thick descriptions not only give a more intimate view and a deeper understanding of the context in which qualitative research occurs, but also they provide context, either culturally or ethnically, that may help an outside observer to better comprehend the thoughts and feelings of those participating in the research (Geertz, 1994). Therefore, this chapter begins with thick descriptions of the participants of Phase 2 of this study and concludes with an overview of the different themes found through analysis of the data.

**Steven.** Steven is a 19-year-old male of North African heritage and a first year student at the institution. At the time of the interview, he was pursuing pre-medicine with
a focus on sports medicine. He participated in the 2015 summer cohort of SIHL and reported a cumulative GPA of 3.67, on a 4.0 scale.

**Nicole.** Nicole is a 22-year-old Latina about to complete her fourth and final year at the institution. She reports her GPA as a 2.75 out of 4.0, and she is completing her studies with a Bachelors of Education and an intention to teach elementary school. During her time at the institution, she joined a sorority and took on a leadership role in a registered student organization.

**John.** John is an 18-year-old Caucasian male first year student. He reported a cumulative GPA as 2.2, on a 4.0 scale. John was a part of the 2015 cohort of SIHL.

**Bryce.** Bryce, a first-year student, is an 18-year-old African American male from a suburb of Chicago who was a part of the 2015 cohort. Bryce is the only child of his family and indicated that his cumulative GPA at the time of the interview was 2.5.

**Brandon (B-Cash).** Brandon, or B-Cash, is a 19-year-old African American male from the South Side of Chicago. He identifies himself as a sophomore and was a part of the 2014 cohort. B-Cash is passionate about his musical talents and his practice of them. He reported a cumulative GPA at the time of the interview as 1.98. B-Cash, at the time of the interview, was pursuing a Bachelors in Sociology.

**Self-Efficacy Beliefs**

This section examines self-efficacy and its sources, posited in the theoretical framework of this study, to have a bi-directional relationship with academic and social engagement as well as retention and persistence behaviors. Self-efficacy beliefs and the impact that participation in SIHL has on them is thought to stem from mastery experiences gained inside and outside of the classroom (Bandura, 1977). What follows
was coded using a thematic scheme that examined the sources of self-efficacy (Bandura, 1986).

**Mastery experience.** Understanding how students who participated in SIHL were able to gain mastery experience relied on a combination of questions from the interview protocol formulated for this portion of the study. In particular, the questions, “What role do you think that the SIHL program played in your level of confidence today?”, and, “What about the SIHL program do you think contributed to your change in confidence?”, sought to find out how the participants gained mastery experiences from their time in SIHL (Appendix A). Answers to these questions varied, as did the experiences discussed by the participants in the interviews, yet a common thread was shared among the five. This commonality included positive mastery experiences like overcoming speech impediments to better communicate with professors, and learning time management and study techniques that impacted the way in which the participants thought about their ability to succeed in college. Nicole highlighted this when she was asked how SIHL impacted her confidence:

I think it played a lot just because, I knew I could achieve things if I tried, I guess, and if I sat down and I got my priorities straight and I knew what I wanted to accomplish then I could accomplish that, because I feel like, that I knew that like freshmen year, but things just kind of got crazy, with like, I just have to know my priorities. If I’m gonna like, if I really tried, studying and worked hard, then I could do the things I wanted to do.
Other participants had similar feelings concerning how the impact that SIHL had on their change in confidence. Bryce had this to say when he was asked the same question as Nicole:

Oh, definitely, definitely a lot more confident, because, I’ll tell you, I had two A’s in the classes that I had in the summer institute, and had, there’s people that got B’s and A’s and whatever, but you see that that’s a college level course, whether it’s over the summer or not, and you do it and you’re like, it lets you know that you can do this and, so definitely going into fall semester it definitely gives you more confidence had you just been brought in at the fall semester, like, alright here are your classes, you know, “good luck”.

While overall described by the participants in glowing terms, the SIHL program did not have as profound an impact on the level of confidence on every participant. John was asked how his level of confidence was impacted by his time in SIHL and this was his response:

Oh, definitely, definitely a lot more confident, because, I’ll tell you, I had two A’s in the classes that I had in the summer institute, and had, there’s people that got B’s and A’s and whatever, but you see that that’s a college level course, whether it’s over the summer or not, and you do it and you’re like, it lets you know that you can do this.

Mastery experience, and the increases in confidence it can imbue, are as varied and different as the individual. Yet, all of the participants explained something they learned or experienced in their time at SIHL that encouraged the development of self-
efficacy. Whether it was learning how to navigate campus, effective study techniques, or how to adapt socially, they all reported some growth because of the time spent in SIHL.

**Vicarious experience.** Understanding how vicarious experience impacted the self-efficacy beliefs of those interviewed was more difficult than finding examples of mastery experience. The questions from the interview protocol did not specifically focus on this, as it was the hope of the researcher that through the interview process, participants would share examples. While these examples do not abound in the data, there are a few telling moments. One in particular was Brandon’s response to the question; “What made you want to go to college?”:

> Um, my mother she went back to school when I was younger to get her masters, she works at [redacted], so I seen, I actually witnessed her go to school. So, it was just something that I definitely strive for, just cause I understand that I need, uh, a diploma and I understand that I need that to be able to move on.

Further examples as obvious as the one shared by Brandon were not available, but each of the participants mentioned why they wanted to attend college, and mentioned the word “everyone”. This was used in the context of the unknown other and usually led to a discussion on how attending college would lead to a betterment of their future lifestyles. This offers a transition to the next source of self-efficacy (Bandura, 1986).

**Verbal and social persuasions.** Verbal and social persuasions were similarly targeted as mastery experiences in the interview protocol. The question, “why did you want to go to college?”, was primarily geared towards this effort. While Brandon spoke of witnessing his mother’s work towards her masters, Bryce talked about his options after high school when he said, “I mean, you know, of course, my parents gave me two
choices. They said college, or the military, but then my father, you know, who’s in the military, he didn’t want me to go [into the military]”. This is an extreme form of verbal and social persuasion that goaded Bryce into a college career. While this was not necessarily caused by his time within SIHL, it allowed him to experience it which led to other examples of verbal and social persuasion that did impact his self-efficacy beliefs. An example of this can be seen when he discusses the encouragement he received from professors instructing SIHL participants: “The professors that I had in the summer institute really encouraged, you know, asking questions and, you know, discussions, and you know I really appreciated that.” This is an example of the verbal persuasions that were experienced by some of the SIHL participants.

Another example comes from Nicole who did not necessarily share an example of verbal or social persuasions that affected her, but her own persuasions to another about her own experience in SIHL. Nicole recounted this when she mentioned a conversation with a friend who was considering participation in the program: “Um, my friend actually, uh right after the summer when I was finishing my freshmen year, uh, she had emailed me and said that, ‘oh, I got offered to do the summer institute, should I do it?’ And I was like, ‘yes, you should do it because it was a great experience’. ” Sharing her own positive experiences with another so that they too may have a similar chance to grow their own self-efficacy through participation in SIHL is a powerful example of social and verbal persuasion.

**Physiological states.** Fear, joy, and anxiety are some examples of feelings that can impact physiological states through autonomic responses within an individual’s body (Bandura, 1977). These responses vary as widely as the individual, but can have an
impact on the self-efficacy beliefs of anyone. Avoidance behavior, in particular, is discussed by Bandura (1977) in his seminal work on the topic of self-efficacy. While participants in this study did not expressly discuss extreme feelings of anxiety, they did hint at a few occasions where they felt feelings of intimidation or anxiety. Nicole discussed this when she was asked to describe a time when she failed at an academic task.

I remember I would go to class, and like, I'd try and take notes, but, I just like, I would try...ish, but I was so intimidated by my teacher that I just like failed. I was scared to ask him things, like, uh, I think I even saw Mary [SIHL Graduate Assistant] about my class too. I think I actually sought her out because I was like, “I need help”.

Nicole’s experience highlights the avoidance behavior that Bandura (1977) discussed when she thought about working with her professor, yet she was able to work within the support frame that she had been exposed to during her time in SIHL. Mary, a Graduate Assistant that helped lead Nicole’s SIHL cohort, was also an adviser assigned to work with SIHL students during their freshmen year (Lucas, 2012). Perhaps this type of support helped Nicole overcome her fear of reaching out to her instructors as she developed as a student.

Another example of physiological states can be drawn from the interview of Bryce. When he was asked about how SIHL taught him how to succeed in college, he remarked that he had struggled, but learned from SIHL to “not [be] afraid to, you know, ask questions. Because, that [had] been my main, you know, hindrance in school. You know, partly because, um, you know my speech impediment”. Both Nicole and Bryce
were exposed to small and incremental experiences within SIHL that may have been overwhelming to them in a more traditional setting. Through these experiences, they learned to rely on their support systems, or overcome their anxiety. These incremental and continuous procedures of SIHL, such as study tables and time spent in class with professors, were designed to help build the self-efficacy beliefs participants so that they may be more likely to succeed later. Bryce and Nicole provide differing approaches towards this success through the overcoming of their shared anxieties.

Social and Academic Engagement as Environmental Factors of Academic Success

The social and academic elements of engagement, as related to self-efficacy beliefs, rest upon vicarious learning and the continuous comparing of one’s performance to others (Usher & Pajares, 2008). During the summer session of SIHL, participants spend time in class, at seminars, and study tables with one another (Lucas, 2012). Beyond the time spent in academic endeavors, the students also live in the same residence hall over the course of their time within SIHL (Lucas, 2012). This helps them develop relationships with other students before everyone else’s day one.

Social Engagement. As discussed by Usher and Pajares (2008), the continuous comparing of one’s own performance to others is a key component in social engagement as it related to self-efficacy beliefs. This notion can lead to many avenues that examine both the micro and macro influences of single friendships or society. Yet, this section examines how SIHL participants described their experiences with social engagement within and after their time in SIHL. A particularly telling glimpse into the social dynamics of engagement and it’s relation to self-efficacy beliefs comes from B-Cash.
When he was asked to describe something he learned from his participation in SIHL, he had this to say;

I feel like personally, me, it gave me a chance to, uh, party, do all that. Like, by my first semester of my freshmen year, I was done, I like, there was nothing that I hadn’t seen, it was like, there was no reason for me to go out. You know, you got priorities you got to think about and I feel like that prepared me a lot quicker than some other students, you know what I’m saying, especially by saying my first semester, my freshmen year.

In his own words, B-Cash was able to have the “college experience” earlier than his newly minted college compatriots because of his time at SIHL. He felt this allowed him to better focus on his other goals, like academics. Yet, his personal account is based on the observation of those around him. He compared himself to others as they lacked focus on academics and he made a decision to be different. He asserts that this choice was based upon what he learned through his experiences in SIHL. Yet another example of social engagement can be seen in John’s recounting of his time in SIHL and how it helped him to learn about his new surroundings.

Mmm, on, you know, on the smaller scale of the spectrum, like I said, I had never even been to Eastern’s campus, you know, before the first day. You know, definitely those eight weeks or so, um, they definitely, they definitely acquainted me with the campus.

John did not feel that his time at SIHL really boosted his feelings of academic confidence, yet he felt that it did give him the opportunity for socialization and familiarization with the campus he would be a part of in the fall. The importance of
socialization was also discussed by another participant. Brandon, when asked how the SIHL impacted his confidence, immediately discussed how his personality skews towards the outgoing, and how “dealing with that small group of people and having that, I don’t know, just it really, it helped me out a lot because I got a lot out of it with the [social] connections”.

**Academic Engagement.** Academic engagement, in a similar fashion to other sources of self-efficacy, was explored through multiple questions. One question in particular asked participants what they would say to incoming freshmen about SIHL. There were varying responses to this question; however, Steven had a response that highlighted academic engagement through a social lens. When asked this question, Steven replied

I guess my biggest piece of advice for new students coming in [to SIHL] is that talking to your professors and actually sitting down and discussing with them gets you so much more, because in high school it was you go to class, you go to your next class, you go to your next class. Well, it’s not like that in college you can actually go talk to your professor, and what I found, as far as me as a student, when you talk to your professor whether it’s about class, or just discussing anything, you learn better from them.

This is a prime example of Steven’s academic engagement, but attributing it to his experiences within SIHL relies on a comment earlier in his interview. When asked how he remembered his experience in SIHL, he responded

I remember my experience being, at first, really, um, kinda traumatizing and different just because I had never been that far of a distance from my parents. So,
it was a little different but I had uh, an amazing professor. I had a great time. The GA [Graduate Assistant] was amazing. My RA’s [Resident Assistant], err my PLA’s, were amazing. Uh, for the most part, my teachers were pretty good. Uh, basically I had every support system I needed and I remember it being pretty positive for the most part.

Steven’s ability to connect with his professors and his other advisors allowed him to be fully engaged in an academic sense. Perhaps if Steven had entered the target institution without this type of support, he may not have had the same type of engagement level.

Another example of academic engagement can be drawn from the account of John. When he was asked to discuss what he learned from his time in SIHL, he replied that

I think the one thing I learned is, um, you have to put time into like, everything that you do. Like, the more time and the better and more accurately you work on stuff, the more successful you will be in the college level classes, and they put a big emphasis on that in the summer institute. Like they made you, you were supposed to log, every day we had study hours in the morning and then at night. John’s academic engagement in this passage was induced by the compulsory requirements of his continued involvement with SIHL. Even though he had little choice in logging study hours, he learned from his experience that diligence in studying would pay high dividends in the classroom. This lesson was something that stayed with John throughout his first few semesters, as recounted this at the end of his first year at the target institution.
Retention and Persistence as Behavioral Factors of Academic Success

The behavioral factors of retention and persistence and their relation to academic success when examined through the lens of SIHL abound in varying forms throughout the five interviews conducted. All of the participants spoke highly of their experiences while attending the summer session of SIHL. Perhaps the questions that sought to highlight both persistence and retention due to the experiences of SIHL was, “Now, how do you feel about your ability to successfully complete college?” This question does not mention SIHL, but it is implied that the respondents’ time in SIHL had an impact on their ability to successfully complete college.

Persistence and Retention. The persistence and retention behaviors of Bryce are something to behold. When asked how he felt about his ability to successfully complete college, he shared some wise advice: “My mother always tells me, she says, “you have to learn how to do school”, and you know, I learned how to succeed in elementary, middle school, you know, high school and through the summer institute, you know, I think I’ve learned how to succeed in college”. Similar thoughts and feelings were echoed by other participants as well.

Summary of Qualitative Findings

The qualitative findings of this study mirror some aspects of the quantitative results of the study. Participants seemed to rely on, and gain more confidence in, their social abilities. Communicating with professors, getting to know and rely on their PLAs and faculty, and the learning about their own abilities helped the participants build feelings of self-efficacy. Chapter 6 discusses how these findings, as well as the quantitative findings come together within the theoretical framework of this study.
CHAPTER VI

Discussion and Conclusion

This study was designed to investigate the impact of participation in a summer bridge program on students' self-efficacy beliefs. This was done through a two phased mixed methods design, which expanded upon a previous study conducted by Lucas (2012) who suggested that program participation positively impacted students' self-efficacy beliefs. Data analysis between the two approaches revealed incongruence, as a less than clear picture of this impact was produced. While the differences between the Summer Institute of Higher Learning (SIHL) participants and non-participants were not extreme, there were some minor differences. Further, the differences between the results of this study and the results of the Lucas (2012) study present some possible avenues for future research. Additionally, the results of this study point to some recommendations that may be useful to administrators and professionals alike, as they endeavor to better enrich the educational outcomes of students.

Discussion

The intentional design of this study was meant to gather both quantitative and qualitative data in an effort to better understand how participants view on their own self-efficacy changed through involvement in SIHL. The quantitative portion of this study collected both demographic information and information concerning feelings around self-efficacy from both SIHL and non-SIHL participants. Through this collection, it was possible to compare these two groups to find potential differences between them. Also, the quantitative data collected in this study was based on the same instrument utilized in a previous study (Lucas, 2012) on a sample of SIHL participants. This allowed for the
comparison of the present results to those of the past. Finally, the qualitative information gathered in this study allowed for a deeper and more nuanced explanation of the quantitative data collected in Phase 1. The more nuanced data is helpful in explaining the quantitative data collected and may allow for more effective practices to be undertaken in the future. The research questions guiding this study follow, and are discussed in detail.

Research Question 1: What are the self-efficacy beliefs of students who have participated in the SIHL program? (Quantitative) It was hypothesized that the self-efficacy beliefs of the SIHL participants of this study would not be significantly different from those found by Lucas (2012). Of the 322 respondents who fully completed all items of the CSEI, 23 participated in SIHL. These participants were either a part of the 2012, 2014, or 2015 cohorts. The self-efficacy beliefs of these participants were measured through the use of the twenty item CSEI which asked respondents to rank their feelings, on a scale of 0 (totally unconfident) to 8 (totally confident), about their ability to complete certain tasks. It was found that overall SIHL respondents' feelings about their self-efficacy was measured as an average of 5.79 ($SD = 1.57$), which is "somewhat confident" on the Likert scale utilized by the modified CSEI used in Phase 1. Understanding how, and if, participation in SIHL program impacted all of these individual scores is not possible. Yet, the focus of the SIHL program is to prepare underprepared students for college (EIU, 2015a). This takes the form of time in the classroom, time studying, and time spent with other members of their cohort. Through these experiences, perhaps academically related tasks that would have been ranked lower by participants were influenced.
These results are significantly different from those of Lucas (2012). A single sample $t$ test was completed to determine whether the average self-efficacy score of the SIHL participants for the current study was different from 6.88, the average posttest self-efficacy score of Lucas (2012). The results (Table 4) suggest that the participants of the current study were significantly less efficacious on college related tasks than those who completed the former study. The scores reported in the Lucas (2012) study were not only significantly higher than the scores of the SIHL participants in the present study, but were also significantly higher than the scores of the non-SIHL participants as well. It is not evident that the overall self-efficacy beliefs of SIHL participants has steadily decreased over time so that SIHL participants are less efficacious and therefore more equally efficacious when compared to their non-SIHL counterparts. On the contrary, it may be that influencers such as social desirability bias, and the format and context in which the CSEI was administered to SIHL participants in the former study, may have resulted in an inflation reports of self-efficacy. Social desirability bias is the desire for survey participants to over report things that might be socially desirable, and under report those things that might be less desirable (Krumpal, 2013). If this was indeed a true phenomenon, then it may offer support to the idea that participation in SIHL does indeed increase the self-efficacy beliefs of underprepared students so that they feel just as efficacious as their non-SIHL counterparts, and support the conclusion drawn by Lucas (2012).

The findings for the first research question of this study suggest that the socialization factors, such as the forming of social ties with other cohort members, faculty, and staff are more impactful than the purely academic aspects of the program.
This could mean that while SIHL participants may be underprepared academically when they start their college careers, they utilize skills they feel more efficacious about, like social skills, to build up other factors associated with the theoretical framework of this study like retention and persistence behaviors and self-efficacy beliefs (Strage, 1999). While participants within SIHL ranked their feelings of efficacy higher on these items, they did not rank their feelings concerning academic efficacy at the bottom. Surprisingly, the lowest ranked items were also socially leaning tasks. Social and academic engagement are seen as environmental factors of the theoretical framework guiding this study. These results suggest that the social engagement of SIHL participants was something they felt confident about. The social engagement of college students has been shown to be a predictor of persistence and retention, but has little impact on academic performance (Gore, 2006).

**Research Question 2: Is there a difference in the self-efficacy, between undergraduate students who have participated in the SIHL program and those who have not? (Quantitative).** The anticipated findings for this research question included a significant difference in the perceived self-efficacy, as measured by the CSEI, between the two groups with the EIU undergraduate population displaying a higher perceived self-efficacy than those who have participated in the SIHL program. With regards to the second research question, no significant difference was found in self-efficacy beliefs between those who participated in SIHL and those who did not. These findings suggest that while the two groups may have had the difference of SIHL participation sorting them, they were not overly different in their feelings of efficacy. This could be interpreted as meaning that participation in the SIHL program increased students' self-
efficacy to be on par with their non-SIHL participants. In an attempt to better understand this assertion, the comparison between the self-efficacy scores of the participants in this study and the Lucas (2012) study show significant differences. As reported earlier, the Lucas (2012) participants reported significantly higher scores on the CSEI, especially during the post-test session.

**Research Question 3: How do participants describe their experiences during their time in the SIHL program? (Qualitative)** For the third research question, it was hypothesized that participants would describe their experiences during their time within the SIHL program with a common positive thread that indicated the development of positive study skills, time management, and exposure to faculty and staff. Some of the themes that were developed from the theoretical framework of this study included positive experiences in SIHL, mastery experience, impact on belief systems, the sources of self-efficacy, verbal and social persuaders, and retention and persistence behaviors. SIHL participants (Phase 2) expressed positive feelings about their experiences in SIHL. Particularly, participants discussed how they learned to study in a collegiate setting and importantly, developed the ability to confidently approach and engage their professors. While this ability does not necessarily guarantee academic success, it has been shown that the development of a mentor mentee relationship between a student and a faculty member contributes to the social self-efficacy of a student (Bean & Eaton, 2001). This contribution can in turn allow the student to develop a better understanding of the social environment in which they exist. Some participants also discussed how obtaining six hours of college credit before their non-SIHL compatriots even began their first semester made them feel better about their chances of completing a college degree. It is the belief
of the primary investigator of this study that these feelings in particular represent mastery experience.

An example of the mastery experiences gained by SIHL participants through their time in the program comes from the interview of Bryce. When he was asked about how SIHL taught him how to succeed in college, he remarked that he had struggled, but that the SIHL had taught him to not be afraid to ask questions. This was particularly salient for Bryce because of his speech impediment. By participating in SIHL, he was able to overcome fear and anxiety to better communicate with his professors. This example was rooted in the physiological states theme, but relates to a mastery experience Bryce had. Personal mastery experience, as related by Bandura (1977), is perhaps the most poignant and impactful factor of self-efficacy that an individual can have. This experience may have helped to increase the likelihood of Bryce completing his post-secondary education.

Other examples of mastery experiences drawn from other themes seem to focus further on communication between the student and their peers. B-Cash’s experience details how he felt that his time in SIHL allowed him to develop social networks more quickly than his peers and thereby focus more on the academic aspects of his collegiate experience. This is especially impactful as B-Cash was living on campus at the time of his participation in SIHL and its immediate aftermath. With his development of a social network and a connection to the campus environment, perhaps he was able to build on his mastery experience. As Astin (1984) discussed, and as was covered in Chapter 2 of this study, living on campus allowed students to build leadership qualities, and may contribute to the likelihood of degree completion. The experiences that B-Cash had in
SIHL may have allowed him to build social networks, be socialized by on campus living, and build mastery experience through his successful interactions with others.

**Research Question 4: How does the SIHL program impact participants' self-efficacy? (Qualitative).** It was expected that SIHL participants would describe vicarious experience and verbal persuasion as important factors that impacted their self-efficacy beliefs. Through these factors, it was thought that SIHL participants would outline the building of mastery experience founded on the observation of similar others undertaking the same challenges and that the encouragement of faculty and staff would play an important role in the building of confidence. How participation in SIHL impacted the self-efficacy beliefs of the participants in Phase 2 is perhaps the most important goal of this study. Quantitative findings found no difference in self-efficacy beliefs between of SIHL and non-SIHL participants, as measured by the CSEI. This was interpreted as desirable since an underlying assumption is that participation in the SIHL program will provide students with the skills that will close any college relevant gap between them and their counterparts who were admitted without the provisions of the SIHL program.

Several important findings were revealed from analyses meant to uncover the answer to this research question. First, while the second phase of the study did not include interviews with non-SIHL participants, it did ask the questions, “What role do you think that the SIHL program played in your level of confidence today?” and, “What about the SIHL program do you think contributed to your change in confidence?” Before these interviews were transcribed and analyzed, it was expected that participants would indicate that factors such as vicarious experience and verbal persuasions would have large impacts on their self-efficacy beliefs. Through the analysis of the data collected in
Phase 2, it was found that participants' self-efficacy beliefs were impacted by more than these factors alone. Participants discussed how they learned to be a part of the community they were entering. They learned about their own learning styles and who they were, how to operate as a college student through learned time management techniques and note taking, and how they could succeed through application of effort.

These findings, while not totally in line with the hypothesized results, support the argument that self-efficacy is impacted by many different aspects of a student's experience. While vicarious experience and verbal and social persuasions have an impact on students, the participants of this study built confidence through mastery experiences that relied on the completion of goals, and the application of their social skills to build relationships with their professors, PLAs, and other members of their cohorts. Yet, the theoretical framework of this study asserts that these behaviors will ultimately impact both self-efficacy beliefs and academic and social engagement. All of these have, in turn, been impacted through participation in SIHL. An alternative to the model proposed in this study, and partially supported by the data gathered and analyzed thus far in the results, may be more unidirectional in nature.

The reciprocal nature of the triangular pyramid that was constructed for the study asserts that the relationships between self-efficacy, academic and social engagement, and retention and persistence are bidirectional and influenced by SIHL participation in only one direction, outwards. The findings of this study suggest that while the influence of SIHL on some of these factors remains the same, that Social engagement may be impacted with more magnitude than the others. These findings also suggest that the bidirectional nature of the theoretical model proposed in this study is more unidirectional
in nature, with social engagement first impacting academic engagement and then influencing retention and persistence behaviors, and finally self-efficacy beliefs.

Figure 2. Conceptual model of the impact of participation in the Summer Institute of Higher Learning modified to show the unidirectional influence of environmental influences on the behavioral, and cognitive characteristics of participants.

Implications for Research and Practice

The hypotheses tested in this study grew from the idea that self-efficacy beliefs relied heavily on the observation of others (Schunk, 1991). They also sprang from an understanding that social interactions played an important role in how students thought about themselves and their own abilities (Bandura, 1986). The theoretical model guiding this study provides a few different avenues for future research, including expanded qualitative studies examining the impact of social engagement on first year underprepared student academic self-efficacy beliefs and outcomes. Also, this theoretical model could be examined among student considered better prepared for the rigors of
higher education to better understand how the relationships they form with peers will impact their educational course.

Recommendations

**Administrators and policy-makers.** Building a better and more complete understanding of the state in which students begin their educational pursuits can be done through the use of pre-test evaluations. Pretesting was not completed in this study, but it was completed by Lucas (2012). This gave that study a more complete snapshot of the state in which those participants inhabited, especially in relation to their self-efficacy beliefs. The utilization, or even availability, of pre and posttest materials could have enriched the study presented here. Therefore, it is a recommendation that policy makers and administrators work to evaluate and assess the self-efficacy beliefs of students and program participants both before and after programmatic intervention.

Another possible recommendation for administrators and policy makers might involve the incorporation of more socially centered learning strategies to SBPs. This could be done through the use of structured introductions and collaborative efforts with more faculty. While SIHL participants are introduced to at least three faculty members, as there are three classes offered during the course of the program, they may benefit from being able to meet and work with even more faculty. This approach could be done throughout the entirety of a participants’ first year at the institution and take the form of an extracurricular assignment similar to mandated study tables. An example might include an interview with a professor they will have in the future, or are considering enrolling under. This interview could then be put into a reflection or even turn into more than one meeting over time.
Future research. Researching the impact of SBPs on self-efficacy beliefs in the future should focus more on the interactions between social engagement and self-efficacy beliefs. The quantitative findings of this study did not show significant differences between the self-efficacy beliefs of SIHL and non-SIHL participants, suggesting that participation in SIHL had an impact on the self-efficacy beliefs of participants. Further understanding these potential differences could lead to a better understanding of how underprepared students rely on social connections between themselves and others to build on mastery experiences. Measuring this could be done through the use of longitudinal studies (Rajulton, 2001).

This study was able to capture information in a particular point in time, and the feelings of respondents at that moment. Pre and post testing offers a little more detail about the influences of a program like SIHL. One step further would be to complete a longitudinal study that tracked the self-efficacy beliefs over time and not merely before and after program completion. This study could further focus more on the qualitative aspects of research and utilize interviews to expand on the richness of the information collected beyond CSEI scores. Specifically, this study could focus on each of the sources of self-efficacy.

Another option might be a longitudinal study focused on the social aspects of self-efficacy which could bring further understanding to how SIHL participants may rely on these factors as a starting point to build retention and persistence behaviors. These behaviors may ultimately lead to mastery experience and more feelings of self-efficacy that could be examined over time. This longitudinal study could even be of mixed methodologies starting with a quantitative study that leads to a qualitative study with
research question based on the findings of the quantitative. These questions could then be shaped to examine the change in self-efficacy beliefs over time.

Limitations

At the conclusion on this study, a few limitations stood out and should be taken into consideration for future research. First, the small sample size of the SIHL cohorts in question presented a limited picture of their self-efficacy beliefs. This small sample size also limited the ability to compare the results across cohorts. Ideally, a sample size of approximately 30 for each cohort would have allowed for more robust comparisons and perhaps presented different and richer data (Morse, 2000).

Non response bias, or the lack of response and its impact on the data collected, is another limitation that could have threatened the validity of the study (Porter & Whitcomb, 2005; Sax, Gilmartin, & Bryant, 2003). While the offering of incentives to entice participants was one strategy taken against non-response bias, the limitation was still present. The offering of financial incentives has been shown to positively impact response rates to surveys and questionnaires (Deehan, Templeton, Taylor, Drummond & Strang, 1997) Another strategy to combat this included reminder emails sent at two week intervals. This limitation may have kept data that could have changed the findings of this study from being analyzed and presented. Further, it may have contributed to a sample that was homogeneous in structure. This homogeneous sample may have not offered the clearest or most accurate view of either the sample being examined or the institutions’ undergraduate population.
Conclusions

This study started as an examination of the impact that SIHL, and programs like it, might have on participants' self-efficacy beliefs. Through a review of the literature surrounding self-efficacy, its sources, the history of SBPs and remedial education in American higher education, it became apparent that a theoretical framework was necessary. The framework constructed and tested in this study was close to the original manifestation when the findings of this study were taken into consideration. Those findings included the likelihood that SIHL participants' self-efficacy beliefs were not significantly different from their non-SIHL participant counterparts after completing the SIHL program, and that they felt more efficacious about socially leaning tasks. These findings, when compared to the findings of Lucas (2012), seem to show that SIHL participants underwent an increase in their self-efficacy beliefs to rival those of their Non-SIHL counterparts. This increase may contribute to the future success of some of these participants as they build on and enhance their mastery experiences and self-efficacy beliefs. Understanding how programs like SIHL help participants achieve success, either academically or in other areas of life, is important. This importance stems not only from the eternal desire of educators to see students succeed, but from the need to efficiently and effectively direct scarce resources as they may soon be even scarcer.
A SUMMER BRIDGE PROGRAM'S IMPACT

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APPENDIX A

Interview Protocol

Welcome and thank the interviewee and ensure that they are comfortable. Provide informed consent materials to participant. Tell the participant about informed consent, and advise that they are volunteering and can stop volunteering and deny consent at any time. Ask participant if they have any questions. If so, provide answers.

1. May I record this interview, video and audio equipment?

I: The following questions are meant to simply gather demographic information and will not be used in to reveal your identity.

1. What would you like to be called?
2. What is your age?
3. What is your classification? Freshman, sophomore, junior, senior, or other?
4. When did you participate in SIHL?
5. How do you identify racially?
6. What is your current cumulative GPA?
7. Tell me about yourself. You can share anything you’d like, but I am interested in your background.

• SIHL
1. How do you remember your experience?
2. Could you describe what your participation in SIHL did for you?
3. What would you say to incoming freshmen about SIHL?
4. Describe something you learned from your participation in SIHL.
5. What do you think of SIHL?

• Perceived Self-Efficacy
1. What made you want to go to college?
2. Can you tell me how you first heard about the SIHL program?
3. What kind of student would you say you were before participating in the SIHL program? Good student? Struggling student? Mediocre student?
4. How did you react when you were first invited to participate in SIHL?
5. Why do you think that you reacted that way?
6. Could you describe your first year at EIU, including your summer, fall and spring semesters?
7. Now how do you feel about your ability to successfully complete college?
8. What role do you think that the SIHL program played in your level of confidence today?
9. What about the SIHL program do you think contributed to your change in confidence?
10. Describe a time you failed at an academic task.
11. Describe a time you succeeded at an academic task.
APPENDIX B

College Self-Efficacy Inventory

The following 20 item survey concerns your confidence in different aspects of college. You will be asked to respond to a series of statements by selecting the number which best represent your current attitude or opinion. The answer categories range from:

0 – Totally Unconfident
1 – Very Unconfident
2 – Unconfident
3 – Somewhat Unconfident
4 – Undecided
5 – Somewhat Confident
6 – Confident
7 – Very Confident
8 – Totally Confident

Using this scale, please indicate how confident you are in successfully completing the following tasks. Select 0 – 8

1. Make new friends at college.
2. Divide chores with others you live with.
3. Talk to university staff.
4. Manage time effectively.
5. Ask a question in class.
6. Participate in class discussions.
7. Get a date when you want one.
8. Do well on your exams.
10. Join a student organization
11. Talk to your professors.
12. Join an intramural sports team.
13. Ask a professor a question.
14. Take good class notes.
15. Get along with others you live with.
16. Divide space in your residence.
17. Understand your textbooks.
18. Keep up to date with your schoolwork.
19. Write course papers.
20. Socialize with others you live with.

APPENDIX C

Consent to Participate In Research

Self-Efficacy, Summer Bridge Programs, and Academic Success: A Mixed Methods Approach

You are invited to participate in a research study conducted by Stephen Roach and Dr. Catherine Polydore, from the Counseling and Student Development: College Student Affairs department at Eastern Illinois University. Your participation in this study is entirely voluntary. Please ask questions about anything you do not understand, before deciding whether or not to participate.

You have been asked to participate in this study because of your participation in the Summer Institute of Higher Learning. Approximately eight people will be involved in this portion of the study.

PURPOSE OF THE STUDY

The purpose of this study is to gain insight into the impact that participation in SIHL has on participants' self-efficacy beliefs. This study will not only examine this impact in the immediate aftermath of participation, but is designed to examine the longer term effects of participation through the use of both quantitative and qualitative methodologies.

PROCEDURES

If you volunteer to participate in this study, you will be asked to:

Share your experiences before, during, and after your participation in the Summer Institute of Higher Learning.

POTENTIAL RISKS AND DISCOMFORTS

The likelihood that participation in this study would cause you any discomfort is minute. However, you may feel uncomfortable relating your experiences concerning your participation in the Summer Institute of Higher Learning to the researcher. If this occurs, the interview can be halted and a referral to counseling services may be provided if so desired.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The outcome of this research will benefit you directly, yet it may provide a benefit to those students in the future that undertake programs similar to the Summer Institute of Higher Learning.

INCENTIVES FOR PARTICIPATION (Optional)
As a sign of gratitude for your participation in this study, you will be placed in a drawing to win one of four $25 Amazon gift cards that will be distributed after all interviews are completed.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of anonymization of collected data through the use of unique identifiers that only the researcher will be able to match with the participant. All of this collected data will be kept in the secure cloud storage service known as OneDrive. After a period of three years, the data drawn from this interview (audio and video recordings, and transcripts) will be deleted.

Data may be released to the faculty advisor of this study, Dr. Catherine Polydore. While this is not very likely, it may occur if further guidance is needed in the transcription and coding of interviews.

PARTICIPATION AND WITHDRAWAL

Participation in this research study is voluntary and not a requirement or a condition for being the recipient of benefits or services from Eastern Illinois University or any other organization sponsoring the research project. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind or loss of benefits or services to which you are otherwise entitled. There is no penalty if you withdraw from the study and you will not lose any benefits to which you are otherwise entitled. You may also refuse to answer any questions you do not want to answer.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about this research, please contact:
Primary Investigator: Stephen Roach
Email: 
Phone: 
Faculty Sponsor:
Email:
Phone:

RIGHTS OF RESEARCH SUBJECCTS

If you have any questions or concerns about the treatment of human participants in this study, you may call or write:

Institutional Review Board
Eastern Illinois University
600 Lincoln Ave.
Charleston, IL  61920
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Telephone: (217) 581-8576
E-mail: eiuirb@www.eiu.edu

You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with EIU. The IRB has reviewed and approved this study.

I voluntarily agree to participate in this study. I understand that I am free to withdraw my consent and discontinue my participation at any time. I have been given a copy of this form.

Printed Name of Participant

Signature of Participant Date

NOTE: Use the following signature line for minor/handicapped subjects only if applicable.

I hereby consent to the participation of ____________________________________________, a minor/subject in the investigation herein described. I understand that I am free to withdraw my consent and discontinue my child’s participation at any time.

Signature of Minor/Handicapped Subject’s Parent or Guardian Date

I, the undersigned, have defined and fully explained the investigation to the above subject.

Signature of Investigator Date