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Living-Learning Communities Effect on Students’ Self-Efficacy of their Successful Social and Academic Transition to College

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LIVING-LEARNING COMMUNITIES EFFECT ON STUDENTS’ SELF-EFFICACY OF THEIR SUCCESSFUL SOCIAL AND ACADEMIC TRANSITION TO COLLEGE

by

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A dissertation submitted to the department of Leadership, School Counseling, and Sports Management in partial fulfillment of the requirements for the degree of Doctor of Education in Educational Leadership

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Dedication:

To my wife, Amanda, who worked behind the scenes to make this possible and the endless encouragement of my family and friends.
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Abstract

This study investigated the effect of the integrated learning environment fostered by Living-Learning Communities on students’ self-efficacy towards their social and academic transition to college at a large regional institution in the Southeast. Grounded in a theoretical framework guided by Schlossberg's Model for Analyzing Human Adaptation to Transition and Bandura's Triadic Reciprocal Determinism, a two-part structural equation model analysis was conducted with SkyFactor survey data from 427 first-year students. The first analysis, which compared outcomes for LLC participants with non-participants, demonstrated a small statistically significant positive effect for LLC-participants perception of their housing environment. Regardless of LLC participation, the general housing environment had a positive direct effect on students' perception of their social and academic transition to college. Furthermore, the perception of social transition had a greater effect on students’ academic transition as a mediating factor, when compared to the direct effect of the general housing environment. The second analysis, which only used data from LLC-participants, investigated the relationship between the LLC environment and perceived transition outcomes. The results showed the LLC environment did not have a statistically significant direct effect on students’ perception of their academic transition. However, the support fostered by LLCs had a relatively large and significant effect on social transition and an indirect positive effect on academic transition. Implications for program structure, student outcomes, methods to cultivate meaningful relationships for shared leadership, and future research are discussed.
Chapter 1: Introduction

College marks the beginning of a significant transition for young adults. During this time, many students move away from home and enter new social and academic settings that will challenge previous epistemologies (i.e., how knowledge is constructed and what constitutes an authority) and relationships – such as peer and intimate relationships (Magolda & King, 2004). These transitions result “in a change in assumptions about oneself and the world and thus requires a corresponding change in one’s behavior and relationships” (Schlossberg, 1981, p. 5). Researchers have linked the ability for students to successfully negotiate these transitions to outcomes such as student success and retention (Brooman & Darwent, 2014; Tinto & Pusser, 2006). Additionally, early interventions during the first semester can have the most significant impact on students’ transition to college (Elkins, Braxton, & James, 2000). During this time, students establish new social connections on campus and pivot away from previous hometown-based communities.

To help transition students to the college environment, Living-Learning Communities (LLCs), also commonly referred to as Living-Learning Programs (LLPs), have emerged as a high impact practice. Similar to other identified practices, such as writing intensive courses and undergraduate research, receiving the distinction of a high impact practice means it is “significantly beneficial” towards student learning and success in college and supported through
extensive research (Kezar & Holcombe, 2017, p. 34; Kuh, 2008a; Dunn & Dean, 2013). LLCs break down traditional institutional silos – such as academic and student affairs - to create an integrated and collaborative learning environment (Tinto & Pusser, 2006). By design, LLCs are intended to increase faculty and student interactions, promote a supportive environment, and encourage academic success (Kuh, 2008a). The positive outcomes associated with these types of initiatives have led to their presence on campuses and their identification as a high-impact practice in the past 20 years (Brower & Inkelas, 2010; Kuh, 2008b).

The modern expansion of LLCs is the result of the high stakes associated with student transition and retention and are often tied to rankings (Brooman & Darwent, 2014; Hagedorn, 2012; Stassen, 2003). College and university rankings by external entities such as US News and World Report (USNWR), emphasize retention rates (Fowles, Fredrickson, & Koppell, 2016). The highly publicized USNWR has based 22.5 percent of an institution’s ranking on student retention. Although USNWR does not have direct ties to funding, they are influential in shaping perceived institutional identity and value. In response, institutions have increasingly explored how to make the college environment conducive and supportive of student transition early in students’ post-secondary experiences and raise rankings by entities such as USNWR. Although interest and understanding of how students’ transition continues to grow within the post-secondary community, there are still significant knowledge gaps (Gale & Parker, 2014). Often, these gaps are filled with assumptions and “taken-for-granted notions of what constitutes a transition” (Gale & Parker, 2014, p. 734). As such, it is imperative that policies and programs, such as LLCs, assist in student transition as expected.

While LLCs are a recognized high-impact practice that has the potential to affect students' transition positively, researchers have also revealed that anticipated outcomes are not
always guaranteed (Brower & Inkelas, 2010; Kuh, 2008a). Program size, structure, level of collaboration, and purpose can vary significantly. These variances can have a significant impact on student learning outcomes (Inkelas, Soldner, Longerbeam, & Leonard, 2008). Since student outcomes are contextual to each program and institutional characteristics, additional inquiry and exploration is required across various campus environments. This study expanded on current knowledge in the research by examining moderately sourced LLCs at a large regional institution. Specifically, investigating whether participation in a Living-Learning Community affected students’ self-efficacy towards their successful social and academic transition to college through their perception of the residence hall environment and the relationship between these factors. This study also explored the direct and mitigating effect of LLC participants perception of their LLC environment and their social and academic transition efficacy.

**Problem Statement**

Retention to graduation remains one of the most critical outcomes for students and institutions of higher education (Hagedorn, 2012). As exemplified in *USNWR*, retention and graduation rates are often tied directly to college rankings for colleges and universities. Degree attainment, for students, has been linked to significant differences for lifetime earning potential and quality of life standards. Despite these high stakes, the 6-year graduation rate for students seeking a bachelor’s degree is only about 59 percent (National Center for Education Statistics, 2017). Institutional practices can, however, influence students’ retention through initiatives that “provide academic, social, and personal support” (Tinto, 2004, p. 8). This support must be pervasive and reach beyond the classroom to be effective. Furthermore, policies and constituents from across campus must deconstruct traditional barriers and collaborate towards these ends to create an integrated learning environment for students to be successful (Tinto & Pusser, 2006).
While the definition of retention can be complex and multifaceted, a critical first step in achieving any measure of success requires onboarding students through their transition to college (Hagedorn, 2012). One of the most significant time periods of transition is the first semester when students are adjusting to a new collegiate community; as early development of meaningful connections on campus is critical towards students’ short and long-term persistence (Elkins, Braxton, & James, 2000). LLCs targeted towards first-year students can be a powerful initiative to connect students to their new community. LLCs support students’ transition to college by fostering an integrated learning environment, described by Tinto (2004), that bridges in and out-of-class learning (Brower & Inkelas, 2010).

Specific program size and design vary, as exemplified by the Collins Living-Learning Center at Indiana University Bloomington and the Aviation Living-Learning Community at the University of North Dakota. The Collins LLC houses approximately 450 students in a dedicated residence hall that features a coffee shop, library, art studio, and dining facility in the heart of campus (Indiana University Bloomington, 2018; Kranzow, Hinkle, Muthiah, & Davis, 2015). Launched in 1972, the community engages students from a multitude of disciplines across the College of Arts and Sciences. Participating students enroll in LLC-specific courses as well as shared on and off-campus learning activities. In contrast, launched in 2012 the Aviation Living-Learning Community (ALLC) at the University of North Dakota holds a maximum of 65 students enrolled in the aviation program (University of North Dakota, 2018; Wilson, Bjerke, & Martin, 2015). Participants in the ALLC must live on a designated floor, in a building shared with non-LLC students. Unlike the Collins Living-Learning Community, the ALLC does not have a shared academic course but does feature social programs and specialized academic advising. Despite the difference in these programs, the implementation of LLCs can achieve an
integrated learning environment by housing students together who have a shared academic or co-curricular interest (Dunn & Dean, 2013).

Beyond requiring students to live together, programs also typically incorporate shared academic courses, co-curricular learning experiences, mentorship, and access to faculty and support staff, such as the Collins Living-Learning Community at Indiana University Bloomington. However, as demonstrated by the Aviation Living-Learning Community at the University of North Dakota, many programs exist without shared courses or high-levels of faculty involvement (Inkelas, Soldner, Longerbeam, & Leonard, 2008). When LLCs are functioning at their best, they work to form meaningful bridges between institutional silos and require strong leadership from associated faculty and student affairs administrators (Magolda, 2005; Tinto, 2004). As such, LLCs invite a shared governance approach to leadership that fosters collaboration and distribution of power (Dzur, 2015). Since these programs operate outside of typical practices, they can be difficult to sustain over time (Magolda, 2005). Therefore, evidence connecting LLCs to stated outcomes is essential to justifying and supporting their continuing development.

A strong partnership between faculty and student affairs administrators alone, however, is insufficient for LLCs to be impactful. Students must also be involved as leaders in shaping their learning environment (Dzur, 2015; Schlossberg, 1981). A students’ perception of their capability to succeed in their transition, self-efficacy, is an important attribute they need to negotiate their transition to college and participate in the construction of their learning environment (Anderson, Goodman, & Schlossberg, 2012; Bandura 1989). Beyond negotiating their immediate experience of transitioning to college, gaining confidence and leadership experience offers transferable skills students can bring to future transitions. However, during significant life transitions, they are
likely experiencing “challenges for coping efficacy” (Bandura, 1989, p. 47). This study sought to understand what effect participating in an LLC has on students’ self-efficacy toward their successful transition to college.

**Purpose Statement**

This study explored the effects of participation in a Living-Learning Community on students’ self-efficacy for their transition to college using Schlossberg’s (1981) Model for Analyzing Human Adaptation to Transition and Bandura’s (1989) Social Cognitive Theory. These theories describe the relationship between self-efficacy, the environmental support systems, and transition outcomes. This study tested these theories by comparing perceptions of social transition, academic transition, and residence hall environment of LLC participants to non-participants at a large regional institution in the Southeast. The independent variable, LLC participation, included two groups- LLC participants (i.e., students who applied, enrolled, and resided in an LLC) and students from the general housing population. The dependent variables were gathered using self-reported data through an online survey.

**Research Questions**

The empirical portion of this dissertation was guided by the following 2 questions:

1. Does participation in a Living-Learning Community affect students’ self-efficacy towards their successful social and academic transition to college?

2. Does perception of the LLC environment affect social and academic transition self-efficacy for participants?
Study Definitions

First-Year Student. A student enrolled in college full-time for the first time after completing secondary education.

High-Impact Practice. A highly researched and tested educational practice that supports the success of students from various backgrounds (Kuh, 2008b).

Living-Learning Community (LLC). A “residence hall-based undergraduate program with a particular topical or academic theme” (Inkelas & Soldner, 2011, p. 1).

Retention. Sustained student enrollment at an institution through graduation with a degree (Hagedorn, 2012).

Self-efficacy. One’s “beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives,” such as their success in a designated task or life transition (Wood & Bandura, 1989, p. 364).

Transition. The change of one’s internal and external paradigms of themselves and the world that requires a change in behavior and relationships (Schlossberg, 1981).
Chapter 2: Literature Review

Under pressure to support students’ successful transition and persistence to graduation, institutions are challenged to foster learning environments and collaborations that support these outcomes. In response, Living-Learning Communities have emerged as a popular initiative across many college campuses, and researchers have examined how they contribute towards students’ success through a multitude of lenses and measures. Using a theoretical framework adapted from Schlossberg’s (1981) Model for Analyzing Human Adaptation and Bandura’s (1989) Model of Triadic Reciprocal Determinism, this study examined to what effect Living-Learning Communities contribute towards students’ self-efficacy in their transition to college.

This chapter will first review this history of LLCs and how researchers have captured their effect on transition student self-efficacy and conclude with how this study expanded on existing understanding of the impact LLCs have on students transition to college.

Living-Learning Communities and American Higher Education: A Historical Context

Living-Learning Communities (LLCs) have emerged as a high-impact practice attributed to promoting student success and supporting the transition to college in the past 20 years (Brower & Inklelas, 2010; Dean & Dunn, 2013). As a high-impact practice, LLCs have been recognized for their “significantly beneficial impact” towards student learning and success in college through extensive research (Kezar & Holcombe, 2017, p. 34). The pedagogical paradigm to bring faculty and students together in a residential environment, however, is not new to American higher education (Dean & Dunn, 2013). Modern American colleges and universities
are modeled on the “Oxford-Cambridge ideal” (Thelin, 2004, p. 7). This archetype for higher education idealizes a residential campus community where faculty and students had a high frequency of interactions. The source of early leadership for student learning and development in college was therefore faculty. However, over time a growing demand of administrative bureaucracy led to the emergence of student affairs administrators to oversee what were considered ancillary functions such as housing, student conduct, and admissions. While the emergence of the field of student affairs alleviated faculty from administrative burdens, it has led to a modern paradigm of disparate learning environments artificially segmented and isolated to individual classes (Keeling, 2004). Opportunities for learning exist beyond the classroom, however, students “may perceive little coherence” in their learning and development experiences (Keeling, 2004, p. 8).

An important early model for contemporary LLCs was the Experimental College at the University of Wisconsin in the 1920s (Stassen, 2003). The Experimental College intentionally developed a curriculum focused on creating a cohesive learning experience that extended beyond the classroom. Although the Experimental College was abandoned shortly after its creation, interest in developing an integrated learning environment persisted through to present day (Dunn & Dean, 2013). During the 1990s LLCs experienced a renaissance with emerging research linking student retention with cohesive and holistic support structures (Stassen, 2003; Tinto, 2004; Tinto & Pusser, 2006). Most programs in existence today are relatively new to their campus and vary widely in structure and learning outcomes (Soldner & Szelényi, 2008). Research on outcomes for LLC’s has also emerged with their growing popularity. Presently, however, most research has focused on large research institutions (Inkelas & Soldner, 2011).
This trend may be caused by the perceived appeal for large universities to foster smaller niche communities within their broader campus.

Although the past 20 years has ushered a significant expanse in LLC programs across American campuses, their history is as deep as the system itself (Dunn & Dean, 2013; Soldner & Szelényi, 2008). This context is an advantage and hindrance of their potential impact. LLC’s seek to reestablish a connection between co-curricular and curricular learning environments lost from the hyper-specialization of faculty and student affairs administrators (Keeling, 2004). A consequence of this legacy is the type of cross-institutional relationships can be difficult to foster and sustain over time (Magolda, 2005). Current institutional culture and structures can exacerbate the cultural divide that now exists between faculty and student affairs administrators. Magolda suggested “faculty generally coalesce around core values such as the generation and dissemination of knowledge; autonomy rooted in academic freedom; and collegiality” whereas student affairs professionals unite around “tending to students’ multiple needs, respecting differences, developing citizen-leaders, and increasing student’s self-awareness and self-direction” (pg. 20). Amplifying these differences, academic affairs and student affairs often have independent organizational structures within institutions that minimize interaction and understanding of roles and responsibilities between groups. The result has created silos, which foster an overall fragmented learning experience, leaving students unsupported in drawing meaning and forging connections (Keeling, 2004).

Living-Learning Communities have the potential to bridge this cultural and structural divide described by Magolda (2005) and Keeling (2004). LLCs have the capacity to “combine knowledge acquisition and experimental learning to promote more complex outcomes” for students (Keeling, 2004, pg. 23). However, partnerships must be intentional with mutually
agreed upon expectations, roles, and outcomes (Magolda, 2005). Without the foundation of a strong partnership, it may not be possible for LLCs to realize their intention to create an integrated learning experience for students. Evidence of the difficulty to achieve this partnership emerges in trends of contemporary program structures and collaborations that show a minority of programs have shared leadership (Soldner & Szelényi, 2008).

**Living-Learning Communities as a High-Impact Practice**

Living-Learning Communities are one of ten high-impact practices (HIP) identified by Kuh (2008b) as a part of the Liberal Education and America’s Education Promise (LEAP). The LEAP program was a ten-year initiative by the Association of American Colleges and Universities to “align the goals for college learning with the needs of the new global century” (Kuh, 2008b, pg. 7). HIPs emerged as institutions of higher education began to consider the student experience through a more holistic framework at the end of the 20th century (Wawrzynski & Baldwin, 2014). The catalyst for this paradigm shift was the realization that “students who are actively engaged in both academic and out-of-class activities gain more from the college experience than those who are not involved” (p. 54). In response, institutions began to map student learning on campus and identify learning opportunities and develop practices and support systems that connect them. From the LEAP project, the ten HIP identified were:

- First-year seminar and experiences
- Common intellectual experiences
- Learning communities
- Writing intensive courses
- Collaborative assignments and projects
- Undergraduate research
Living-Learning Communities have been identified as a high-impact practice because they “encourage the integration of learning across courses and involve students with “big questions” that matter beyond the classroom” (Kuh, 2008b, p. 20). The result is an academic and social climate that fosters a connection to a shared purpose, increases faculty and peer interactions, and increases contact with a diverse group of people. Student outcomes associated with participation in high-impact programs, such as LLCs, include employer-identified essential learning outcomes that include critical thinking, social responsibility, and application of knowledge (Bower & Inkelas, 2010, Kuh, 2008b). Additional outcomes include increased first to second-year retention and overall institutional persistence (Kuh, 2008b). However, to be successful LLCs, and other HIP, require a multilateral commitment across all levels of an institution (Wawrzynski & Baldwin, 2014). The achievement of collaboration for the implementation of LLCs, as demonstrated by the National Study of Living-Learning Programs (NSLLP) findings, however demonstrates mixed success in practice (Bower & Inkelas, 2010).

Contemporary Models and Structures of Living-Learning Communities

Living-Learning Communities on college campuses today vary greatly in structure, theme, and levels of collaboration between faculty and student affairs administrators (Inkelas, Szelenyi, Soldner, & Brower, 2007). Broadly LLCs can be described as “residence hall-based undergraduate programs with a particular topical or academic theme;” however, a common definition through research and practice does not currently exist, and programs can take on a
multitude of forms (Inkelas & Soldner, 2011, p. 1). Various researchers and studies have sought to classify and develop a typology for LLCs since the 1990s; but, none have persisted. The most recent effort has come from the National Study of Living-Learning Programs (NSLLP), a cross-sectional and longitudinal study of LLC programs across 34 institutions (Inkelas et al., 2007). The NSLLP is the first data-driven model (Inkelas, Soldner, Longerbeam, & Leonard, 2008), and researchers reviewed 611 institution-identified LLC programs to develop thematic and structural typologies. From this data, Inkelas et al. (2007) classified program themes into 17 general and 41 specific categories. Themes varied from outdoor recreation to business. Additionally, three structural types were developed using NSLLP data (Inkelas et al., 2008). Their structural typology incorporated the number of students, available funding, level of collaboration between academic and student affairs, affiliated courses, and strength of learning outcomes. The three categories ranged from small with minimal academic involvement to large with extensive collaboration and academic components.

Beyond developing these typologies, the NSLLP also revealed the diversity of program structures currently in practice under the umbrella term of LLC. On average, LLC programs enroll approximately 50 students (Inkelas et al., 2008). Most programs have a limited partnership between student affairs and academic offices, and primary leadership typically fell to residence life staff (Inkelas et al., 2008; Soldner & Szelényi, 2008). These findings draw into question how collaborative LLCs are in practice, as 47% of programs primarily reported to residence life offices, 37% to multiple offices, and just 7% to academic offices (Soldner & Szelényi, 2008). Additionally, most programs studied in the NSLLP had no shared coursework (Brower & Inkelas, 2010).
Research since the NSLLP has focused on a single or small grouping of campuses or programs. It is often difficult to apply typologies from the NSLLP because studies usually do not include specific details or reference them. As research and programs continue to evolve, a lack of standard definition and typology will continue to hinder cross-program comparisons.

**Living-Learning Communities and Student Transition**

In the past 20 years, researchers have also investigated the effect of LLC’s on students on a large and small scale. There is notably a single comprehensive national study and many smaller follow-up and independent studies. Overall, the outcomes were positive, but moderate to negligible in effect size. This section will provide an overview of research trends and dive deeper into results related to this study.

In 2007, Inkelas, Szelényi, Soldner, and Brower published the first and only large-scale longitudinal study, called the National Study of Living-Learning Programs (NSLLP). Beyond reviewing program theme and structural typologies, their primary focus was to evaluate the effect of participation in LLCs on students. The NSLLP surveyed nearly 24,000 students across the 34 institutions and found that, compared to non-LLC on-campus residents, LLC students exhibited greater critical thinking skills, had higher engagement, and experienced a smoother academic and social transition (Brower & Inklelas, 2010). The NSLLP supported these findings by comparing LLC participants and non-LLC participants with similar input characteristics. The study took place over several years with an initial survey and follow-up survey for a portion of participants. Overall, the NSLLP found a statistically significant increase in the ease of social and academic transition for LLC participants relative to non-participants with a minimum exception for high-research institutions.
Most studies completed on LLCs, before and since the NSLLP, only examine a single campus or individual LLC program. This research trend is a consequence of the relative newness of many LLCs and vast diversity of intended student outcomes and programmatic designs (Dean & Dunn, 2013; Soldner & Szelényi, 2008). The NSLLP provided substantial preliminary evidence on a large-scale for the positive potential of LLCs. However, research has continued to examine sub-populations, specific programs, research trends, and outcomes. This study is consistent with emerging research by investigating programs at a particular campus, however, differentiates itself by focusing on an under-investigated institution type and exploring the causal relationships of the environment fostered by LLCs and student’s perception of their academic and social transition.

Research Designs

Since the publication of the NSLLP, there have been a wide variety of studies completed to measure the transition outcomes of LLC participants. The most common methodology was quantitative, and just a small portion was qualitative, or mixed methods. Additionally, there have been several follow-up studies utilizing data from the NSLLP to examine sub-populations or specific outcomes associated with LLC’s in greater depth. Other studies employ novel data collection sources, tools, and analysis methods. However, most of the new research continues to focus on large research institutions and LLC typologies (Inlekas, Soldner, Longerbeam, & Leonard, 2008).

In addition to the relative hegemony on institution types studied in the past ten years, there was a limited typology studied. The most common program typology investigated by researchers in this review have been moderate to comprehensively resourced programs. These types of programs are more likely to feature shared coursework and have an active collaboration
and connection between faculty, students, and student affairs staff. This trend may be connected with the predominant focus on large research institutions, as they are most likely to house these types of programs (Inkelas et al., 2008). Beyond new studies, there have also been several follow-up publications utilizing data from the NSLLP that focus on specific outcomes or sub-populations. Common populations concentrated on are women in STEM, racial minority, and first-generation college students.

**How LLCs Affect Students’ Academic Transition to College**

There have been a multitude of studies that have investigated the impact of LLC on students’ academic transition. The most common measures included their perceptions, GPA, and retention. Overall, observed outcomes have ranged from moderate to no effect on student outcomes compared to non-participants. Findings on academic transition and achievement, however, highlight the importance of program structure for influencing student outcomes.

**Grade Point Average.** GPA was a common measure used by researchers to evaluate students’ academic achievement and transition to college (Inkelas & Soldner, 2011). Although several studies have found participating in an LLC to have a positive effect on students’ GPA performance, the impact was typically minimal. An example of a study that used GPA as a primary measure of achievement is Pasque and Murphy (2005) who surveyed LLC participants at a large public research institution in the Midwest. While controlling for prior academic performance and demographics, Pasque and Murphy found LLC participation was a significant predictor of students’ academic performance. The effect was greatest for students who identify with a traditionally underserved racial, sexual orientation, or socioeconomic status. However, the actual observed effect size of LLC participation was very small, only “accounting for 1.1% of the variation of the dependent variable,” academic achievement (p. 435). Wilson, Bjerke, and
Martin’s (2015) study of an aviation LLC at the University of North Dakota had similar GPA findings. Wilson et al. found aviation students who participated in the LLC had a statistically significant higher GPA and rate of course completion during their first fall semester on campus. They attributed outcome to additional tutoring and staff available for LLC participants. However, despite gains in the fall, the spring GPA fell and became comparable to non-participant aviation students, and retention in the aviation program or the institution was also the same.

Purdie and Rosser’s (2011) study of Freshman Interests Groups (FIGs) and Academic Theme Floors (ATF) at two land-grant universities in the Midwest provides an excellent example of how program structure influences GPA outcomes for students. When comparing outcomes among students enrolled in ATFs and FIGs, they found students in FIGs had a statistically significant GPA increase. The key difference between ATFs and FIGs is program size and level of academic collaboration. ATFs focused on out-of-class learning experiences had no shared course(s), and limited partnership between student and academic affairs. FIGs, however, offered extensive programming, academic support, affiliated classes, and a strong collaboration. While the effect size was still very small, similar to Murphy and Pasque (2005) and Wilson, Bjerke, and Martin’s (2015) findings, Purdie’ and Rosser’s study highlights the importance of program structure and student GPA outcomes.

**Student retention.** Often studied alongside GPA outcomes for students is their retention and persistence to graduation. GPA’s inclusion is likely due to its predictive value in student retention (Reason, 2003). Purdie and Rosser’s (2011) study, for example, also measured student retention outcomes and found that FIG participants experienced a moderate increase in retention odds. Similar to GPA outcomes, for students who participated in an ATF it did not affect their
retention. Cambridge-Williams, Winsler, Kitantas, and Bernard (2013) also found no significant GPA performance difference for LLC participants but discovered a substantial effect on 7-year graduation rates. 85.5% LLC participants at a large research university graduated within 7-years, relative to 62.7% of non-participants. Their study was conducted at a large research university in Virginia, and LLC students lived in a common area and took a course together their first year.

The increase in retention rates for LLC participants, despite little to no effect on GPA, suggests that other factors may contribute to this student outcome. Experiences related to the housing or LLC environment may support a smooth transition to college, a factor connected to retention by Hagedorn (2012).

**Perception of academic transition.** One of the greatest effects identified across studies that measured academic transition were in positive perceptions of an academically supportive environment. This attitude was captured by Wawrzynski, Jessup-Anger, Helman, and Beaulieu (2009), using a constructivist framework in a qualitative study of three LLCs at a large land-grant university in the Midwest. They based their finding on interviews with current and past participants to collect perceptions of the environment created by the LLC. Key themes that emerged were that participants felt the social and physical environment of an LLC promoted a scholarly environment that fostered a culture of academic success and engagement. Eck, Edge, and Stephenson (2007), who surveyed 191 LLC and 212 non-LLC students at a small private institution in Florida also found LLC participants perceived the learning environment and pedagogy to be more engaging and useful for learning compared to non-participants.

The NSLLP looked at multiple outcomes commonly associated with the academic transition, including their perception (Inkelas, Szelényi, Soldner, & Brower, 2007). They found students who participated in an LLC, compared to non-LLC participants, experienced a
statistically smoother perception of their academic transition to campus. This outcome was measured by asking students to rate their perceptions of their transition on a 6-point Likert scale. In addition to a higher perceived ease of transition, the NSLLP found that LLC participants were also more likely to have a higher confidence in their college success. LLC students also felt their residence hall environment more supportive of their academic goals and were more likely to utilize support services on campus.

**How LLCs Affect Students’ Social Transition to College**

Living-Learning Communities are unique environments that have the ability to bring together faculty, staff, and students focusing on a common outcome. This collaborative environment can foster a social setting that students have increased interactions and perceive higher levels of social support. However, similar to academic outcomes, the program structure is still a significant factor in predicting social support (Pascarella & Terenzini, 1980).

**Increased peer connections.** With the importance of informal interactions on a student transition, LLC’s demonstrate a unique ability to connect peer groups with similar interests (Kranzow, Hinkle, Muthiah, & Davis, 2015). An example of the impact LLC’s can have on fostering peer connection is Grills, Fingerhut, Thadani, and Machon (2012). They found 93.8% of participants reported the LLC helped them develop relationships with peers. Most of these connections made were with students who had similar academic interests. In addition to linking with students in similar academic standing, LLC’s also had the potential to connect participants with advanced students through mentorship. For programs that utilized student mentors, LLC participants reported feeling safe and supported (Kendricks & Arment, 2011).

A notable exception is that while increased peer interactions helped students’ social transition, the positive effect did not always carry over into increased interactions with faculty
and staff in the residence hall environment. Arms, Cabrera, and Brower (2008) found increased social interactions with academic advisors in the residence hall setting had little to no impact on students’ perceptions of the value or support available to them, relative to non-participants’. Workman (2015) found a similar outcome in a study at a different institution.

**Perceptions of a socially supportive environment.** Perceptions of a socially supportive environment fostered by LLCs was the most common effect captured by researchers. Most frequently, the environment referred to was the residence hall. Participants reported a greater sense of social integration which resulted in a decrease in loneliness (Agawu-Kakraba & Gaudelius, 2013). This social integration translated into a perception of a socially supportive environment by connecting students with peers, faculty, and staff who share and support their academic and career aspirations (Grills, Fingerhut, Thadani, & Machon, 2012; Mills, 2015). LLC’s provide a unique environment to foster these outcomes because they house students together and provide common community spaces, such as residence hall lounges and classrooms, for students to congregate (Kranzow, Hinkle, Muthiah, & Davis, 2015). These environments provide a higher frequency of informal interactions, which tend to have more significant impact on student outcomes compared to formal ones.

Students’ perceptions of their physical and social environment are critical to the success of their transition. These factors can directly contribute to the stress and outlook for students as they adapt to college (Schlossberg, 1981). What appears to be consistent across studies, is that students perceive a supportive peer and institutional environment fostered by LLCs.

**How LLCs Affect Students’ Perception of their Residence Hall Environment**

Residence halls provide students both physical and social environments. The physical environment can include student rooms, common spaces, dining facilities, faculty offices, and
classrooms. The social environment can include fellow LLC participants and non-LLC participants who share residential areas. The configuration of these spaces can have a direct effect on student outcomes, and the structure and resources associated with LLC’s can vary wildly across programs and institutions (Soldner & Szelényi, 2008).

The NSLLP found that an academically and socially supportive residence hall environment predicted a smooth transition into college during the first year and support retention (Brower & Inkelas, 2010; Inkelas, Daver, Vogt, Leonard, 2007). Several studies have found LLC’s environments foster unique cultures, social norms, and traditions that impact students’ perception (Brower, Golde, & Allen, 2003). The capacity of LLC to shape students’ perception can be seen in Krazow et al.’s (2015) study of a Living-Learning Center at a large high-research institution in the Midwest. The authors used a cultural lens to investigate the residential environments capacity to foster an integrated learning environment. They found “institutional environments (including many LLC’s) that are perceived by students as inclusive, affirming, and academically engaging are more likely to promote student satisfaction and achievement” (p. 12). Additionally, perceptions of this environment start as early as the application and recruitment process and continue through physically moving in. Common spaces are also identified as an essential characteristic that supports student interactions and perceptions of the social environment of the residential community.

By bringing together faculty, students, and staff with shared interests and goals, and creating spaces for them interact, LLCs have the capacity to enhance students sense of belonging in academic and co-curricular areas (Agawu-Kakraba & Gaudelius, 2013). For programs with shared coursework, this can contribute to a perception that their residential communities are academically supportive (Soldner, Rowan-Kenyon, Inkelas, Garvy, & Robbins, 2012). In
addition to increasing the frequency, they are also more likely to be perceived to be productive interactions (Longerbeam, Inkelas, & Brower, 2007). The result can be a perception that residence hall climates are more socially supportive. This attitude can extend beyond LLC participants, and have also been found to provide similar in-direct benefits to non-participants.

**Theoretical Framework**

Although Living-Learning Communities may appear to be a new initiative brought on by contemporary retention pressures, they are deeply rooted in American collegiate history. LLCs are a return to the Oxford Model that imagined an idyllic campus where faculty and students had frequent and meaningful interactions that shaped a mutual culture of learning. The growth of institutions has challenged this model, but practitioners have been initiating communities and curriculums designed to bridge the growing chasm of student learning experiences since the early 1900s. The recent expanse of LLCs that started in the 1990s has made them a staple on most college campuses today (Longerbeam, Inkelas, & Brower, 2007). The actualization of LLCs as a collaborative learning environment that support students transition to college, however, has been mixed and further research is required to understand how program structures and institutional context impact outcomes associated with these types of initiatives. This study further investigated the affect LLC’s have to students transition to college through theoretical frameworks of Schlossberg’s Model for Analyzing Human Adaptation to Transition (1981) and Bandura’s (1989) self-efficacy.

**Transition**

Over the course of a lifetime, one goes through a multitude of transitions. A transition is the change of one’s internal and external paradigms of themselves and the world that requires a change in behavior and relationships (Schlossberg, 1981). Life events, such as starting college, is
one of a many of transitions people can undergo in their lifetime. In her Model for Analyzing Human Adaptation to Transition, Schlossberg (1981) describes the three most important contributing factors that affect adaptation. These three factors include the perception of the transition, environmental characteristics, and individual characteristics. Students expectations and perceptions of their environment are critical because it influences behaviors and satisfaction (Wawrzynski & Jessup-Anger, 2010).

Schlossberg states that environments can include “interpersonal support systems, institutional supports, and physical setting” (Schlossberg, 1981, p. 10). LLCs aim to develop intentional environments that facilitate a smooth transition for students (Brower & Inklelas, 2010). Specifically, LLCs seek to establish the supportive conditions described by Schlossberg by housing students together, creating shared co-curricular experiences, shared courses, and access to faculty and staff. The anticipated outcome of fostering these types of environments is it will contribute to a smooth academic and social transition for participants and their adaptation to college, retention, and eventual graduation.

**Self-Efficacy**

As a student begins their transition to college, their sense of agency and capabilities is a critical factor for success (Anderson, Goodman, & Schlossberg, 2012; Bandura, 1989). Schlossberg (1981) addressed this in her model by including perception as one of the three main factors that impact transition. This study focused on this factor when interpreting the effect LLC participation has on students’ transition to college. Bandura’s (1989) self-efficacy provides a framework to understand how the environment and behaviors influence perception. In his Model of Triadic Reciprocal Determinism, Bandura describes the interaction effects between perception, behavior, and the environment. His model predicts an individual’s self-efficacy
directly affects how they behave and perceive their environment. Furthermore, “people are both products and producers of their environment” (Bandura, 1989, p. 3). Living-Learning Communities have the capacity to impact students’ self-efficacy before their arrival to campus through the application and selection process. By applying an LLC, students are actively participating in choosing and shaping their environment. Their decision to apply and behavior within them is continually affected by their self-efficacy. Once students arrive to campus, interactions with the environment will continue to shape their self-efficacy and influence behaviors. Understanding these interdependent relationships between the environment, perceptions, and behavior is a critical connection for interpreting whether the learning environment fostered by LLC’s has a positive effect on students’ self-efficacy in their transition (Figure 2.1). Furthermore, a study by Inkelas, Daver, Vogt, and Leonard (2007) has suggested that students’ perceptions of their capabilities may be a more critical factor in their ultimate success compared to traditional measures of potential, such as high school GPA and SAT scores.
By incorporating Bandura’s Triadic Reciprocal Determinism within Schlossberg’s Transition model, an interdependent relationship between the residential environment and students’ perception of their transition emerges (Figure 2.1). Also identified in the theoretical model, individual characteristics (i.e., socioeconomic status, previous experiences, sexual orientation, gender, etc.), is another critical factor that Schlossberg (1981) and Bandura (1989) predict to impact student outcomes and behaviors. This factor, however, was not incorporated within the scope of this study but could be included in future research to expand understanding of the effect for student self-efficacy in their transition. This study investigated the affect the
residential environment has on students’ perception and self-efficacy towards their transition and ultimate adaptation to college.
Chapter 3: Research Methods

Research Question

Does participation in a Living-Learning Community affect students’ self-efficacy towards their successful social and academic transition to college. Furthermore, does the LLC environment have an effect on these perceptions?

To address the research question, a quantitative approach was best suited to observe trends, compare sample populations, and draw salient inferences (Creswell, 2014). Additionally, this methodology is consistent with most inquiries into LLCs effect on students transition to college, making it easier to contextualize findings in existing research. The following sections will discuss the study design, sampling methods, and analysis.

Study Design

This study used a quasi-experimental nonequivalent comparison group post-test only design (Campbell & Stanley, 1963; Muijs, 2011). A treatment group (students who participated in a Living-Learning Community) was compared to a comparison group (residential non-LLC students). A quasi-experimental approach is ideal for measuring educational interventions in the field (Muijs, 2011). Additionally, it is not possible for a true randomized experimental design, as students self-select their participation in LLCs.

In the absence of randomization, it is essential for the comparison group to be as similar as possible to the treatment group (Muijs, 2011). A pre-test, typically associated with a nonequivalent comparison group research design, was not conducted for the available data set.
(Campbell & Stanley, 1963). However, this study assumed input characteristics were similar across both groups. This assumption is grounded in findings from the National Study of Living-Learning Programs (NSLLP), which surveyed nearly 24,000 students across the 34 institutions and found no significant difference in input characteristics between LLC participants and non-LLC participants (Brower & Inkelas, 2010). These input characteristics included gender, previous academic achievement, and socioeconomic status (Inkelas, Szelényi, Soldner, & Brower, 2007).

Participants

The study took place at a large master’s regional institution in the Southeast (Indiana University Center for Post-Secondary Research, 2017). The university enrolled approximately 15,000 undergraduate and graduate degree-seeking students, most of which come from the surrounding region. At the time of this study, all first-year students were required to live on campus as a condition of enrollment. The sample population were all first-year residential students in the Fall of 2015 (n=1882). Participants were divided into a treatment group and a comparison group. The treatment group were all first-year students who participated in a Living-Learning Community, and the non-treatment (comparison) group were residential students living in the general campus population. Sampling the entire population provided the best opportunity to capture trends and variable relationships for this university environment.

Of the first-year residential population, approximately 246 students participated in an LLC in Fall 2015. Participation in an LLC was voluntary, and students were selected to participate based on their stated interest in a designated program and commitment to be engaged. Some programs had additional admission criteria that students were required to meet (i.e., admission essays, majors, and interviews). The first-year LLC programs offered at the institution
during the period of this study were Honors, PreMed, Business, Wellness, and STEM. The structure, theme, and resources for each program varied; however, all LLC’s share some common characteristics. Each LLC required students to move-in early to participate in a multi-day retreat, students lived on a designated residential community, and most had some level of collaboration between residence life staff and academic affairs. The following sections briefly describe the programs and connect them with typology characteristics developed by Inkelas, Soldner, Longerbeam, and Leonard (2007). This criterion is salient, as empirical studies have linked program structures to student outcomes.

**Honors Living-Learning Community.** The Honors Living-Learning Community (n=148) was the largest community on campus and occupied an entire residence hall. To participate in this program students must enroll in the Honors College and be a first-year student. The purpose of the community was to bring Honors students together and create a shared learning environment. Funding for the program was shared jointly between academic and student affairs and enjoyed a healthy leadership partnership between residence hall staff, faculty, and academic advisors. Students took a course together in the fall, engaged in service learning experiences, and participated in regular social programs throughout the year.

**PreMed Living-Learning Community.** The PreMed Living-Learning Community (n=8) was one of the smallest programs available to students and had a maximum enrollment of 25. Participants in this community lived on a designated floor in a residence hall, but due to its size, most students on the floor were not in the LLC. The purpose of the community was to prepare first-year students for the academic rigor necessary to be admitted to professional medical school. Funding for the program was equitability shared between Residence Life and the Biology Department. Leadership was distributed for the LLC between Residence Life, faculty, and a
retired doctor from the local community. Students took a course in the fall and spring. Additionally, Residence Life staff hosted social programs throughout the year.

**Business Living-Learning Community.** The Business Living-Learning Community (n=16) was designed to introduce students to the multitude of career paths available in the field. Students must be a business major or minor and agree to live on a designated floor to join. Additionally, students enrolled in an introduction to business course during the fall semester and were encouraged to participate in programs tailored to business skills and social development. Leadership for the program was shared equally between Residence Life staff and academic advisors for the Business College. Funding was shared between student and academic affairs, but most came from Residence Life.

**Wellness Living-Learning Community.** The Wellness Living-Learning Community (n=28) introduced and encouraged students to live a healthy lifestyle. The community incorporated physical, intellectual, emotional, spiritual, and relational aspects of fitness. Participants lived together on a designated floor and were urged to enroll in a 3-credit hour course that examined personal wellness. The course, however, was not required for participation. Programming was offered around developing a healthy lifestyle and how to access wellness services on campus. Most leadership for the program was from Residence Life staff in partnership with several Student Affairs staff at the campus fitness complex. Student Affairs sourced all funding for the LLC.

**STEM Living-Learning Community.** The STEM Living-Learning Community (n=36) brought together students from science, technology, engineering and mathematics majors. Students from this community all had a major within related STEM disciplines and were required to enroll in a math course. However, since students tested into several levels of math
courses during the admission process, it was not possible to create a standard math class for the community. Students were housed together on a designated residence hall floor. Residence Life staff, faculty, and academic advisors provided social programs, introduced academic clubs, brought in special lecturers, and offered math tutoring to participants. Leadership and funding for the LLC were shared equitably between Residence Life staff, faculty, and academic advisors.

**Sample Collection**

Towards the conclusion of the fall semester, all on-campus residents were invited through their student email account to participate in the SkyFactor (formally Educational Benchmarking, Incorporated) Survey. The Office of Housing and Residence Life sent the invitation, and participants were given two weeks to complete the survey online via an individualized link in the email. After one week participants who had not completed the survey were sent a reminder email to take the survey. The survey was closed for additional responses at the conclusion of the two weeks. Participation was encouraged by offering students Residence Life t-shirts and other promotional give-a-way items. The result was a one-time cross-sectional data set.

There was a total of 924 respondents. Of the respondents, 497 identified as upper-class students (i.e., sophomore, junior, and seniors), 427 identified as first-year students. Of the first-year identified respondents, 101 also designated their participation as first-year LLC participants (i.e., treatment). The Skyfactor survey does not collect which LLC participants who responded are enrolled in. Therefore, the treatment group broadly represents the experience of LLC participants at the institution. Overall, this sample represents 41.05% of the first-year LLC population and 9.3% percent of the non-LLC on-campus first-year population. This sample size exceeds the minimum guidelines identified by Bartlett, Kotrlik, and Higgins (2001) for the campus residential population size when conducting analysis with continuous data.
Data Collection Methods

**Instrumentation.** A survey study design was chosen for this study because it was an economical and efficient method for gathering quantitative data (Creswell, 2014). The Skyfactor Survey was a proprietary and copyrighted instrument; however, user guidelines permit use for institutional improvement. Also, raw data use and access is available to administrators within the purchasing department. As the survey administrator for the Residence Life department the author met the conditions for use.

The Skyfactor Survey was designed in partnership with the Association of College and University Housing Officers-International (ACUHO-I) and grounded in CAS Standards for Housing and Residence Life. The survey is intended to evaluate “satisfaction with the housing experience, facilities, staff, dining, and roommates; as well as learning related to community interactions, programs, diverse interactions, sustainability, and healthy habits” (Skyfactor, 2017, pp. 2-6). This survey was administered to 335,132 students across 297 institutions in 2015-2016. Since some portions of the survey are not applicable to the research question, such as sections focused on dining services, and were therefore excluded from analysis.

The survey, itself, first collected personal characteristics of respondents. Questions included gender, sexual orientation, race, academic class standing, cumulative GPA, the frequency of housing program attendance, room configurations, and LLC participation. LLC Participants were also prompted to responded to several additional questions directed towards their experience. These questions included interaction with faculty and peers through the LLC. All participants were asked clusters of questions regarding their satisfaction of hall staff, the residential environment, safety and security, roommates, the community environment, personal interactions, diverse interactions, self-managing, risk behaviors, sustainability, and overall
satisfaction. Most questions asked respondents to rate their satisfaction using a seven-point Likert scale. Each section cluster of questions also allowed students to write-in additional feedback in a text box.

**Specification of variables.** Observed dependent and independent variables were used to construct latent factors used in each Structural Equation Model (SEM) (Schumaker & Lomax, 1996). A measurement model was developed, and each independent variable was tested for its fit within each factor (Byrne, 2006). This method resulted in four unique dependent factors for analysis. These latent factors represent students’ perceptions of their general housing environment, social transition, academic transition, and LLC environment.

Factor 1: Perception of Academic Transition (PAT). This factor describes skills and attributes that support academic success and retention in college such as GPA, time management, overall learning, wellbeing, and study skills. PAT was formed using observed variables that connect to students’ perception of their academic transition. These variables were formed from select prompts in the SkyFactor survey related to skills and environmental factors that support academic success and transition. The factor loadings for PAT ranged from 0.37 to 0.73 indicating acceptable construct validity; and construct reliability for PAT, calculated using Coefficient $H$, was acceptable at 0.81 (Hancock & Mueller, 2001). Specifically, questions included how satisfied students were with:

- Ability to manage their time
- Ability to balance with social, work, and academic commitments
- The contributions of living on-campus towards their academic performance
- The contributions of overall learning
- Ability to solve their own problems
• Ability to live a healthy life
• Ability to study in their room

Factor 2: Perception of Social Transition (PST). This factor describes students' sense of belonging to the institution through the formation of meaningful relationships and perceived support from peers. PST was therefore built using observed variables that connect to students’ perception of their social transition. Variables were formed from select prompts in the SkyFactor survey related to skills and environmental factors that support relationship development, trust, belonging, and social transition. The factor loadings for PST ranged from 0.44 to 0.78 indicating acceptable construct validity; and construct reliability for PST, calculated using Coefficient $H$, was acceptable at 0.90 (Hancock & Mueller, 2001). Specifically, questions included how satisfied students were with:

• The extent living in on-campus housing has enhanced their ability to meet other students
• The extent living in on-campus housing has enhanced their ability to live cooperatively
• The extent living in on-campus housing has enhanced their ability to resolve conflict
• The extent living in on-campus housing has enhanced their ability to improve interpersonal relationships
• Trust in other students
• Respect for other students
• Feeling accepted by other students
• Benefit from the interactions with residents that are different
• Overall sense of belonging on campus
Factor 3: Perception of General Housing Environment (PGHE). This factor was developed from observed variables that connect to students’ perception of their general housing environment and describes the physical and psychological attributes of the residence hall experience. These variables were formed from select prompts in the SkyFactor survey related to environmental factors that shape their perception of the staff, safety, and physical spaces of their residence hall. The factor loadings for PGHE ranged from 0.53 to 0.68 indicating acceptable construct validity; and construct reliability for PGHE, calculated using Coefficient $H$, was acceptable at 0.86 (Hancock & Mueller, 2001). Specifically, these eleven questions included students’ satisfaction with and perception of:

- The degree to which residents who live near them respect their study time
- The degree to which residents who live near them respect their sleep time
- The degree to which residents who live near them respect their privacy
- The degree to which residents who live near them respect their property
- The availability of housing student staff
- The overall performance of housing student staff
- The enforcement of policies by student staff
- How safe they feel in their building
- Common/community areas
- The noise level of their floor/community
- The cleanliness of their floor/community/public spaces

Factor 4: Perception of Living-Learning Community Environment (LLCP). This factor was constructed from variables using questions in the survey regarding the LLCs specifically. These prompts were only available to respondents who identified participation in a program.
Since the comparison group did not answer these questions, they could not be used for comparison between the two groups. However, they were incorporated in a second SEM analysis to provide additional depth to LLC-participants perception of the influence of the program on their transition to college as a dependent variable. The factor loadings for LLCP ranged from 0.53 to 0.60 indicating acceptable construct validity; and construct reliability for LLCP, calculated using Coefficient $H$, was acceptable at 0.70 (Hancock & Mueller, 2001). These four questions included students’ satisfaction with how participating in an LLC contributed towards their ability to:

- Connect with faculty/instructors
- Connect with fellow students in the LLC
- Form effective study groups
- Be academically successful

**Data Analysis**

Living-Learning Communities create social learning environments in a residence hall setting that are hypothesized to have direct and indirect effects on students’ transition to college. Recognizing this direct and indirect relationship between variables in this study a Structural Equation Model (SEM) was used to investigate path relationships between factors (Pedhazuer, 1997). Although this form of analysis will not solidify causality between the dependent factors, it will provide evidence of the connection between the environment fostered by an LLC and the social and academic transition of students to college. To fully address the research question of this study, a two-step analysis was necessary. The first analysis compared the treatment and comparison groups, and the second dove deeper into the relationship between the environment fostered in LLC’s and outcomes for participating students.
The first analysis evaluated whether participation in a Living-Learning Community affected students’ self-efficacy towards their successful social and academic transition to college by comparing the treatment and comparison sample groups (see Figure 3.1). The SEM paths constructed for this model were formed from the expectation that LLCs seek to construct integrated learning environments that center around the residence hall environment (Levine Laufgraben, & Shapiro, 2004). Since these experiences are different from the control group, an effect was predicted to emerge in student perceptions. The residence hall environment includes the physical environment (i.e., student rooms, common spaces, noise) and psychological environment (i.e., relationships, privacy, and safety). Past studies have found the unique housing environment fostered by LLC’s have a direct effect on student’s perception of their academic transition; however, in most instances, its effects on outcomes such as GPA have been small. Despite the small effect on academic transition, as measured by GPA, large effects have been observed in student retention. Anticipating that other factors, such as social transition (i.e., through increased peer connections with students who have similar academic interests and goals) may affect this outcome, it was, therefore, incorporated as a direct and mitigating factor in the model.
After investigating whether participation in an LLC has an effect on student’s perceptions of their transition, the implications for whether participating in an LLC effects students’ academic transition to college were analyzed further (Pedhazur, 1997). To investigate the relationship between these three variables a second SEM was conducted (see Figure 3.2). The second analysis only used data from LLC participants, as the comparison group did not participate in portion of the SkyFactor Survey used to generate Factor 4.
Figure 3.2. SEM model demonstrating theoretical mediated relationship between students’ perception of the LLC environment and their social and academic transition.

Similar to the SEM for analysis 1, the second SEM path structure (Figure 3.2) was constructed with the expectation that the social experiences constructed by LLC’s would be a strong and mitigating factor shaping student’s academic transition. Multiple studies have found LLC participants experienced increased interactions and relationships with peers and faculty through the LLC, and this path construction explores the effect of social transition on students’ academic transition, in addition to direct effect from the LLC environment (Eck, Edge, & Stephenson, 2007; Grills, Fingerhut, Thadani, Machon, 2012; Johnson, Soldner, Leonard, Alvarez, Inkelas, Rowan-Kenyon, Longerbeam, 2007; Kranzow, Hinkle, Muthiah, & Davis, 2015).
Chapter Conclusion

The study design and analysis were constructed to provide insight into whether participation in an LLC affects students’ self-efficacy, as well as the effect of the LLC environment for participants. Furthermore, this design sought to develop additional understanding of the relationship between the residential environment fostered by participation in an LLC and students’ perceptions of their transition.
Chapter 4: Analysis and Results

For each research question a two-step model building approach was utilized (Schumaker & Lomax, 1996). A measurement model first was built to establish the relationship between observed and latent variables. A secondary Structural Equation Model (SEM) was then specified to investigate relationships postulated by the theoretical framework established in Chapter 2. This chapter will describe the outcome for each model building step and path relationships.

Preparing Data for Analysis

First, the raw survey data were sorted to identify all respondents pertinent to this study. From the total sample population of 941, all non-first-year respondents were removed leaving a sample group of 427 first-year students. An additional 28 respondents were removed from analysis because they identified as “unsure” regarding their LLC participation and it was unclear whether to identify them with the treatment or control group. This reduction created a total of 399 respondents used for the development of the measurement model and analysis. Of the total respondents, 101 identified as LLC-participants (treatment group) and 289 as members of the general housing population (control group).

Missing data. Of the 399 cases analyzed, 154 contained partially missing data, and 20 had missing data for all variables. Missing data resulted from a participant skipping a prompt or a participant identifying it as "not applicable." For the 20 cases missing data for all variables, 13 were from the control group, and seven were from the treatment group; and therefore, skipped in
the analysis. Cases with partially missing data were treated using the Full Information Maximum Likelihood (FIML) Solution and retained in the analysis (Schumaker & Lomax, 1996).

**Analysis Part 1: Does participation in a Living-Learning Community affect students’ self-efficacy towards their successful social and academic transition to college?**

Analysis 1 used the entire identified sample population of 399 participants to address the research question. After establishing the relationship of the observed and latent variables in the measurement model, a group comparison SEM was used to evaluate the effect of LLC participation on students’ self-efficacy of their social and academic transition to college.

**Measurement Model.** Prior to running the Structural Equation Model (SEM) for Analysis 1, a measurement model (Figure 4.1) was developed to determine the data’s fit to the theoretical framework (Schumaker & Lomax, 1996). To construct the measurement model, each factor was initially analyzed individually through EQS to test the model-fit between observed and latent variables (Byrne, 2006). Finally, after each factor was individually tested, a complete model was run to verify fit, identify cross-loading of variables across factors, and any error covariance.
Figure 4.1. Measurement Model for analysis 1.

Measurement Model: Factor 1 (Perception of Academic Transition). The first factor tested was Perception of Academic Transition (PAT). Observed variables associated with PAT
and their associated prompts are in Table 4.1. Initial modeling found PAT_4 (V5) to have a low loading with Factor 1 and reduced the overall fit of the model. PAT_4 asked participants to evaluate how living on campus contributed to their overall learning. Although learning is an essential contributor to students’ academic success, respondents may not have associated it with their academic transition to college. It was also possible that PAT_4’s close proximity to other questions in the survey (i.e., PAT_3) that directly addressed academic performance, the “learning” stated in PAT_4 may have been interpreted to outside the classroom. For statistical and theoretical reasons PAT_4 was therefore removed from the measurement model and SEM analysis.

Table 4.1

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
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<tbody>
<tr>
<td>V2 V3 V4 V5 V6 V7 V8</td>
<td>PAT_1</td>
<td>As a result of your on-campus housing experience, you are better able to: Manage your time?</td>
</tr>
<tr>
<td>V3 V3</td>
<td>PAT_2</td>
<td>As a result of your on-campus housing experience, you are better able to: Balance your social, work and academic commitments?</td>
</tr>
<tr>
<td>V4 V4</td>
<td>PAT_3</td>
<td>Regarding your on-campus housing experience, to what degree: Has living on-campus contributed to your academic performance?</td>
</tr>
<tr>
<td>V5 V5</td>
<td>PAT_4</td>
<td>To what degree has living in on-campus housing contributed to your: Learning?</td>
</tr>
<tr>
<td>V6 V6</td>
<td>PAT_5</td>
<td>As a result of your on-campus housing experience, you are better able to: Solving your own problems?</td>
</tr>
<tr>
<td>V7 V7</td>
<td>PAT_6</td>
<td>As a result of your on-campus housing experience, you are better able to: Live a healthy life (e.g., sleep, exercise, diet)?</td>
</tr>
<tr>
<td>V8 V8</td>
<td>PAT_7</td>
<td>How satisfied are you with: Your ability to study in your room?</td>
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</tbody>
</table>
Measurement Model: Factor 2 (Perception of Social Transition). The second factor tested was Perception of Social Transition (PST). The variables and survey prompts used to construct Factor 2 are listed in Table 4.2. All variables were found to load satisfactorily to Factor 2 and retained in the model. However, a covariance between the measurement error of several observed variables also emerged. These covariance relationships are represented in Figure 4.1 by double-headed arrows. Most residual covariance for Factor 2 corresponds with question groupings in the SkyFactor survey. For example, PST_5 and PST_6 are both associated with measuring “Community Environment,” a factor utilized by the authors of the SkyFactor survey. Recognizing these covariances improved the overall fit of the measurement model.

Table 4.2

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V9</td>
<td>PST_1</td>
<td>To what extent has living in on-campus housing enhanced your ability to: Meeting other people?</td>
</tr>
<tr>
<td>V10</td>
<td>PST_2</td>
<td>To what extent has living in on-campus housing enhanced your ability to: Living cooperatively?</td>
</tr>
<tr>
<td>V11</td>
<td>PST_3</td>
<td>To what extent has living in on-campus housing enhanced your ability to: Resolving conflicts?</td>
</tr>
<tr>
<td>V12</td>
<td>PST_4</td>
<td>To what extent has living in on-campus housing enhanced your ability to: Improving interpersonal relationships?</td>
</tr>
<tr>
<td>V13</td>
<td>PST_5</td>
<td>In your living area (i.e., floor, apt. section, community, house), to what degree do you: Trust other students?</td>
</tr>
<tr>
<td>V14</td>
<td>PST_6</td>
<td>In your living area (i.e., floor, apt. section, community, house), to what degree do you: Respect other students?</td>
</tr>
<tr>
<td>V15</td>
<td>PST_7</td>
<td>In your living area (i.e., floor, apt. section, community, house), to what degree do you: Feel accepted by other students?</td>
</tr>
</tbody>
</table>
To what degree has your on-campus housing experience helped you: Benefit from the interactions with residents who are different from you?

To what degree has living in on-campus housing contributed to your: Sense of belonging to this institution?

Measurement Model: Factor 3 (Perception of General Housing Environment). The third factor tested was Perception of General Housing Environment (PGHE). The variables and survey prompts used to construct Factor 3 are listed in Table 4.3. All variables were found to load satisfactorily to Factor 3 and were retained in the model. However, a covariance between the measurement error of several observed variables also emerged. These covariance relationships are represented in Figure 4.1 by double-headed arrows. Similar to Factor 2, most residual covariance for Factor 3 corresponds with question groupings in the SkyFactor survey.

Table 4.3

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V17</td>
<td>PGHE_1</td>
<td>To what degree do residents who live near you respect your: Study time?</td>
</tr>
<tr>
<td>V18</td>
<td>PGHE_2</td>
<td>To what degree do residents who live near you respect your: Sleep time?</td>
</tr>
<tr>
<td>V19</td>
<td>PGHE_3</td>
<td>To what degree do residents who live near you respect your: Privacy?</td>
</tr>
<tr>
<td>V20</td>
<td>PGHE_4</td>
<td>To what degree do residents who live near you respect your: Property?</td>
</tr>
<tr>
<td>V21</td>
<td>PGHE_5</td>
<td>How satisfied are you with your student staff member (i.e., RA, Community Advisor, Mentor, Apt. Advisor) on your floor regarding: Availability?</td>
</tr>
<tr>
<td>V22</td>
<td>PGHE_6</td>
<td>How satisfied are you with your student staff member (i.e., RA, Community Advisor, Mentor, Apt. Advisor) on your floor regarding: Overall, how satisfied are you with the performance of your staff member?</td>
</tr>
</tbody>
</table>
V23  PGHE_7  How satisfied are you with your student staff member (i.e., RA, Community Advisor, Mentor, Apt. Advisor) on your floor regarding: Enforcing policies?

V24  PGHE_8  How satisfied are you with: How safe you feel in residence hall?

V25  PGHE_9  How satisfied are you with: Study facilities in residence hall?

V26  PGHE_10 How satisfied are you with: The noise level of your floor/community?

V27  PGHE_11 How satisfied are you with: Cleanliness of your floor/community/public spaces?

**Overall Goodness-of-Fit of Measurement Model.** After testing each factor of the measurement model independently, the entire model was tested using EQS (Figure 4.1). The overall fit of the model, as measured by the Comparative Fit Index (CFI) was acceptable at 0.909. This value meets the minimum threshold of 0.90 for a well-fitted model; however, falls short of the revised ideal cutoff value of 0.95 (Byrne, 2006). Additionally, the Root Mean Square Error of Approximation (RMSEA) value of 0.075, which “considers the error of approximation in the population” and how well the model represents the general population, shows the model holds a reasonable approximation of errors in the population (Byrne, 2006, p. 100). Overall, the fit indices indicate a robust hypothesized measurement model supported by the sample data.

**Structural Equation Model Analysis 1.** With the measurement model established (Figure 4.1), the comparative Structural Equation Model (SEM) for Analysis 1 was run using EQS (Figure 4.2). The SEM evaluated paths between Factors 1 through 3 and compared the control and treatment groups (V1). The comparison is visualized as a path between V1 and Factor 3 in Figure 4.2. Introducing the paths to the model did not significantly change the fit. The
Comparative Fit Index remained 0.906. Additionally, the RMSEA only dropped slightly to 0.071, which signified the model remained robust.

Figure 4.2. Comparative Structural Equation Model for Analysis 1.
The results for SEM Analysis 1, shown in Figure 4.3, showed that all paths predicted by the theoretical framework were statistically significant. The standardized regression coefficients ($\beta$) shows that residents’ perception of their general housing environment affects their perception of their social and academic transition. However, residents’ perception of their general housing environment had a greater effect magnitude on their perceived social transition. Furthermore, residents’ perception of their social transition had a greater effect magnitude on their perceived academic transition than the general housing environment. The smallest relative effect size was the path between LLC participation and student’s perception of their general housing environment.

Figure 4.3. Comparative Structural Equation Model, showing only latent factors, for Analysis 1 with path $\beta$ values. All $\beta$ values are statistically significant.
Analysis Part 2: Does participation in an LLC affect perceptions of social and academic transition self-efficacy?

Similar to Analysis 1, a measurement model (Figure 4.4) was developed to verify the data’s fit to the theoretical framework (Schumaker & Lomax, 1996) before a SEM analysis was completed. This analysis, however, only used the responses from 100 LLC participants.

Measurement Model. The measurement model for Analysis 2 retained Factors 1 and 2 and any covariances previously identified. Additionally, Factor 4 was developed using observed variables described in Table 4.4. The overall fit of the model, as measured by the Comparative Fit Index (CFI) was good at 0.901. This value meets the minimum threshold of 0.90 for a well-fitted model; however, falls short of the revised ideal cutoff value of 0.95 (Byrne, 2006). The measurement model had a RMSEA value of 0.099. This value shows that the measurement model has a “mediocre fit” (Byrne, 2006, p. 100). Overall, the fit indices indicate that the data supports the theoretical model, however may not be generalizable.
Figure 4.4. Measurement Model for Analysis 2.
Table 4.4

Measurement Model for Factor 4: Perception of LLC Environment (LLCP)

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V28</td>
<td>LLCP_1</td>
<td>As a result of your living-learning community, you are better able to: Connect with faculty/instructors?</td>
</tr>
<tr>
<td>V29</td>
<td>LLCP_2</td>
<td>As a result of your living-learning community, you are better able to: Connect with fellow students within your living-learning community?</td>
</tr>
<tr>
<td>V30</td>
<td>LLCP_3</td>
<td>As a result of your living-learning community, you are better able to: Form effective study groups?</td>
</tr>
<tr>
<td>V31</td>
<td>LLCP_4</td>
<td>As a result of your living-learning community, you are better able to: Be academically successful?</td>
</tr>
</tbody>
</table>

Structural Equation Model Analysis 2. With the measurement model established (Figure 4.4), the comparative Structural Equation Model (SEM) for Analysis 2 (Figure 4.5) was run using EQS. The SEM evaluated paths between Factors 1, 2, and 4, visualized using single-directional arrows in Figure 4.5. The fit of the model, as articulated by the CFI was adequate at 0.901, however again fell short of the revised ideal baseline of 0.95 or higher (Byrne, 2006). The RMSEA for the SEM remained 0.099, maintaining a “mediocre” fit (Byrne, 2006, p. 100). The high RMSEA value may be reflective of the small sample size, which can lead to over-rejection by this fit index. Overall, the CFI and RMSEA values show that while the SEM fitness is generally good, its generalizability is limited.
Figure 4.5. Structural Equation Model (SEM) for Analysis 2.
The results for SEM Analysis 2 confirmed that most paths predicted by the model were statistically significant (Figure 4.6). Students perception of their LLC environment had a statistically significant effect on their perceived social transition; however, this was not true for the direct path to their perceived academic transition. There does appear to be an indirect positive effect between LLC participants social transition and academic transition. This relationship had the greatest relative magnitude in the model with a $\beta$ of 0.679.

Figure 4.6. Structural Equation Model for Analysis 2, showing only latent factors with path $\beta$ values. **p < .05

Chapter Conclusion

Overall, the models for both analyses, developed using the theoretical framework discussed in Chapter 2, fit the data collected and the majority of paths investigated where statistically significant. Consistently across both models, students’ perception of their social
transition had the most substantial magnitude effect on their academic transition. The overall fit of both models, as expressed through CFIIs greater than 0.9 for both SEMs, was good. The robustness across both models, however, was not as consistent. This difference may be attributed to the smaller sample size used for the second analysis and therefore limits its generalizability.
Chapter 5: Discussion and Implications

Living-Learning Communities are built on the premise that combining curricular and co-curricular learning in a residential setting has a significant impact on student success (Kuh, 2008b). Overall, the results of this study confirm a positive and statistically significant relationship between students’ perception of their residential environment and their efficacy towards their social and academic transition to college. Additionally, social interactions have a relatively larger effect on students’ academic transition compared to the direct effect of the residential environment. The following section will address each research question and discuss implications for practice and future research.

Analysis 1: Does perception of the LLC environment affect social and academic transition self-efficacy for participants?

LLCs strive to construct environments that strongly encourage social and academic experiences to foster positive outcomes, and these findings support a blended approach to promote student success (Tinto, 2004). The greatest effect for participants was on students’ self-efficacy towards their social transition as demonstrated by the $\beta$ value of 0.67 for path $P_{23}$ in Figure 4.3. This finding is consistent with the results of Kranzow, Hinkle, Muthiah, and Davis (2015) who found informal social interactions, even more so than the formal ones, appear to have the strongest influence on transmitting and establishing a community culture and sense of belonging. The physical environment and utilization of residential community spaces was also a significant factor influencing student culture. Grills, Fingerhut, Thadani, Machon (2012) also
found LLC participation to have the greatest effect on student’s perception of social support from peers who shared their academic and career interests.

Beyond direct effect, as a mediating factor, perceived social transition had a higher relative effect on students’ academic transition compared to the direct effect of the residence hall environment (as shown in β values of $P_{13} = 0.337$ and $P_{12} = 0.442$ in Figure 4.3). The connection between fostering a social transition to college and students’ academic transition to college is also constant with Mills (2015), who found students in LLCs reported a higher likelihood to work with classmates outside of class and engage more in the classroom. Although Mills examined LLC participants, this analysis demonstrates the relationship of social transition towards fostering academic success for all students regardless of LLC participation.

For LLC participants there was a positive and statistically significant effect on their perception of their general housing environment ($P_{4V1}$ in Figure 4.3) relative to the control group. The effect size, however, was small compared to other paths in the model ($β = 0.192$). Inkelas, Daver, Vogt, and Leonard (2007) had similar findings with first-generation students who participated in the NSLLP. They sampled 1,335 first-generation students across multiple institutions. Inkelas et al. found LLC participants gained a small but statistically significant beneficial effect towards their academic and social transition to college; when compared to non-participants. These findings also support the assertion that LLCs have the potential to be a high-impact practice, which positively benefits students who participate (Kuh, 2008b). Although the effect size for this study was also small, it still positively contributed to desired student outcomes that support learning and retention for LLC participants.
Analysis 2: Does perception of the LLC environment affect social and academic transition self-efficacy for participants?

Overall, the results of the second analysis support the assertion that student’s perception of their LLC environment positively affects their social and academic transition to college. However, not all paths explored in the model were statistically significant, as demonstrated in Figure 4.6. Specifically, path $P_{13}$, between LLC environment and academic transition had a small and non-significant effect magnitude $\beta$ of 0.141. The LLC environment, however, had an indirect positive effect on students’ academic transition through their perception of their social transition. This path ($P_{12}$) had the largest statistically significant $\beta$ in the model with a value of 0.679.

The strong effect found in this study, on students’ social transition to college, may be attributed to structured and unstructured social interactions offered to LLC participants. Furthermore, at the start of the academic year participants attended an on-site retreat prior to the start of the fall semester. During this retreat LLC participants were permitted to move into their residence hall room early, participate in team building activities, and meet the faculty and staff leading the LLC. Team building activities included ice breakers, shared meals, a low-ropes course, community service, and pool party. Also, during the retreat faculty and other campus partners, who share leadership with each program, participated and facilitated sessions that included tours of academic spaces, discussing LLC expectations, and introduction to content that will be covered in associated courses. Faculty and campus partners were also present for most meals, providing additional un-structured interaction and socializing. These informal, more socially oriented interactions, early in the year may contribute to the indirect effect social transition was found to have on student’s academic transition.
Additionally, beyond social transitions gained in the retreat, ongoing experiences throughout the academic year also likely supported student’s social transition to college. For example, sharing residency in a designated floor or building, participants had greater opportunity for social interaction outside the classroom. Programming facilitated by residence hall staff, often in collaboration with affiliated faculty and academic staff, also provided intentional experiences where students could interact and develop relationships with each other and staff.

Although the outcome for path P₁₃ was surprising, considering all LLC programs incorporated in this study had associated academic components and partnerships, the results may explain the outcomes of previous research. Studies such as Cambridge-Williams, Winsler, Kitantas, and Bernard (2013) found no significant GPA performance for LLC participants at a large research institution in Virginia; however, a substantial positive effect on retention. Although some studies have found a significant effect on participants GPA, such as Pasque and Murphy (2005), the effect size was still small. Furthermore, in studies such as Wilson, Bjerke, and Martin’s (2015) of an aviation LLC, the positive GPA effect was not sustained over time.

Therefore, while LLC participation may not directly affect student’s academic performance, as measured by GPA or student perception in this study, the social connections with peers and faculty indirectly support their academic transition and ultimate retention. Soldner, Rowan-Kenyon, Inkelas, Garvy, and Robbins’ (2012) study of 5,240 first-year STEM students (2,098 men and 3,142 women) from the NSLLP is consistent with this relationship. They found participation in a STEM LLC had no direct effects that supported their persistence within the discipline to graduation; however, in-direct benefits supported academic persistence. Soldner et al. also found the most considerable influence from a perceived social support that included “academic-focused peer conversations, sociocultural-focused peer conversations, non-
course related faculty interaction, perceptions of a socially supportive residence hall climate, and perceptions of an academically-supportive residence hall climate" (p. 325).

Implications for Practice

The findings of this study highlight the importance and connection between students’ social connections and their academic self-efficacy. High-impact practices, such as LLCs, are believed to be successful because they “put students in circumstances that essentially demand they interact with faculty and peers about substantive matters, typically over extended periods of time” (Kuh, 2008b, p.14). LLCs foster these interactions through structural components such as housing, coursework, and co-curricular experiences. The findings in both analyses in this study support the importance of the relationships these environments can create. Pascarella and Terenzini’s 1980 early study of an experimental Residential Learning Community also found LLCs facilitate the relationships described by Kuh’s high-impact practice. Pascarella and Terenzini’s findings also suggested that the quality of interactions and relationships, however, was more important than the number of interactions. Furthermore, the quality of socialization “has a mediating influence on college outcomes,” such as academic achievement and institutional persistence (p. 351).

Program structure. Although there were variations in the structure of individual LLC programs studied, and the analysis did not separate or compare outcomes across programs, common characteristics across all LLCs incorporated in this study provide some insight into how structures may have influenced outcomes. Generally, all LLCs incorporated in this study required students to move-in early to participate in a multi-day retreat, live on a designated residential community, and most had some level of collaboration between residence life staff and academic affairs. Additionally, some of the greatest programmatic differences, such as the
number of participants—such as the Honors LLC with 148 participants compared to the PreMed LLC that had 8—size may not be significant factors that contribute to student outcomes. When Inkelas, Soldner, Longerbeam, and Leonard (2008) developed the first data-driven LLC typologies, they found program size did not have a significant effect in student outcomes related to cognitive complexity, critical thinking, and appreciation of liberal learning.

Other structural characteristics such as the incorporation of community building initiatives (i.e., team builders, diversity programming, career workshops, and community service), moderate partnerships between residence life staff and academic affairs (i.e., some incorporation of faculty-led programming, coursework, and academic advising), and available funding for the LLC’s may have contributed to student outcomes evaluated in this study. Generally, the LLCs incorporated in this study align best within the classification of a “Medium, Moderately Resourced, Student Affairs/Academic Affairs Combination” by Inkelas et al. (2008, pg. 502). Compared to other typologies, students in Moderately Resourced programs had no statistically significant difference in the outcome of critical thinking; however, had lower overall cognitive complexity and appreciation for liberal learning compared to other typologies. Direct comparisons to Inkelas et al.'s findings are limited, as different outcomes were measured, however, future research may benefit from cross-program comparisons to see if structural differences across programs also impact outcomes more directly related to students transition to college.

Fostering meaningful relationships and leadership to promote student’s self-efficacy towards their transition to college. In recognizing the importance of informal interactions between faculty, staff, and peers for LLC participants as a mediator for student success, intentionality towards enhancing the quality of these relationships is necessary. Leader-member
exchange (LMX) theory could provide a productive framework to support the growth of meaningful peer and faculty relationships. LMX emphasizes the importance of interactions and relationships towards improved performance, loyalty, and outcomes over time (Northouse, 2016). Although traditionally based in a business setting, researchers such as Peterson and Aikens (2017) have also found success utilizing LMX in the higher education setting.

Additionally, since LLC’s promote long-term and frequent interactions with peers and faculty, sufficient opportunity is created for strong relationships to develop across the multiple phases described by LMX (Table 5.1).

Table 5.1

| LMX Phases of Leadership Development (Northouse, 2016 pg. 143) |
|-----------------|-----------------|-----------------|-----------------|
| Roles | Phase 1: Stranger | Phase 2: Acquaintance | Phase 3: Partnership |
| Influences | Scripted | Tested | Negotiated |
| Exchanges | One Way | Mixed | Reciprocal |
| Interests | Low Quality | Medium Quality | High Quality |
| | Self | Self and Other | Group |

Understanding that early in the year as students transition to college, relationships follow scripted interactions guided by perceived organizational roles, LLC program leaders should create opportunities to build the credibility of the faculty and student affairs staff working with the community. Credibility can be built by leaders espousing behaviors such as “model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart” (Peterson and Aikens, 2017, p. 121). This early time described in Phase 1 of relationship building by LMX should also be used to express clear outcomes and goals for LLC participants (Graen & Uhl-Bien, 1995). The LLC programs incorporated in this study require students to attend an on-site retreat before the start of the fall semester, and this time could be maximized by activities and interactions that promote these behaviors and exchanges.
Beyond the retreat (or start of the academic year), opportunities for small unstructured group and one-on-one interactions where leaders offer relevant support and access to resources could deepen student’s commitment and to the LLC and encourage retention at the institution (Northouse, 2016). These exchanges should provide students with support related to academic success and social belonging to facilitate transition into the second phase described by LMX (Graen & Uhl-Bien, 1995). Sustaining these interactions throughout their first year in college and providing leadership opportunities (i.e., a community leadership council responsible for planning social programs) could further deepen partnerships between faculty and students, expand commitment, and foster self-efficacy for shaping the learning environment of the LLC.

LMX predicts fostering strong relationships between leaders and followers enhances the self-efficacy and perception of belonging of followers. Through the development of credible and meaningful relationships between faculty, staff, and students, the social gap that often exists as a cultural norm in higher education can be diminished (Dzur, 2015). By diminishing the power gap that traditionally exists, the opportunity for shared governance and a distributive approach to leadership emerges (Dzur, 2015; Spillane, Halverson, & Diamond, 2001). A distributive approach to community leadership in LLCs could provide students with more opportunities to shape their experience, grow their self-efficacy towards their transition to college, and influence their learning as they transition into the third phase described by LMX. This paradigm shift could be an essential bridge that breaks down traditional silos and diminish the learning experience gap described in Learning Reconsidered 2 (Keeling, 2004; Tinto & Pusser, 2006).

**Implications Future Research and Inquiry**

The finding of this study addresses the knowledge gap described by Gale and Parker (2014) regarding the understanding of how institutions can support students transition to college.
As evidenced by both analysis, LLCs may foster essential relationships between students, faculty, and staff that directly support their social transition and academic transition indirectly. These results are consistent with other research, which suggests social support as an essential and consistent outcome for LLC participants. Additional inquiry into how to foster meaningful and lasting relationships could shrink this knowledge gap further and potentially increase the effect of initiatives such as LLCs. LMX was proposed as a framework to foster meaningful relationships in this study, and further investigation of incorporating this leadership theory and student outcomes could be insightful into how to enhance LLCs beyond structural components (i.e., program size, theme, shared coursework). Qualitative or a mixed-method approach may also provide a deeper understanding of how LLC environments support student outcomes, such as their transition to college.

**Study Limitations, Validity, and Reliability**

The results of this study demonstrate LLC’s effectiveness as a high-impact practice that support students’ social and academic transition to college. However, there are limitations to the implications of these findings, as data was collected once at a single institution. Although research supports the decision to forgo a pre-test, including one in the research design would help control for the influence of input characteristics and improve internal validity of the findings (Campbell & Stanley, 1963) as input characteristics influence how students interact with the environment and outcomes (Austin, 1970). Therefore, stronger control of environmental characteristics would increase the validity of these findings (Muijs, 2011). Additionally, the sampling method was not random, thus limiting the robustness and external validity of the findings (Campbell & Stanley, 1963). Finally, the sample size, especially for the second analysis, were relatively small compared to recommended N values (Schumaker & Lomax, 1996).
Although the sample population was within minimum standards, a larger sample population would potentially improve model fit and increase the validity and reliability of findings (Byrne, 2006).

**Conclusion**

The hyper-specialization of student affairs professionals, academic support services, and faculty has fostered a disjointed learning environment for students (Keeling, 2006). Students have struggled to connect learning across course-work and co-curricular experiences. Finding ways to integrate these campus environments and approach learning from a holistic framework has been linked to student success (Keeling, 2006; Kuh, 2008b; Tinto & Pusser, 2006). In the past 20 years, LLCs have emerged as a high-impact practice that break down institutional silos and increase faculty and student interactions, promote a supportive environment, and encourage academic success (Kuh, 2008b).

As a designated a high-impact practice, LLCs are expected to have a significant benefit towards desired student outcomes such as persistence (Kuh, 2008b). While the relative effect size was modest, this study found LLC students had a statistically significant increase in the perception of their housing environment. This benefit positively contributed to their self-efficiency towards their academic and social transition to college, which are key factors that contribute to overall retention and persistence (Hagedorn, 2012).

Additionally, when evaluating the effect of the LLC environment on outcomes for participants the importance of the relationship between social transition and academic transition emerged. The social experience fostered through increased peer and faculty interactions had a significant and substantial effect on students’ self-efficacy towards their academic transition to college. Recognizing and capitalizing on this relationship could be a powerful tool in enhancing
student outcomes and warrants additional inquiry. LMX was proposed as a theoretical leadership framework that capitalizes on the extended interactions offered by LLC’s to strengthen meaningful peer, faculty, and staff relationships.

Finally, to successfully develop and sustain LLCs and achieve intended outcomes a meaningful and intentional partnership between student affairs, academic affairs, faculty, and participants is a crucial structural attribute. While historical institutional structures and cultures make forging these relationships challenging, this study adds to the evidence that these types of integrated learning environments support important outcomes for institutions and students (Keeling, 2006; Levine Laufgraben, & Shapiro, 2004; Magolda, 2005). Furthermore, research by Inkelas, Soldner, Longerbeam, and Leonard (2008) suggests that increase faculty involvement and integration beyond those in the LLC’s in this study- such as designated office space, faculty in residence, and classroom space in residence halls- could enhance student outcomes greater than those observed in this study as quality and frequency of student-faculty interactions are tied to student success and satisfaction (Astin, 1999; Pascarella & Terenzini, 1980).
References


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SELECTED PRESENTATIONS

