

IMPACT OF LIVING-LEARNING COMMUNITIES ON SECOND-YEAR STUDENTS

by

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(Under the Direction of Diane L. Cooper)

ABSTRACT

Researchers and administrators have started to turn their focus to the issues and challenges second-year students face. Second-year students have the second highest attrition rate, coming second to the attrition rate of first-year students (Wellman, Johnson, & Steele, 2012). Research on second-year students indicated they face challenges in (a) feeling a sense of abandonment (Schreiner, Miller, Pullins, & Seppelt, 2012), (b) academic integration (Gansemer-Topf, Stern, & Benjamin, 2007), (c) social integration (Noel-Levitz, 2011), and (d) satisfaction with their experience (Juillerat, 2000). While research showed that living-learning communities (LLCs) can positively impact areas of academic and social integration (Brower & Inkelas, 2010), no research was found about the impact of continued participation in a LLC after the first year. The purpose of this study was to compare the sense of belonging experienced by second-year students who participated in a LLC their first year and the start of their second year with those who did not participate in a LLC after their first year, as measured by the Institutional Integration Scale (Pascarella & Terenzini, 1980).

This exploratory, post-test, quantitative research study was conducted at a large, public institution located in the southeast region of the United States with a limited number of respondents ($n = 68$). Analyses of the data collected did not show any statistically significant

results comparing the sense of belonging between those who lived in a LLC their first year only and those who lived in a LLC their first two years. There were some statistically significant results when comparing the student's level of involvement on the different subscales. Students who attended campus activities and events and/or were involved in a student organization connected more with faculty outside the classroom and advanced intellectually compared to those who were not.

The findings from this study and the literature call to a need to explore the creation of a specialized second-year student experience. Future research should look to creating an instrument that speaks to the challenges specific to second-year students.

INDEX WORDS: Second-Year College Students, Living-Learning Community, Belonging, College Student, Institutional Integration Scale, Sophomore Students

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DEDICATION

This work is dedicated to my husband, Bence, who continuously supported and believed in me throughout this entire process. I also dedicate this to my Mom and Dad, who made me the person I am today and made me believe I can do anything I set my mind to. Finally, I dedicate this to all the researchers who navigated (or will navigate) “messy” research and to all the practitioners who continue to focus on creating an impactful experience for students.

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CHAPTER 1

INTRODUCTION

Second-year students have the second largest drop in retention after first-year students (Almanac Issue, as cited by Gardner, Pattengale, Tobolowsky, & Hunter, 2010; Wellman, Johnson, & Steele, 2012). However, administrators have focused on the first-year experience since most students who leave an institution leave after their first year (Wellman et al., 2012). After a supportive first-year environment, it is still critical for second-year students to have a sense of belonging (Cheng, 2004; Juillerat, 2000).

Retention and persistence rates of students at higher education institutions continue to be a focus area for administrators and stakeholders. On average, over half of students entering a college or university will leave at some point during their college career (ACT, 2018). Higher education administrators and stakeholders focus on retention and persistence efforts of institutions for good reason. If a student leaves an institution, the institution loses revenue and funding (Astin, 1975; O’Keeffe, 2013), and funds for instruction and education-related expenses have been utilized on students who have not attained a degree (Wellman, Johnson, & Steele, 2012). In addition to the financial impact on the institution, there should be a desire to improve the student experience. If more students are retained, they can generate more academic achievements to illustrate institutional success (Burke, 2019). Therefore, it is important for administrators to implement strategies to improve retention and persistence. Administrators have focused most of their efforts on retention strategies for first-year students (Graunke & Woosley, 2005; Isakovski, Kruml, Bibb, & Benson, 2011; Noel-Levitz, 2013; Schaller, 2005). However,

these students should not be the only population of concern for retention by college administrators (Tinto, 1987).

Institutions and national professional organizations are taking steps to work more directly with second-year students to increase retention rates. In 1998, the National Resource Center for the First-Year Experience and Students in Transition (NRC) broadened its scope to include other significant transitions for students in addition to the first-year experience, including second-year students (“About the Center”, n.d.). The NRC is currently working on new initiatives for the second-year experience (“National Resource Center”, n.d.), further showing the need to improve practices for this population of students. More institutions have started creating second-year experience programs (courses and living-learning communities). In the 2019 National Survey on Sophomore-Year Initiatives, 51% of the 335 participating institutions reported offering some type of second-year initiative (Young, 2019). Some institutions (e.g., California Polytechnic State University, San Luis Obispo; Kennesaw State University; North Carolina State University; The Ohio State University; and Southern Illinois University Edwardsville) have begun designing living-learning communities specifically geared towards second-year students. However, there are still 43.9% of institutions that were surveyed in 2019 who have not started offering any second-year initiative (Young, 2019).

Statement of the Problem

On average, 29% percent of students who leave an institution leave in their second year (Wellman, Johnson, & Steele, 2012). When a student leaves in their second year, the average education and related (E&R) costs, which includes costs for instruction and student services and related overhead associated with courses taken, is \$17,400 per student (Wellman, Johnson, & Steele, 2012). This is only a portion of the cost spent on the student prior to departing; this does

not include the cost to recruit and enroll the student (Wellman, Johnson, & Steele, 2015). This average cost includes community colleges, which tend to have lower E&R costs than public or private institutions (Wellman, Johnson, & Steele, 2012). In addition to the loss of investment of E&R costs toward degree attainment, institutions lose revenue (Astin, 1975; O’Keeffe, 2013; Raisman, 2013). Raisman (2013) noted the total loss of revenue due to attrition was close to \$16.5 billion with an average loss of \$9.9 million per institution across 1,669 four-year public, private, and for-profit colleges and universities. This impacts how institutions can properly budget for the upcoming year due to this lost revenue. With the average of 29% of students who leave an institution leaving in their second year (Wellman, Johnson, & Steele, 2012) and an average loss of \$9.9 million loss per institution (Raisman, 2013), institutions could lose an average of \$2.9 million annually for students leaving after their second year. While cost should not be the only factor associated with the need to improve retention of a population of students, the numbers can be a large motivator for stakeholders. Therefore, specific retention strategies are needed for second-year students.

One method administrators have implemented to increase retention is high-impact practices. High-impact practices are “activities that make a claim on student time and energy in ways that deepen learning and change the way students think and act” (National Survey of Student Engagement, 2006, p. 9). This engagement sets students up for success and achievement in college and beyond (Finley, 2011; Kilgo, Ezell Sheets, & Pascarella, 2015; National Survey of Student Engagement, 2006). However, the National Survey of Student Engagement only assesses high-impact practices in the first and senior years (Finley, 2011). The results of a study conducted by Provencher and Kassel (2019) suggested that incorporation of high-impact

practices in the second year could improve retention, but future research is needed to determine which high-impact practices align with the needs of second-year students.

One high-impact practice that administrators implement to improve retention is learning communities (Association of American Colleges and Universities, 2015; Kuh, 2008), and living-learning communities (LLCs) are a type of learning community where “students live together in a discrete portion of a residence hall (or the entire hall) and participate in academic and/or extracurricular programming designed especially for them” (Soldner & Szelényi, 2008, p. 15). LLCs impact social integration (Brower & Inkelas, 2010; Eck, Edge, & Stephenson, 2007; Inkelas, Daver, Vogt, & Leonard, 2007; Pike, 1999; Pike, Schroeder, & Berry, 1997; Stassen, 2003; Wawrzynski, Jessup-Anger, Stolz, Helman, & Beaulieu, 2009; Workman, 2015) and academic integration (Brower & Inkelas, 2010; Eck, Edge, & Stephenson, 2007; Garrett & Zabriskie, 2003; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, Longerbeam, Owen, & Johnson, 2006; Pike et al., 1997; Purdie & Rosser, 2011; Wawrzynski et al., 2009), which can lead to a greater sense of belonging at the institution (Cheng, 2014; Hoffman, Richmond, Morrow, & Salomone, 2002; Wawrzynski et al., 2009). Social and academic integration ultimately leads to a student choosing to stay and continue (Tinto, 1987).

In connection with Tinto’s (1975) model of the dropout process, Pascarella and Terenzini (1980) developed the Institutional Integration Scale. They developed this to measure academic and social integration to see if it would illustrate a statistically significant difference between first-year students who persisted and those who left while taking the students’ characteristics as they entered the institution into account (Pascarella & Terenzini, 1980). Even though Pascarella and Terenzini (1980) focused on the first-year students, they argued that this instrument could

still connect with Tinto's (1975) model of the dropout process since the first year has the highest attrition rate.

While most administrators have focused on first-year programs because of this high attrition rate, they have put little effort into second-year programs (Graunke & Woosley, 2005; Isakovski et al., 2011; Gardner et al., 2010; Kennedy & Upcraft, 2010; Noel-Levitz, 2013; Pattengale & Schreiner, 2000; Schaller, 2005; Schaller, 2010). Is it possible that this could also apply for LLCs? Some LLCs are only provided for first-year students. For those that provide an experience for second-year students, has that experience been tailored to their needs or is it a recycling of the first-year program? Second-year students also need to continue to develop in academic and social areas (Noel-Levitz, 2011; Tinto, 1987), but we cannot just apply what was provided for first-year students to second-year students (Graunke & Woosley, 2005).

Purpose of the Study

While the impact of LLCs has a strong presence in the literature, there are few studies that focus on students who had the opportunity to have a second-year experience in LLCs. This lack of research could be due to the limited number of programs that encompass a second-year experience. The purpose of this study was to compare the sense of belonging experienced by second-year students who participated in a LLC their first year and the start of their second year with those who did not participate in a LLC after their first year. The central research question for this study was:

What are the differences in sense of belonging between second-year students who participated in a living-learning community for their first two years of college and those who did not continue living-learning community participation after their first year as measured by Pascarella and Terenzini's (1980) Institutional Integration Scale?

To answer this, the researcher broke this research question down into the following sub-questions:

1. What is the difference in social integration of second-year students who participated in a LLC their second year and those who did not?
2. What is the difference in academic integration of second-year students who participated in a LLC their second year and those who did not?
3. What is the difference in commitment to completion of degree of second-year students who participated in a LLC their second year and those who did not?
4. What is the difference in overall sense of belonging based on the type of LLC second-year students participated in?
5. What is the difference in academic integration based on academic connection to LLC (i.e., class component connected to LLC, faculty in residence)?
6. Is there any correlation between academic integration and other second-year factors (i.e., perceived difficulty, grade point average)?
7. What is the difference in academic and social integration based on other environmental factors (i.e., type of LLC, involvement)?

Significance of the Study

Since administrators have not committed much attention into second-year programs (Graunke & Woosley, 2005; Isakovski et al., 2011; Noel-Levitz, 2013; Schaller, 2005), this study adds empirical data that explores the impact LLCs that allow second-year students have on the student. Research suggests that students feel a greater sense of belonging when they are more academically and socially integrated (Cheng, 2014; Hoffman et al., 2002; O’Keeffe, 2013; Wawrzynski et al., 2009). A greater sense of belonging leads to higher retention and persistence

(Tinto, 1987). The researcher sought to provide support for additional research as well as impact how stakeholders perceive the need for second-year LLC participation by comparing the level of sense of belonging between these groups of second-year students.

Delimitations

There are some delimitations for this study. First, the characteristics of the LLC was a factor. Some LLCs may be more established than others with closer connections to academic partners. The strength of the focus on academic and social integration of the LLC program could impact the student experience. The questionnaire asked participants to select among provided characteristics to determine if the type of LLC (associated with major, honors, or special interest) impacted the student's sense of belonging. Second, the researcher sent this questionnaire at the beginning of the second semester of the second year. Since the researcher did not conduct a pre-/post-test, the researcher was not be able to see if the student's sense of belonging increased, decreased, or stayed the same. The researcher was not able to measure the impact of the experience for the students, but the researcher was able to compare between the populations of those who participated in a LLC their first year. Finally, the researcher only measured the academic and social integration of those who participated in a LLC during their first year. Since the researcher did not include those who never participated in a LLC, the researcher could not determine if participation in a LLC for at least their first year positively impacted the participants social and academic integration to the institution.

Definition of Terms

Within this study, the term "second-year" refers to students who are in their second year of study at their institution. The term sophomore is utilized in some studies, but this term typically has a credit hour threshold at institutions. Someone who is a second-year student may

not be a sophomore based on the credit hours they earned or could be a junior based on the credit hours they brought with them from high school. The term “second year” is more accurate to the purpose of this study because the researcher looked at the sense of belonging of those who are in their second year at the institution.

Researchers and practitioners can utilize varying terminology when referring to LLCs. Some examples include living-learning programs (Brower, 2008; Brower & Inkelas, 2010; Garrett & Zabriskie, 2003; Inkelas, 2008; Inkelas, Daver, et al., 2006; Inkelas, Johnson, et al., 2006; Inkelas, Soldner, Longerbeam, & Leonard, 2008; Inkelas, Vogt, et al., 2006; Inkelas & Weisman, 2003; Soldner & Szelényi, 2008; Stewart, 2008), living-learning centers (Kranzow, Hinkle, Muthiah, & Davis, 2015), residential learning communities (Pike, 1999; Pike et al., 1997), or living-learning communities (Inkelas, Jessup-Anger, Benjamin, & Wawrzynski, 2018; Purdie & Rosser, 2011; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015). This researcher used the term “living-learning community” (LLC) with the definition of “programs in which undergraduate students live together in a discrete portion of a residence hall (or the entire hall) and participate in academic and/or extracurricular programming designed especially for them” (Soldner & Szelényi, 2008, p. 15).

Some researchers choose to utilize terms like sense of community or sense of belonging almost interchangeably. This study utilized “sense of belonging” intentionally. Sense of belonging encompasses more than just a sense of community. The definition for sense of belonging utilized for this study is “students’ perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g., campus community) or others on campus

(e.g., faculty, peers)” (Strayhorn, 2012, p. 3). Sense of belonging is more than social integration; it also encompasses academic integration.

Social integration is a level of student involvement and engagement on campus where the student feels more incorporated into the social aspect of the campus (Pike et al., 1997; Stassen, 2003). This can include involvement in organizations and attending events on campus (Bean & Eaton, 2000).

Academic integration is the level of students’ incorporation into the academic aspects at the institution (Pike et al., 1997). Academic integration includes faculty-student interaction (Bean & Eaton, 2000; Garrett & Zabriskie, 2003; Inkelas, Vogt, et al., 2006; Pike et al., 1997) and academic achievement (Brower & Inkelas, 2010; Eck et al., 2007; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006).

Summary

Improving the second-year experience has been identified by researchers and practitioners as a need primarily because of retention concerns. It is reasonable to consider the need for high-impact practices for second-year students, and one potential high-impact practice is LLCs. LLCs have been researched as practices that impact social integration (Brower & Inkelas, 2010; Eck, Edge, & Stephenson, 2007; Inkelas, Daver, Vogt, & Leonard, , 2007; Pike, 1999; Pike et al., 1997; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015) and academic integration (Brower & Inkelas, 2010; Eck, Edge, & Stephenson, 2007; Garrett & Zabriskie, 2003; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006; Pike et al., 1997; Purdie & Rosser, 2011; Wawrzynski et al., 2009). To measure social and academic integration, Pascarella and Terenzini (1980) utilized Tinto’s (1975) model of the dropout process and developed the Institutional Integration Scale (IIS) to provide a measure for administrators to identify at risk

students in their first year in order to intervene and retain the student. This study aimed to utilize the IIS to determine if LLCs continued to have an impact after the first year of involvement. It is important to consider what potential experiences can improve the retention of our second-year students.

CHAPTER 2

REVIEW OF THE LITERATURE

The concern over retention for college students has focused predominantly on first-year students in the past. For the entering first-year students in fall 2016, administrators saw an overall 61.6% retention rate at all institutions, and four-year public institutions saw approximately 79% of full-time, first-year students retained (National Student Clearinghouse Research Center, 2018). Wellman, Johnson, and Steele (2012) found that an average of 29% of students leave in their second year. This is the second largest drop in retention after first-year students. According to the 2014 National Survey of Sophomore-Year Initiatives, the second year matters (Young, 2015). Second-year students need to have engagement, focus, sense of direction, sense of belonging, and interactions with faculty in order to be motivated, succeed academically, and thrive (Young, 2015).

This chapter presents literature related to second-year students. In addition, this chapter will review the history and literature on living-learning communities (LLCs) and the impact LLCs have on the student experience. This high-impact practice may positively influence the social and academic integration of second-year students, which would lead to a sense of belonging.

Second-Year Students

While searching databases, the researcher found limited empirical research connected specifically to second-year students. Most of the literature found focused on the challenges second-year students face. A few delved into predictors of success for second-year students, and

some provided context of potential best practices for supporting second-year students. One of the challenges for second-year students is the lack of support provided after a highly supportive first-year experience. While most administrators have focused on first-year programs, they have put little effort into second-year programs (Graunke & Woosley, 2005; Isakovski et al., 2011; Gardner et al., 2010; Kennedy & Upcraft, 2010; Noel-Levitz, 2013; Pattengale & Schreiner, 2000; Schaller, 2005; Schaller, 2010). This is evident from the limited number of second-year initiatives provided across many institutions. However, the first year in college is not the only critical transition college students face (Tinto, 1987).

Challenges for Second-Year Students

“The second year of college is frequently described as a critical period of transition, adjustment, and potential confusion for students who often leave the safety and security of a very structured and directed first year” (Noel-Levitz, 2011, p. 1). In addition, even though an at-risk student received the necessary support in their first year, it does not mean that student is not still at-risk during their second year (Pattengale & Schreiner, 2000). Second-year students face a number of challenges as they navigate this period of transition. Through a review of the literature, the following challenges will be discussed: (a) navigating a sense of abandonment, (b) transitioning through the differences from their first year, (c) integrating academically to the institution, (d) integrating socially to the institution, (e) satisfaction with the institution, and (f) retention.

Abandonment. Multiple authors have stated that second-year students may feel a sense of abandonment from the institution (Flanagan, 2007; Pattengale & Schreiner, 2000; Schreiner, Miller, Pullins, & Seppelt, 2012). For second-year students, it can seem like the administration at the institution has turned all of its attention to the incoming class (Flanagan, 2007; Pattengale

& Schreiner, 2007), but it is a mistake to believe that all of the necessary integration was achieved in the first year alone (Schaller 2010). Second-year students are still transitioning in a different sense after their first year.

Different from first year. After such a supportive first year, second-year students may feel a bit let down (Pattengale & Schreiner, 2007). The first-year experience has become full of structure and opportunity at many institutions (Schaller, 2007). While more structure and support are needed for second-year students, administrators cannot just apply what was done for first-year students to second year students (Graunke & Woosley, 2005). Second-year students face different challenges compared to first-year students. During an interview, a student said the first year is like getting everything together to build a house and the second year is like building the foundation for the house (Schaller, 2010). In another research study, a student compared the first year to an all-you-can-eat buffet, while the second year is more focused (Gansemer-Topf, Stern, & Benjamin, 2007).

There have been some who have coined the term “sophomore slump” to describe the second year (Pattengale & Schreiner, 2000). Kennedy and Upcraft (2010) redefined the sophomore slump as “a multidimensional phenomenon, which could begin as early as the second semester of college and includes one or more of the following:” (a) academic deficiencies, (b) academic disengagement, (c) dissatisfaction with the collegiate experience, (d) major and career indecision, and (e) developmental confusion (p. 39). However, after such a supportive and structured first-year experience, one has to question “is it our sophomores who are slumping or our institutional environments?” (Gansemer-Topf, Stern, & Benjamin, 2007, p. 44).

Academic integration. There are different challenges second-year students face to continue academic integration into the institution. Typically, there is more academic difficulty in

the second year (Gansemer-Topf, Stern, & Benjamin, 2007). Some incoming second-year students are already coming in at a deficit. From Adelman's (2006) sample, "one out of five entered the second year with low credit momentum" (p. 53). This means they were already behind the number of credit hours they need to progress and most likely did not classify as a "sophomore" by credit hours. Additionally, in Adelman's (2006) sample, "roughly one out of six carried low first year GPAs" (p. 53). Not only are second-year students potentially facing a battle to get back on track academically, they are doing so with fewer resources than they had as a first-year student.

Second-year students are challenged to integrate academically because they are not having enough interactions with faculty (Gardner, Pattengale, & Schreiner, 2000). Some are also struggling with choosing an academic major (Gardner et al., 2010). Second-year students may not receive the individualized and trained attention they need to be able to navigate the complexity of selecting or changing a major.

Social integration. Not only are second-year students continuing the process of integrating academically to the institution, but they are also continuing to the process of social integration (Noel-Levitz, 2011). Cheng (2004) found that students' sense of community decreases as they move up in class levels. During a study conducted by Gansemer-Topf, Stern, and Benjamin (2000), some second-year students felt there was a lack of opportunity to meet new people. It is important to provide opportunities to second-year students to make new connections with others (Schaller, 2010).

Satisfaction. Juillerat (2000) conducted a study utilizing the Student Satisfaction Inventory comparing second-year students from public and private institutions with first-, third-, and fourth-year students. Of the 73-items, second-year students at both public and private

institutions placed higher importance on “admissions, financial aid and registration services, residence hall issues, tutoring and career services, being involved, and feeling a sense of belonging on campus” (p. 27). Second-year students who left the institution were more likely to have lower expectations and lower satisfaction scores compared to second-year students who persisted (Juillerat, 2000).

In 2007, Schreiner (2010) sent the Sophomore Experiences Survey to 26 four-year institutions (16 private and 10 public). With a sample of 2,856 second-year students, Schreiner (2010) measured various aspects of the second-year experience. While the sampling could not be generalized to all second-year students nationally, there were some interesting results. Satisfaction of their overall college experience was the highest predictor for the student to re-enroll (Schreiner, 2010). Additionally, the frequency and satisfaction of the student interacting with faculty was also highly significant in predicting re-enrollment. Meanwhile, more connected to social integration, “peer satisfaction was the strongest contributor to overall student satisfaction” (Schreiner, 2010, p. 49). Since satisfaction impacts retention, it is important to provide opportunities for interacting with faculty and for connecting with peers.

Retention. Retention is still a challenge for second-year students. Adelman (2006) recommends waiting to measure retention information at the end of the second year instead of prominently measuring at the end of the first year. The full integration into college life may take two years (Flanagan, 2000). When measuring both the attrition of first-year and second-year students, some researchers found that second-year students have the second highest attrition rate following first-year students (Almanac Issue, as cited by Gardner, Pattengale, Tobolowsky, & Hunter, 2010; Wellman, Johnson, & Steele, 2012), but some have found that almost as many students left after the second year as after the first year (Stockenberg, 2007). As Tobolowsky

and Cox (2007) so eloquently stated, “retention numbers are the first warning sign that these students need our attention” (p. 24). In order to fully grasp the second-year experience to determine strategies for improvement, researchers have indicated some predictors for success.

Predictors of Success in Second-Year Students

Graunke and Woosley (2005) found that second-year academic success is predicted by high levels of certainty of major and positive faculty interactions. Positive interactions with faculty were found by a number of researchers to continue to have an impact on the college student experience after the first-year (Graunke & Woosley, 2005; Kranzow, Foote, & Hinkle, 2015; Noel Levitz, 2011; Schaller, 2010; Schreiner et al., 2012). However, Graunke and Woosley (2005) found that high levels of institutional commitment and involvement in activities were not predictors of second-year academic success. Boivin, Fountain, and Baylis (2000) recommended faculty involvement with second-year students to focus more in a mentorship capacity. These “mentoring relationships within the discipline shape lives and provide meaning to the sophomore” (Boivin et al., 2000, p. 12). These mentoring relationships should be more than a transition to the institution; they should focus on a transition into the profession (Boivin et al., 2000). With this intentional mentorship, second-year students can develop as future professionals of the discipline.

Second-Year Initiatives

A more intentional, integrated, and holistic experience is needed for second-year students (Graunke & Woosley, 2005; Isakovski et al., 2011; Noel-Levitz, 2013; Schaller, 2005). Of the 335 institutions that participated in the 2019 National Survey of Sophomore-Year Initiatives, 43.9% of the institutions reported no institutional efforts specifically focused on second-year students (Young, 2019). In the 2014 National Survey of Sophomore-Year Initiatives, 49.5% of

the 778 responding institutions reported no institutional efforts specifically focused on second-year students (Young, 2015). The decrease in number could be because of the increase in second-year initiatives, but the 2014 survey had over twice the number of responding institutions than the 2019 survey. In the 2019 survey, the most frequent campus-wide objective for second-year students was career exploration and/or preparation (Young, 2019), but the most frequent campus-wide objective for second-year students in 2014 was retention (Young, 2015). In 2014, 62.1% of institutions reported retention as a campus-wide objective, but in 2019, only 30.5% of the responding institutions reported retention as a campus-wide objective. The second-year initiatives that are most frequently offered are academic advising and career exploration (Young, 2019). In 2019, they did not report this figure, but in 2014, of the 46% of institutions offering second-year initiatives, nearly 80% of these efforts were less than five years old (Young, 2015).

Academic support. One of the “calls” to aid in second-year academic integration is for increased faculty involvement. Faculty interaction has been a predictor for second-year student success (Graunke & Woosley, 2005; Schaller, 2010; Schreiner, 2010). Not only are faculty called to the front for second-year engagement, academic advisors are also essential to their success.

Academic advising should be tailored to the needs of the second-year student. Some second-year students will come in knowing their major and will only need help mapping out their courses for their major or connecting to their major advisor (Gordon, 2010). Some second-year students may be navigating the process of wanting to change their major (Gordon, 2010). Finally, there may be some who do not know what they want to major in at all and will need assistance from an academic advisor as someone who is undecided (Gordon, 2010). In some instances, it may be best for the academic advisor to connect their major decision to career

planning (Schreiner, 2010; Tobolowsky & Cox, 2007). However, selecting a major and selecting a career will not always go together (Schaller, 2010). “The focus on academic and career planning in the second year should not be to survive, but rather to thrive” (Gore & Hunter, 2010, p. 108).

Assessment needs. The second-year initiatives are at a similar stage as when first-year experience programs started. Administrators have initiated intervention strategies, but empirical research is needed to determine the effectiveness of these strategies (Kennedy & Upcraft, 2010). Not only does research need to happen at the national level, but assessment needs to be conducted at the institutional level. Each campus has its own unique identity and culture, and administrators need to determine what will work best for their students to have the greatest impact on retention, persistence, and success (Chan, 2000; Kennedy & Upcraft, 2010; Tobolowsky & Cox, 2007).

Retention and Persistence

Retention and persistence have been key focal points for many colleges and universities, and this continues today. While there should be a desire to improve retention and persistence of students for the overall student experience, the financial impact of retention and persistence can speak the most to senior administration. When students leave the institution, institutions not only lose the revenue (Gardner, Pattengale, Tobolowsky, & Hunter, 2010), but they may also lose state and federal funding (Astin, 1975; O’Keeffe, 2013). Increasing efforts to reduce attrition can impact three years of revenue at four-year institutions (Astin, 1975), so it is in the administration’s best interest to create an environment where students stay and persist to graduation.

Beyond the First Year

Institutions need to continue to focus on long-term actions for retention (Tinto, 1987). The formation of long-term retention policies and programs can be more complex than initial transition programs (Tinto, 1987), but it is necessary. Retention efforts after the first year should focus on these three sources of departure: “academic problems, the inability of individuals to resolve their educational and occupational goals, and their failure to become incorporated into the intellectual and social life of the institution” (Tinto, 1987, p. 155). In order to focus on long-term retention, staff and faculty need to continue personal contact with students after their first year (Tinto, 1987). While first-year retention programs may assist with the transition to college, these retention efforts need to continue in order to retain students after their first year.

Theory

In 1987, Tinto presented the Theory of Institutional Departure from Higher Education. This model of institutional departure incorporates the student’s pre-entry attributes (family background, skills and abilities, and prior schooling) leading to the student’s goals and commitments to education (Tinto, 1987). Once the student enters college, they experience different systems of the institution (academic and social) both formally and informally (Tinto, 1987). These experiences lead to social and academic integration into life at the college or university. A positive integration leads to the student strengthening their goals and commitments; however, if there are negative experiences, the student is more likely to depart the institution (Tinto, 1987).

Sense of Belonging

Wolf-Wendel, Ward, and Kinzie (2009) have expanded on Tinto’s work to incorporate a definition for integration as “students forming relationships with peers, faculty, and staff and ...

the sense of belonging that students develop” and “a measure of student knowledge of campus cultural norms” (p. 416). Other researchers have critiqued Tinto’s use of integration (Bensimon, 2007; Hurtado & Carter, 1997). Integration can have a different meaning to minoritized students (Hurtado & Carter, 1997). Hurtado and Carter (1997) recommended studying the sense of belonging since this “allows researchers to assess which forms of social integration (academic and social) further enhance students’ affiliation and identity with their colleges” (p. 328). In an interview conducted by Wolf-Wendel, Ward, and Kinzie (2009), Tinto agreed that the terms social and academic integration no longer hold the same meaning that they did when he first developed the theory. Tinto used integration in opposition to the term segregation and now agrees the term “sense of belonging” could be a good substitute for integration (Wolf-Wendel, Ward, & Kinzie, 2009).

Definition

At its core, a sense of love and belonging is a need after the individual meets their psychological needs (food, water, etc.) and safety needs (Maslow, 1968). A sense of belonging is needed before a student can grow towards self-actualization (Maslow, 1968). Multiple researchers have provided definitions of sense of belonging. Utilizing Bollen and Hoyle’s (1990) research on perceived cohesion, Hurtado and Carter (1997) defined sense of belonging as a student’s identification and evaluation of their role with a group leading to a connection to their campus community.

Strayhorn (2012) went further with his definition stating it is the “students’ perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g., campus community) or others on campus (e.g., faculty, peers)” (p. 3). Sense of belonging has seven core

principles (Strayhorn, 2012). Sense of belonging: (a) is “a basic human need;” (b) is “a fundamental motive, sufficient to drive human behavior;” (c) “takes on heightened importance in certain contexts,” “at certain times,” and “among certain populations;” (d) is “related to...mattering;” (e) is affected by a student’s social identity; (f) “engenders other positive outcomes;” and (g) “must be satisfied on a continual basis” (Strayhorn, 2012, p. 18-23).

Living-Learning Communities

Some living-learning communities (LLCs) are a partnership between student affairs and academic affairs. It is important for student affairs professionals to create a “seamless” learning experience for students by partnering more with faculty and academic affairs (American Association for Higher Education [ASHE], American College Personnel Administration [ACPA], & NASPA, 1998; ACPA, 1994; Blimling & Whitt, 1998). Streit, Dalton, and Crosby (2009) provided seven types of student affairs-faculty interactions along a continuum. These interactions can range from structured to unstructured (Streit, Dalton, & Crosby, 2009). The seven types of interactions from most structured to unstructured are: (a) learning compacts (specific learning and development outcomes with shared leadership between student affairs and academic affairs); (b) research (faculty and student affairs personnel collaborating on research projects); (c) consultation (faculty and staff serving as consults for the other area’s needs); (d) advising (faculty serving as an advisor for student groups); (e) committees and/or task forces (joint participation from student affairs and academic affairs); (f) shared use of facilities and/or resources (faculty may utilize space in spaces operated by student affairs personnel); and (g) informal contacts (unplanned interactions) (Streit et al., 2009). LLCs represent an example of the “most formally structured types of interactions between student affairs and faculty” (Streit et al., 2009, p. 3).

LLCs are not a new initiative. This concept actually began with the first institutions of higher education in the United States (U.S.) which were modeled after the residential college model in Oxford and Cambridge (Frederiksen, 1993; Thelin, 2011; Thelin & Gasman, 2011). Throughout the history of housing, the implementation and structure of LLCs has fluctuated with societal demands and trends.

History of Housing at Colleges and Universities in the United States

Housing at colleges and universities in the United States started at the beginning of higher education in the U.S. The first U.S. institutions were modeled after the English institutions of Oxford and Cambridge, which created residential colleges (Frederiksen, 1993; Rudolph, 1962; Thelin, 2011; Thelin & Gasman, 2011). U.S. colonists wanted to emulate the “Oxbridge” model because it integrated living and learning (Fink & Inkelas, 2015; Thelin & Gasman, 2011), and it was also a model that colonists knew from attending Oxford and Cambridge (Akens & Novak, 2011; Blimling, 2003). In addition to this philosophical reasoning, housing was also a practical necessity because students traveled far to go to college (Akens & Novak, 2011; Blimling, 2003; Frederiksen, 1993). Dormitories became part of the “collegiate way,” and all colleges and universities modeled this way (Rudolph, 1962).

Due to financial constraints, U.S. institutions could not completely duplicate the role of the faculty as seen at institutions like Oxford and Cambridge (Akens & Novak, 2011; Blimling, 2003). Faculty at English institutions were in charge of instruction and built strong relationships with the students, and there was a separate role for handling disciplinary issues (Blimling, 2003; Schroeder & Mable, 1994). Since faculty in U.S. institutions were over both instruction and student discipline, the faculty were not able to create the same kind of relationships with the students for a living and learning environment (Akens & Novak, 2011; Blimling, 2003).

In the 19th century, the focus of institutions of higher education shifted to research and a Germanic model (Akins & Novak, 2011; Blattner, Cawthon, & Baumann, 2013; Blimling, 2003; Fink & Inkelas, 2015; Frederiksen, 1993). As the focus of faculty shifted to conducting research, the faculty no longer had the time to focus on the development of students within housing. Administrators in higher education started to believe it was not the responsibility of the institution to provide housing or developmental experiences (Frederiksen, 1993).

Since the focus moved away from providing residential experiences, the maintenance of the housing facilities was no longer a priority for administrators. In the late 1800s, students were looking for other places to live and were boarded in houses off campus with the community, faculty, and even presidents (Blimling, 2003). However, the decrease in on-campus housing put a strain on the communities surrounding colleges and universities (Frederiksen, 1993). It would not be long before another shift in higher education created a desire to bring back the residential college model.

When women's colleges opened in the 1860s and 1870s (Gordon, 1997), the administration of these institutions created residential-based colleges (Frederiksen, 1993). This was partially because the administration did not want the women to fend for themselves in the community (Blimling, 2003). With the advent of these institutions and the increases in complaints from off-campus housing, administrators (particularly university presidents) supported the construction of residence halls (Frederiksen, 1993). This resurgence occurred around 1915, but as the nation entered the Great Depression in the 1930s, there was a lack of funding to build residential facilities (Frederiksen, 1993). In 1933, the federal government became involved by signing the Federal Emergency Administration of Public Works, which allowed administrators to apply for loans and grants for residential facilities (Frederiksen, 1993).

The call for providing housing services continued at the national level. In 1937, the American Council on Education published *The Student Personnel Point of View*. In this document, colleges and universities were called to provide 23 services (American Council on Education, 1937). Of the aims and objectives listed, the following connected the most to educational goals of housing:

- Assisting the student to reach his maximum effectiveness through clarification of his purposes, improvement of study methods, speech habits, personal appearance, manners, etc., and through progression in religious, emotional, social development, and other non-academic personal and group relationships...
- Providing and supervising an adequate housing program for students. (American Council on Education, 1937, p. 4)

When the American Council on Education (1949) published an update to *The Student Personnel Point of View*, housing accommodations were mentioned again. According to the American Council on Education (1949), a student will grow and develop socially if “he finds satisfactory living facilities” (p. 5).

After World War II, the GI Bill created an increase in enrollment (Frederiksen, 1993; Thelin & Gasman, 2011) to 2.3 million students (Anderson, as cited by Trow, 1988). As a result, institutional administrators created makeshift classrooms and residence halls (Blimling, 2003; Thelin & Gasman, 2011), and the government provided former war facilities (Frederiksen, 1993) to accommodate this increase. However, college administrators needed a more permanent solution for the shortage of housing on college and university campuses. Congress passed Title IV of the Housing Act of 1950 in order to provide loans for housing repairs, additions, and new construction for students and faculty (Frederiksen, 1993). However, the administration needed

to use the loan to construct a facility that was fiscally conscious and not “elaborate or extravagant” (Housing Act of 1950, p. 78). With this condition, administrators maximized the number of beds for the cost which led to an increase in dormitory housing and did not consider the personal and educational development of the students (Frederiksen, 1993).

Prior to the 1960s, the housing staff primarily focused on disciplining students and teaching them the values of the institution (Blattner, Cawthon, & Baumann, 2013). The 1960s saw a shift in the students being seen as consumers and a focus on services and amenities to keep students on campus (Blattner, Cawthon, & Baumann, 2013). Also, during the 1960s, administrators were trying to better the quality of undergraduate education (Thelin & Gasman, 2011). In 1963, Clark Kerr, the President of the University of California system, delivered three lectures at Harvard University. In these lectures, there was a call to improve undergraduate student instruction (Kerr, 1995). The public was more interested in the education of the students, not the research produced by the institution (Kerr, 1995). The desire to increase the educational benefit for living on campus also came from the concern for legal issues. In *Prostrollo v. University of South Dakota* (1974), the institution was sued because of the requirement for first- and second-year students to live on campus. Initially, the requirement was said to be because of the necessity to pay back bonds on the residential facilities, which caused the court to side with the plaintiffs; however in an appeal, the administration said the reasons were to help students transition to college life and provide a learning environment for students (*Prostrollo v. University of South Dakota*, 1974).

In the 1970s and 1980s, the focus for housing staff was on student development (Blattner, Cawthon, & Baumann, 2013). Staff focused on the development of the whole student (Blattner, Cawthon, & Baumann, 2013). This is when dorms (simply a place to live on campus) became a

more holistic developmental experience of residence halls (Blattner, Cawthon, Baumann, 2013). The concept of living learning communities started to re-emerge with Evergreen State College leading the way in 1984 (Blattner, Cawthon, & Baumann, 2013).

By the 1980s, institutions had waiting lists for students wishing to live on campus (Boyer, 1987). In 1984, the Carnegie Foundation for the Advancement of Teaching conducted a national survey of undergraduates and found that over two-thirds of public institution freshmen lived on campus and 86 percent of freshmen lived on campus at private universities (Boyer, 1987).

As institutions moved into the 1990s and beyond, administrators faced more demands for university housing. Students wanted private bathrooms, air conditioning, cable television, and internet access (Shea, 1995). Some of the students were not accustomed to sharing and were used to these comforts at home, so they wanted them at college as well (Shea, 1995).

Administrators faced increased costs to meet these demands as well as the need to update facilities for updates in technological advancements like computers and internet (Shea, 1995; Thelin & Gasman, 2011). Additionally, housing staff started to shift from student development focus to a student learning focus (Blattner, Cawthon, & Baumann, 2013). Residence halls were “designed to provide students with low-cost, safe, sanitary, and comfortable living accommodations and to promote students’ intellectual, social, moral, and physical development” (Frederiksen, 1993, p. 173). Student affairs professionals shifted the concept of extracurricular towards the concept of “co-curriculum” (Thelin & Gasman, 2011). These professionals changed the language and actions to promote the integration of in-class and out-of-class learning instead of having out-of-class learning experiences being seen as supplemental to in-class learning (Blattner, Cawthon, & Baumann, 2013; Thelin & Gasman, 2011). One way campus leaders implemented the integration of in-class and out-of-class learning in residence halls is in the form

of living-learning communities (LLCs) (Blattner, Cawthon, & Baumann, 2013; Love & Tokuno, 1999; Smith, MacGregor, Matthews, & Gabelnick, 2004).

Definition

LLCs are called a variety of names on different campuses. They can be referred to as living-learning programs (Brower, 2008; Brower & Inkelas, 2010; Garrett & Zabriskie, 2003; Inkelas, 2008; Inkelas, Daver, et al., 2006; Inkelas, Johnson, et al., 2006; Inkelas, Soldner, Longerbeam, & Leonard, 2008; Inkelas, Vogt, et al., 2006; Inkelas & Weisman, 2003; Soldner & Szelényi, 2008; Stewart, 2008), living-learning centers (Kranzow, Hinkle, Muthiah, & Davis, 2015), residential learning communities (Pike, 1999; Pike et al., 1997), or living-learning communities (Inkelas, Jessup-Anger, Benjamin, & Wawrzynski, 2018; Purdie & Rosser, 2011; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015). Depending on the source, researchers or practitioners may use these terms interchangeably. In this study, the term living-learning communities (LLCs) will be used because this is the term more recently utilized and “community” connects with the social and academic integration focused on in this study. For those who do not use these terms interchangeably, the definition of the term may vary depending on the professional

Because these terms can vary, researchers provided an operating definition of LLCs in their study for reader clarification. LLCs vary not only from campus to campus, but also within a campus (Inkelas, 2008; Inkelas, Johnson, et al., 2006; Kranzow et al., 2015). The differences between LLCs are in (a) the number of students involved; (b) whether it was housed in a discrete portion or entire building; (c) what the reporting structure looked like (i.e., student affairs or academic affairs); (d) the source of institutional funding; (e) the amount of funding; (f) if fees were charged to the residents; (g) the kind, if any, of criteria in admitting students; (h) the

learning outcomes associated; (i) the use of faculty, staff, and/or peer leadership; (j) the type, if any, of course offerings; and (k) the age of the program (Soldner & Szelényi, 2008) With all of these variables, it is not surprising that researchers tend to take on a broad definition when it comes to LLCs. For the purposes of this research design, the following definition for LLCs will be used: “programs in which undergraduate students live together in a discrete portion of a residence hall (or the entire hall) and participate in academic and/or extracurricular programming designed especially for them” (Soldner & Szelényi, 2008, p. 15). This tends to be the most common definition utilized in recent research.

Typology

With such a broad definition, researchers have also looked towards creating a typology of living-learning communities (Shapiro & Levine, 1999; Soldner & Szelényi, 2008). Initially, Shapiro and Levine (1999) presented information on the structure of LLCs, including the curricular structure, faculty role, co-curricular opportunities, and peer leadership. The LLC models the researchers depicted have strong intentionality. The curricular structure in LLCs could either provide cluster courses (cohort-structured, individually-taught courses), freshmen interest groups (smaller groupings of students within larger lecture courses), or team-taught courses (faculty working together on a common theme to create a holistic academic experience for a semester or year) (Love & Tokuno, 1999; Shapiro & Levine, 1999). In addition to faculty working on the curricular aspects, faculty in the LLC may attend programs in the residence hall or live in the residence hall (Shapiro & Levine, 1999). There were many co-curricular opportunities for residents in LLCs. Residents could participate in a series of activities (related to course work, transitioning to college, etc.) and more extensive opportunities, such as a semester-long service project (Shapiro & Levine, 1999). Finally, Shapiro and Levine (1999)

described the peer leadership opportunities for residents in LLCs. Residents in LLCs typically had more influence on their experience than other residential students because they had the opportunity to participate in councils and committees as well as serve as mentors as returning students (Shapiro & Levine, 1999).

More recently, Inkelas et al. (2008) provided the following typology: (a) “small, limited resourced, primarily residential life emphasis” (p. 502); (b) “medium, moderately resourced, student affairs/academic affairs combination” (p. 502); and (c) “large, comprehensively resourced, student affairs/academic affairs collaboration” (p. 503). The administration would determine which type of LLC best suited its campus (Shapiro & Levine, 1999). Depending on the type of LLC, there is a certain level of coordination necessary. For example, for large, comprehensively resourced LLCs with strong student affairs/academic affairs collaboration, administrators need the most coordination between staff and departments to provide “a wide range of resources (such as career workshops, community building activities, and study abroad opportunities)” (Inkelas et al. 2008, p. 503).

LLCs and Second-Year Students

Not many second-year students participate in LLCs; this could be by choice or because there is not an option available for them to participate. In a study conducted by Skyfactor (an assessment benchmarking company), only 9% of second-year students who lived on campus lived in a LLC at the 291 institutions where the survey was taken (Skyfactor Benchworks, 2017). If a student changes living arrangements or can no longer participate in a LLC, they may lose their informal contacts, which can impact the level of social integration to the institution (Schaller, 2010). In Whitcher-Skinner, Dees, and Watkins’ (2017) review of their LLC,

researchers found students wanted to continue living in the LLC after their first year even though the community was only designed for one academic year.

As practitioners, it is imperative to review the resources and programs available to second-year students and ensure they are geared towards the needs of second-year students. As there is a call for a more integrated, holistic experience for second-year students (Graunke & Woosley, 2005; Isakovski et al., 2011; Noel-Levitz, 2013; Schaller, 2005), it is important to determine if second-year students can benefit from participating in LLCs. Administrators at institutions have already started creating LLCs specifically for second-year students. These institutions include, but are not limited to, California Polytechnic State University, San Luis Obispo; Kennesaw State University; North Carolina State University; The Ohio State University; and Southern Illinois University Edwardsville.

Impact of Living-Learning Communities

Through mostly quantitative research, researchers have found LLCs impact the student experience. Multiple researchers confirm some of the impacts, but there are instances where a single researcher determines an impact or researchers discover conflicting findings. LLCs demonstrate a certain level of impact (mostly positive but sometimes negative) on alcohol consumption (Brower, 2008; Brower, Golde, & Allen, 2003; Mayhew, Klein, Behringer, & Ulrich, 2011), social integration (Brower & Inkelas, 2010; Eck et al., 2007; Inkelas, Daver, et al., 2007; Pike, 1999; Pike et al, 1997; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015), and academic life (Brower & Inkelas, 2010; Eck et al., 2007; Garrett & Zabriskie, 2003; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006; Pike et al., 1997; Purdie & Rosser, 2011; Wawrzynski et al., 2009).

Alcohol

Students who were part of LLCs did not drink as often or as heavily as those who were outside of the LLCs (Brower, 2008; Brower et al., 2003; Mayhew et al., 2011). They also did not suffer as many consequences from their or others' consumption (Brower, 2008; Brower et al., 2003). "Living-learning programs create local *communities of learning* that compete effectively with the college binge drinking culture to reduce student drinking and the harms associated with their drinking" (Brower, 2008, p. 33). Because of the community the students build within the LLC, there is a level of peer accountability to help each other make smart decisions (Brower, 2008; Brower et al., 2003). The students realize the impact their behavior can have on the community (disturbing others with noise or damaging the community with vandalism or vomit), so they work to prevent themselves from engaging in such behavior (Brower, 2008). Not only do residents in LLCs have lower alcohol consumption and binge-drinking, but there is also the potential for administrators to make an even larger impact by teaching students about high-risk drinking in the curricula (Mayhew et al., 2011). There is a level of social integration within the community that helps residents in LLCs understand the impact they can have on others. The social integration also facilitates a desire to uphold a certain image and may help LLC students transition to campus more easily by preventing them from engaging in the same level of drinking habits as those residents who are not a part of a LLC.

Social Integration

Social integration is a level of student involvement and engagement on campus where the student feels more incorporated into the social aspect of the campus (Pike et al., 1997; Stassen, 2003). This can include involvement in organizations and attending events on campus (Bean & Eaton, 2000). Social integration is a benefit for students living in LLCs (Brower & Inkelas,

2010; Eck et al., 2007; Inkelas, Daver, et al., 2007; Pike, 1999; Pike et al, 1997; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015). The social aspect of living in the LLC can be more meaningful for the residents than the academic or career-focus (Workman, 2015). Students participating in LLCs have “significantly higher levels of involvement, interaction, and integration” (p. 277) than those not participating in LLCs (Pike, 1999). This social integration can provide a smoother transition to college (Brower & Inkelas, 2010; Inkelas, Daver, et al., 2007). LLC students felt more support from their peers since they had a greater connection to those peers both inside and outside the classroom (Domizi, 2008). On the other hand, Arensdorf and Naylor-Tincknell (2016) found that while students participating in LLCs made more connections to their peers, they felt isolated from the larger campus community. The students felt a bit disconnected from the university because the LLC was “like a little clique or little team” (Arensdorf & Naylor-Tincknell, 2016, “Engagement with University and Community”, para. 2).

Academic Integration

In addition to social integration, residents in LLCs display a higher level of academic integration (Arensdorf & Naylor-Tincknell, 2016; Brower & Inkelas, 2010; Eck et al., 2007; Garrett & Zabriskie, 2003; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006; Pike et al., 1997; Purdie & Rosser, 2011; Wawrzynski et al., 2009). Academic integration is the level of students’ incorporation into the academic aspects at the institution (Pike et al., 1997). Academic integration includes faculty-student interaction (Bean & Eaton, 2000; Garrett & Zabriskie, 2003; Inkelas, Vogt, et al., 2006; Pike et al., 1997) and academic achievement (Brower & Inkelas, 2010; Eck et al., 2007; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006). Students participating in LLCs transition to college with more academic ease (Brower & Inkelas, 2010;

Inkelas, Daver, et al., 2007). These students also experience more peer academic support from living in an LLC (Domizi, 2008). This further solidifies the intent behind institutions implementing LLCs. LLCs want to create a culture that promotes “(a) seamless learning, (b) scholarly environment, and (c) an ethos of relatedness among faculty, staff, and peers” (Wawrzynski et al., 2009, p. 144). Students participating in LLCs had more faculty-student interactions (Arendsorf & Naylor-Tincknell, 2016; Garrett & Zabriskie, 2003; Pike et al., 1997) and even more of a mentoring relationship with faculty (Garrett & Zabriskie, 2003; Inkelas, Vogt, et al., 2006) yielding a significant positive impact on both academic integration and academic achievement (Pike et al., 1997).

Even though students participating in LLCs consistently showed a positive impact from faculty-student interaction, students have not always displayed positive academic achievement. Students participating in LLCs displayed increased intellectual skills (Brower & Inkelas, 2010; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006; Purdie & Rosser, 2010) and academic self-confidence (Brower & Inkelas, 2010; Inkelas, Vogt, et al., 2006). However, students did not always perceive intellectual growth (Inkelas, Johnson, et al., 2006). Inkelas, Johnson, et al. (2006) found there was no statistical significance in perceived growth in cognitive complexity compared to residents in a traditional residence hall. The cognitive complexity scale included “the ability to critically analyze, to learn on one’s own, to learn new material, and to understand relationships between ideas” (p. 126). On the other hand, students in LLCs had a statistically significant higher perception of liberal learning compared to peers in a traditional residence hall (Inkelas, Johnson, et al., 2006). Liberal learning included “an appreciation of a broad education; openness to opposing views; ability to discuss controversial issues; and enjoyment of art, music, and cultural diversity (Inkelas, Johnson, et al., 2006, p. 126). Inkelas, Johnson, et al. (2006)

believed this higher perception of liberal learning could suggest that the programs studied at the three institutions could be “better at creating environments that facilitate openness to difference than other analytical skills” (p. 137).

Sense of Belonging

For students participating in LLCs, the research has been somewhat mixed on the impact on sense of belonging. Schussler and Fierros (2008) found students in LLCs increased their connections by establishing both academic and social networks. When Spanierman et al. (2013) conducted their study, they found LLC participants had a higher sense of belonging in the residence hall, but they did not differ significantly from non-participants with their sense of belonging on campus. However, a number of studies found as a result of social and academic integration, residents felt a greater sense of belonging (Cheng, 2014; Hoffman et al., 2002; Wawrzynski et al., 2009).

Retention and Persistence

With the findings mentioned above, it is not surprising that participating in LLCs impacts retention and persistence rates. A positive integration leads to the student strengthening their goals and commitments; however, if there are negative experiences, the student is more likely to depart the institution (Tinto, 1987). Experiences in LLCs lead to social and academic integration into life at the college or university, which leads to an increased feeling of sense of belonging (O’Keeffe, 2013). In addition, students living on campus are more likely to persist at the institution (Astin, 1975; Astin, 1993; Pascarella & Terenzini, 2005). Since increased academic and social integration are two areas LLCs positively impact, LLCs should aid in retention and persistence efforts.

Cambridge-Williams, Winsler, Kitsantas, and Bernard (2013) conducted a longitudinal study in which they tracked students who participated in an LLC and took a first-year seminar course. The researchers compared retention and graduation rates from those who took the first-year seminar but did not participate in an LLC. There was a statistically significant difference in graduation rates within seven years with 85.7% of those who participated in a LLC and the first-year seminar course graduating within seven years and 62.7% who participated in the first-year seminar but did not participate in a LLC graduating within seven years (Cambridge-Williams et al., 2013).

However, institutions need to continue to focus on long-term actions for retention (Tinto, 1987), and not just track students who participated in these first year only retention efforts. When Astin (1975) compared dropout rates for different residence patterns of students in their first two years, he found that students who continued or changed to living on campus (including fraternity and sorority housing) were less likely to leave college compared to off campus living options (including living at home). Administrators at some institutions have seen the benefit of not just a first-year, but a first-year and second-year live on requirement (Blimling, 2003). Some of these institutions include Gallaudet University (“First-Year and Second-Year Residency Requirement”, n.d.), Northwestern University (“Residency Requirement”, n.d.), and University of Denver (“Two-Year Live-On Requirement and Contract Release”, n.d.).

Summary

It is clear from the literature that LLCs are a high-impact practice that help improve the student experience. Students participating in LLCs benefit from increased social and academic integration which lead to a greater sense of belonging and an increased likelihood that the student will stay at the institution. However, these programs have been geared towards first-year

students and not as much focus has been placed on second-year students. Even though a student has made it to their second year, it does not mean they no longer need the support and initiatives they received as a first-year student. Next to the first year, the second year sees the second largest drop in retention. Since LLCs have been documented as programs that have increased factors that lead to greater retention, it is necessary to see if and how these programs impact the second-year experience.

CHAPTER 3

METHODOLOGY

The purpose of this study was to determine if there is a difference in second-year students' sense of belonging between those who participated in a living-learning community (LLC) their first two years and those who participated in the LLC for their first year only. Since the researcher reached out to second-year students, who either continued participating in a LLC or not, towards the middle of their second year, this quantitative study utilized a posttest-only design with nonequivalent groups. This chapter provides an overview of sites, participants, data collection procedures, and the data analysis process. Utilizing the methods outlined in this chapter, the researcher answered the central research question: is there a difference in the sense of belonging for students who participated in a LLC for their first two years and students who participated in a LLC their first year only? This central research question was broken down into the following sub-questions:

1. What is the difference in social integration of second-year students who participated in a LLC their second year and those who did not?
2. What is the difference in academic integration of second-year students who participated in a LLC their second year and those who did not?
3. What is the difference in commitment to completion of degree of second-year students who participated in a LLC their second year and those who did not?
4. What is the difference in overall sense of belonging of second-year students who participated in a LLC their second year and those who did not?

5. What is the difference in academic integration based on academic connection to LLC (i.e., class component connected to LLC, faculty-in-residence)?
6. Is there any correlation between academic integration and other second-year factors (i.e., perceived difficulty, grade point average)?
7. What is the difference in academic and social integration based on other environmental factors (i.e., type of LLC, involvement)?

Sites

The researcher attempted to find at least two comparable sites to conduct this study. There were some challenges in recruiting and confirming these sites. Ultimately, the researcher conducted this study at one large, public, land-grant, and sea-grant institution located in the southeast region of the United States (referred to University of the Southeast). The researcher chose this institution because they provided the opportunity for second-year students to continue in their LLC for their second year.

Challenges

The researcher attempted to recruit multiple institutions to participate in this study by posting in the American Colleges and Universities Housing Officers International (ACUHO-I) message board and reaching out to colleagues from institutions the researcher was aware had LLCs with second-year students. There was a fair response from staff at different institutions who valued this type of research; however, the number of second-year participants was a limiting factor. At some institutions, second-year students only participated in the LLC if they served in a mentor leadership role.

Initially, the researcher identified two sites which each had approximately 3,000 participants in their LLCs, and approximately 800 were second-year students. Unfortunately,

extenuating circumstances occurred, which led to the inability of these sites to participate. At one of the potential sites, there was a restructure in the department which led to the site no longer being able to participate. At another potential site, the Institutional Review Board (IRB) process never approved (or denied) the study after navigating the process for four months. Another site was recruited, but the record keeping of first-year LLC participants was limited, leading to the inability to actively recruit a large number of participants to take the questionnaire. While the number of second-year participants in the participating site is not large, it did provide some information to explore this topic on sense of belonging for second-year LLC participants.

University of the Southeast

University of the Southeast is a land- and sea-grant institution where the university is a predominant presence for the city. According to The Carnegie Classification of Institutions of Higher Education, University of the Southeast is a four-year, large, primarily residential institution with over 37,000 students. University of the Southeast is a doctoral university with a very high research activity.

University of the Southeast has a competitive application process. Of the 26,027 applicants, only 12,659 were admitted and 5,718 actually enrolled as first-time, first-year students in fall 2018 (where the sample was pulled from). Of the enrolled population, approximately 37% of the students were male and 63% were female. In looking further into the demographics of this population, approximately 69% of the first-year students are white, non-Hispanic. The other ethnicities did not represent a large portion of the enrollment with Asian (11%), Black or African American (8%), and Hispanic or Latino (6%) being the largest of the minoritized populations. The retention rate of students at University of the Southeast was 94%

for first-year students entering in 2012. The graduation rates of the same cohort were 66.2% after four years and 85.8% after six years.

The institution provides three LLCs for residential students. One LLC is associated with their Honors Program (Honors LLC); one is for students who major in the same college (Major LLC); and one is for students who have a similar interest (Interest LLC). Of these three LLCs, only the Major LLC provides a structured experience for the second year. In order to return to the Major LLC, applicants must be approved, and this could be based on the student's regular participation in LLC activities. The Honors LLC allows second year students to return to the hall, but the institution does not necessarily recognize them as part of the LLC (though the students may see themselves as members of the LLC). Approximately 322 first-year students participated in LLCs at University of the Southeast in Fall 2018 (245 in Honors LLC, 54 in Major LLC, and 29 in Interest LLC). The institution reported that approximately 26 returned as second-year students in Fall 2019; all of these students were in the Major LLC, but some students in the Honors LLC self-identified as continuing in a LLC their second year.

At University of the Southeast, LLCs are not the only area where students can be involved on campus. There are more than 700 student organizations and 67 intramural and club sports programs at University of the Southeast. Students also can be involved in fraternity and sorority life with 26 interfraternity organizations, 19 Panhellenic sorority organizations, 11 multi-cultural Greek organizations, and 8 National Pan-Hellenic organizations. University of the Southeast also provides opportunities for students to work on campus.

Sample

The target population for this study was second-year students who participated in a LLC their first year. For the purposes of this study, second-year students are defined as students who

are in their second year at a higher education institution. The administrator at the site assisted in identifying the students who participated in a LLC for their first year in Fall 2018.

Recruitment of Participants

To recruit participants for this study, the researcher had a staff member contact at the institution who provided information on second-year students who lived in a LLC their first year at the institution. In order to make sure a large enough sample responded to the questionnaire, all students who met this criterion received the e-mail (Appendix A) asking them to participate in the study. Within the e-mail, there was a link to the survey, which included an informed consent agreement (Appendix B). Only students who were 18 years of age or older were eligible to participate in the study.

Procedures

After reaching out and confirming the site for participation, the researcher asked the staff contact to provide information on the number of students in their LLC program along with the contact information for all potential participants. The contact at University of the Southeast provided the total number of students who participated in a LLC their first year for fall 2018 and the total number of students who participated in a LLC their second year for fall 2019. The contact at University of the Southeast provided the list of e-mails for students who were in a LLC as a first-year student for fall 2018.

The researcher utilized the list of e-mails provided to send an e-mail invitation with a link to the questionnaire in January (Appendix A). After clicking the link, the participant saw the Institutional Review Board (IRB) consent form (Appendix B). Once the participant consented to participate, they were directed to the questionnaire (Appendix C). To mitigate potential low

return rates of online questionnaires, the researcher gave participants the opportunity to enter for a chance to win one of five \$25 gift cards to Amazon.

In this study, the dependent variable was the student's sense of belonging as measured by the academic and social integration measured by the Institutional Integration Scale (IIS) created by Pascarella and Terenzini (1980) utilizing Tinto's (1975) model of the dropout process. This sense of belonging was measured with the following subscales: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments. The independent variable was participation in a LLC in the participant's second year. Since students either self-select or are unable to continue participation in an LLC, participants were not randomly assigned to comparison groups.

Instrument

The researcher utilized a questionnaire with three sections of questions pertinent to the study (Appendix C). The first section of the questionnaire contained questions related to the participant's status as a LLC resident. The second section of the questionnaire incorporated the Institutional Integration Scale (IIS) (Pascarella & Terenzini, 1980). The final section was a series of demographic questions, questions about their involvement on campus, and questions related to issues faced as second year students (Schreiner, 2010).

LLC status. The questionnaire included ten questions on determining the participant's status as a LLC resident. The students did not answer all ten questions because their answers determined the question they proceeded to next. The maximum number of questions a participant answered was seven (Appendix C).

Participants identified if they lived in a LLC their first year and if they were living in a LLC their second year. For those who were living in a LLC their second year, they identified if the LLC was (a) designated for their major, (b) connected to an Honors Program/College, (c) one with shared interests, or (d) a different designation the students described. This was collected in order to delve further into the data to determine if the type of LLC had any impact on a student's sense of belonging.

Then, the participant identified if there was a class component connected to their LLC and if there was a faculty-in-residence. According to Inkelas, Jessup-Anger, Benjamin, and Wawrzynski (2018), the academic components to a LLC are the foundation of the Best Practices Model. The researcher wanted to see if this had an impact on their sense of belonging and particularly their academic integration since it is the foundation of LLCs (Inkelas et al., 2018).

Participants who did not participate in a LLC for their second year identified whether they lived (a) on campus in a hall with no LLC presence, (b) on campus within a hall that had a LLC, (c) off campus with other students, (d) off campus alone, (e) off campus with a partner, (f) in a fraternity or sorority house, or (g) off campus with family during their second year. This could also impact the student's sense of belonging, so the researcher collected this information as well. Finally, the participant answered why they chose not to live in a LLC for their second year (selected all that applied) and whether or not they would have continued living in their first-year LLC if they could have. This helped determine why students were not continuing in LLCs and if they would have if they could. The intention was to provide information for administrators to determine how to provide second-year students with opportunities to continue participating in this high-impact practice.

Institutional Integration Scale. The Institutional Integration Scale (IIS) was created by Pascarella and Terenzini (1980) utilizing Tinto's (1975) model of the dropout process. The core concepts utilized in the creation of the scale were the student's academic and social integration to the institution. Pascarella and Terenzini (1980) wanted to determine if they could create an instrument to determine the likelihood of students persisting based on their social and academic integration to the school while taking the student's entering characteristics into account.

The longitudinal study utilized a simple random sample of 1,905 of incoming freshmen at a large (approximately 10,000 students), independent university in central New York State (Pascarella & Terenzini, 1980). This sample received a questionnaire prior to enrollment, and 1,457 students responded. In the spring semester of the participants' first year, another questionnaire was sent to determine what the students experienced. From this questionnaire, 773 responded, and Pascarella and Terenzini (1980) determined this was a representative group from the first-year population at the institution where the study was being conducted based on incoming demographics (identities, academic aptitude scores, etc.).

Using Tinto's (1975) model, Pascarella and Terenzini (1980) focused on the components of social and academic integration. According to Tinto's (1975) model, academic integration included academic performance and intellectual development, and social integration included "quality of peer-group interactions and quality of student interactions with faculty" (Pascarella & Terenzini, 1980, p. 62). However, Pascarella and Terenzini (1980) noted that interactions with faculty also enhanced academic integration. A student's social and academic integration led to the commitment of the student to continue attending the institution and to graduate and pursue a career (Pascarella & Terenzini, 1980). This study controlled for pre-college characteristics as well as first-year grade point average and involvement in co-curricular activities.

The scales were analyzed and tested for reliability. The alpha reliabilities for each scale were: (a) peer-group interactions = 0.84, (b) interactions with faculty = 0.83, (c) faculty concern for student development and teaching = 0.82, (d) academic and intellectual development = 0.74, and (e) institutional and goal commitments = 0.71. The alphas for 0.71 to 0.84 were “judged to be adequate for using the scales in further analysis” (Pascarella & Terenzini, 1980, p. 67).

Pascarella and Terenzini (1980) noted these scales could be used to predict persistence decisions, but they provided words of caution because some of the scales were different based on certain student characteristics (i.e., peer-group interactions scale based on sex identification) and there was potential that some of the students noted as “persisters” may have voluntarily dropped out later. Pascarella and Terenzini (1980) also recommended replicating the study since it was a single-institution study, and there have been studies that have utilized the IIS in its original or slightly modified version (Berger & Milem, 1999; French & Oakes, 2004; Mannan, 2001; Reid, 2013).

Berger and Milem (1999) combined the questions from Pascarella and Terenzini’s instrument to include behavioral components (students reported how often they engaged in certain behaviors associated with academic and social integration) and found use in utilizing a combined instrument. French and Oakes (2004) found greater internal reliability in adding questions and reversing the wording of the reverse coded phrases. Mannan (2001) revised the Institutional Integration Scale (IIS) to account for the academic and social context of an international institution and surveyed an on-campus undergraduate population (multiple years represented). Mannan (2001) reported alpha reliability coefficients of 0.70 to 0.75, which was a little lower than Pascarella and Terenzini (1980). In Reid’s (2013) study, he measured institutional integration of Black males attending five research institutions by utilizing the peer-

group interactions subscale and the interactions with faculty subscale for social integration and academic integration, respectively. However, Reid (2013) found lower alpha reliability coefficients than Pascarella and Terenzini (1980). The alpha reliability coefficient for peer group interactions was 0.72, and the alpha reliability coefficient for interactions with faculty was 0.52.

Demographics and more. For the last section, participants answered up to 11 questions about themselves. They answered demographic questions and questions about their academic achievement, involvement outside of the LLC, and how their second year compared to their first year. The researcher incorporated the questions on how their second year compared to their first from the Sophomore Experience Survey conducted by Schreiner (2010) where she was able to “understand the second-year experiences in ways [they] have not before” (p. 47). These all could play a factor in the analysis of sense of belonging.

Each participant answered demographic questions on their gender and ethnicity. As seen in Pascarella and Terenzini’s (1980) work, sex was a factor when looking at the different scales, so this is something the researcher also tested. The researcher also collected information on the participant’s ethnicity because the site involved in this study was a predominantly white institution. As seen from other research (Strayhorn, 2012), there can be a difference in minoritized students’ sense of belonging.

Participants also answered questions about their involvement both on- and off-campus through work and involvement in organizations. Living in the LLC is not the only aspect of the student’s experience that could impact their sense of belonging. There could be many environmental factors that impact sense of belonging.

Finally, participants provided information about their grade point average (GPA) both at the end of their first year and the end of first semester of their second year. The researcher asked

participants about their GPA at the end of their first year to provide an input factor to determine if this may impact the data (i.e., did students who continued participating in a LLC their second year have higher GPAs at the end of their first year compared to those who did not continue). The GPA at the end of the first semester of their second year was collected to measure the academic achievement of the students as part of academic integration.

At the end of the questionnaire, participants saw contact information for the researcher should they have additional questions on the study. On this page, there was an additional link for participants to provide information if they wanted to be entered into the drawing for one of the \$25 gift cards to Amazon, which took the respondent to an outside form so their entry was not tied to the questionnaire. In addition to the gift card incentive, reminder e-mails were sent by the researcher to potential participants two weeks, one week, and two days before the questionnaire closed. Once the questionnaire was closed, the researcher analyzed the data.

Data Analysis

Once the data was collected, data was analyzed through several statistical tests. All responses to the questionnaire were compiled in a dataset in SPSS for Windows. The scales were created from the item responses (Appendix D) and each was reviewed for adequate reliability levels. The significance level that was used in all tests was .05.

First, the researcher removed data from any participant who indicated they did not participate in a LLC during their first year (in case someone received the questionnaire in error). Then, the researcher removed data from any participant who did not complete the questionnaire. After that, the researcher utilized descriptive statistics to determine the frequency and percentage of respondents for the questions about participation in a LLC and the demographics. The researcher determined the frequency and percentage of the following areas: (a) LLC

participation, (b) information for participants in LLC during the first year only, and (c) demographics and involvement. For the LLC participation frequencies, the researcher determined the frequencies and percentages for the following: (a) type of LLC participated in first year, (b) type of LLC participated in second year, (c) if the second year LLC was the same or different from the first, (d) if there was a class component tied to the second year LLC, (e) if there was a faculty-in-residence for their second-year LLC. For the information for participants who participated in a LLC their first-year only, the researcher determined the frequencies and percentages of the following: (a) type of non-LLC housing during second year, (b) why non-LLC participants chose not to participate in a LLC their second year, and (c) if participants would have participated in their first-year LLC if it were an option for them. Finally, for the demographics and involvement, the researcher determined the frequencies and percentages for the following: (a) gender, (b) ethnicity, (c) if they were employed during their second year, (d) where they were employed during their second year, (e) how many hours they worked each week, and (f) what involvement they had on campus. Once the researcher collected the descriptive statistics, the researcher wanted to see if any of the data provided any statistically significant results.

First, since the researcher conducted this study with second-year students (the original instrument was created with first-year students), the researcher ran a reliability analysis using Cronbach's alpha to determine the degree to which the questions were interrelated (Johnson & Christensen, 2014). First all the questions from the Institutional Integration Scale were grouped within the subscales. There were five subscales: (a) Peer-Group Interactions (seven questions), (b) Interactions with Faculty (five questions), (c) Faculty Concern for Student Development and Teaching (5 questions), (d) Academic and Intellectual Development (7 questions), and (e)

Institutional and Goal Commitments (6 questions). The questions associated with each subscale are outlined in Appendix D.

Then, the researcher analyzed the data to answer the seven sub-research questions. The researcher ran multiple independent samples *t*-tests comparing the two independent variables (participating in a LLC as a second-year and not participating in a LLC as a second-year) and multiple analyses of variance (ANOVA) comparing more than two groups. In order to measure social and academic integration, the researcher assigned which subscale would be utilized to measure each type of integration. The researcher measured social integration with the Peer-Group Interactions subscale. While social integration can also include the “quality of student interactions with faculty” (Pascarella & Terenzini, 1980, p. 62), the researcher actively chose to measure the Interactions with Faculty subscale for academic integration because more recent literature measure academic integration with student-faculty interaction (Bean & Eaton, 2000; Garrett & Zabriskie, 2003; Inkelas, Vogt, et al., 2006; Pike et al., 1997; Reid, 2013). Interactions with Faculty, Faculty Concern for Student Development and Teaching, and Academic and Intellectual Development subscales were all utilized to measure academic integration. The final subscale (Institutional and Goal Commitments) was utilized to measure other potential impacts on retention. Table 1 provides a brief overview of each subscale and the sub-research questions connected to each subscale.

Table 1
Summary of Subscales and Sub-Research Questions

Subscale	Integration	Sub-Research Questions
Peer-Group Interactions	Social	1, 4, 7
Interactions with Faculty	Academic	2, 4, 5, 6, 7
Faculty Concern for Student Development and Teaching	Academic	2, 4, 5, 6, 7
Academic and Intellectual Development	Academic	2, 4, 5, 6, 7
Institutional and Goal Commitments	N/A	3, 7

The following are all the tests the researcher ran based on the research sub-questions:

- Sub-Research Question 1: What is the difference in social integration of second-year students who participated in a LLC their second year and those who did not?
 - *t*-test was performed to compare those who participated in a LLC their first two years and those who participated in a LLC their first year only in Peer-Group Interactions subscale
- Sub-Research Question 2: What is the difference in academic integration of second-year students who participated in a LLC their second year and those who did not?
 - *t*-test was performed to compare those who participated in a LLC their first two years and those who participated in a LLC their first year only in Interactions with Faculty, Faculty Concern for Student Development and Teaching, Academic and Intellectual Development subscales
- Sub-Research Question 3: What is the difference in commitment to completion of degree of second-year students who participated in a LLC their second year and those who did not?
 - *t*-test was performed to compare those who participated in a LLC their first two years and those who participated in a LLC their first year only in Institutional and Goal Commitments subscale
- Sub-Research Question 4: What is the difference in overall sense of belonging of second-year students who participated in a LLC their second year and those who did not?
 - Reviewed results from academic and social integration tests conducted for research questions 1 and 2 to determine overall sense of belonging based on integration

- Sub-Research Question 5: What is the difference in academic integration based on academic connection to LLC (i.e., class component connected to LLC, faculty-in-residence)?
 - *t*-test was performed to compare the independent variables of class component in Interactions with Faculty, Faculty Concern for Student Development and Teaching, Academic and Intellectual Development subscales
 - *t*-test was performed to compare the independent variables of faculty-in-residence in Interactions with Faculty, Faculty Concern for Student Development and Teaching, Academic and Intellectual Development subscales
- Sub-Research Question 6: Is there any correlation between academic integration and other second-year factors (i.e., perceived difficulty, grade point average)?
 - Correlation tests were performed to test for any relationship between second-year factors and Interactions with Faculty, Faculty Concern for Student Development and Teaching, Academic and Intellectual Development subscales
- Sub-Research Question 7: What is the difference in academic and social integration based on other environmental factors (i.e., type of LLC, involvement)?
 - ANOVA and *t*-tests were used to determine if there were other circumstances that may have impacted sense of belonging for second-year students, which could ultimately impact the comparison from the *t*-test.
 - *t*-test compared type of LLC participating in their second year (designated major, honors) on the five subscales.
 - ANOVA compared non-LLC living arrangement participants (no LLC in building, LLC in same building, off campus with other students, off campus

alone, off campus with partner, fraternity/sorority house, or off campus with family) on the five subscales.

- ANOVA compared type of LLC participating in their first year (designated major, honors, shared interests) on the five subscales.
- *t*-test compared involvement on campus (attending events, participating in fraternity/sorority, participating in intercollegiate athletics, participating in intramural sports, participating in other student organizations, working on campus, other) on the five subscales.

Delimitations

As mentioned in chapter one, there are number of limitations in this exploratory study that prevent this study from being generalizable to the larger population. This study aimed to answer if there is a difference in the sense of belonging between those who participated in a LLC in the first two years and those who participated in a LLC their first year only. However, students do not experience opportunities in a vacuum. They are answering questions based on the entirety of their college experience. There could be other outside factors that impact the student's sense of belonging. The researcher attempted to measure this impact by gathering information on potential outside factors that could impact the student's sense of belonging. These outside factors included: (a) employment, (b) involvement on campus, (c) gender identity, and (d) ethnic/racial background.

In addition, the characteristics were not generalizable to the general population because the demographics of the participants who participated in a LLC their first two years did not match the demographics of the entire respondent group or the institution. The Asian/Pacific Islander representation was much higher (11% institutionally, but 36.5% for the LLC

participants). It is unclear if this was because of the nature of LLC programs (being academically focused) or if Asian/Pacific Islander students were more likely to participate in a questionnaire. Also, since not all LLCs are equal across the United States, the impact of LLCs on students' sense of belonging may not look the same at other institutions. However, this research adds to the body of research already present to provide additional information to the body of LLC literature. Finally, since the research occurs at one time, it is possible the research will not be able to be generalizable. LLC programs change and the students change. There is a possibility of future research opportunities to replicate the study at another time.

Summary

By conducting the tests outlined in this chapter (*t*-tests, correlations, and ANOVA), the researcher utilized the information provided by the participants to determine how different variables impact a student's sense of belonging. The researcher's focus for this study was to determine if there is a difference between second-year students' sense of belonging of those who participated in an LLC their first two years and those who participated in their first year only. However, the researcher could not compare a student's sense of belonging based on only one variable. There are other variables that could impact their sense of belonging. Therefore, the researcher measured other variables to determine if there was a statistically significant difference in the sense of belonging on multiple factors that potentially had an impact on sense of belonging (i.e., involvement on campus).

CHAPTER 4

FINDINGS

The purpose of this study was to determine if there was a difference in second-year students' sense of belonging for those who participated in a living-learning community (LLC) their first two years compared with students who participated in a LLC for their first year only. This chapter provides an overview of the participants of this study, the process to prepare the data for analysis, and the results from the data analysis. The results of data analysis include the results of the reliability tests and the data analysis related to the research questions.

Participation

The researcher sent invitations to participate in this study to a total of 322 potential participants. This is the total population of students who participated in a LLC their first year in fall 2018. Of these 322 potential participants, 26 participated in a LLC their first two years (8.1% retention in the LLC program). Since this population size was so small, the researcher sent the invitation to the total population. The study was open for just under three weeks (19 days). The invitation yielded 84 respondents who attempted to complete the questionnaire in Qualtrics yielding a 26% response rate. After the researcher removed those who had not completed the entire survey or did not participate in a LLC in their first year, 68 respondents remained for data analysis. Of these respondents, 16 participated in a LLC for their first two years (23.5% of respondents, a 61.5% response rate), and 52 participated in a LLC their first year only (76.5% of respondents, a 17.6% response rate).

Data Preparation

The researcher exported the data from Qualtrics to SPSS version 26 to review the responses and prepare the data for analysis. Participants who did not complete the entire questionnaire and those who indicated they had not participated in a LLC their first year were removed from respondents. The researcher recoded the responses for the questions associated with the scales in the Institutional Integration Scale (Pascarella & Terenzini, 1980) so that the higher score was assigned to the higher level of agreement (“Strongly Agree” = 5, “Somewhat Agree” = 4, “Neither Agree Nor Disagree” = 3, “Somewhat Disagree” = 2, “Strongly Disagree” = 1). The researcher also reverse-coded the responses for the questions in the Institutional Integration Scale (IIS) that were negatively worded (i.e., it has been difficult for me to meet and make friends with other students) to arrive at the IIS scale score. Finally, the researcher created variables and calculated the mean for each of the subscales for the IIS. The subscales were (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments. The questions associated with each of these subscales are listed in Appendix D.

Respondent LLC Status

The breakdown of respondents’ LLC status is provided in Table 2. Participants were asked to identify the type of LLC they participated in their first year, the type of LLC they participated in their second year, whether the LLC they participated in their second year was the same as their first-year LLC, if there was a required class for their second-year LLC, and if there was a faculty living in the residence hall as part of their LLC.

Of the 68 respondents who lived in a LLC their first year, 13 participated in a LLC that was connected to their major (19.1%), 44 participated in a LLC associated with an Honors

Program or College (64.7%), nine participated in a LLC that was associated with a shared interest (13.2%), and two participated in a LLC that was not any of the aforementioned LLC types (2.9%). It is possible these two did not realize that they were in one of the other three LLCs. When they filled in the name of the LLC, they named a residence hall name, so the student may identify more with the building than the name of the LLC. Of the 16 respondents who lived in a LLC their second year, nine participated in a LLC that was connected to their major (56.3%), six participated in a LLC associated with an Honors Program or College (37.5%), none participated in a LLC that was associated with a shared interest (0%), and one participated in a LLC that was not any of the aforementioned LLC types (6.2%). According to the institution, the LLC associated with the major is the only one that allows second-year students in the LLC. The LLC associated with the Honors Program or College allows second year students to continue living in the building, but the institution does not recognize them as part of the LLC. The participant who said they participated in a different LLC than those that were mentioned lived in a community that is not considered a LLC by the institution. Of these 16 respondents who participated in a LLC their first two years, 15 participated in the same LLC for both years (93.8%) and only one changed LLCs for their second year (6.2%). None of these 16 respondents had a class component connected with their LLC for their second year. Finally, of the 16 respondents who participated in a LLC their first two years, nine said there was a faculty member living in the residence hall as a part of the LLC (56.3%) and seven said there was no faculty member living in the residence hall (43.7%).

Table 2
Summary of LLC Participation Frequencies

	N	Percentage
Type of LLC in First Year		
Major-Related	13	19.1
Honors	44	64.7

Shared Interests	9	13.2
Other	2	2.9
Type of LLC in Second Year		
Major-Related	9	56.3
Honors	6	37.5
Shared Interests	0	0.0
Other	1	6.2
Second Year LLC		
Same as First Year	15	93.8
Different from First Year	1	6.2
LLC Class in Second Year		
Yes	0	0.0
No	16	100.0
Faculty-in-Residence in Second Year		
Yes	9	56.3
No	7	43.7

The breakdown of frequencies for respondents who only lived in a LLC their first year (52 respondents, 76.5%) is in Table 3. Most participants (33 respondents, 63.5%) who lived in a LLC for their first year only chose to live off campus with other students for their second year. The next highest percentage was those who lived in a fraternity or sorority house for their second year (7 respondents, 13.5%). Of the 52 respondents who lived in a LLC their first year, 18 did not live in a LLC their second year because they wanted to live in a different style building (34.6%). Thirteen wanted to live with friends who were not in the LLC (25%), and another 13 chose the “other” option (25%). Of the 13 who chose the “other” option, nine of them said they wanted to live off campus (17.3%). If given the choice, 39 said they would not have returned to the LLC even if they were allowed to (75%) while 13 said they would have returned to the LLC for their second year if they were allowed (25%). Currently only one LLC (the one associated with the major) officially allows students to return for a second year. That LLC may not allow students to return if they did not participate in the activities associated with the LLC.

Table 3
Summary of Frequencies for Participants in LLC First Year Only

	N	Percentage
Second Year Living Location		
On Campus in Area w/o LLC	6	11.5
On Campus in Area w/ LLC	5	9.6
Off Campus with Students	33	63.5
Off Campus Alone	0	0.0
Off Campus w/ Partner	0	0.0
Fraternity/Sorority House	7	13.5
Off Campus w/ Family	1	1.9
Reason for Not Living in LLC		
LLC was First-Year Only	11	21.2
Wanted to Live with Friends Not in LLC	13	25.0
Wanted to Live in Different Style Hall	18	34.6
Not Enough Space in LLC (waitlist)	1	1.9
Could Not Afford On Campus	6	11.5
Other	13	25.0
Would Have Returned to LLC if Allowed		
Yes	13	25.0
No	39	75.0

Respondent Demographics

The demographic data collected from participants is provided in Table 4. Participants were asked to identify their gender, ethnicity, employment status in their second year, employment location, number of hours worked each week, and their involvement in activities on campus. The demographic data is divided to illustrate the frequencies for those who participated in a LLC for their first year only and those who participated in a LLC their first two years.

LLC First Year Only

Of the 52 respondents (76.5%) who lived in a LLC for their first year only, 36 identified as female (69.2%), 15 identified as male (28.8%), and one identified as other (1.9%). Half of the respondents who lived in a LLC for their first year only were Caucasian/White (26 respondents, 50%). The second largest ethnicity represented in the respondents was Asian/Pacific Islander (19 respondents, 36.5%). Most of the respondents who lived on campus for their first year only

were not employed in their second year (28 respondents, 53.8%). Of the 24 who were employed (46.2%), 16 said they worked on campus (66.7%), and eight said they worked off campus (33.3%). Of those who worked, the largest group of respondents reported they worked 11-15 hours per week (10 respondents, 41.7%) and seven (29.2%) reported they worked 6-10 hours per week as the second highest response. Finally, participants were able to indicate different areas they were involved in on campus. They were able to select all areas applicable to their involvement. The majority of respondents who lived in a LLC for their first year only were involved in student organizations (47 respondents, 90.4%) and attended campus activities and events (42 respondents, 80.8%).

LLC Two Years

Of the 16 respondents (23.5%) who lived in a LLC for their first two years, 11 identified as female (68.7%), four identified as male (25.0%), and one identified as non-binary (6.3%). The majority of the respondents who lived in a LLC for their first two years were Caucasian/White (11 respondents, 68.7%). The second largest ethnicity represented in the respondents was Asian/Pacific Islander (four respondents, 25.0%). Most of the respondents who lived on campus for their first two years were employed in their second year (11 respondents, 68.7%). Of these 11 who were employed, eight said they worked on campus (72.7%), and three said they worked off campus (27.3%). Of those who worked, the largest group of respondents reported they worked five or less hours per week (four respondents, 36.4%) with three (27.3%) reporting they worked 11-15 hours per week as the second highest response. Finally, participants were able to indicate different areas they were involved in on campus. They were able to select all areas applicable to their involvement. The majority of respondents who lived in a LLC for their first two years were involved in student organizations (15 respondents, 93.8%).

Table 4
Summary of Demographic Frequencies Based on LLC Participation

Demographic	LLC First Year Only		LLC Two Years	
	N	Percentage	N	Percentage
Gender				
Female	36	69.2	11	68.7
Male	15	28.8	4	25.0
Other/Non-Binary	1	1.9	1	6.3
Ethnicity				
African American/Black	2	3.8	1	6.3
Asian/Pacific Islander	19	36.5	4	25.0
Caucasian/White	26	50	11	68.7
Hispanic/Latinx	3	5.8	0	0.0
Multi-ethnic	2	3.8	0	0.0
Native American/Alaskan Native	0	0.0	0	0.0
Other	0	0.0	0	0.0
Employment in Second Year				
Employed	24	46.2	11	68.7
Not Employed	28	53.8	5	31.3
Employment Location				
On-Campus	16	66.7	8	72.7
Off-Campus	8	33.3	3	27.3
Employment Hours Per Week				
5 or Less	4	16.7	4	36.4
6-10	7	29.2	2	18.2
11-15	10	41.7	3	27.3
16-20	1	4.2	2	18.2
More than 20	2	8.3	0	0.0
Other Involvement on Campus				
Attending campus activities and events	42	80.8	15	93.8
Social Fraternity or Sorority	16	30.8	0	0.0
Intercollegiate Athletics	5	9.6	0	0.0
Intramural Sports	12	23.1	2	12.5
Other Student Organizations	47	90.4	15	93.8
Other	3	5.8	3	18.8
None	0.0	0.0	0	0.0

Data Analysis

The researcher conducted reliability, independent samples t-tests, correlation tests, and analyses of variance (ANOVA) to analyze the data. The reliability test was conducted using

Cronbach's Alpha to determine the degree to which the questions within the subscales were interrelated (Johnson & Christensen, 2014).

Reliability

Internal reliability is the “extent to which people [scored] similarly on different parts of [the] measurement that [was] completed only once” (Christopher, 2017, p. 33). In order to measure if each respondent answered the items within the same subscale in a consistent manner, the researcher conducted reliability tests utilizing Cronbach's alpha. The researcher conducted this reliability test on the five subscales of the IIS: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments. The peer-group interactions subscale consisted of seven questions and had a high level of internal reliability with a Cronbach's alpha of 0.819. The interactions with faculty subscale's five questions also had a high level of internal reliability with a Cronbach's alpha of 0.823. The third subscale, faculty concern for student development and teaching, had five questions with a high level of internal reliability as well with a Cronbach's alpha of 0.817. The academic and intellectual development subscale's seven questions had a lower level of internal reliability with a Cronbach's alpha of 0.682. The final subscale, institutional and goal commitments, had six questions and a high level of internal reliability with a Cronbach's alpha of 0.715. Table 5 summarizes the results of the reliability tests.

Table 5
Summary of Reliability Tests

	Cronbach's Alpha	N
Peer-Group Interactions	.819	7
Interactions with Faculty	.823	5
Faculty Concern for Student Development and Teaching	.817	5
Academic and Intellectual Development	.682	7
Institutional and Goal Commitments	.715	6

Descriptive Statistics

The researcher conducted analyses on the five subscales, the items from Schreiner's (2010) Sophomore Experience Survey (how the participants' second year compared to their first), and the participants' academic achievement. As stated previously, the scales within the IIS ranged from one to five, with the five being the strongest level of agreement ("Strongly Agree" = 5, "Somewhat Agree" = 4, "Neither Agree Nor Disagree" = 3, "Somewhat Disagree" = 2, "Strongly Disagree" = 1). Table 6 provides the descriptive statistics for each of the subscales for the IIS divided between those who participated in a LLC their first year only and those who participated in a LLC their first two years. Table 7 provides the descriptive statistics for each of the subscales for the IIS separated by the type of LLC the participant was in during their second year. Since there was only one respondent who said they lived in a community other than a major-related LLC or Honors LLC, there is no standard deviation.

Table 6

Descriptive Statistics for Sense of Belonging Based on LLC Participation

	LLC First Year Only			LLC Two Years		
	Mean	SD	N	Mean	SD	N
Peer-Group Interactions	3.97	.72	51	3.85	.79	16
Interactions with Faculty	3.75	.87	52	3.74	.87	16
Faculty Concern for Student Development and Teaching	3.81	.82	52	3.48	.89	16
Academic and Intellectual Development	4.10	.58	52	4.03	.54	16
Institutional and Goal Commitments	4.63	.48	52	4.73	.52	16

Table 7

Descriptive Statistics for Sense of Belonging Based on Type of Second-Year LLC

	Major-Related N = 9		Honors N = 6		Other N = 1	
	Mean	SD	Mean	SD	Mean	SD
Peer-Group Interactions	3.97	.71	4.00	.46	1.86	.

Interactions with Faculty	3.64	1.08	3.90	.62	3.60	.
Faculty Concern for Student Development and Teaching	3.31	1.04	3.87	.55	2.60	.
Academic and Intellectual Development	3.94	.67	4.14	.34	4.14	.
Institutional and Goal Commitments	4.59	.66	4.89	.14	5.00	.

Note. No respondents indicated they participated in a LLC of shared interest as a second-year student.

To measure how the second year compared to their first year as well as their academic achievement, the researcher asked participants five questions: (a) how sure they are of their major, (b) how much worse or better their second year was compared to their first, (c) how much worse or better their second year courses were compared to their first year courses, (d) what their first-year grade point average (GPA) was, and (e) what their first semester GPA was in their second year. For the GPA, ranges were provided as options:

- 0.00 – 0.50 = 1
- 0.51 – 1.00 = 2
- 1.01 – 1.50 = 3
- 1.51 – 2.00 = 4
- 2.01 – 2.50 = 5
- 2.51 – 3.00 = 6
- 3.01 – 3.50 = 7
- 3.51 – 4.00 = 8

Table 8 provides the descriptive statistics of how the participants' second year compared to their first along with their academic achievement separated between those who participated in a LLC their first year only and those who participated in a LLC their first two years.

Table 8
Descriptive Statistics for Second Year Comparison and Academic Achievement

	LLC First Year Only N = 52		LLC Two Years N = 16	
	Mean	SD	Mean	SD
Certainty of Major	3.54	.67	3.50	.73
Second Year Overall	3.42	.94	3.50	1.32
Second Year Courses	3.46	1.16	3.69	1.01
First Year GPA	7.79	.54	7.69	.60
Second Year GPA	7.79	.54	7.69	.60

Note. GPA scores are based on the ranges provided in the questionnaire. 7 = 3.01 – 3.50; 8 = 3.51 – 4.00

Finally, the researcher conducted analyses to measure the mean and standard deviation for participants who had a faculty member living in their residence hall during their second year on the three subscales connected with academic integration: (a) interactions with faculty, (b) faculty concern for student development and teaching, and (c) academic and intellectual development. Nine participants (56.3%) had a faculty member living in their residence hall as part of their LLC, while seven (43.7%) did not have a faculty member living in their residence hall. The descriptive statistics are listed in Table 9.

Table 9
Descriptive Statistics for Academic Integration Based on Faculty-in-Residence

	Faculty-in-Residence N = 9		No Faculty-in-Residence N = 7	
	Mean	SD	Mean	SD
Interactions with Faculty	3.67	1.07	3.83	.60
Faculty Concern for Student Development and Teaching	3.36	1.01	3.63	.77
Academic and Intellectual Development	4.02	.58	4.04	.52

Social Integration

The researcher conducted analysis in order to answer the research question: what is the difference in social integration of second-year students who participated in a LLC their first two years and those who only participated in the LLC for their first year. An independent samples *t*-

test was performed to compare the independent variables (participating in a LLC for their first year only and participating in a LLC their first two years) on the IIS's first subscale (peer-group interactions). The t -test indicated there was no statistical significance between the mean peer-group interactions scores of participants who lived in a LLC their first year only ($M = 3.97, SD = .72$) and those who lived in a LLC for their first two years ($M = 3.85, SD = .79$); however, those who lived in a LLC their first year only did score higher than those who participated in a LLC their first two years, $t(65) = .57, p = .57$.

Academic Integration

The researcher conducted analyses in order to answer the research question: what is the difference in academic integration of second-year students who participated in a LLC their first two years and those who participated in their first year only. Independent samples t -tests were performed to compare the independent variables (participating in a LLC for their first year only and participating in a LLC their first two years) on three subscales of the IIS. The three subscales were: (a) interactions with faculty, (b) faculty concern for student development and teaching, and (c) academic and intellectual development.

The first independent samples t -test was performed on the interactions with faculty subscale. The t -test indicated there was no statistical significance between the mean interactions with faculty scores of participants who lived in a LLC their first year only ($M = 3.75, SD = .87$) and those who lived in a LLC for their first two years ($M = 3.74, SD = .87$); however, those who lived in a LLC their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .04, p = .97$.

The second independent samples t -test was performed on the faculty concern for student development and teaching subscale. The t -test indicated there was no statistical significance

between the mean faculty concern for student development and teaching scores of participants who lived in a LLC their first year only ($M = 3.81, SD = .82$) and those who lived in a LLC for their first two years ($M = 3.48, SD = .89$); however, those who lived in a LLC their first year only did score higher than those who participated in a LLC their first two years, $t(66) = 1.40, p = .17$.

The third independent samples t -test was performed on the academic and intellectual development subscale. The t -test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who lived in a LLC their first year only ($M = 4.10, SD = .58$) and those who lived in a LLC for their first two years ($M = 4.03, SD = .54$); however, those who lived in a LLC their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .443, p = .66$.

Commitment to Completion of Degree

The researcher conducted analysis in order to answer the research question: what is the difference in commitment to completion of degree of second-year students who participated in a LLC their first two years and those who participated in their first year only. An independent samples t -test was performed to compare the independent variables (participating in a LLC for their first year only and participating in a LLC their first two years) on the IIS's fifth subscale (institutional and goal commitments). The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who lived in a LLC their first year only ($M = 4.63, SD = .48$) and those who lived in a LLC for their first two years ($M = 4.73, SD = .52$); however, those who lived in a LLC their first two years did score slightly higher than those who participated in a LLC their first year only, $t(66) = .68, p = .50$.

Overall Sense of Belonging

The researcher reviewed the results of the independent samples *t*-tests for academic integration and social integration to answer the research question if there is any difference in the overall sense of belonging based on if the respondent participated in a LLC their first year only or if they participated in a LLC their first two years. Based on the independent samples *t*-tests above, there is no statistical significance between the difference in academic and social integration between students who participated in a LLC their first year only or if they participated in a LLC their first two years. In all cases, the respondents who participated in a LLC their first year only scored higher than the respondents who participated in a LLC their first two years.

Academic Integration and Faculty-in-Residence

The researcher conducted analyses in order to answer the research question: what is the difference in academic integration of second-year students who participated in a LLC their second year and had an academic connection. Since there was no respondent who had a class component connected to their LLC, the researcher focused on whether the participant had a faculty-in-residence or did not have a faculty member living in the residence hall of their LLC. Independent samples *t*-tests were performed to compare the independent variables (having a faculty-in-residence and not having a faculty-in-residence) on three subscales of the IIS. The three subscales were: (a) interactions with faculty, (b) faculty concern for student development and teaching, and (c) academic and intellectual development.

The first independent samples *t*-test was performed on the interactions with faculty subscale. The *t*-test indicated there was no statistical significance between the mean interactions with faculty scores of participants who did not have a faculty member living in the residence hall

in their second year LLC ($M = 3.83$, $SD = .60$) and those did have a faculty member living in their LLC ($M = 3.67$, $SD = 1.07$); however, those who did not have a faculty member living in their LLC did score higher than those who did, $t(14) = .36$, $p = .73$.

The second independent samples t -test was performed on the faculty concern for student development and teaching subscale. The t -test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who did not have a faculty member living in the residence hall in their second year LLC ($M = 3.63$, $SD = .77$) and those did have a faculty member living in their LLC ($M = 3.36$, $SD = 1.01$); however, those who did not have a faculty member living in their LLC did score higher than those who did, $t(14) = .59$, $p = .56$.

The third independent samples t -test was performed on the academic and intellectual development subscale. The t -test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who did not have a faculty member living in the residence hall of their second year LLC ($M = 4.04$, $SD = .52$) and those did have a faculty member living in their LLC ($M = 4.02$, $SD = .58$); however, those who did not have a faculty member living in their LLC did score slightly higher than those who did, $t(14) = .09$, $p = .93$.

Academic Integration and Second-Year Factors

The researcher also conducted multiple correlation tests to determine if there was any relationship between the three academic integration subscales (interactions with faculty, faculty concern for student development and teaching, and academic and intellectual development) on the factors relating to second-year student academic integration. The following were the factors related to second-year student academic integration collected in this questionnaire: (a) certainty

of major, (b) how difficult the second year was compared to the first, (c) how difficult second-year courses were compared to first-year courses, (d) first-year grade point average (GPA), and (e) first semester of the second year GPA.

Certainty of major. There was no statistically significant correlation between certainty of major and the interactions with faculty score, $r(66) = .208, p = .09$. There was no statistically significant correlation between certainty of major and the faculty concern for student development and teaching score, $r(66) = .100, p = .42$. There was a statistically significant positive correlation between certainty of major and the academic and intellectual development score, $r(66) = .252, p = .04$.

The researcher also ran a *t*-test to determine if there was any significance in how certain a participant was in their major based on if they lived in a LLC for their first year only or if they lived in a LLC for their first two years. The *t*-test indicated there was no statistical significance between the mean certainty of major scores of participants who lived in a LLC for their first year only ($M = 3.54, SD = .67$) and those who lived in a LLC their first two years ($M = 3.50, SD = .73$); however, those who lived in the LLC for their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .197, p = .845$.

Difficulty of second year. There was a statistically significant positive correlation between how much the difficulty of the second year did not change from the first year and the interactions with faculty score, $r(66) = .243, p = .046$. There was no statistically significant correlation between how much the difficulty of the second year did not change from the first year and the faculty concern for student development and teaching score, $r(66) = .169, p = .17$. There was no statistically significant correlation between how much the difficulty of the second year

did not change from the first year and the academic and intellectual development score, $r(66) = .186, p = .13$.

The researcher also ran a *t*-test to determine if there was any significance in how much the difficulty of the second year did not change from the first year based on if they lived in a LLC for their first year only or if they lived in a LLC for their first two years. The *t*-test indicated there was no statistical significance between the mean change in difficulty of the overall second year scores of participants who lived in a LLC for their first year only ($M = 3.50, SD = 1.317$) and those who lived in a LLC their first two years ($M = 3.42, SD = .936$); however, those who lived in the LLC for their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .260, p = .796$.

Difficulty of second year course work. There was no statistically significant correlation between how much the difficulty of the second-year coursework did not change from the first year and the interactions with faculty score, $r(66) = .061, p = .62$. There was no statistically significant correlation between how much the difficulty of the second-year coursework did not change from the first year and the faculty concern for student development and teaching score, $r(66) = -.063, p = .61$. There was no statistically significant correlation between how much the difficulty of the second-year coursework did not change from the first year and the academic and intellectual development score, $r(66) = .090, p = .47$.

The researcher also ran a *t*-test to determine if there was any significance in how much the difficulty of the second year coursework did not change from the first year based on if they lived in a LLC for their first year only or if they lived in a LLC for their first two years. The *t*-test indicated there was no statistical significance between the mean change in difficulty of second-year coursework scores of participants who lived in a LLC for their first year only ($M =$

3.69, $SD = 1.014$) and those who lived in a LLC their first two years ($M = 3.46$, $SD = 1.163$); however, those who lived in the LLC for their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .699$, $p = .487$.

First-year GPA. There was a statistically significant positive correlation between the first-year GPA category and the interactions with faculty score, $r(66) = .348$, $p = .004$. There was a statistically significant positive correlation between the first-year GPA category and the faculty concern for student development and teaching score, $r(66) = .383$, $p = .001$. There was a statistically significant positive correlation between the first-year GPA category and the academic and intellectual development score, $r(66) = .385$, $p = .001$.

The researcher also ran a t -test to determine if there was any significance in the first-year GPA based on if they lived in a LLC for their first year only or if they lived in a LLC for their first two years. The t -test indicated there was no statistical significance between the mean first-year GPA of participants who lived in a LLC for their first year only ($M = 7.79$, $SD = .536$) and those who lived in a LLC their first two years ($M = 7.69$, $SD = .602$); however, those who lived in the LLC for their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .640$, $p = .525$.

Second-year GPA. There was a statistically significant positive correlation between the second-year GPA category and the interactions with faculty score, $r(66) = .304$, $p = .012$. There was a statistically significant positive correlation between the second-year GPA category and the faculty concern for student development and teaching score, $r(66) = .267$, $p = .027$. There was a statistically significant positive correlation between the second-year GPA category and the academic and intellectual development score, $r(66) = .317$, $p = .009$.

The researcher also ran a *t*-test to determine if there was any significance in the second-year GPA based on if they lived in a LLC for their first year only or if they lived in a LLC for their first two years. The *t*-test indicated there was no statistical significance between the mean second-year GPA of participants who lived in a LLC for their first year only ($M = 7.79, SD = .536$) and those who lived in a LLC their first two years ($M = 7.69, SD = .602$); however, those who lived in the LLC for their first year only did score slightly higher than those who participated in a LLC their first two years, $t(66) = .640, p = .525$.

Other Impacts on Sense of Belonging

The researcher also conducted multiple analyses to determine if there were other impacts on the sense of belonging of the respondents. The researcher analyzed if there is an impact on the (a) type of LLC they participated in during their second year, (b) type of LLC they participated in during their first year, (c) living arrangements for non-LLC participants in their second year, and (d) involvement on campus on their sense of belonging utilizing the five subscales of the IIS. These analyses were a mixture of analyses of variance (ANOVA) and independent samples *t*-tests.

Type of LLC in second year. Of the four options for type of LLC respondents participated in their second year, only two options had greater than five participants (Honors and Major-Related). Therefore, the researcher conducted independent samples *t*-tests comparing those who participated in a Honors LLC their second year and those who participated in a Major-Related LLC their second year on each of the subscales of IIS to see if there was any significance in the type of LLC respondents participated in their second year on sense of belonging. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for

student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples *t*-test was performed on the peer-group interactions subscale comparing respondents who lived in a Honors LLC their second year and those who lived in a Major-Related LLC their second year. The *t*-test indicated there was no statistical significance between the mean peer-group interactions scores of participants who lived in a Honors LLC ($M = 4.00$, $SD = .46$) and those who lived in a Major-Related LLC ($M = 3.96$, $SD = .71$); however, those who participated in a Honors LLC scored higher than participants living in the Major-Related LLC, $t(13) = .10$, $p = .93$.

Next, an independent samples *t*-test was performed on the interactions with faculty subscale comparing respondents who lived in a Honors LLC their second year and those who lived in a Major-Related LLC their second year. The *t*-test indicated there was no statistical significance between the mean interactions with faculty scores of participants who lived in a Honors LLC ($M = 3.90$, $SD = .62$) and those who lived in a Major-Related LLC ($M = 3.64$, $SD = 1.08$); however, those who participated in a Honors LLC scored higher than participants living in the Major-Related LLC, $t(13) = .52$, $p = .61$.

Then, an independent samples *t*-test was performed on the faculty concern for student development and teaching subscale comparing respondents who lived in a Honors LLC their second year and those who lived in a Major-Related LLC their second year. The *t*-test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who lived in a Honors LLC ($M = 3.87$, $SD = .55$) and those who lived in a Major-Related LLC ($M = 3.31$, $SD = 1.03$); however, those who participated in a

Honors LLC scored higher than participants living in the Major-Related LLC, $t(13) = 1.20, p = .25$.

An independent samples t -test was performed on the academic and intellectual development subscale comparing respondents who lived in a Honors LLC their second year and those who lived in a Major-Related LLC their second year. The t -test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who lived in a Honors LLC ($M = 4.14, SD = .34$) and those who lived in a Major-Related LLC ($M = 3.94, SD = .67$); however, those who participated in a Honors LLC scored higher than participants living in the Major-Related LLC, $t(13) = .69, p = .50$.

Finally, an independent samples t -test was performed on the institutional and goal commitments subscale comparing respondents who lived in a Honors LLC their second year and those who lived in a Major-Related LLC their second year. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who lived in a Honors LLC ($M = 4.89, SD = .14$) and those who lived in a Major-Related LLC ($M = 4.59, SD = .66$); however, those who participated in a Honors LLC scored higher than participants living in the Major-Related LLC, $t(13) = 1.7, p = .31$.

Type of LLC in first year. The researcher ran a one-way, between-subjects ANOVA for the type of LLC the respondent participated in their first year on all five subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments. Any respondent who indicated they had participated in “Other” type of LLC was removed from analysis because there were only 2 respondents in this category. Table 10 illustrates the results found from this ANOVA test. This analysis revealed

statistically significant overall effect of the type of LLC respondents participated in their first year on institutional and goal commitments, $F(2, 63) = 3.335, p = .042$. There was no statistical significance in any of the other subscales. A follow-up Tukey's honesty significant difference (HSD) test showed no statistical significance between any of the types of LLCs participated in the first year.

Table 10

Summary of ANOVA Findings for Type of First Year LLC and Sense of Belonging

	Source	SS	df	MS	F	p
Peer-Group Interactions	Between Groups	.140	2	.070	.143	.867
	Within Groups	30.216	62	.487		
	Total	30.356	64			
Interactions with Faculty	Between Groups	.005	2	.003	.003	.997
	Within Groups	48.574	63	.771		
	Total	48.579	65			
Faculty Concern for Student Development and Teaching	Between Groups	.363	2	.182	.282	.755
	Within Groups	40.541	63	.644		
	Total	40.905	65			
Academic and Intellectual Development	Between Groups	.435	2	.218	.713	.494
	Within Groups	19.223	63	.305		
	Total	19.669	65			
Institutional and Goal Commitments	Between Groups	1.221	2	.610	3.335	.042*
	Within Groups	11.530	63	.183		
	Total	12.751	67			

Non-LLC living arrangements in second year. The researcher ran a one-way, between-subjects ANOVA on the type of living arrangement those who did not participate in a LLC their second year lived in on all five subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments. Any respondent who indicated they had lived "Off Campus w/ Family" was removed from analysis because there was only 1 respondent in this category. Table 11 shows the complete ANOVA results for all five subscales. This analysis did not reveal statistically significant

overall effect of the type of non-LLC living arrangement during the second year on sense of belonging.

Table 11

Summary of ANOVA Findings for Non-LLC Living Arrangements and Sense of Belonging

	Source	SS	df	MS	F	p
Peer-Group Interactions	Between Groups	.451	3	.150	.273	.844
	Within Groups	25.278	46	.550		
	Total	25.729	49			
Interactions with Faculty	Between Groups	1.380	3	.460	.604	.616
	Within Groups	35.826	47	.762		
	Total	37.206	50			
Faculty Concern for Student Development and Teaching	Between Groups	.548	3	.183	.254	.858
	Within Groups	33.849	47	.720		
	Total	34.397	50			
Academic and Intellectual Development	Between Groups	.562	3	.187	.538	.658
	Within Groups	16.369	47	.348		
	Total	16.932	50			
Institutional and Goal Commitments	Between Groups	.604	3	.201	.875	.461
	Within Groups	10.817	47	.230		
	Total	11.422	50			

Involvement on campus. Since participants were able to select all involvement opportunities that applied to them, the researcher conducted independent samples *t*-tests for each of the options on all the subscales.

Attending campus activities and events. Most respondents indicated they attended campus activities and events (57 respondents, 83.8%). In order to see if there was any significance in attending campus activities and events on sense of belonging, the researcher conducted independent samples *t*-tests comparing those who attended campus activities and events and those who did not on each of the subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples *t*-test was performed on the peer-group interactions subscale comparing respondents who attended campus activities and events and those who did not. The *t*-test indicated there was a statistical significance between the mean peer-group interactions scores of participants who attended campus activities and events ($M = 4.05$, $SD = .64$) and those who did not attend campus activities and events ($M = 3.40$, $SD = .97$). Those who did attend campus activities and events scored higher than those who did not, $t(65) = 2.80$, $p = .01$.

Next, an independent samples *t*-test was performed on the interactions with faculty subscale comparing respondents who attended campus activities and events and those who did not. The *t*-test indicated there was a statistical significance between the mean interactions with faculty scores of participants who attended campus activities and events ($M = 3.90$, $SD = .81$) and those who did not attend campus activities and events ($M = 2.93$, $SD = .71$). Those who did attend campus activities and events scored higher than those who did not, $t(66) = 3.73$, $p = .00$.

Then, an independent samples *t*-test was performed on the faculty concern for student development and teaching comparing respondents who attended campus activities and events and those who did not. The *t*-test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who attended campus activities and events ($M = 3.80$, $SD = .86$) and those who did not attend campus activities and events ($M = 3.40$, $SD = .66$); however, those who did attend campus activities and events scored higher than those who did not, $t(66) = 1.44$, $p = .16$.

An independent samples *t*-test was then performed on the academic and intellectual development subscale comparing respondents who attended campus activities and events and those who did not. The *t*-test indicated there was a statistical significance between the mean

academic and intellectual development scores of participants who attended campus activities and events ($M = 4.17$, $SD = .54$) and those who did not attend campus activities and events ($M = 3.62$, $SD = .48$). Those who did attend campus activities and events scored higher than those who did not, $t(66) = 3.12$, $p = .00$.

Finally, an independent samples t -test was performed on the institutional and goal commitments subscale comparing respondents who attended campus activities and events and those who did not. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who attended campus activities and events ($M = 4.72$, $SD = .38$) and those who did not attend campus activities and events ($M = 4.32$, $SD = .77$); however, those who did attend campus activities and events scored higher than those who did not, $t(10.98) = 1.70$, $p = .00$.

Social fraternity or sorority. Of the 68 respondents, only 16 indicated they participated in a social fraternity or sorority (23.5%). In order to see if there was any significance in participating in a social fraternity or sorority on sense of belonging, the researcher conducted independent samples t -tests comparing those who participated in a social fraternity or sorority and those who did not on each of the subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples t -test was performed on the peer-group interactions subscale comparing respondents who participated in a social fraternity or sorority and those who did not. The t -test indicated there was no statistical significance between the mean peer-group interactions scores of participants who participated in a social fraternity or sorority ($M = 4.03$, $SD = .76$) and those who did not participate in a social fraternity or sorority ($M = 3.91$, $SD =$

.73); however, those who did participate in a social sorority or fraternity scored slightly higher than those who did not, $t(65) = .54, p = .59$.

Next, an independent samples *t*-test was performed on the interactions with faculty subscale comparing respondents who participated in a social fraternity or sorority and those who did not. The *t*-test indicated there was no statistical significance between the mean interactions with faculty scores of participants who participated in a social fraternity or sorority ($M = 3.33, SD = 1.05$) and those who did not participate in a social fraternity or sorority ($M = 3.87, SD = .77$); however, those who did not participate in a social fraternity or sorority scored higher than those who did, $t(20.247) = 1.94, p = .07$.

Then, an independent samples *t*-test was performed on the faculty concern for student development and teaching comparing respondents who participated in a social fraternity or sorority and those who did not. The *t*-test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who participated in a social fraternity or sorority ($M = 3.69, SD = .74$) and those who did not participate in a social fraternity or sorority ($M = 3.74, SD = .88$); however, those who did not participate in a social fraternity or sorority scored slightly higher than those who did, $t(66) = .241, p = .81$.

An independent samples *t*-test was then performed on the academic and intellectual development subscale comparing respondents who participated in a social fraternity or sorority and those who did not. The *t*-test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who participated in a social fraternity or sorority ($M = 4.00, SD = .59$) and those who did not participate in a social fraternity

or sorority ($M = 4.11$, $SD = .56$); however, those who did not participate in a social fraternity or sorority scored slightly higher than those who did, $t(66) = .660$, $p = .51$.

Finally, an independent samples t -test was performed on the institutional and goal commitments subscale comparing respondents who participated in a social fraternity or sorority and those who did not. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who participated in a social fraternity or sorority ($M = 4.55$, $SD = .57$) and those who did not participate in a social fraternity or sorority ($M = 4.69$, $SD = .45$); however, those who did not participate in a social fraternity or sorority scored higher than those who did, $t(66) = .991$, $p = .33$.

Intercollegiate athletics. A few of the respondents indicated they participated in intercollegiate athletics (5 respondents, 7.4%). In order to see if there was any significance in participating in intercollegiate athletics on sense of belonging, the researcher conducted independent samples t -tests comparing those who participated in intercollegiate athletics and those who did not on each of the subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples t -test was performed on the peer-group interactions subscale comparing respondents who participated in intercollegiate athletics and those who did not. The t -test indicated there was no statistical significance between the mean peer-group interactions scores of participants who participated in intercollegiate athletics ($M = 4.06$, $SD = .82$) and those who did not participate in intercollegiate athletics ($M = 3.93$, $SD = .73$); however, those who did participate in intercollegiate athletics scored slightly higher than those who did not, $t(65) = .37$, $p = .71$.

Next, an independent samples *t*-test was performed on the interactions with faculty subscale comparing respondents who participated in intercollegiate athletics and those who did not. The *t*-test indicated there was no statistical significance between the mean interactions with faculty scores of participants who participated in intercollegiate athletics ($M = 3.84, SD = 1.05$) and those who did not participate in intercollegiate athletics ($M = 3.74, SD = .86$); however, those who did participate in intercollegiate athletics scored slightly higher than those who did not, $t(66) = .255, p = .80$.

Then, an independent samples *t*-test was performed on the faculty concern for student development and teaching comparing respondents who participated in intercollegiate athletics and those who did not. The *t*-test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who participated in intercollegiate athletics ($M = 3.80, SD = .76$) and those who did not participate in intercollegiate athletics ($M = 3.73, SD = .86$); however, those who did participate in intercollegiate athletics scored slightly higher than those who did not, $t(66) = .185, p = .85$.

An independent samples *t*-test was then performed on the academic and intellectual development subscale comparing respondents who participated in intercollegiate athletics and those who did not. The *t*-test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who participated in intercollegiate athletics ($M = 3.94, SD = .26$) and those who did not participate in intercollegiate athletics ($M = 4.09, SD = .56$); however, those who did not participate in intercollegiate athletics scored slightly higher than those who did, $t(66) = .568, p = .57$.

Finally, an independent samples *t*-test was performed on the institutional and goal commitments subscale comparing respondents who participated in intercollegiate athletics and

those who did not. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who participated in intercollegiate athletics ($M = 4.47, SD = .78$) and those who did not participate in intercollegiate athletics ($M = 4.67, SD = .46$); however, those who did not participate in intercollegiate athletics scored higher than those who did, $t(66) = .913, p = .37$.

Intramural sports. Some of the respondents indicated they participated in intramural sports (14 respondents, 20.6%). In order to see if there was any significance in participating in intramural sports on sense of belonging, the researcher conducted independent samples t -tests comparing those who participated in intramural sports and those who did not on each of the subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples t -test was performed on the peer-group interactions subscale comparing respondents who participated in intramural sports and those who did not. The t -test indicated there was no statistical significance between the mean peer-group interactions scores of participants who participated in intramural sports ($M = 4.05, SD = .60$) and those who did not participate in intramural sports ($M = 3.91, SD = .76$); however, those who did participate in intramural sports scored slightly higher than those who did not, $t(65) = .605, p = .55$.

Next, an independent samples t -test was performed on the interactions with faculty subscale comparing respondents who participated in intramural sports and those who did not. The t -test indicated there was no statistical significance between the mean interactions with faculty scores of participants who participated in intramural sports ($M = 3.90, SD = .79$) and

those who did not participate in intramural sports ($M = 3.70, SD = .89$); however, those who did participate in intramural sports scored higher than those who did not, $t(66) = .753, p = .45$.

Then, an independent samples t -test was performed on the faculty concern for student development and teaching comparing respondents who participated in intramural sports and those who did not. The t -test indicated there was no statistical significance between the mean faculty concern for student development and teaching scores of participants who participated in intramural sports ($M = 3.94, SD = .80$) and those who did not participate in intramural sports ($M = 3.68, SD = .85$); however, those who did participate in intramural sports scored higher than those who did not, $t(66) = 1.047, p = .30$.

An independent samples t -test was then performed on the academic and intellectual development subscale comparing respondents who participated in intramural sports and those who did not. The t -test indicated there was no statistical significance between the mean academic and intellectual development scores of participants who participated in intramural sports ($M = 4.29, SD = .52$) and those who did not participate in intramural sports ($M = 4.03, SD = .57$); however, those who did participate in intramural sports scored higher than those who did not, $t(66) = 1.527, p = .30$.

Finally, an independent samples t -test was performed on the institutional and goal commitments subscale comparing respondents who participated in intramural sports and those who did not. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who participated in intramural sports ($M = 4.69, SD = .51$) and those who did not participate in intramural sports ($M = 4.65, SD = .48$); however, those who did participate in intramural sports scored slightly higher than those who did not, $t(66) = .290, p = .77$.

Student organizations. Most of the respondents indicated they participated in student organizations (62 respondents, 91.2%). In order to see if there was any significance in participating in student organizations on sense of belonging, the researcher conducted independent samples *t*-tests comparing those who participated in student organizations and those who did not on each of the subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitments.

First, an independent samples *t*-test was performed on the peer-group interactions subscale comparing respondents who participated in student organizations and those who did not. The *t*-test indicated there was no statistical significance between the mean peer-group interactions scores of participants who participated in student organizations ($M = 3.96, SD = .74$) and those who did not participate in student organizations ($M = 3.74, SD = .60$); however, those who did participate in student organizations scored higher than those who did not, $t(65) = .623, p = .54$.

Next, an independent samples *t*-test was performed on the interactions with faculty subscale comparing respondents who participated in student organizations and those who did not. The *t*-test indicated there was a statistical significance between the mean interactions with faculty scores of participants who participated in student organizations ($M = 3.84, SD = .84$) and those who did not participate in student organizations ($M = 2.80, SD = .46$). Those who did participate in student organizations scored higher than those who did not, $t(66) = .2.95, p = .00$.

Then, an independent samples *t*-test was performed on the faculty concern for student development and teaching comparing respondents who participated in student organizations and those who did not. The *t*-test indicated there was no statistical significance between the mean

faculty concern for student development and teaching scores of participants who participated in student organizations ($M = 3.79$, $SD = .83$) and those who did not participate in student organizations ($M = 3.10$, $SD = .84$); however, those who did participate in student organizations scored higher than those who did not, $t(66) = 1.961$, $p = .05$.

An independent samples t -test was then performed on the academic and intellectual development subscale comparing respondents who participated in student organizations and those who did not. The t -test indicated there was a statistical significance between the mean academic and intellectual development scores of participants who participated in student organizations ($M = 4.14$, $SD = .53$) and those who did not participate in student organizations ($M = 3.48$, $SD = .58$). Those who did participate in student organizations scored higher than those who did not, $t(66) = 2.894$, $p = .01$.

Finally, an independent samples t -test was performed on the institutional and goal commitments subscale comparing respondents who participated in student organizations and those who did not. The t -test indicated there was no statistical significance between the mean institutional and goal commitments scores of participants who participated in student organizations ($M = 4.67$, $SD = .46$) and those who did not participate in student organizations ($M = 4.50$, $SD = .75$); however, those who did participate in student organizations scored higher than those who did not, $t(66) = .830$, $p = .41$.

Other involvement. Some of the respondents indicated they were involved in something that was not listed in the options provided (6 respondents, 8.8%). All respondents were able to provide additional details of what the “other” involvement entailed. Only one referred to participating in something other than options that were calculated elsewhere. Some listed working on campus, which was incorporated in data analysis previously, and some listed names

of student organizations, which were just reviewed. Since only one respondent referred to a different level of involvement, data analysis was not conducted on this answer.

Summary of Findings

A total of 68 respondents completed the questionnaire for this study and were included in data analysis. The researcher conducted independent samples *t*-tests, correlation tests, and analyses of variance (ANOVA) to answer each sub-research question. Based on the *t*-test analyses, the researcher found no statistically significant difference between students who lived in a LLC their first two years and those who only lived in a LLC their first year only on the five subscales of the IIS. The five subscales are: (a) peer-group interactions, (b) interactions with faculty, (c) faculty concern for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitment. The difference between the two groups on these five subscales was slight in most areas (difference ranging between .01 - .33). The only subscale where participants who lived in a LLC their first two years scored higher than those who lived in a LLC their first year only was the institutional and goal commitments subscale.

The researcher also wanted to determine if there were any other impacts to the five subscales. After performing *t*-tests on academic integration (subscales: interactions with faculty, faculty concern for student development and teaching, and academic and intellectual development) based on the presence of faculty-in-residence, there was no statistical significance found in academic integration between participants who lived in a LLC their first two years and either did or did not have a faculty member living in their residence hall. The researcher also found no statistically significant difference between the five subscales and (a) the type of LLC second-year respondents participated in, (b) their involvement in a social fraternity or sorority, (c) their involvement in intercollegiate athletics, and (d) their involvement in intramural sports.

The researcher did find statistically significant differences in some areas of involvement on campus after performing *t*-tests on the five subscales. Those who attended campus activities scored statistically, significantly higher in the subscales (a) peer-group interactions, (b) interactions with faculty, and (c) academic and intellectual development. Those who participated in student organizations scored statistically, significantly higher in the subscales (a) interactions with faculty and (b) academic and intellectual development.

The ANOVA test on the type of LLC respondents participated in their first year seemed to find a statistically significant difference on institutional and goal commitments subscale. However, a follow-up Tukey HSD showed no statistical significance between the groups. There was no statistical significance with their other five subscales based on the type of LLC respondents participated in their first year. Finally, another ANOVA test found no statistical significance on the five subscales of IIS and the living arrangement during the second year for respondents who did not live in a LLC. The potential implications and limitations of these findings will be discussed in the next chapter.

CHAPTER 5

DISCUSSION

The original purpose of this study was to determine if there was a difference in second-year students' sense of belonging for those who participated in a living-learning community (LLC) their first two years compared with students who participated in a LLC for their first year only. The researcher wanted to see if there was a difference because second-year students have the second highest attrition rates after first-year students (Almanac Issue, as cited by Gardner, Pattengale, Tobolowsky, & Hunter, 2010; Wellman, Johnson, & Steele, 2012). Many administrators have answered the call to provide more support and high-impact experiences for first-year students in answer to the retention issues of first-year students, but few have provided structure and support for second-year students (Graunke & Woosley, 2005; Isakovski et al., 2011; Gardner et al., 2010; Noel-Levitz, 2013; Pattengale & Schreiner, 2000; Schaller, 2005; Schaller, 2010).

The central research question for this study was: is there a difference in the sense of belonging for students who participated in a LLC for their first two years and students who participated in an LLC only their first year? To answer this central research question, the researcher broke it down into the following sub-questions:

1. What is the difference in social integration of second-year students who participated in a LLC their second year and those who did not?
2. What is the difference in academic integration of second-year students who participated in a LLC their second year and those who did not?

3. What is the difference in commitment to completion of degree of second-year students who participated in a LLC their second year and those who did not?
4. What is the difference in overall sense of belonging of second-year students who participated in a LLC their second year and those who did not?
5. What is the difference in academic integration based on academic connection to LLC (i.e., class component connected to LLC, faculty-in-residence)?
6. Is there any correlation between academic integration and other second-year factors (i.e., perceived difficulty, grade point average)?
7. What is the difference in academic and social integration based on other environmental factors (i.e., type of LLC, involvement)?

The researcher aimed to answer all these questions through a quantitative study utilizing a posttest-only design with nonequivalent groups. The researcher collected information through an electronic questionnaire on the respondent's participation in a LLC, their level of academic and social integration through the Institutional Integration Scale (IIS) (Pascarella & Terenzini, 1980), their experiences as a second-year student, and their demographics. Students who were at least 18 years of age who participated in a LLC during their first year (starting Fall 2018) were invited to participate in the study. The survey response rate was approximately 26%.

The researcher prepared descriptive statistics of the respondents to determine their LLC involvement, involvement elsewhere on campus, and demographics. In order to answer the multiple research questions, the researcher conducted independent samples *t*-tests, correlation tests, and one-way analysis of variance (ANOVA) looking at the five subscales of the IIS. A summary of the research questions, the findings, and the statistical significance can be found below in Table 12.

Table 12

Summary of Findings by Sub-Research Question and Subscale

Subscale Tested	Statistically Significant	Statistic
What is the difference in social integration of second-year students who participated in a LLC their second year and those who did not?		
• Peer-Group Interactions	No	$t(65) = .57, p = .57$
What is the difference in academic integration of second-year students who participated in a LLC their second year and those who did not?		
• Interactions with Faculty	No	$t(66) = .04, p = .97$
• Faculty Concern for Student Development and Teaching	No	$t(66) = .04, p = .97$
• Academic and Intellectual Development	No	$t(66) = .443, p = .66$
What is the difference in commitment to completion of degree of second-year students who participated in a LLC their second year and those who did not?		
• Institutional and Goal Commitments	No	$t(66) = .68, p = .50$
What is the difference in academic integration based on academic connection to LLC (faculty in residence)?		
• Interactions with Faculty	No	$t(14) = .36, p = .73$
• Faculty Concern for Student Development and Teaching	No	$t(14) = .59, p = .56$
• Academic and Intellectual Development	No	$t(14) = .09, p = .93$
Was there any correlation between academic integration and second-year factors?		
<u>Certainty of Major</u>		
• Integrations with Faculty	No	$r(66) = .208, p = .09$
• Faculty Concern for Student Development and Teaching	No	$r(66) = .100, p = .42$
• Academic and Intellectual Development	Yes	$r(66) = .252, p = .04$
<u>Difficulty of Second Year</u>		
• Integrations with Faculty	Yes	$r(66) = .243, p = .046$
• Faculty Concern for Student Development and Teaching	No	$r(66) = .169, p = .17$
• Academic and Intellectual Development	No	$r(66) = .186, p = .13$
<u>Difficulty of Second Year Coursework</u>		
• Integrations with Faculty	No	$r(66) = .061, p = .62$
• Faculty Concern for Student Development and Teaching	No	$r(66) = -.063, p = .61$

• Academic and Intellectual Development	No	$r(66) = .090, p = .47$
<u>First-Year GPA</u>		
• Integrations with Faculty	Yes	$r(66) = .348, p = .004$
• Faculty Concern for Student Development and Teaching	Yes	$r(66) = .383, p = .001$
• Academic and Intellectual Development	Yes	$r(66) = .385, p = .001$
<u>Second-Year GPA</u>		
• Integrations with Faculty	Yes	$r(66) = .304, p = .012$
• Faculty Concern for Student Development and Teaching	Yes	$r(66) = .267, p = .027$
• Academic and Intellectual Development	Yes	$r(66) = .317, p = .009$

Were there any other circumstances that impacted the sense of belonging of second-year students?

Type of LLC in Second Year

• Peer-Group Interactions	No	$t(13) = .10, p = .93$
• Interactions with Faculty	No	$t(13) = .52, p = .61$
• Faculty Concern for Student Development and Teaching	No	$t(13) = 1.20, p = .25$
• Academic and Intellectual Development	No	$t(13) = .69, p = .50$
• Institutional and Goal Commitments	No	$t(13) = 1.7, p = .31$

Type of LLC in First Year

• Peer-Group Interactions	No	$F(2, 62) = .143, p = .867$
• Interactions with Faculty	No	$F(2, 63) = .003, p = .997$
• Faculty Concern for Student Development and Teaching	No	$F(2, 63) = .282, p = .755$
• Academic and Intellectual Development	No	$F(2, 63) = .713, p = .494$
• Institutional and Goal Commitments	No (follow up Tukey)	$F(2, 63) = 3.335, p = .042$

Non-LLC Living Arrangements in Second Year

• Peer-Group Interactions	No	$F(3, 46) = .273, p = .844$
• Interactions with Faculty	No	$F(3, 47) = .604, p = .616$
• Faculty Concern for Student Development and Teaching	No	$F(3, 47) = .254, p = .858$
• Academic and Intellectual Development	No	$F(3, 47) = .538, p = .658$
• Institutional and Goal Commitments	No	$F(3, 47) = .875, p = .461$

Attending Campus Activities and Events

• Peer-Group Interactions	Yes	$t(65) = 2.80, p = .01$
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• Interactions with Faculty	Yes	$t(66) = 3.73, p = .00$
• Faculty Concern for Student Development and Teaching	No	$t(66) = 1.44, p = .16$
• Academic and Intellectual Development	Yes	$t(66) = 1.44, p = .16$
• Institutional and Goal Commitments	No	$t(10.98) = 1.70, p = .00$
<u>Social Fraternity and Sorority</u>		
• Peer-Group Interactions	No	$t(65) = .54, p = .59$
• Interactions with Faculty	No	$t(20.247) = 1.94, p = .07$
• Faculty Concern for Student Development and Teaching	No	$t(66) = .241, p = .81$
• Academic and Intellectual Development	No	$t(66) = .660, p = .51$
• Institutional and Goal Commitments	No	$t(66) = .991, p = .33$
<u>Intercollegiate Athletics</u>		
• Peer-Group Interactions	No	$t(65) = .37, p = .71$
• Interactions with Faculty	No	$t(66) = .255, p = .80$
• Faculty Concern for Student Development and Teaching	No	$t(66) = .185, p = .85$
• Academic and Intellectual Development	No	$t(66) = .568, p = .57$
• Institutional and Goal Commitments	No	$t(66) = .913, p = .37$
<u>Intramural Sports</u>		
• Peer-Group Interactions	No	$t(65) = .605, p = .55$
• Interactions with Faculty	No	$t(66) = .753, p = .45$
• Faculty Concern for Student Development and Teaching	No	$t(66) = 1.047, p = .30$
• Academic and Intellectual Development	No	$t(66) = 1.527, p = .30$
• Institutional and Goal Commitments	No	$t(66) = .290, p = .77$
<u>Student Organizations</u>		
• Peer-Group Interactions	No	$t(65) = .623, p = .54$
• Interactions with Faculty	Yes	$t(66) = .2.95, p = .00$
• Faculty Concern for Student Development and Teaching	No	$t(66) = 1.961, p = .05$
• Academic and Intellectual Development	Yes	$t(66) = 2.894, p = .01$
• Institutional and Goal Commitments	No	$t(66) = .830, p = .41$

After running reliability tests, most of the subscales had a high level of internal reliability (Cronbach's $\alpha \geq .70$), but the academic and intellectual development subscale had a lower

level of internal reliability (Cronbach's alpha of .682). This is one potential limitation of this study as the researcher reviews other limitations below.

Limitations

The researcher aimed to add empirical research to the literature on second-year students within LLCs. While the data provided an initial glance into the difference in sense of belonging on second-year students who either remained in a LLC or left after the first year, the results from this study should be considered exploratory. Several limitations emerged from the data collection process that should be considered when reviewing the results of this study. While there was a response rate of 26%, there was not a large enough sample size that was initially recruited from ($n = 322$). In order to have at least a moderate effect size (Cohen's $d \geq 0.51$), at least 57 respondents needed to live in a LLC for their first two years, and at least 143 respondents needed to live in a LLC for their first year only (Faul, Erdfelder, Buchner, & Lang, 2009). Given the numbers at University of the Southeast, this was not possible to achieve because only 26 students returned to live in a LLC for their second year. Based on the responses of students who participated in a LLC their first two years, only one race and ethnicity option had more than 5 participants. Therefore, the researcher could not conduct analysis with race and ethnicity as a variable.

Another limitation was the timing of this questionnaire. This questionnaire came out in the first month of the second semester of the second year. Participants had not experienced a full second year yet. It is possible that their scores could have changed if this questionnaire was sent towards the end of their second year.

Overall, the limited number of respondents lead to this study being an exploratory study. While the researcher could explore potential meaning of the data, it must be read through the that

lens. This study can be used as an additional call for the need for additional empirical data for second-year student's experience.

Interpretations of Findings

Overall, the results from the data analysis displayed no statistical significance. Therefore, the researcher cannot conclude whether the differences in the scores between the populations of those who lived in a LLC their first year only and those who lived in a LLC their first two years are due to something other than chance. While previous research indicated living in a LLC positively impacts social integration (Brower & Inkelas, 2010; Eck et al., 2007; Inkelas, Daver, et al., 2007; Pike, 1999; Pike et al., 1997; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015) and academic integration (Arendsdorf & Naylor-Tincknell, 2016; Brower & Inkelas, 2010; Eck et al., 2007; Garrett & Zabriskie, 2003; Inkelas, Johnson, et al., 2006; Inkelas, Vogt, et al., 2006; Pike et al., 1997; Purdie & Rosser, 2011; Wawrzynski et al., 2009), studies surrounding LLCs have not focused on the benefits of continued participation of living in a LLC more than one year. In addition, it is difficult to find a causal relationship between one aspect of a student experience and their overall sense of belonging.

Viewing a student's experience utilizing Astin's Input-Environment-Outcome (Astin, 1993), the student experiences college through navigating multiple environments and opportunities. Everything the student goes through in college can impact their sense of belonging. Some could be planned (e.g., student self-selecting to participate in an involvement opportunity) or unplanned (e.g., student connecting with another student by chance through a shared class). The student's sense of belonging is not only impacted by their choice to participate in a LLC, but also from the other planned and unplanned experiences the student's

environment provided. It is through this lens that the researcher interprets the results of this study.

The focus of this study was on the sense of belonging of second-year students in relation to their participation in a LLC in their second year. To measure the sense of belonging, the researcher looked at the student's academic and social integration at the institution. The connection between academic and social integration and sense of belonging came from Wolf-Wendel, Ward, and Kinzie (2009) as they expanded on Tinto's work. In order to interpret the sense of belonging from the findings, the researcher illustrated the findings for academic integration and social integration.

Academic Integration

With the three subscales associated with academic integration (interactions with faculty, faculty concern for student development and teaching, and academic and intellectual development), those who participated in a LLC for their first year only scored higher than those who participated in their first two years. This does not necessarily contradict studies focused on the academic integration of those participating in LLCs because those studies focused solely on comparing those who did not participate in a LLC and those who did. It is possible the students who participated in a LLC in the first year no longer needed the academic support of the LLC to face the challenges of the second year.

Diving in deeper to the data, the researcher looked to determine if there was any difference in academic integration based on the type of LLC the respondent participated in. In the first year, there was no statistical significance between the type of LLC in the first year on the academic integration subscales. Those who participated in a Major-Related LLC scored highest in the interactions with faculty subscale. Those who participated in the Honors LLC

scored highest in the faculty concern for student development and teaching subscale and the academic and intellectual development subscale. When comparing the second-year LLC type, there was no statistical significance between the type of LLC on the academic integration subscales. Those who participated in a Honors LLC scored higher in all three subscales (interactions with faculty, faculty concern for student development and teaching, and academic and intellectual integration) compared to the Major-Related LLC. This could be because of the structure of the Honors LLC or because the Honors LLC students could have more academic strength than other students. Those who participated in a Honors LLC were the highest number of respondents, so that could also impact the data.

However, it is interesting that those participating in a LLC during their second year who had a faculty-in-residence scored lower in all three subscales compared to those who were in a LLC during their second year and did not have a faculty-in-residence. The researcher thought the presence of a faculty member in the residence hall would at least increase the score for the interactions with faculty subscale. The researcher would need more information about the faculty-in-residence program to determine if the structure of the program does not promote interaction with the LLC participants.

Previous research stated that some second-year students tend to face academic integration issues. While Adelman's (2006) sample indicated that some second-year students may come into the second year struggling academically, this second-year population did not. Previous research also stated second-year students face the challenge of integrating academically because they are not having enough interactions with faculty (Gardner, Pattengale, & Schreiner, 2000). However, research on LLCs indicates that students who participate in LLCs have more interactions with faculty (Arendsorf & Naylor-Tincknell, 2016; Garrett & Zabriskie, 2003; Pike

et al., 1997) and even more of a mentoring relationship with faculty (Garrett & Zabriskie, 2003; Inkelas, Vogt, et al., 2006). This literature could not be supported by the results on this study because there was no non-LLC participant group to compare the LLC participants to.

In addition, previous research on second-year students has said that there is more academic difficulty in the second year (Gansemer-Topf, Stern, & Benjamin, 2007). When the respondents of this questionnaire compared their second year to their first year (overall and based on course work) the mean score was above the “about the same” option. It is possible that the students who participated in the LLCs (and responded to this questionnaire) were high achieving students especially since their mean first-year GPA category was close to the 3.51 to 4.00 range. This supported the research that students participating in LLCs transition to college with more academic ease (Brower & Inkelas, 2010; Inkelas, Daver, et al., 2007).

Research indicates second-year students may also struggle with choosing an academic major (Gardner et al., 2010); however, the mean response to how sure the respondents are of their major is at least “somewhat sure.” This could also indicate that participation in the LLC for the first year aided the transition to college. However, it must be noted that most of the respondents of this questionnaire participated in a LLC associated with a Honors program or one connected with their major.

The researcher also found positive correlations between most of the second-year factors mentioned and the academic integration subscales. Those who (a) were more certain of their major, (b) felt that their second year was not much different from the first year, (c) felt their second-year courses were not much different than their first-year courses, (d) had a high first-year GPA, and (e) had a high first semester of their second-year GPA were more likely to have

higher scores associated with higher academic integration. This helps connect these aspects with the academic integration of students.

Finally, the researcher presupposed that a student's involvement on campus would most likely affect their social integration on campus. However, there were a number of statistically significant results connected with their involvement on campus and their interactions with faculty. In looking at the interactions with faculty subscale, those who attended campus activities and events and those who participated in student organizations scored statistically significantly higher than those who did not. While not statistically significant, the data revealed that those who participated in intercollegiate athletics and those who participated in intramural sports scored higher than those who did not. However, those who participated in a social fraternity scored lower than those who did not.

When looking at the faculty concern for student development and teaching, only those who participated in a social fraternity or sorority scored lower than those who did not. If a respondent participated in any of the following, they scored higher than those who did not: (a) attending campus activities and events, (b) intercollegiate athletics, (c) intramural sports, and (d) student organizations. Of these areas with higher scores, those who attended campus activities and events or participated in student organizations were statistically significant. Those who participated in a social sorority or fraternity scored lower in this subscale than those who did not.

Overall, those who attended campus activities and events, participated in intramural sports, or participated in a student organization scored higher in all three subscales associated with academic integration than those who did not. Those who participated in intercollegiate athletics scored higher in the interactions with faculty and faculty concern for student development and teaching subscales but scored lower than those who did not in the academic

and intellectual development subscale. Something that should be considered for future research is the impact on social sororities and fraternities on academic integration since these students scored lower in all three subscales associated with academic integration.

Social Integration

With the IIS, there is only one subscale this researcher mainly associated with social integration: peer-group interactions. While it is not statistically significant, those who lived in a LLC for their first year only scored higher in this subscale than those who lived in the LLC their first two years. In both groups, their mean answer leaned more towards the agreement side of the scale indicating more social integration. This contradicts some of the studies on second-year students, that indicate that second-year students are still integrating socially to the institution (Noel-Levitz, 2011). Of course, research on LLCs indicates that students who participate in a LLC benefit from greater social integration (Brower & Inkelas, 2010; Eck et al., 2007; Inkelas, Daver, et al., 2007; Pike, 1999; Pike et al, 1997; Stassen, 2003; Wawrzynski et al., 2009; Workman, 2015). Therefore, the opportunity to participate in a LLC for even only one year could help aide the social integration of the student compared to those who do not participate in a LLC at all. There could also potentially be an argument that the students who continued participating in a LLC for a second year did so because they still felt that they needed that support. However, their score was not much lower than those who participated in a LLC for their first year only.

In looking to see if there is an impact on social integration based on the type of LLC the respondent participated in, there were no statistically significant results based on the type of LLC in the first year or the second year. In both years, those who participated in the Honors LLC scored higher than those who participated in the Major-Related LLC or a Shared Interest LLC.

As previously mentioned, the researcher thought the involvement of the student would have a greater impact on their social integration. Students scored higher on the peer-group interactions subscale when they were involved in any of the following: (a) attending campus activities and events, (b) a social sorority or fraternity, (c) intercollegiate athletics, (d) intramural sports, or (e) student organizations. The higher score was statistically significant for those who attended campus activities and events. This connects with the social integration definition as a level of student involvement and engagement on campus where the student feels more incorporated into the social aspect of the campus (Pike et al., 1997; Stassen, 2003), including being involved in organizations and attending events on campus (Bean & Eaton, 2000). However, a true causal relationship could not be discerned. As mentioned previously, there are a lot of environmental factors in a student's experience. A higher social integration score could be because they attended campus activities and events or from other opportunities and these students just so happened to also attend campus activities and events.

Commitment to Completion of Degree

The final subscale of the IIS was the institutional and goal commitments subscale. Again, this subscale did not produce any statistically significant results, but they are worth mentioning. This is the only subscale where those who participated in a LLC their first two years scored higher than those who only participated in the LLC for their first year. This could be because the students who continued in the LLC have a higher level of commitment overall to their experience than those who chose not to continue in a LLC. This was also interesting because Graunke and Woosley (2005) found that high levels of institutional commitment were not a predictor of second-year academic success. Additionally, those who participated in the Major-Related LLC their first year scored higher in the institutional and goal commitments

subscale than those who participated in the Honors LLC or the Shared Interest LLC. In looking at the type of LLC in the second year, those who participated in the Honors LLC scored higher in this subscale than those who participated in the Major-Related LLC. Both of these LLCs center on commitment to certain aspects of their college experience (i.e., commitment to a major, commitment to an honors program). This could explain why their institutional and goal commitments scores are higher.

When looking at the other levels of involvement on the institutional and goal commitments subscale, there were no statistically significant results. Those who attended campus activities and events, participated in intramural sports, or participated in student organizations scored higher in this subscale than those who did not. Those who participated in social sororities and fraternities or intercollegiate athletics scored lower than those who did not. While these results were not significant, it would be an interesting future research study to investigate why participating in social sororities and fraternities or intercollegiate athletics results in a lower score for institutional and goal commitments.

Sense of Belonging

Overall, when looking at the academic and social integration scores to indicate their sense of belonging, those who participated in a LLC their first year only scored higher than those who participated in a LLC their first two years. However, there were no statistically significant data to indicate the results were related to anything other than chance. Previous research on LLCs was somewhat mixed when determining the impact of LLCs on the student's sense of belonging. Spanierman et al. (2013) found that LLC participants did not differ significantly in their sense of belonging compared to those who did not participate in a LLC. However, a number of studies

found that they experienced a greater sense of belonging because of their social and academic integration (Cheng, 2014; Hoffman et al., 2002; Wawrzynski et al., 2009).

Conclusion

Overall, this exploratory study did not find any statistically significant data to conclude if there is any difference in the sense of belonging between those who participated in a LLC their first two years and those who participated in a LLC their first year only. Those who participated in the LLC for their first year only scored higher on the social and academic integration subscales than those who participated for their first two years. Is the impact of LLCs most prominent in the first year but not necessary for second-year students? In reviewing recent research, the impact of even living on campus seems mixed with some findings not showing a benefit (Mayhew et al., 2016). It is necessary for each institution to truly assess the impact of their own programs to determine the impact, determine if an initiative should continue, or determine what improvements should be made to address the needs of their students.

Implications for Practice

Since each institution is unique (Chan, 2000; Kennedy & Upcraft, 2010; Tobolowsky & Cox, 2007), there is no single initiative that will improve the second-year experience at every campus. LLCs may be a strong initiative for second-year students on some campuses. The assessment of the second-years' student experience and any initiatives is imperative for administrators to gain a deeper understanding of the needs of their specific students.

LLCs for Second-Year Students

While this study did not produce statistically significant results comparing the sense of belonging of those who participated in a LLC their first year only and those who participated in a LLC their first two years, this study contributes to the existing body of literature by providing

additional information about second-year initiatives. This study supports the information that not many second-year students live in a LLC (Skyfactor Benchworks, 2017). This was found based on the low number of students provided by the housing administration of who participated in a LLC their first two years and based on the difficulty of finding institutions with a good number of second-year participants in their LLCs.

Whitcher-Skinner, Dees, and Watkins (2017) found that their students wanted to continue living in the LLC after their first year even though the community was only designed for one academic year. However, in this study, most respondents who participated in the LLC for their first year only actively chose not to participate in the LLC for their second year. This supports the statement that each campus has its own unique identity and culture, and administrators need to determine what will work best for their students to have the greatest impact on the retention, persistence, and success of their second-year students (Chan, 2000; Kennedy & Upcraft, 2010; Tobolowsky & Cox, 2007). Whitcher-Skinner, Dees, and Watkins' (2017) study was at a single mid-sized institution (Southeast Missouri State University). In looking on their website, this institution currently has a two-year live on requirement ("FAQ", n. d.). It is unclear if this was the requirement at the time of the study, but this could impact why students wanted to return to the LLC. Providing opportunities for second-year students to continue living in a LLC could positively impact a student's sense of belonging at one institution but not another, or it could be a better alternative to other options of on campus housing. It is important for practitioners to conduct the assessment and listen to their students to determine if the need is there.

Research suggested that second-year students struggle with academic integration (Adelman, 2006; Gardner, Pattengale, & Schreiner, 2000), social integration (Cheng, 2004; Gansemer-Topf, Stern, & Benjamin, 2000; Noel-Levitz, 2011), and satisfaction (Juillerat, 2000;

Schreiner, 2010). Based on previous research on LLCs, it would make sense that LLCs could be an initiative to help second-year students with their continued transition to the institution. At some institutions, this initiative may be successful, but it is important for the institution to determine what initiatives speak best to their students. LLCs may be a high-impact practice that is best suited for first-year students. Administrators must be cognizant that they cannot just apply what was done for first-years students to second-year students (Graunke & Woosley, 2005).

If LLCs are an initiative that works for their second-year students, the administrators will need to look at why students are not returning to the LLC for the second year. A number of participants in this study wanted to live off campus or in a different style hall. Maybe institutions need to look at the potential of creating an LLC environment in the style of living environment that speaks to upper class students (potentially apartment-style). However, administrators should be mindful of the potential financial impact of moving the LLC to a community some students cannot afford. Depending on the information gathered by the administrators, potential scholarships or financial help should be researched to determine how to assist students who may not be able to afford a more expensive housing option.

Assessing the Needs of Second-Year Students

Each campus' unique identity and culture make it difficult to provide a national standard for what the student experience should look like. Practitioners also need to understand their student population and where they are (Chan, 2000; Kennedy & Upcraft, 2010; Tobolowsky & Cox, 2007). Initially, gathering retention and persistence information is key. They need to determine how many students are being retained from year to year to determine where there may be large drops in retention. Then, they should assess their students to see where the issues are.

Determining what their students may be struggling with (academics, social integration, etc.), can determine next potential steps in identifying initiatives to help with these challenges. The student experiences the whole institution and no single initiative is a cure-all for retention issues. Provencher and Kassel (2019) suggested that incorporation of high-impact practices in the second year could improve retention, but future research is needed to determine which high-impact practices align with the needs of second-year students.

Research and best practices should be reviewed, but it must be through the lens of their specific institution and the needs of their students. Research tells us second-year students struggle with a sense of abandonment (Flanagan, 2007; Pattengale & Schreiner, 2000; Schreiner, Miller, Pullins, & Seppelt, 2012), transitioning out of the first year (Pattengale & Schreiner, 2007), interacting with faculty (Gardner, Pattengale, & Schreiner, 2000), choosing an academic major (Gardner et al., 2010), and making connections with peers (Gansemer-Topf, Stern, & Benjamin, 2000; Schaller, 2010). Administrators need to assess their second-year students to see where they are. Are they facing the same challenges as those who participated in these research studies?

After assessing their needs, it is important to assess the programs or initiatives they currently have for second-year students. If there are already students who are participating, administrators should find out why they are participating. At the site for this study, only 8% returned to the LLC experience (based on the numbers provided by the housing administration). Why did those students choose to continue in the LLC experience? With such a small group of students to start with, it would be easy for administrators to connect with these students at the beginning of the year (or prior to the start of the year) to determine the needs of this group of students to create an intentional experience for them. While this may not speak to the entire

second-year population, it can be beneficial to start creating a foundation for a specialized second-year experience.

Administrators also need to engage in empirical research to determine the effectiveness of these strategies (Kennedy & Upcraft, 2010). Then, they need to share their findings. Publishing and presenting on their programs or initiatives can help others learn about potential solutions. Even though each institution is unique, providing potential solutions to other institutions can help create a starting point for administrators to identify some potential strategies and initiatives to test at their campus.

Interactions with faculty was cited as a predictor of second-year student success (Graunke & Woosley, 2005; Schaller, 2010; Schreiner, 2010). How are the faculty building interactions with the students? What faculty interact with second-year students? How does this initiative connect to the tenure process (if the institution wants this to be a priority)? In addition to interactions with faculty, there has been a focus on academic and career planning (Gore & Hunter, 2010; Schaller, 2010; Schreiner, 2010; Tobolowsky & Cox, 2007). This has been something academic advisors focus on (Schreiner, 2010; Tobolowsky & Cox, 2007). These strategies can lend themselves to an integrated second-year student experience with the proper coordination.

Integrated Student Experience

The student does not experience the programs and initiatives in a vacuum. The student experiences college through navigating multiple environments and opportunities (Astin, 1993). As seen from this study, students who attended campus events and activities and/or were involved in student organizations were statistically, significantly higher in the subscales interactions with faculty and academic and intellectual development. This does not mean that

these involvement opportunities caused this increase, but there could have been additional opportunities that increased the impact in these areas.

If the research is correct about the need to increase interactions with faculty and academic and career planning, administrators can create a holistic experience to connect all these experiences. There is a call for a more integrated, holistic experience for second-year students (Graunke & Woosley, 2005; Isakovski et al., 2011; Noel-Levitz, 2013; Schaller, 2005), Faculty, academic advising, career services, and student activities can come together to discuss a partnership to create an integrated second-year experience. Faculty can share what issues they are seeing in the classroom. Then, academic advisors can better prepare students for the difficulties they may face in their second year. Academic advisors and career services can come together to better help second-year students think about their majors through a career lens. Student activities can work with faculty, academic advisors, and career services to help build co-curricular programs to increase interactions with faculty and connecting their major with potential career options.

Marketing the Second-Year Experience

Once a second-year initiative is created, administrators should determine how to market this to appeal to students. If students are already participating in the initiative, administrators should determine why they decided to participate. Administrators can even ask why they think their peers are not participating. Since second-year students are potentially navigating a sense of abandonment (Flanagan, 2007; Pattengale & Schreiner, 2000; Schreiner, Miller, Pullins, & Seppelt, 2012), administrators need to create a marketing plan to make the initiative feel like a premiere experience.

Future Research

This exploratory study offers many opportunities for future research. First, researchers should continue to investigate the impact of LLCs past the first year. This should be done with different types of institutions and a larger sample size. With a larger sample size, it is possible to obtain statistically significant results, if significant differences exist. This institution also had a high retention rate in the first year (94%), so this may not have been the best site to measure the impact of a second year in a LLC. Future studies should also ask why a student chose to continue participating in a LLC and should include students who never participated in a LLC to have an additional level of comparison.

At some institutions, second-year students can join a LLC even after not participating in a LLC in their first year. In this instance, a pre- and post-test study could help measure the impact of joining a LLC after the first year. Another study should also be completed at an institution with a two-year live-on requirement. Since a number of participants in this study chose not to participate in a LLC their second year because they wanted to live off campus, an institution with a two-year live-on requirement would remove that factor from their choice not to continue.

Additionally, future research should potentially look at other instruments or revising the Institutional Integration Scale (IIS) to apply more to the second-year experience since IIS was created with first-year students (Pascarella & Terenzini, 1980). IIS is 40 years old now, and both institutions and the students are different. A new instrument could focus on the challenges specifically faced by second-year students (i.e., sense of abandonment, transitioning out of the first year, interacting with faculty, choosing an academic major, and making connections with peers) and update the language to reflect today's student experience. The instrument could be updated to speak about interacting with faculty in more of a mentorship capacity for second-year

students (Boivin, Fountain, & Baylis, 2000). It could speak more about how connected they feel with their academic major (Gardner et al., 2010) and career planning (Schreiner, 2010; Tobolowsky & Cox, 2007). Additionally, the questionnaire in this study was almost 50 questions long. In an era of BuzzFeed quizzes, it is unclear if students will fully engage in a long questionnaire.

This study's findings about the academic and social integration of respondents who participated in a social fraternity or sorority also provides the potential for future research studies. While these findings were not statistically significant, it is interesting data to note that those who participated in a social fraternity or sorority scored lower than those who did not in all the subscales associated with academic and social integration. Mayhew et al. (2016) reported the inconsistent findings of the impact of social fraternity and sorority membership on academic competence partly because some studies measured self-reported gains while others utilized objective measures of student learning (i.e., standardized testing). This could be a finding specific to this institution, so it is worth investigating at other institutions.

Qualitative studies can also help in understanding the student experience in LLCs. Conducting interviews or focus groups can help gather more candid information on how the LLC impacts the student experience. Conducting a mixed methods study could provide additional context on why the students scored a certain way in the subscales. Providing an opportunity for respondents to offer an explanation for why they felt a certain way about the subscale (i.e., why they felt connected to faculty, why they felt connected to their peer-group) can also glean information on if the LLC was the impact or another initiative or experience may have impacted the score for the subscale.

Longitudinal studies may also be helpful in understanding any ongoing impact participating in a LLC during their first year may have had. This research study does not make note of any students who participated in a LLC their first year but did not return to the institution for their second year. Following a group of students as they progress through the institution can provide more details on the student experience after their first year in a LLC. Currently, no study exists that has explored whether the academic and social integration of students who participated in a LLC during their first year stays the same or changes over time.

Summary

This exploratory research study surveyed students who participated in a LLC during their first year at a large, public, land-grant, and sea-grant institution located in the southeast region of the United States. This study explored the sense of belonging of second-year students who either continued participating in a LLC or left the LLC after the first year. This study had limitations including sample size and the timing of the questionnaire, which was administered halfway through the second year, rather than at the end of a second full year in a program. There were no statistically significant differences in the sense of belonging between the those who lived in a LLC their first year only and those who lived in a LLC their first two years. Those who lived in a LLC their first year only had higher scores in academic and social integration. It is possible those who returned to the LLC experience still needed the connection, but those who left after the first year felt they did not need to continue because they felt integrated to the institution. Those who lived in a LLC their first two years had higher scores in institutional and goal commitments. There were some statistically significant results for students who attended campus events and activities and/or were involved in a student organization. Those who attended campus activities and events felt more connected to their peers (peer-group

interactions), connected more with faculty outside of the classroom (interactions with faculty), and advanced intellectually (academic and intellectual development). Those who participated in student organizations connected more with faculty outside of the classroom (interactions with faculty) and advanced intellectually (academic and intellectual development). This exploratory study adds to the literature on second-year students and LLCs. The results of this study provide implications for practice and directions for future research.

Practitioners should continue understanding their student body to determine initiatives to increase retention and persistence rates. There is no one initiative that will provide solutions for every institution. Each institution's student body is unique, and administrators need to better understand their students to create initiatives that will truly have an impact (Chan, 2000; Kennedy & Upcraft, 2010; Tobolowsky & Cox, 2007). It is imperative for institutions to assess their students' needs and the initiatives and programs they are currently providing. There is an opportunity to create an integrated second-year student experience to help retain these students. Administrators need to focus on making sure the institutional environment is not "slumping" on our second-year students (Gansemer-Topf, Stern, & Benjamin, 2007).

Future researchers should examine any ongoing impact participating in a LLC may have on the student experience and continued transition while also including non-LLC participants in the study. Researchers can continue to utilize the IIS as a way to measure sense of belonging, but they should also consider creating an updated instrument that speaks to the challenges of the second-year students. Researchers should also look to conduct qualitative and longitudinal studies to enhance the literature on this topic.

While this study does not provide evidence to suggest a second year in the LLC is needed, it will add to the literature on both second-year students and LLCs. The second-year

student faces different challenges than first-year students, so an initiative that was created for first-year students may no longer create a large impact on their integration into the institution. Second-year initiatives need to focus on the needs of the second-year student and become premiere programs to prevent any “sophomore slump.”

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Appendix A

E-mail to Potential Participants

Dear Student,

You are invited to participate in a research study because you lived in a <ENTER LANGUAGE USED FOR LLC BY INSTITUTION> as a first-year student. I am a graduate student under the direction of Dr. Diane Cooper in the Department of Counseling and Human Development at the University of Georgia. The purpose of this study is to compare the experiences and satisfaction level of students who participated in a <ENTER LANGUAGE USED FOR LLC BY INSTITUTION> as a first-year student and either continued participation or did not continue participation for their second year.

Your participation will involve taking a survey through the link listed below. This survey should only take 15-20 minutes to complete. There are no anticipated risks with this study. The potential benefits may include improvement of opportunities for second-year participation in <ENTER LANGUAGE USED FOR LLC BY INSTITUTION>.

At the end of the survey, you can enter in for a chance to win one of five \$25 gift cards to Amazon!

If you would like additional information about this study, please feel free to e-mail Christina Ujj at cdu13864@uga.edu.

Please complete the follow questionnaire by <INSERT DATE> to be considered a participant in this study.

Thank you for your consideration!

<LINK TO QUESTIONNAIRE>

Christina Ujj

Appendix B

Informed Consent

UNIVERSITY OF GEORGIA CONSENT FORM Second-Year LLC Study

Researcher's Statement

I am asking you to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called "informed consent." A copy of this form will be given to you.

Principal Investigator: Dr. Diane Cooper
Department of Counseling and Human Development Services
dlcooper@uga.edu

Co-Investigator: Christina Ujj
Department of Counseling and Human Development Services
cdu13864@uga.edu

Purpose of the Study

Many studies provide information on the impact of participating in living-learning communities (LLCs), but not all LLCs provide an opportunity for second-year students to continue participation in the LLC they started in as a first-year student. Through this study, I intend to gather information in order to compare the experiences and satisfaction of second-year students who both continued participation in an LLC and did not continue participation.

You received information on participating in this study because you participated in a LLC in your first year.

Study Procedures

If you agree to participate, you may continue to the questionnaire associated with this study. The questionnaire includes fifty (50) with questions about participants' demographics. Within this demographic question section, participants will be asked personal and potentially sensitive information including: gender identity, racial/ethnic identity, current living situation, and reason for not participating in a LLC for a second year. This questionnaire should take no longer than 15-20 minutes to complete.

Risks and discomforts

I do not anticipate any risks from participating in this research. The decision to participate or not participate in the research will not influence the availability of any services or grades that the participant may receive outside of the context of research

Benefits

There are no direct benefits to participants. The benefits of this research are to those who work with living-learning communities (LLC). Through this study, those who work with LLCs will determine if there is a need to create opportunities for second-year students to participate in LLCs.

Incentive for Participation

For your participation, you will be entered into a drawing for one of five \$25 gift cards to Amazon. You do not have to be in the study to enter the drawing. Please send an e-mail to cdu13864@uga.edu to enter the drawing if you do not want to be in the study. Your name will be provided to the investigator's departmental business office for tracking purposes if you win.

Privacy/Confidentiality

No identifiable information will be collected in the questionnaire. For participants who are interested in entering in for the drawing of the Amazon gift card, they will have the opportunity to click a link that will take them to a separate form that will not connect their name and contact information to their questionnaire.

This research involves the transmission of data over the internet. Every reasonable effort has been taken to ensure the effective use of available technology; however, confidentiality during online communication cannot be guaranteed.

The project's research records may be reviewed by departments at the University of Georgia responsible for regulatory and research oversight.

Taking part is voluntary

Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Again, the decision to participate or not participate in the research will not influence the availability of services or grades that the participant may receive outside of the context of research.

Once you select "Submit" at the end of the questionnaire, you will not be able to withdraw from this study. Since the information collected through the questionnaire is not identifiable, the researcher will not be able to delete your responses should you reach out after selecting "Submit".

If you have questions

If you have questions at this time or at a later day, you may contact Christina Ujj at cdu13864@uga.edu or at 954-629-2585. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject's Consent to Participate in Research:

To voluntarily agree to take part in this study, you will enter your initials below and select "Agree". By selecting "Agree", you agree that you have read this entire consent form, are eighteen (18) years of age or older, and have had all of your questions answered.

Appendix C

Questionnaire

*Questionnaire has language specific to the institution removed to keep the institution anonymous.

1. Did you participate in a living-learning community in your first year at your institution?
 - Yes – lead to question 2
 - No – end questionnaire (thank you)
2. What type of living-learning community did you live in your first year?
 - One for your designated major
 - An Honors community
 - One where you shared interests with other residents
 - Other:
3. Did you live in a living-learning community for your second year at your institution?
 - Yes – proceed to question 4
 - No – proceed to question 8
4. What type of living-learning community did you live in for your second year?
 - One for your designated major
 - An Honors community
 - One where you shared interests with other residents
 - Other:

5. Did you have to take a specific class as part of living in the living-learning community during your second year?
- Yes
 - No
6. Was there a faculty member who lived in the residence hall as part of the living-learning community during your second year?
- Yes
 - No
7. Did you return to the same living-learning community or change communities for your second year? (then proceed to question 11)
- Returned to same living-learning community
 - Changed to a different living-learning community
8. Where did you live during your second year?
- On campus in a hall that does not have an LLC
 - On campus in a hall that does have at least one LLC
 - Off campus with other students
 - Off campus alone
 - Off campus with partner
 - In a fraternity/sorority house
 - With family off campus
9. Why did you choose not to live in a living-learning community your second year (check all that apply)?
- The living-learning community I was in was only for first-year students

- I wanted to live with friends who were not part of the living-learning community
- I wanted to live in a different style hall on campus (i.e., apartment style, suite style, etc.)
- There was not enough space for me to live in a living-learning community (i.e., applied and was on the waiting list)
- I could not financially afford to live on campus
- Other (please specify):

10. If you could have continued participating in your LLC from your first year, would you have chosen to return for your second year?

- Yes
- No

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
(11) Since coming to this university, I have developed close personal relationships with other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(12) The student friendships I have developed at this university have been personally satisfying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(13) My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(14) My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(15) It has been difficult for me to meet and make friends with other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(16) Few of the students I know would be willing to listen to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

and help me if I had a personal problem.					
(17) Most students at this university have values and attitudes different from my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(18) My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(19) My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(20) My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(21) Since coming to this university, I have developed a close, personal relationship with at least one faculty member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(22) I am satisfied with the opportunities to meet and interact informally with faculty members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(23) Few of the faculty members I have had contact with are generally interested in students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(24) Few of the faculty members I have had contact with are generally outstanding or superior teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(25) Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(26) Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(27) Most faculty members I have had contact with are genuinely interested in teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(28) I am satisfied with the extent of my intellectual development since enrolling in this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(29) My academic experience has had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(30) I am satisfied with my academic experience at this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(31) Few of my courses this year have been intellectually stimulating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(32) My interest in ideas and intellectual matters has increased since coming to this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(33) I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(34) I have performed academically as well as I anticipated I would.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(35) It is important for me to graduate from college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(36) I am confident that I made the right decision in choosing to attend this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(37) It is likely that I will register at this university next fall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(38) It is not important to me to graduate from this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(39) I have no idea at all what I want to major in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(40) Getting good grades is not important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. What is your gender?

- Female
- Male
- Other:

42. What is your ethnicity?

- African American/Black
- Asian/Pacific Islander
- Caucasian/White
- Hispanic/Latinx
- Multiethnic
- Native American/Alaskan Native
- Other:

43. Were you employed during your second year?

- Yes (proceed to question 44)
- No (proceed to question 46)

44. Where were you employed during your second year?

- On-Campus
- Off-Campus
- Both

45. Approximately how many hours did you work per week during your second year?

- Less than 5
- 5 – 10
- 11 – 15
- 16 – 20
- More than 20

46. What are you involved in on campus (please check all that apply)?

- Attending campus activities and events

- Participate in a social fraternity or sorority
- Participate in intercollegiate athletics
- Participate in intramural sports
- Participate in other student organizations
- Other:
- None of the above

47. How sure of you of your major?

- Very Unsure
- Somewhat Unsure
- Somewhat Sure
- Very Sure

48. Compared to your first year of college, your second year was:

- Much worse
- Worse
- About the Same
- Better
- Much Better

49. Compared to your first year, courses in your second year were:

- Much Worse
- Worse
- About the Same
- Better
- Much Better

50. What was your GPA after your first year (Spring 2019)?

- 4.0-3.51
- 3.50-3.01
- 3.00-2.51
- 2.50-2.01
- 2.00-1.51
- 1.50-1.01
- 1.00-0.51
- 0.50-0.00

51. What was your GPA after your first semester second year (Fall 2019)?

- 4.0-3.51
- 3.50-3.01
- 3.00-2.51
- 2.50-2.01
- 2.00-1.51
- 1.50-1.01
- 1.00-0.51
- 0.50-0.00

If you would like to enter in for a drawing for one of five \$25 gift cards to Amazon, please click the link below. Information collected for the drawing will be separate from individual responses to the survey.

Thank you for your participation in this study!

Appendix D

Subscales

- Subscale I: Peer-group interactions (social integration)
 - Since coming to this university, I have developed close personal relationships with other students.
 - The student friendships I have developed at this university have been personally satisfying.
 - My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.
 - My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.
 - It has been difficult for me to meet and make friends with other students.
(reverse)
 - Few of the students I know would be willing to listen to me and help me if I had a personal problem. (reverse)
 - Most students at this university have values and attitudes different from my own.
(reverse)
- Subscale II: Interactions with faculty (academic integration)
 - My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.

- My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.
- My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.
- Since coming to this university, I have developed a close, personal relationship with at least one faculty member.
- I am satisfied with the opportunities to meet and interact informally with faculty members.
- Subscale III: Faculty concern for student development and teaching (academic integration)
 - Few of the faculty members I have had contact with are generally interested in students. (reverse)
 - Few of the faculty members I have had contact with are generally outstanding or superior teachers. (reverse)
 - Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students. (reverse)
 - Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.
 - Most faculty members I have had contact with are genuinely interested in teaching.
- Subscale IV: Academic and intellectual development (academic integration)
 - I am satisfied with the extent of my intellectual development since enrolling in this university.

- My academic experience has had a positive influence on my intellectual growth and interest in ideas.
- I am satisfied with my academic experience at this university.
- Few of my courses this year have been intellectually stimulating. (reverse)
- My interest in ideas and intellectual matters has increased since coming to this university.
- I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.
- I have performed academically as well as I anticipated I would.
- Subscale V: Institutional and goal commitments (persistence)
 - It is important for me to graduate from college.
 - I am confident that I made the right decision in choosing to attend this university.
 - It is likely that I will register at this university next fall.
 - It is not important to me to graduate from this university. (reverse)
 - I have no idea at all what I want to major in. (reverse)
 - Getting good grades is not important to me. (reverse)