

ASSESSING ACADEMIC AND PERSONAL OUTCOMES FOR MEN ENGAGED IN THE
SIGMA PHI EPSILON RESIDENTIAL LEARNING COMMUNITY

By

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ABSTRACT

The presence of fraternities on college campuses is a topic of controversy among various higher education stakeholders. While fraternity membership has been found to be positively associated with college persistence (Biddix, Matney, Norman, & Martin, 2014; Routon & Walker, 2014), other associations related to academic performance and social behavior are not as positive (Brint & Cantwell, 2008; Whipple & Sullivan, 1998). Though an obvious and longstanding presence on over 800 American campuses, these organizations have been called into question regarding their contributions to the collegiate experience. As a result, the North-American Interfraternity Conference (NIC) and some of its member organizations have developed programs designed to address issues of concern.

The purpose of this quantitative study was to evaluate a residential learning community (RLC) program that was developed by a national fraternity, Sigma Phi Epsilon (Sig Ep). Sigma Phi Epsilon fraternity recognizes both RLC and non-RLC chapters. The research questions guiding this study were: (a) do men living in a fraternity house that employs the Sig Ep RLC program report higher levels of social and academic engagement compared to fraternity members in a chapter that does not participate in this program, and (b) are the grade point averages of men in the Sig Ep RLC higher than those of men whose chapter are not designated as a RLC?

The National Survey of Student Engagement (NSSE) was completed by 761 undergraduate members of Sig Ep fraternity within 140 chapters. All class years participated in approximately equal percentages. A total of 32% (n = 245) were from a RLC chapter and 68% (n = 516) were from non-RLC chapters. A series of t-tests identified that while grade point averages were positively associated with involvement in an RLC, involvement with faculty and co-

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curricular opportunities were higher for non-RLC men. Further research is needed to clarify the relationship between student engagement and GPA for students in RLC and non-RLC chapters prior to implementing the Sig Ep RLC program on a wide-scale basis.

Keywords: residential learning community, fraternity, academic engagement, academic achievement, university, Sigma Phi Epsilon, NSSE

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CHAPTER 1: INTRODUCTION

There has been a continuous dialogue among various stakeholders regarding the best ways to address the current state of fraternities on college campuses in the United States. Some of this dialogue has led to the development of various programs ranging from continuous educational development initiatives such as Sigma Phi Epsilon National Fraternity's Balanced Man program implemented in 1991, to Theta Chi's Sacred Purpose designed in 2013 improve the health, safety and overall wellbeing of its members, to Sigma Alpha Epsilon's creation of the Director of Diversity & Inclusion position in 2015 to address racially charged behavior in chapters.

In 2000 Sigma Phi Epsilon (Sig Ep) answered the call to action for fraternities to improve the undergraduate college experience by creating their own version a program that has been an accepted practice of Residential Life programs. The on-campus residential learning community program, supported by two widely known theorists in higher education, Vincent Tinto and Alexander Astin, leads to positive outcomes related to academic performance and social development (Astin, 1984; Tinto, 2003). Sig Ep sought to establish accountability mechanisms and a culture that focus on improving academic quality and student achievement, along with increased engagement with faculty, peers, and the campus environment. This paper will explore the development of the residential learning community, how Sig Ep utilized it for their own purposes, and what outcomes this program produced.

Statement of the Problem

College administrators and stakeholders are responding to the needs and demands of their students by funneling resources towards initiatives such as the creation of women's centers,

diversity programming focused on social justice and inclusion (Kelderman, 2016; Landreman, Rasmussen, King, & Jiang, 2007; Pope, Mueller, & Reynolds, 2009), and most recently, sexual assault prevention programming (Breitenbecher, 2000; Wilson, 2016). Women's centers and diversity programming became ubiquitous in U.S. higher education by the end of the 1980s as more bachelor's and master's degrees were being earned by White women and people of color than by White men (Pope et al., 2009). Social justice work has continued to increase into the 2010s as a result of campus activism regarding the conditions minority communities face in higher education (Kelderman, 2016; Tuitt, 2016). Most recently, the inclusion of sexual assault prevention programming stemming from new federal mandates outlined in the Campus Sexual Violence Elimination Act and the Violence Against Women Reauthorization Act (VAWA) of 2013 (DeGue, 2014) rounds out some of the co-curricular programming in U.S. higher education.

These initiatives remain at the forefront for the 2016-2017 academic year according to Kevin Kruger, president of the National Association of Student Personnel Administrators (NASPA), the professional association for student affairs in Higher Education. Kruger stressed these areas to higher education professionals during his opening address at the NASPA Annual Conference in March 2016. At the opening session of the conference, which boasted over 5,000 attendees, including several university presidents, he shared the top six current trends in higher education based on research conducted by NASPA: campus activism, sexual violence, fraternity/sorority life, mental health, race and equity, and in loco parentis.

While topics listed above are of utmost importance to the development of collegiate individuals, men are silently falling behind. Absent from Kruger's list was explicit mention of the academic performance and social development of college men. Authors such as Leonard Sax

(2009) and Michael Kimmel (2009, 2012) have recently raised concerns about collegiate men: they are becoming increasingly unmotivated and underachieving while becoming a serious liability to themselves and others. Sax (2009) maintains that men are disengaged from school and generally lack motivation to attend and persist in college. They begin to exhibit lower engagement levels in grade school (DiPrete & Buchmann, 2013) which carries on through their adult lives. Men are less likely to attend college right after high school and once enrolled, they do not persist or perform at the same rates as women do (Bae, Choy, Geddes, Sable, & Snyder, 2000; DiPrete & Buchmann, 2013; Ewert, 2012). In the eyes of faculty, undergraduate men are often seen as less prepared for class, less focused and conscientious, and ultimately less successful (Blackburn & Janosik, 2009; Brint & Cantwell, 2008; Brooks & Rebetez, 1991; Ewert, 2012). They obtain lower grades and cut class more frequently than women (Brooks & Rebetez, 1991). Since the 1980s college men have been less likely to earn high honors or to graduate when compared to their female peers (DiPrete & Buchmann, 2013; Ewert, 2012; Sax, 2009). By 2010, women's four-year graduation rates had "skyrocketed" to 36% while the rate among men was only 27% (DiPrete & Buchmann, 2013). Modern-day men must often navigate their emerging masculine identities while struggling with engagement and success in school (DiPrete & Buchmann, 2013; Spencer, Fegley, Harpalani, & Seaton, 2004).

Masculine identity is a socially constructed idea frequently characterized by hypermasculinity among U.S. collegiate men. Hypermasculinity is an exaggeration of traditional and stereotypical male ideology (Corprew, Matthews, & Mitchell, 2014). Socially, men exhibit an inflated valuation of status, self-reliance, aggressive activities, dominance over others, and the devaluation of emotion and cooperation (Burk, Burkhart, & Sikorski, 2004). Many collegiate men become socially challenged when attempting to navigate their collegiate years in a healthy

and responsible way. They are more likely to engage in behaviors such as being destructive and abusive toward women, misusing alcohol, participating in high-risk activities, and the harassment of men who do not follow the hegemonic masculine “rules” (Breitenbecher, 2000; Chrisler, Bacher, Bangali, Campagna, & McKeigue, 2012; Kimmel, 2009; Syrett, 2009) . These behaviors are destructive to the positive social development and growth that is hoped for in college, which is central to the idea of a liberal education and are at the foundation of student development theory.

The experience of collegiate men in a social fraternity seems to compound issues stemming from hypermasculinity as they pertain to academic performance and social development and behavior. While fraternity membership has been found to be positively associated with college persistence (Biddix et al., 2014; Routon & Walker, 2014), other associations related to academic performance are not as positive. The outcomes associated with fraternity membership have not been consistent with the academic agenda of personal and intellectual development (S. Nelson, Halperin, Wasserman, Smith, & Graham, 2006; Pascarella et al., 1996). Previous researchers suggest that on many campuses, fraternities are not supporting and fostering academic performance (Brint & Cantwell, 2008; Pike, 2003). Specifically, the literature on learning and academic success shows that fraternity men fall behind their female and non-affiliated peers in many academic areas (Blackburn & Janosik, 2009). Though Greek-letter organizations constitute a visible and powerful part of student culture (Mathiasen, 2005), their negative influences may contribute to the phenomenon that women are outperforming men and support the notion that the presence of fraternities detracts from campus environments. Fraternity communities are being challenged by stakeholders within the academy and in the general public to demonstrate that they can fit in with the educational mission of the institutions

with which they are affiliated, i.e., to produce high-performing, academically successful students (Mathiasen, 2005; Whipple & Sullivan, 1998).

It might benefit collegiate men to follow the lead of the women's movement to make gender more visible to their own experience. A shift in attitude might allow men to recognize their place as the most privileged in the cultural system, which is often the least understood by those with a privileged status (Jones & McEwen, 2000). Once they have accomplished this shift, men can begin to redefine what their modern roles are and work beyond the rigid definitions that have been placed on them by society (Kimmel, 2012). Though the concept of the modern man is evolving, the current hypermasculine component needs serious examination. Men must challenge the version of manhood that they have grown accustomed to understand, which embodies the idea of “bro-culture” and masculinity (Kimmel, 2009; Sax, 2009). “Bro-culture” (Chrisler et al., 2012; Kimmel, 2009) is described as academic apathy and laziness (Foste, Edwards, & Davis, 2012; Kleinfeld, 2009; Whipple & Sullivan, 1998), mistreatment towards women and minorities (Biddix et al., 2014), and tolerance of intoxication and hazardous alcohol use behaviors (Biddix et al., 2014).

In order to support collegiate men, college administrators must acknowledge the challenge and stress that these students experience as they navigate rigid sex roles. Administrators should not interpret a lack of a declaration for assistance as a lack of need for support, nor should they view the showing of emotions as a feminine response. Such misinterpretations can set young men back even further in their development (Davis, 2002). Single-sex social Greek letter organization leaders have a unique responsibility to learn how to address this stress and help men feel comfortable with their authentic selves (Corprew & Mitchell, 2014; Davis, 2002) because fraternities tend to be one of the most common places in

the collegiate environment where men go to seek support. Implementing a strong academic climate in the collegiate environment can erode stereotypes and connect academic prowess with a healthy, masculine identity (DiPrete & Buchmann, 2013). Men must be supported just as women are, especially within those communities that demonstrate increased issues with academic performance and healthy social engagement.

Structure and intentionality have traditionally not been a factor when a group of young men are housed together in a residential facility, specifically when the placement of young men is in a fraternity living facility. This lack of purpose is evidenced by an absence of programs provided by fraternity headquarters or local campus administrators and faculty members designed with the objective of organizing and supporting the environment within these residential arrangements. This lack of consideration is a missed opportunity for the support of collegiate men, and is surprising given the growing amount of behavioral and academic issues that have recently come to light associated with this group of college students (Isacco, Warnecke, Ampuero, Donofrio, & Davies, 2013; Storch & Storch, 2002). Men living in fraternity houses report residential environments that are not conducive to promoting their academic success; instead, the cultural norms that are present encourage engagement in risky behaviors (Long, 2014).

The escalation of “bro-culture”, which seems to exist within and beyond fraternal living communities, is compounded in the intimacy of a residential environment (Biddix et al., 2014). Members of fraternal organizations struggle to negotiate manhood in their journey into adulthood. This concept of manhood is defined by how society feels men should and should not act (Edwards & Jones, 2009). These men emulate negative behaviors associated with hegemonic masculinity in order to prove themselves to other college males and be accepted into peer groups.

These risky behaviors act as a barrier to the students' overall development and are cause to consider fraternity members as an at risk subgroup (Isacco et al., 2013; Whipple & Sullivan, 1998). Living environments should foster opportunities for fraternity members to interact in ways that foster, not hinder development. Limited research has been done in the last 20 years on the living environments of fraternities, with the exception of alcohol studies (Biddix et al., 2014). By 1996, just under 100 empirical studies had been published demonstrating a consistent trend for problematic drinking amongst fraternity/sorority members (Biddix et al., 2014). Beyond this, Danielson, Taylor, and Hartford (2001) conducted a more recent review of the literature highlighting the multiple studies that demonstrate a positive correlation between the intensity and frequency of drinking and fraternity members.

Although there has been a limited amount of research focused on solutions to negative behaviors of fraternity men in the collegiate environment, there is evidence to suggest that the structured and intentional living environments of a residential learning community (RLC) may be conducive to positive adult learning and development (Blimling, 2014; Brower & Inkelas, 2010; Jessup-Anger, Johnson, & Wawrzynski, 2012). Residential learning communities are programs in which a group of students occupy a common living space while engaging in collaborative programs designed to foster an educational learning environment stressing social and academic development (Blimling, 2014; Brower & Inkelas, 2010; Inkelas, Zeller, Murphy, & Hummel, 2006). In these programs, an emphasis is placed on desirable outcomes achieved through academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, engaging in a supportive campus environment, and personal development (Brower & Inkelas, 2010; Pascarella, Seifert, & Blaich, 2010).

The purpose of membership in these communities is to enhance learning and development through involvement in educationally purposeful activities that are associated with positive outcomes in college (Astin, 1996; Zhao & Kuh, 2004), especially engagement with faculty outside of the classroom and involvement with student peer groups in pro-social activities (Astin, 1996; Blimling, 2014; Tinto, 2003). RLC interventions that provide a model of positive behavior within a structured environment for college fraternity men are not common in the United States (Isacco et al., 2013). Therefore, there is a need for research to investigate whether an intentionally designed RLC can accomplish its design objectives in a fraternity living unit setting. This study posits that when RLCs are present, fraternity men experience positive academic outcomes such as increased GPA and the use of high impact learning techniques to a greater degree than their non-RLC counterparts. Additionally, it is posited that fraternity members who participate in a RLC are more likely than their non-RLC counterparts to acquire positive personal development outcomes such as having discussions with diverse others and engaging in quality interactions with administrative and student service staff members, as well as alumni.

Rationale and Theoretical Perspective

The rationale for the positive benefits of RLC on fraternity men is derived from the theories of Alexander Astin (1984) and Vincent Tinto (1993). Astin's theory of involvement states that the more students engage in meaningful learning experiences outside of the classroom, the more likely they are to be successful in college. Tinto's revised theory of persistence extends Astin's work by positing that once students are involved in campus life, the more likely they are to voluntarily stay within the system of higher education from their first year through degree completion. These theories assert that engagement in academically effective practices that

augment in-class learning within a supportive community yield a sense of connection and satisfaction (Braxton, Milem, & Sullivan, 2000).

Involvement and engagement in a RLC consists of interactions with fellow students, faculty, and staff pertaining to academic and social development. The quality and quantity of involvement has been found to be directly related to the outcomes of student learning and personal development (Milem & Berger, 1997; Stassen, 2003). Astin's (1993, 1996) research on traditionally aged students demonstrates that interactions with faculty and peers are one of the most powerful developmental forces on a college student's growth.

According to Astin (1993), the process by which students become increasingly integrated into the collegiate environment can be described as a series of stages. Students begin in the stage of separation from high school life to college life, then transition into the collegiate community, and finally there is eventual incorporation into the collegiate environment (Milem & Berger, 1997). The final phase of full incorporation happens when the student becomes unreservedly involved in the community having interactions with multiple individuals on the campus (Milem & Berger, 1997).

Both Tinto (1993) and Milem and Berger (1997) support the critical role that involvement and integration has in educational outcomes by identifying that there is a strong link between learning and persistence. Tinto (1993) identified integration as a critical factor that contributes to whether or not students leave college, as depicted in Figure 1 (Brint & Cantwell, 2008; Tinto, 1975). Tinto asserts that the degree to which students believe they are part of the college or university is of chief concern when referring to integration (Braxton et al., 2000; Milem & Berger, 1997). Programs and opportunities that have been documented as aiding in this process include fraternity/sorority life, residence hall activities, learning communities, contact

with faculty, and other co-curricular activities (Milem & Berger, 1997). These smaller groupings of students and personal interactions create the opportunity for students to become connected. It is important to note that although integration is preferred over isolation, it does not necessarily mean that the experience has a positive influence on the participants in these communities (Tinto, 1993).

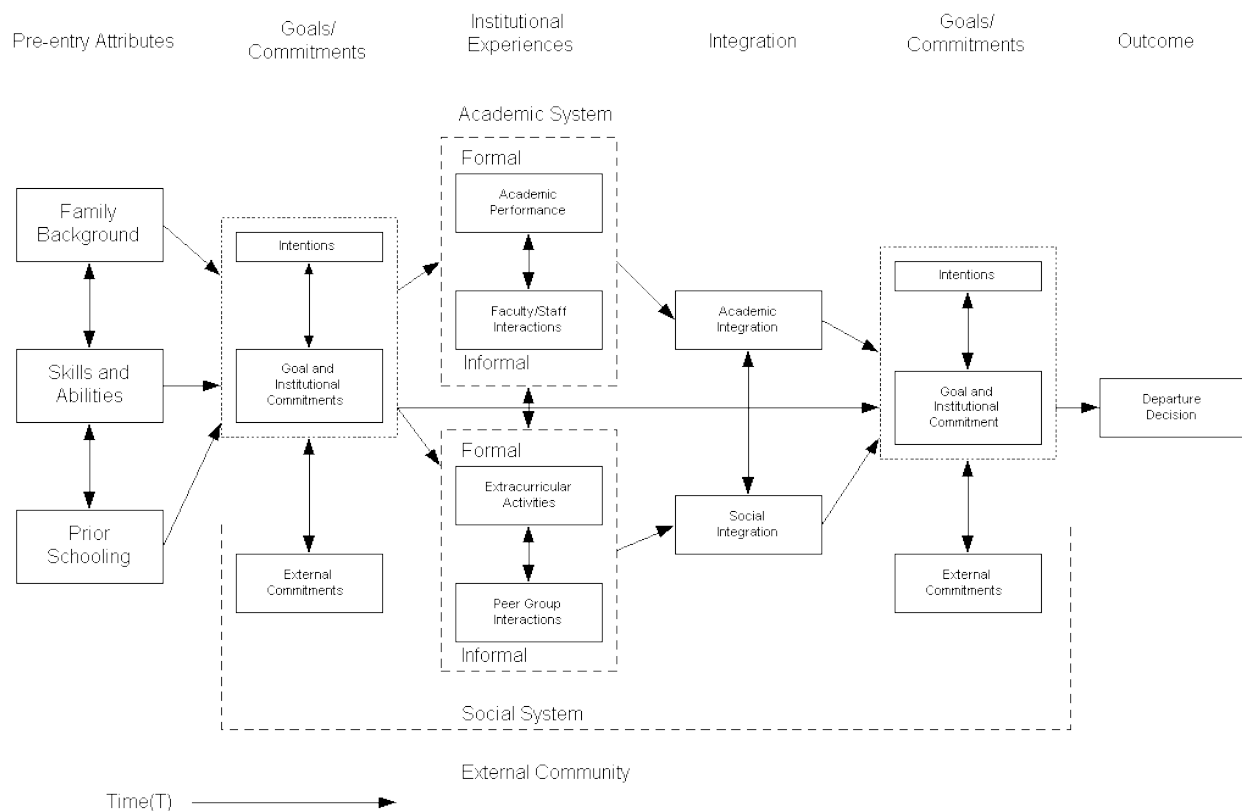


Fig. 4.1. A longitudinal model of institutional departure.
Source: V. Tinto (1994). Leaving College....

Figure 1. Tinto's (1975, 1993) Student Integration Model

The construct of a RLC incorporates many of the tenets of prior research. It can be inferred using Astin's (1984) theory of involvement that students who are more engaged in their educational experience should report greater learning outcomes as a consequence of their

increased involvement. Additionally, utilizing Tinto's theory of student integration, a student who has more positive social experiences through participation in activities on campus is more likely to persist towards graduation (Burks & Barrett, 2009; Tinto, 1975). Social integration occurs in common places such as housing arrangements and in social organizations like sororities and fraternities (Burks & Barrett, 2009). Thus, the RLC, in its construction, becomes a conduit to social and academic integration, which is an essential aspect of college learning (Lenning et al., 2013; Tinto, 2003). The RLC is a gateway program for student involvement in the academic and social communities allowing for a successful collegiate experience.

Sigma Phi Epsilon (Sig Ep) is a national fraternity that has implemented RLCs into some of its chapters across the United States. The Sig Ep RLC was developed to address some of the negative behaviors that national headquarters staff observed when they visited chapter houses (R. Little, personal communication, December 1, 2014). According to the staff, these behaviors included the marked presence of hypermasculinity, or bro-culture, as defined earlier in this chapter. The amount of behavioral and disciplinary sanctions reported to the headquarters on behalf of host institutions had become problematic. The headquarters staff took note that a majority of these reports were associated with chapters that have a live-in situation. Biddix et al., (2014) noted that research conducted on fraternities validated concerns identifying living environments as a catalyst for problematic behavior. Based on their stated values, fraternities should be communities that promote learning, but generally they support the opposite due to misplaced priorities and behaviors among undergraduate members (Lenning & Ebbers, 1999; Whipple & Sullivan, 1998). Changing the way that men are engaged in their living space to an environment with structure and accountability has the potential to change their experience.

A library search conducted in February 2016 confirmed that Sig Ep is the only national fraternity that has implemented an RLC program. The current research on RLCs is limited to programs that are run by fully staffed residential life departments on a college campus, unlike the Sig Ep model. The latter differs from the usual campus-based RLC in that it is primarily alumni and volunteer based and not run by professional student affairs staff members. To date, there has not been an empirical research study conducted on the Sig Ep RLC program to examine whether students involved in it demonstrate significant engagement outcomes when compared to ones in traditional fraternity living environments.

Purpose

The purpose of this study is to examine whether Sig Ep fraternity members who participate in the fraternity's residentially-based learning community model exhibit greater levels of engagement in academically beneficial practices and attain a higher GPA than their brothers in non-RLC chapters. Academically beneficial practices are defined as experiences with faculty, learning with peers, and co-curricular participation through the campus environment. A RLC is defined as an intentionally developed community that exists to promote and maximize the individual and shared learning of its members within the context of a residence hall on campus (Lenning et al., 2013). A guiding principle of these learning communities is growth with the desire to expand knowledge and skills (Lenning et al., 2013). The focus of learning and personal development in RLCs is tied to the concept of student success characterized as measurable variables, such as retention in college, grade point averages, reasonable progress toward graduation, adjustment to college, and engagement in campus life (Blimling, 2014; Inkelas & Weisman, 2003; Lenning et al., 2013; Schein, 2005). Personal development is characterized by interpersonally effective, ethically grounded, socially responsible, and civic-minded individuals

(Shoup, Gonyea, & Kuh, 2009). Sig Ep employs its own version of a RLC in a select group of chapters that have their own off-campus residential property all of whom have been accredited by the fraternity headquarters staff. A RLC designation remains valid for as long as a chapter meets minimum accreditation requirements and submits an RLC Annual Update to the RLC Task Force (Sigma Phi Epsilon, 2017). Though the program is adaptable to chapters without a residential property, currently there are no chapters that have applied for RLC status who are in this situation.

Research Questions

The research questions that guide this study include:

1. Do men living in a fraternity house that employs the Sigma Phi Epsilon residential learning community program report higher levels of social and academic engagement compared to fraternity members in a chapter that does not participate in this program? Specifically, do participating men report higher levels of
 - a. experiences with faculty,
 - b. learning with peers, and
 - c. co-curricular participation through the campus environment.
2. Are the grade point averages of men in the Sig Ep RLC higher than those of men whose chapters are not designated as a RLC? Is there a correlation between involvement and grade point average?

In sum, guided by the theoretical framework of both Astin's (1984) theory of involvement and Tinto's (1993) theory of persistence, this study hypothesizes that students who participate in the Sig Ep RLC will report higher levels of engagement and higher GPA when compared to their counterparts not in a RLC chapter.

CHAPTER 2: LITERATURE REVIEW

Many colleges and universities have turned to residential learning communities (RLCs) to reframe the college experience to be more meaningful and increase successful outcomes. Within these environments, personal development and academic achievement are at the forefront of programming goals. Residential learning communities have been found to challenge and support students to move to higher levels of intellectual and psychological development (Chickering & Reisser, 1993; Evans, Forney, Guido, Patton, & Renn, 2009). They have the potential to encapsulate the three main areas that have the most influence on academic outcomes, involvement with academics, involvement with faculty, and involvement with student peer groups (Astin, 1996). These outcomes are believed to improve through the development of shared beliefs and norms within a shared living environment, which extends learning beyond the classroom. Though RLCs have evolved from their original inception, inspired by Oxford and Cambridge Universities in England, much of the structure and purpose have remained consistent across time (Sanford, 1962).

This literature review will first give a brief history of fraternities in the U.S. higher education sector. This is important due to the context of this research being inspired by a fraternity program. Information about the development of fraternity housing will be shared in this brief overview.

The literature review will then examine the historical development of RLCs in order to better understand how they became part of the higher education sector in the United States. Next, the types and structures of learning communities in higher education will be reviewed, specifically those with a residential component. Lastly, the criteria for measurement and effectiveness of these programs are described as support for the development of the Sigma Phi

Epsilon (Sig Ep) RLC. The focus is to examine the development, execution, and effectiveness of the RLC.

A Brief History of Fraternities

While this paper discusses many of the challenges associated with fraternities and their members, it is important to understand their evolution and what the original purpose of their founding was. The original purpose of fraternities was to debate and discuss current events and literature outside of the classroom and away from the eyes of faculty supervision (Syrett, 2009). They became one of the most popular ways for students to become engaged in the campus community and inevitably led to the formation of deeper relationships, with members depending on each other for more than just an intellectually stimulating conversation. During the undergraduate years, fraternities provided the opportunity for leadership development and volunteerism (Astin, 1993). Within these fraternal groups, there is an opportunity for an enriching undergraduate experience with positive returns post-graduation. Post-graduation, Greek alumni are more likely to support their alma maters than non-Greek alumni (De Los Reyes & Rich, 2003). Despite these benefits, universities and national headquarters alike have tried to shut down or at least suspend entire communities (McMurtrie, 2015). Despite this, through two world wars, the Great Depression, and other periods of turmoil in our country, fraternities have been present and hold an important piece of the historic fabric of American higher education (Robson, 1977).

Phi Beta Kappa became the first Greek lettered fraternity founded in the American collegiate system at the College of William and Mary on December 7, 1776. It was considered to be more of a literary society than a social organization; however, it did differ from the earlier literary societies as it featured social activities (Goldfarb & Eberly, 2011; Torbenson & Parks,

2009). Its founding principles were friendship, morality, and learning (Goldfarb & Eberly, 2011). Phi Beta Kappa became the precursor to a variety of fraternities and sororities that began to materialize approximately 50 years later.

The beginning of the growth of social Greek letter societies began in November 1825 with the founding of Kappa Alpha Society at Union College (Syrett, 2009). This was the first fraternity to survive and maintain the character of a social fraternity (Syrett, 2009). It was founded to fill a void left behind when its members' military company at Union College was dissolved (Syrett, 2009). Other students followed suit shortly thereafter with the founding of Sigma Phi and Delta Phi in 1827 on the same campus (Torbenenson & Parks, 2009). These fraternities were founded out of a need to form groups for men to feel that they belonged to a community. Within these groups, men created friendships that lasted a lifetime in a congenial, social way of life, often referred to as "brotherhood," all while they created networks that would prove to aid in their future career endeavors (Syrett, 2009, p. 6). Future groups were founded by individuals sharing similar values and ideals who united under a set of common goals (Torbenenson & Parks, 2009). Pins, badges, and Greek letters differentiated these groups from one another in public, and in private, they engaged in unique rituals inspired by the Masonic Order (Torbenenson & Parks, 2009). By Civil War times, there were 22 different fraternities with just under 300 chapters at 71 colleges in a total of 25 states, demonstrating their future longevity (Syrett, 2009).

In addition to being a place to belong and socialize, fraternities provided a place to live. In the later years of the nineteenth century, college fraternities and sororities began providing housing for students (Blimling, 2014). The first house to be used for fraternity business was a small, non-residential shack in the woods at University of Michigan used by Chi Psi Fraternity in

1846 (Syrett, 2009). By 1874, fraternity men began to live together at the University of California, Berkeley (Syrett, 2009). The first house built just for the purpose of housing its members belonged to Zeta Psi at the University of Berkeley, which opened its doors in 1880 (Syrett, 2009). Administrators reasoned that if young men wanted to create their own boarding homes, this would free up monies otherwise devoted to building dormitories elsewhere on campus. This provided tremendous financial savings to fraternities' host institutions and allowed them to expand the number of students they could admit (Syrett, 2009). The housing offered by these organizations became helpful to the college administration, as colleges and universities were not providing dormitory spaces or had run out of space (Blimling, 2014; De Los Reyes & Rich, 2003; Whipple & Sullivan, 1998).

Fraternity membership primarily consisted of White, Protestant men who represented the well-connected upper class (Syrett, 2009; Torbenson & Parks, 2009). While this demographic description reflected the actual makeup of the undergraduate student body when these organizations were first founded, even as the landscape of race and class began to shift, the membership of these organizations did not. As institutions began to admit a more diverse student body, these groups were challenged, as they would not allow non-Christians to become members. As a result of these blocked initiations and feelings of anti-Semitism, three Jewish students took it upon themselves to found the first non-sectarian (no discrimination against race, religion, or color) fraternity with the letters Pi Lambda Phi at Yale University in 1895 (Syrett, 2009). Still, it was not until the founding of Alpha Phi Alpha in 1906 at Cornell University that Blacks were to enjoy membership in a fraternity (Syrett, 2009). Once organizations like these were founded, members of different races and cultural backgrounds began to join; they needed a fraternity to specifically represent their own background. While groups still struggle for full

integration, the once all White, Protestant, upper-class organizations of the nineteenth century are few and far between as fraternities needed to reflect the changing student population.

Throughout the history of the college fraternity, the behavior of the men in these organizations became a reflection of the societal expectations that defined masculinity at that time. Though these expectations have shifted over time, they still depict how men react to the ideals placed on them by their contemporary society (Syrett, 2009). Men tried their best to meet these standards, demonstrating behavior to establish themselves as worthy individuals so as to receive an invitation to join these groups, lending them to reach a certain level of social capital. Social capital on campus is a feature of fraternities that is still relevant today.

Historical Development of Residential Communities

Another college-based program created in the United States is the residential learning community (RLC). The origin of RLCs in the United States can be traced back to the English educational institutions Oxford and Cambridge (Oakley, 1992). When the English established colonies in North America, their model of education, known as the Collegiate Model, inspired the founders of the first literary colleges (Blimling, 2014; Brubacher & Rudy, 1997). This model was an inclusive environment in which young men studied the classical liberal arts under the close supervision of faculty members acting in the place of parents and focused on each student's religious piety (Blimling, 2014; Kimball, 2014). Harvard, Yale, and Princeton were the first to adopt this collegiate model of education in the eighteenth century, officially integrating the residential college into the United States higher educational system (Blimling, 2014; Brower & Inkelas, 2010; Koblik & Graubard, 2000; Sanford, 1962).

Several decades later a shift away from the support of RLCs occurred (Blimling, 2014; Marsden, 1994). This shift was caused by the refocusing of priorities to the importance of

research within the American education system, which was inspired by the Germanic ideals of focusing on the natural sciences and humanities (Blimling, 2014; Marsden, 1994). An example of this adaptation was demonstrated with the establishment and success of Johns Hopkins University in the 1860s and the expansion of state-funded land grant colleges whose curriculum focused on the practical application of knowledge (Thelin, 2011). Monitoring students' moral development and dedicating financial resources to these programs was deemed a waste by the faculty (Brubacher & Rudy, 1997). As a result of this shift, some institutions became impersonal and less focused on the social and moral development of students.

In the 1920s, American college administrations began to shift back to the ideals of the Collegiate Model, becoming more organized with the emergence of communities structured with intentional learning objectives (Blimling, 2014). A greater focus on the needs and interests of students re-emerged, which became known as the Holism Period (Blimling, 2014). In practice, this took the form of living learning programs, which can be interchangeable with the RLC term used in this document. These programs began with Alexander Meiklejohn's Experimental College, which existed at the University of Wisconsin from 1927 to 1932 (Zhao & Kuh, 2004). The tenets of Meiklejohn's (1932) Experimental College placed an emphasis on moral and civic development and the intellectual and social life of undergraduate students (Meiklejohn, 1932, p. xvii; A. R. Nelson, 2009). He used these ideals to restructure the curriculum to meet the needs of college students as they were understood at that time (Johnson & Romanoff, 1999). According to Meiklejohn, there was a need to stimulate students to take responsibility for their own learning within a collaborative collegiate community bound by interest and purpose (A. R. Nelson, 2009). Perhaps one of the most characteristic features of this program was the importance placed on the development of a personal relationship between the teacher and the pupil in order to bring more

value to the relationship (Meiklejohn, 1932, p. 487). He “favored a deliberately restructured curriculum to meet the educational objectives of a cohort of students and their faculty” (Johnson & Romanoff, 1999, p. 385). Though deemed unsuccessful in the eyes of many critics (A. R. Nelson, 2009), Meiklejohn’s initial idea of the learning community derived from his work in 1932 is referenced in the literature as the impetus to the future development of living learning programs (Brower & Inkelas, 2010).

During the 1950s and 1960s, American higher education began to expand, offering increased opportunities for access to education for students (Brower & Inkelas, 2010). Efforts were made to humanize the learning environment on college campuses in order to help students from different backgrounds and experiences be successful (Zhao & Kuh, 2004), which led to the reemergence of the learning community. The University of Michigan pilot program launched in 1962 was lauded as an experimental program designed to “enable freshmen to make a better and more productive adjustment to university life” (Brower & Inkelas, 2010, p. 37). Taking its inspiration from Meiklejohn’s work, this program connected students to one another and the faculty in a more purposeful way. Through these connections, the students’ ability to transition correlated with their ability to persist and continue their involvement in the program (Tinto, 2003). The residential community created in this unique program organized both the living environment and the out-of-class experience in which the participants engaged (Shapiro & Levine, 1999).

Learning communities without residential components continued to be a popular method for improving the quality of the undergraduate experience, despite little research being done to prove the effectiveness of such efforts. Seeing a need for this gap in the literature to be filled, a comprehensive review was conducted at the Washington Center for Improving the Quality of

Undergraduate Education (Stassen, 2003). The research conducted at this center examined 63 studies from the years 1988 through 1999 (Stassen, 2003), which uncovered positive outcomes associated with academic engagement and persistence. In other work, Pascarella and Terenzini (1991) looked specifically at the role of RLCs on a range of student outcomes and found that students in these programs show “significantly larger gains in intellectual orientation than students in traditional curricular programs” (p. 245). The outcomes of these works support the theories of Astin (1984) and Tinto (1993), both of whom focused on the factors that affect these outcomes (Lenning & Ebbers, 1999). The support of these theorists coupled with the beginning stages of compiling research on these programs contributed to the emerging prominence of the “residential learning community” term in higher education institutions in the United States that exists today.

In 1998, the Boyer Commission on Educating Undergraduates in the Research University declared a state of crisis for American higher education, calling for reform and restructuring on 10 different points and ending with a charge to create a greater sense of community on campuses (Lenning & Ebbers, 1999). The commission’s report criticized American universities, specifically those that are research intensive, for a lack of integrated and focused learning opportunities (Boyer Commission on Educating Undergraduates in the Research University, 1998). The Boyer Commission recommended that institutions of higher learning create an environment that allows students to feel that they are “needed and valued members of the [college] community” (pp. 34–35). Specific suggestions given in the report on how to create this type of community foreshadowed the eventual creation of contemporary learning communities.

In order to maximize learning and accountability, institutions of higher education initiated learning communities with the goal of helping students integrate classroom knowledge

with opportunities outside of the classroom. These programs, such as service learning and group discussions, led to a deeper understanding that fostered cognitive and social development.

Integrating the residence hall in conjunction with a learning community provided a context for developing these programs in a social setting. Residence halls were a logical location to implement these programs due to the large number of students living within them.

Organizational structure was needed in order to set up residence halls in a way that supported student success and persistence (Blimling, 2014). Once integrated fully into a structured residential community, students became more committed and engaged, which created the sense of belonging that leads to persistence (Pike, Schroeder, & Berry, 1997; Tinto, 1975). As student engagement in educationally purposeful activities both inside and outside of the classroom became more of a focus in higher education, a more contemporary version of the RLC that was informed by research conducted in the previous decades was developed (Kuh, 1996; Zhao & Kuh, 2004). This updated structure will be described in the subsequent section.

Structure of Residential Learning Communities

Research that includes descriptions and definitions of RLCs indicates that they can be characterized as a shared learning experience shaped around intentional social engagement with peers and faculty in a physical space dedicated to learning within a residential building (Blackburn & Janosik, 2009; Inkelas & Weisman, 2003; Lenning & Ebbers, 1999; Zhao & Kuh, 2004). Within this physical space, a student can engage in three experiences that contribute to their development: shared knowledge, shared knowing, and shared responsibility (Tinto, 2003). Shared knowledge implies there is learning taking place; shared knowing is expanding what students know about people in a community setting and by being around others. Shared responsibility refers to the commitment students have to one another occurring in a shared

residential environment. Tinto (2003) asserted that these three ideas are used to structure a learning community, resulting in the establishment of a successful program. Similarly, Zhao and Kuh (2004) stated that most learning communities incorporate active and collaborative learning activities that promote the development of academic and social development skills extending beyond the classroom.

Types of learning communities. Lenning and Ebbers (1999) identified four main categories of learning communities. The first type of learning community they identified focused strictly on academics, which links students who are co-enrolled in two or more courses though a common theme, often across disciplines. The second type of learning community builds on the idea of using the classroom as the vehicle for creating a learning community, but takes the concept a step further. It features cooperative learning techniques and group process learning activities that integrate pedagogical approaches. The third type of learning community is similar to the first two, with the addition of a common residence hall setting allowing classmates to live in close proximity, therefore increasing opportunities for out-of-class interaction and supplemental learning activities. This type of learning community is aligned with what Tinto and Braxton (2000) and Shapiro and Levine (1999) found. Providing a common meeting place helps to create the feeling of unity within that space, thus creating an RLC. A fourth type of learning community is designed around affinity groups such as cultural and academic interests (Lenning & Ebbers, 1999). An example of this is the Sig Ep RLC, as fraternities are considered to be affinity groups.

The critical difference among these four learning communities is the residential component found in the third type. This component provides additional opportunities for shared experiences outside of the classroom. The purpose of this component of learning communities is

to provide seamless integration of the student's social and academic life. It is important to note that although many forms of learning communities exist, this literature review focuses on the type that includes a residential component as part of its structure.

Components of residential learning communities. Though varied in their execution, the main components of a residential learning community are a shared learning experience, intentionally created social engagement with peers and faculty, and a physical space dedicated to learning within a residential building (Blackburn & Janosik, 2009; Inkelas & Weisman, 2003; Lenning & Ebbers, 1999). A shared living space in which a community of scholarship is encouraged by faculty participation and program design is paramount for the learning community to be considered residential (Blimling, 2014).

Interaction with faculty. A key component of the RLC is the presence of faculty advisors who work closely with students. Sriram and Shushok (2010) suggested that positive faculty-student interactions are important to persistence and college graduation. Their study explored the difference in opportunities to engage with faculty and peers on an academic level for engineering and computer science students who participate in a RLC and for those who do not. Sriram and Shushok were particularly interested in its effects for science, technology, engineering, and math (STEM) students, because they are at a higher risk for changing majors or leaving school than students with other majors. The authors found that students in the STEM RLC met informally with a faculty member outside of class 7.4 times more than those who did not participate in the program (Sriram & Shushok, 2010). While meeting with faculty, students in the STEM RLC were 4.1 times more likely to discuss academic issues (Sriram & Shushok, 2010). Results also showed that STEM RLC students were 2.5 times more likely to meet in an organized study group or informally meet with other students to prepare for an academic assignment (Sriram &

Shushok, 2010). These data indicate the important role faculty relationships have in developing academically sound practices such as discussing academic performance, engaging in research, and talking about career plans. These points of contact foster college persistence and graduation.

In order to be an intentional and effective learner, specific skills such as integrative learning activities are needed (Entwistle & Entwistle, 1991). These skills include discussing ideas and readings outside of class, working on a project in a group setting, and synthesizing ideas into new experiences with a group of individuals (Kuh, Laird, & Umbach, 2004; Stassen, 2003). Faculty members engaged in learning communities help students develop these effective learning practices, yielding a more enriching educational experience (Kuh et al., 2004). Students who report a higher level of involvement, which is made possible in an RLC structure, are likely to report higher levels of academic integration. This supports the tenants of Tinto's theory of student departure (Milem & Berger, 1997), namely the relationship between student involvement in learning and the impact that involvement has on student persistence (Tinto, 1993).

Physical aggregate. Drawing on the research conducted by Tinto, students must have a place to integrate their social and academic lives to improve their success and retention while in college (Boyles & Talburt, 2005; Lenning & Ebberts, 1999; Tinto, 1993). The transitional experience of residing in a shared living space causes students to foster relationships with peers (Blimling, 2014). Students begin to engage in social networks to develop personal identities, integrate their academic experience, and cultivate interdisciplinary skills (Boyles & Talburt, 2005; Tinto, 1975). This practice of having students live in the same space develops a community unique to those engaging in it. Community then becomes part of the process and product of this program (Boyles & Talburt, 2005).

Shared beliefs and norms. A shared system of norms, which are accepted as a way of life in a community, leads to the influence on others to behave a certain way. Those within the environment create a socially constructed culture (Cooke & Rousseau, 1988). Gender role socialization theory is grounded in the belief that the expressions of masculinities are social constructions (Martin & Harris, 2007). Members share knowledge and develop social connections within the context of an RLC. Residential learning communities have a more positive social climate (Inkelas & Weisman, 2003; Pike, 1999), and they are supportive of personal exploration in a group (Jessup-Anger et al., 2012). It is suggested that learning communities create an environment conducive for men to transcend external gender expectations. In this environment, college men are safely able to develop a counter culture to challenge and redefine traditional gender roles that would have otherwise become the norm.

Effectiveness of Residential Learning Communities

The traditional measures of determining the success and effectiveness of RLCs focus on increased academic success (Zhao & Kuh, 2004) and the motivation and behavior of the student with regard to personal development (Astin, 1984). The assumptions underpinning the positive influence on these two variables through an RLC seem to have merit regardless of their structure or design (Sriram & Shushok, 2010; Stassen, 2003; Zhao & Kuh, 2004). Residential learning communities “have a significant positive effect on a number of student outcomes, including: student gains in autonomy and independence, intellectual dispositions and orientations, and generalized personal development” (Pascarella & Terenzini, 1991, p. 261). Dramatic increases in student learning and development have been found for students participating in RLCs at campuses as diverse as Ball State University, Bowling Green State University, University of Maryland, Yale University, and Wagner College (Lenning et al., 2013). These increases were

found when students were compared to both students who were not housed and also those housed in a residential hall without an RLC present. A large study conducted by Zhao and Kuh (2004) with a sample of over 80,000 students at 365 four-year colleges and universities that controlled for incoming SAT/ACT scores found that participation in a learning community has a salutary effect on academic performance. Findings include gains in multiple areas of academic skill, competence, and knowledge.

In a study conducted by Stassen (2003) at a public research institution, three different models of RLCs were studied in order to examine their effects on the students engaged in them. The purpose was to “explore the extent to which these more modest learning communities facilitate student social and academic integration into the university environment as well as foster their engagement in their own learning” (Stassen, 2003, p. 587). The three models included were as follows: Residential Academic Program (RAP), Talent Advancement Program (TAP), and the Honors College Learning Community. The variations in the three models were in the admission criteria for the programs and some of their design elements. All three RLC models showed positive effects on academic persistence and on one-year retention. The rates of withdrawal for all three models were lower when compared to non-learning community students.

Sriram and Shushok (2010) looked at learning communities divided by major or area of interest. These authors reported that students in the three LLCs were 33 – 60% less likely to drop out of school than the non-RLC students. The data suggested that participating in an RLC had positive effects on the first-year student experience, regardless of the program’s design. Sriram and Shushok (2010) concluded, “it appears that the positive effects of living-learning communities (LLC) occur regardless of major or student grouping” (p. 76).

Academic success. An important outcome of participation in an RLC is increased academic success (Tinto, 2000). Academic success is typically measured by researchers using grade point average (Santovec, 2004) and by self-reported academic perception (House, 2000). Research on RLC programs demonstrates that participants have higher levels of learning and intellectual development as measured by the College Student Experiences Questionnaire using variables such as critical thinking, learning to adapt, and analyzing problems (Pike, 1999). Additionally, participants demonstrate higher passing rates in more challenging courses (Freeman, Alston, & Winborne, 2008).

Freeman et al. (2008) investigated two different learning communities, one at Howard University and the other at Talladega College, both designated as historically Black colleges and universities. They looked specifically at the role of RLCs on student performance in a pre-calculus class. The students in RLCs reported better comprehension of the material, perhaps because the subject matter was connected across the classes and the information was reinforced (Freeman et al., 2008). The researchers also found that RLC students had a passing rate of 61% compared to a 45% passing rate for non-RLC students (Freeman et al., 2008). A common reason for engaging in an RLC, such as major or affiliation for a fraternity, is that it can build a strong social community resulting in higher passing rates due to peer accountability. A fraternal bond is even stronger than a shared major interest; therefore, it is plausible that shared membership will demonstrate increased academic success.

Grade point averages were also found to be slightly higher in an academically focused RLC program conducted at the University of Southern Maine (Johnson & Romanoff, 1999). The Russell Scholars who participated in a RLC achieved a GPA of 2.57 after their first year in the program. The non-RLC students achieved a GPA of 2.32. This difference in GPA shows a

positive relationship between course performance and involvement in the RLC for students in their first year at the school (Johnson & Romanoff, 1999). Similarly, a program at the University of South Alabama geared towards freshmen living in a learning community had an outcome of grade point averages of .15 points higher than non-participants, and participants were 45% more likely to graduate than non-participants who resided on campus in non-living-learning communities (Noble, Flynn, Hilton, & Lee, 2007). The structural elements associated with this achievement were a support network set up for these students within their classroom and their academically focused collaborative living environment.

Students involved in a RLC program at Rollins College in Winter Park, Florida are another example of a cohort of students experiencing higher academic achievement as a result of participating in an RLC. Eck, Edge, and Stephenson (2007) reported that students involved in the RLC program had higher academic achievement than non-RLC students during the first four years of the program's implementation. They asserted that this evidence shows that they have created a distinctive first-year program worthy of emulation (Eck et al., 2007). Eck et al. also hypothesized that these academic gains will transfer to the second and third years of enrollment through involvement in this program, though this remains an area of future study. In essence, these studies of academic performance conclude that the more students engage in meaningful and supportive learning experiences through participation in RLCs, the more likely they are to be successful in college, persist, and graduate (Brower & Inkelas, 2010).

Social development. In addition to increased academic performance, researchers have found that another benefit of participating in RLCs is in the area of social development. The climate that is created in these spaces is characterized as socially supportive, resulting in a smoother transition to college (Brower & Inkelas, 2010). A supportive climate is especially

important for young men who are found to come to campus with a gap in their social development manifested in immature behavior, a lack of motivation, and disengagement in their own advancement socially (Sax, 2009).

Addressing personal issues and identity development in a safe space such as a RLC can further the likelihood that young men will be able to successfully integrate into society as mature and responsible citizens. For instance, a RLC can be focused on men's identity development. Jessup-Anger et al. (2012) found that for men living within a RLC, the environment can be described as "safe havens where [men] could be themselves among like-minded peers" (p. 168). The space also offered men a place where rigid gender role expectations did not exist like they do outside of the RLC and offered a plethora of involvement opportunities for fostering relationships with faculty and peers (Jessup-Anger et al., 2012). The men were able to avoid pressures commonly placed on collegiate males such as the impetus to drink and not displaying behaviors considered to be feminine for fear of embarrassment; the men were able to express themselves in a way they felt comfortable (Jessup-Anger et al., 2012).

Additionally, students living in RLCs are able to identify noticeable differences in their interactions with peers within and outside of RLCs. Jessup et al. (2012) gave an example of this when quoting an RLC member who stated: "normally when I am eating lunch with my non-RLC friends, I don't bring up poverty. I feel in the RLC we get a little more philosophical and a little more theological than with other friends" (p. 168). In this example, RLC students participated in co-curricular activities that yielded opportunities to talk about topics outside of those strictly academic in nature. Overall, these programs create safe environments that allow men to support one another with regard to identity exploration and their desire to be engaged citizens and excel academically within the safe environment created by the RLC program.

Sigma Phi Epsilon Residential Learning Community

Sigma Phi Epsilon fraternity is committed to "building balanced men" as they navigate the most transformative time in their lives, their college years (Sigma Phi Epsilon, 2017). The Balanced Man Program initiative, described on their website, is founded on five philosophical tenets: equal rights and responsibilities, continuous development, accountability, living the ritual, and mentoring (Sigma Phi Epsilon, 2017). The Balanced Man Program is a non-pledging, non-hazing, four-year, personal, academic, leadership and professional skills development experience. A component of this experience, when broken down further, is executed through a commitment to "sound mind and sound body" (Sigma Phi Epsilon, 2017, para. 2). The sound mind piece of this mission is specifically tied to the fraternity's commitment to develop men into scholars who achieve at high standards and graduate in a timely manner (Sigma Phi Epsilon, 2017). This commitment to scholarship is operationalized by the fraternity's commitment to being a "valued partner in higher education" in association with their host institutions (Sigma Phi Epsilon, 2017, para. 2). The fraternity's volunteer and professional leaders maintain that the Balanced Man Program and related initiatives sponsored by the organization, including the RLC, have the ability to impact the college male experience.

Part of the execution of this commitment to building balanced men is the development of unique programs that address the challenges the members of Sig Ep face as collegiate men. The headquarters staff identified the on-campus RLC model as a program that could aid in the academic and social development of their members. They took best practices and structural components of the RLC and developed their own iteration of it consistent with the values espoused by the fraternity. Sig Ep claims to have implemented a unique program that attempts to combat academic apathy and the underperformance of their members, including social

irresponsibility, using the RLC structure. The fraternity defines their RLC as undergraduate chapters that are committed to the following four operational components: recruiting and developing balanced men, providing consistent support from a strong alumni and volunteer corporation (alumni advisory team to the chapter), engaging university faculty and student affairs professionals as faculty fellows, and managing an environment conducive to undergraduate success, making academics a forefront in the living environment. The headquarters staff is committed to the ideal that the implementation of the program will be similar to the residentially based RLC models, which have been shown to be successful in promoting academic achievement and social development (Pike, 1999; Stassen, 2003).

The design of this fraternal RLC is unique, as it is not housed within a unit of the department of residential life on a local campus, and much of the oversight rests on volunteers and a student leader. The RLC structure is built on university partnerships and faculty engagement. Once the program is built, several key people ensure that the RLC program is being executed properly. Those responsible for the oversight of the RLC are the appointed faculty fellow (a member of the local institution's faculty or administration), the hired graduate resident scholar (traditionally a graduate student originally from another Sig Ep chapter), and the undergraduate RLC chair, who is elected by his peers. To be considered to be a successful program, certain components must be developed, including a transparent and sound academic plan for the individual members of the chapter, goals to increase the academic performance of the chapter that are shared and upheld by the members, a relationship with the host institution and faculty members, and relationships with key RLC partners and stakeholders. Additionally, the program must include regularly scheduled RLC events that address academic performance and study skills and have scholarships, awards, or incentives to promote academic success.

Though no published research has been conducted on this program to date, these efforts are believed to provide the members of the 50 chapters of the RLC program out of the 228 total Sig Ep chapters a superior experience as an undergraduate fraternity man.

Summary

The relevant research and theories regarding the study of the association between involvement in RLCs and academic and social engagement was reviewed in Chapter 2. As previously stated, there has been no research that examines the effectiveness of the Sig Ep RLC. Therefore, the purpose of this study is to determine if Sig Ep fraternity members who participate in the fraternity's residentially based learning community exhibit greater levels of engagement in academically beneficial practices and the co-curricular campus environment and attain higher GPAs than their brothers in non-RLC chapters. The third chapter will discuss the methodology that was used for the present study.

CHAPTER 3: METHODOLOGY

Using a quantitative ex post facto design, this study examined how an independent variable (type of chapter), present prior to the study, affected dependent variables (NSSE scale scores and GPA) (Salkind, 2010). This study attempted to show that the independent variable of chapter type is causing changes in the dependent variables. Participants were not randomly assigned into residential learning community (RLC) and non-RLC; they joined the chapter on their own accord on the campus in which they were enrolled in at the time of receiving an invitation of membership.

Description of the Design

The National Survey of Student Engagement (NSSE) was emailed to undergraduate members of Sigma Phi Epsilon (Sig Ep) fraternity. The primary independent variable was the type of fraternity chapter: RLC versus non-RLC. Results were also examined by students' self-reported year in college and race/ethnicity. The primary dependent variables were scale scores generated from the NSSE and self-reported college grade point averages. The selected variables measured by the NSSE for the purpose of the present research included co-curricular student involvement within the campus environment, experiences with faculty both within and outside of the classroom, and peer relationships within the learning and living communities. It should be noted that the experiences with faculty scale score included questions about teaching practices that are not necessarily related to the residential learning community program or the fraternity. The survey was administered in November 2016 in order to capture men who were living in a facility that employs this program or who have secured their membership as a fully initiated member. A fully initiated member was defined as a brother who has completed the Sigma

member education program, which is the first of four modules of educational programming within the fraternity.

Setting

Undergraduate members of all colleges and universities that have an active chapter of Sig Ep within the United States of America, according to the national office, were invited to take the survey, including all RLC and non-RLC chapters. Sig Ep is recognized under the umbrella organization of the North American Interfraternity Conference, and it had 228 active campus chapters in May 2016. The national fraternity headquarters staff sent out the survey electronically through an email that contained a short paragraph introducing the survey to undergraduate members by the Sig Ep Executive Director, Brian Warren, with a request for every member in each chapter to complete the instrument. The survey was taken electronically through Qualtrics, an online survey program.

Participants

Participants were active members of all 228 undergraduate chapters of Sig Ep from freshman through senior years. Freshmen accounted for the smallest group by class level since some campuses have deferred recruitment, which is a delay of one semester. Some freshmen may be in their second semester as a freshman in the fall, or be in their second semester of a campus that employs a quarter system, such as Stanford, DePaul, or several of the California State University campuses. Chapters' membership sizes ranged from around 40 to 120 men, with an average chapter size of 80 in the fall 2016 semester. Residential learning community chapters accounted for 50 of the 228 chapters and represented 22% of the chapters. Based on information gathered from the national headquarters, it was determined that there are approximately 15,000

affiliated members across the country but only about 12,000 received the survey due to email bounce backs.

A total of 1,102 surveys were attempted. Of the attempted surveys, 341 were incomplete and not used in the analyses for this study. A total of 761 surveys were included in the analyses. Of the 228 active chapters of Sig Ep, 61% ($n = 140$) participated with an average response rate of 5.43 men per chapter and a range of 1 to 37. A total of 32% ($n = 245$) of the respondents were from a RLC chapter and 68% ($n = 516$) were non-RLC participants. The percentage of participants in the sample from RLC chapters closely reflects the overall percentage recognized by the fraternity (50 of 228), which is 22%. It had been planned to eliminate the data collected from the University of Nebraska chapter during data analysis since first-semester freshmen are allowed to reside in the house, thus making it possible to skew the data for Nebraska. However, after reviewing the two responses from this chapter coded as freshmen, it was discovered that the two respondents did not live in the chapter facility; therefore their surveys were retained.

The final response rate for the survey was 6.3% ($n=761$). In 2002, the NSSE had a national response rate across all institutions of 41% (Zhao & Kuh, 2004), however in 2016 it was 29% (NSSE, 2016a). It should be noted that results listed in the table “Characteristics of the NSSE 2016 U.S. Respondents and Undergraduate Population at All U.S. Bachelor’s Degree-Granting Institutions” indicate that males represented 35% of the responses compared to women, who accounted for the majority of responses (NSSE, 2016a). Studies of non-response bias by the NSSE administrators in 2001 and 2005 concluded that non-response effects are minimal, though they still can be problematic (NSSE, 2008).

The racial breakdown of the respondents is reflected on Table 1. The total number of responses was 839 with a sample of 761; 78 respondents choose more than one category.

Table 1

Sample Size for Race by Type of Chapter

Race/Ethnicity	Non-RLC	RLC	Total
	<i>n</i>	<i>n</i>	<i>n</i> (%) [*]
American Indian/Alaska Native	15	13	28 (4%)
Asian	33	13	46 (6%)
Black or African American	18	2	20 (3%)
Hispanic or Latino	48	12	60 (8%)
Native Hawaiian/Other Pacific Islander	6	2	8 (1%)
White	421	222	643 (85%)
Other	11	1	12 (2%)
I Prefer Not to Answer	11	2	13 (2%)

^{*}*Note.* Respondents were able to choose more than one category, which is why the percentages exceed 100%.

Figure 2 provides the racial breakdowns from respondents of the 512 institutions that participated in the 2016 NSSE (NSSE, 2016b). The sample of respondents from Sig Ep was similar to the national NSSE data with the exception of having a smaller percentage of students indentifying as Hispanic or Latino (8% compared to 12%), and Black or African American, (3% compared to 10%). The largest mismatch was the percentage of men identifying as White, Sig Ep respondents accounted for 85% of the sample compared to 65% of the NSSE participants.

Characteristics of NSSE 2016 U.S. Respondents and Undergraduate Population at All U.S. Bachelor's Degree-Granting Institutions

Student Characteristics	NSSE 2016 Respondents ^a (%)	U.S. Bachelor's-Granting Population ^b (%)
Sex		
Male	35	45
Female	65	55
Race/Ethnicity^c		
African American/Black	10	12
American Indian/Alaska native	1	1
Asian	5	6
Native Hawaiian/other Pacific Isl.	<1	<1
Caucasian/White	65	58
Hispanic/Latino	12	14
Multiracial/multiethnic	3	4
Foreign/nonresident alien	4	4
Enrollment Status		
Full-time	89	83
Not full-time	11	17

Note: Percentages are unweighted and may not sum to 100 due to rounding.

- The NSSE 2016 sampling frame consists of first-year and senior undergraduates. Data were provided by participating institutions.
- U.S. percentages are based on data from the 2014 IPEDS Institutional Characteristics and Enrollment data. Includes all class years.
- Institution-reported, using categories provided in IPEDS. Excludes students whose race/ethnicity was unknown or not provided.

Figure 2. Characteristics of NSSE 2016 U.S. respondents

The number of respondents according to self-reported year in college is presented in Table 2. RLC respondents were slightly under-weighted for freshmen and slightly over-weighted for seniors. The opposite pattern was evident for non-RLC respondents.

Table 2

Sample Size for Class Year by Type of Chapter

Class Year	Non-RLC		RLC		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Freshman	129	74	46	26	175	23
Sophomore	134	68	62	32	196	26
Junior	130	69	59	31	189	25
Senior	118	61	75	39	193	26
Total	511	68	242	32	753	100

Variables

The primary independent variable in this study was the type of fraternity living unit: RLC versus non-RLC. Other variables examined were student college year and student self-reported race/ethnicity. The primary dependent variables were three engagement indicators derived from the NSSE which are described in Table 3, and self-reported college grade point average.

Table 3

NSSE Themes and Engagement Indicators and Corresponding Research Questions

NSSE Themes for 2016	NSSE Engagement Indicators	Research Question Component
Learning with peers	Collaborative Learning Discussions with Diverse Others	1b. Interaction with peers
Experiences with faculty	Student-Faculty Interaction Effective Teaching Practices	1a. Out of class interaction with faculty
Campus environment	Quality of Interactions Supportive Environment Co-curricular participation	1c. Co-curricular participation

Materials

The College Student Report assesses the extent to which college students engage in empirically vetted good practices while enrolled (Pascarella et al., 2010). Permission was granted to utilize this survey for the purpose of this research through the Center for Postsecondary Research Item Usage Agreement at Indiana University. The focus of this assessment instrument is to have a broad-based tool to measure cognitive and personal development both in engagement and exposure (Pascarella et al., 2010).

The instrument is a 15 to 20-minute survey consisting of 47 questions to which the student self-evaluates and responds (Pike, 2013). The researcher included an additional set of questions pertaining to residence and grade point average at the end of the NSSE questions. It was determined that the survey takes 15-20 minutes through pilot-tests administered to two groups of students, neither of which were utilized for analysis in the main study. In order to disseminate the survey, it was inputted into Qualtrics, a survey software hosted through the

Rutgers University website. Creswell (2002) asserts that electronic surveys are less expensive and are a simpler form of data collection. The principal investigator maintained sole access to the data collected through Qualtrics.

The NSSE data are organized into four benchmarks that include: Academic Challenge, Learning with Peers, Experiences with Faculty, and Campus Environment. These benchmarks are based on Astin's (1984) theory of student involvement and Chickering and Gamson's work on seven principles of good practice that improve undergraduate education (1987). The engagement benchmark themes are a recent adaptation of the original NSSE, which offered five benchmarks. Four of the original benchmarks evolved in the four new themes, and the fifth benchmark became a component of the high-impact practices, which is no longer considered a theme. According to the NSSE website, the new engagement indicator for "campus environment" expanded to focus on interactions with key people and perceptions of the institution's learning environment; "experiences with faculty" now encompasses aspects of effective teaching practices, and "learning with peers" emphasizes student-to-student collaboration and includes diversity items ("NSSE," 2017). The academic challenge indicator was also altered; however, this engagement indicator is not being considered as a variable for the purposes of this research.

The aforementioned 47 core NSSE items are funneled into 10 engagement indicators that are organized within four engagement benchmark themes. These engagement indicators (EI) are Higher-Order Learning, Reflective & Integrative Learning, Learning Strategies, Quantitative Reasoning, Collaborative Learning, Discussions with Diverse Others, Student-Faculty Interaction, Effective Teaching Practices, Quality of Interactions, and Supportive Environment.

The four benchmarks mentioned in the paragraph above are considered to be the criteria of exposure and engagement in effective educational practices (Pascarella et al., 2010). For the purpose of this study, only three of the four benchmarks were utilized: Learning with Peers, Experiences with Faculty, and Campus Environment. The benchmark theme with the appropriate engagement indicators that were utilized in this study with the corresponding research question is shown in Table 3.

Each theme is applicable to all types of four-year colleges and universities without regard to their mission, Carnegie classification, location, or type of students served (Campbell & Cabrera, 2011). The NSSE has been used to measure the engagement of students involved in types of programs similar to the Sig Ep RLC (Pascarella et al., 2010; Pike, Kuh, & McCormick, 2011; Zhao & Kuh, 2004) in addition to being used to explain student characteristics for fraternity members (Pike, 2003).

The NSSE is a valid and reliable measurement tool (Bureau, Ryan, Ahren, Shoup, & Torres, 2011; LaNasa, Cabrera, & Trangsrud, 2009). However, it has been subject to criticism. Porter (2011) expressed concern in its ability to have students accurately report information about their academic experiences, partly due to vaguely worded questions and motivation to please the researchers. Though he made this argument about these types of instruments in general, he did not offer nor provide an alternative measurement tool.

In 2006, Charles Miller, chair of the Commission on the Future of Higher Education, suggested using the NSSE benchmarks as a viable tool for assessing educational quality, further supporting its significance as a valued research tool (Miller & Malandra, 2006). NSSE was used by 530 campuses in 2016 such as Rutgers University and several other Big Ten and AAU universities (NSSE, 2016a). For the purpose of this paper, it will be used to measure whether or

not student members in Sig Ep RLCs demonstrate a different level of academic and social engagement compared to their non-RLC fraternity chapters. The NSSE was one of the few surveys other than EBI-Mapworks, now called Skyfactor, which collects this type of information. Therefore, it was determined to be the best choice for this research to accurately measure what this work intended to discover.

An additional set of items was used to augment the demographic information that was collected in Qualtrics. Kyle Sutton, the information systems and analytics director for the fraternity's headquarters, sent the researcher an Excel spreadsheet containing the following information for all participants: first and last name, two email addresses, postal address, date of birth, ethnicity, date they joined Sig Ep, institution, year in college, major, degree they are seeking, GPA, high school they attended, high school GPA, and if they are a legacy, meaning their father or brother had been a member prior to them joining Sig Ep. The purpose of using this database provided by the fraternity headquarters was to reduce the number of questions participants were asked in an effort to increase response rates.

Data Collection Procedure

Before the launch of the survey, a small sample of 23 Sig Ep undergraduate men were asked to pilot the survey to ensure that it worked properly in mid-October. The men were instructed to take the survey as if they were taking the survey officially. All 23 men reported that the survey worked properly and that the questions were clear and easy to understand.

Subsequently, on Nov 9, 2016 at 2:46 PM, the National Headquarters sent out an email to all members with an appeal to participate in the survey to begin the first phase. The survey was open and available for two weeks. It was sent to 15,445 email addresses. Approximately 3,500 emails bounced back; therefore, it reached an estimated total of 12,000 inboxes. Contained in the

email was a more detailed description of the survey and a letter of consent that explained the confidentiality of the participant's responses (Appendix A).

On November 12, 2016, a total of 312 surveys were attempted. Of those attempted, 91 had been completed, and 221 were still in progress. Of the 221 still in progress, 144 had entered an email. Phase two began by sending an email on November 15, 2016 to those with an email on file reminding them to complete the survey. Of the 144 men who received the reminder email, a few bounced back due to incorrectly entered email addresses. On November 21, 2016, another email was sent to 16 men whose surveys were in progress and who had entered an email in an attempt to get them to complete it.

Towards the end of November, due to the low response rate, a decision was made by the principal investigator enact phase three to send a series of emails to 53 campus-based Greek advisors who had emails that could easily be found on their university websites who have chapters on their campuses. This email encouraged them to reach out to their leadership to have their members take the survey before Thanksgiving. These emails went out on November 20-21, 2016 and on November 23, 2016. On November 22, 2016 at 10:36 AM, phase four of data collection was a social media blast on Facebook and Twitter was executed by the public relations department of Sig Ep headquarters encouraging men to take the survey. These efforts led to a noticeable uptick of responses on the survey. Following this posting, an additional social media blast was posted in a Facebook group for alumni and volunteers who work closely with undergraduate men to ask for their support in getting the undergraduates to take the survey.

After the Thanksgiving break, on November 27, 2016, an email was sent to 145 men to request that they complete the survey for phase five. Following this attempt, a final email was sent as part of phase five on November 29, 2016 to 72 men with the same message. In a last

attempt to increase the response rate, a final phase six email was sent to campus-based Greek Advisors who advise chapters that had no response recorded by the date of December 11, 2016 to ask for 5-6 members to participate so that their chapter could be represented. It should be noted that on December 8, 2016, a request was made to have another push on social media from Sig Ep headquarters; however, it was not granted due to a specific schedule of announcements that the organization had an obligation to execute. On Tuesday, December 13, 2016, the survey was officially closed. A flow chart of the data collection procedure is represented in Figure 3.

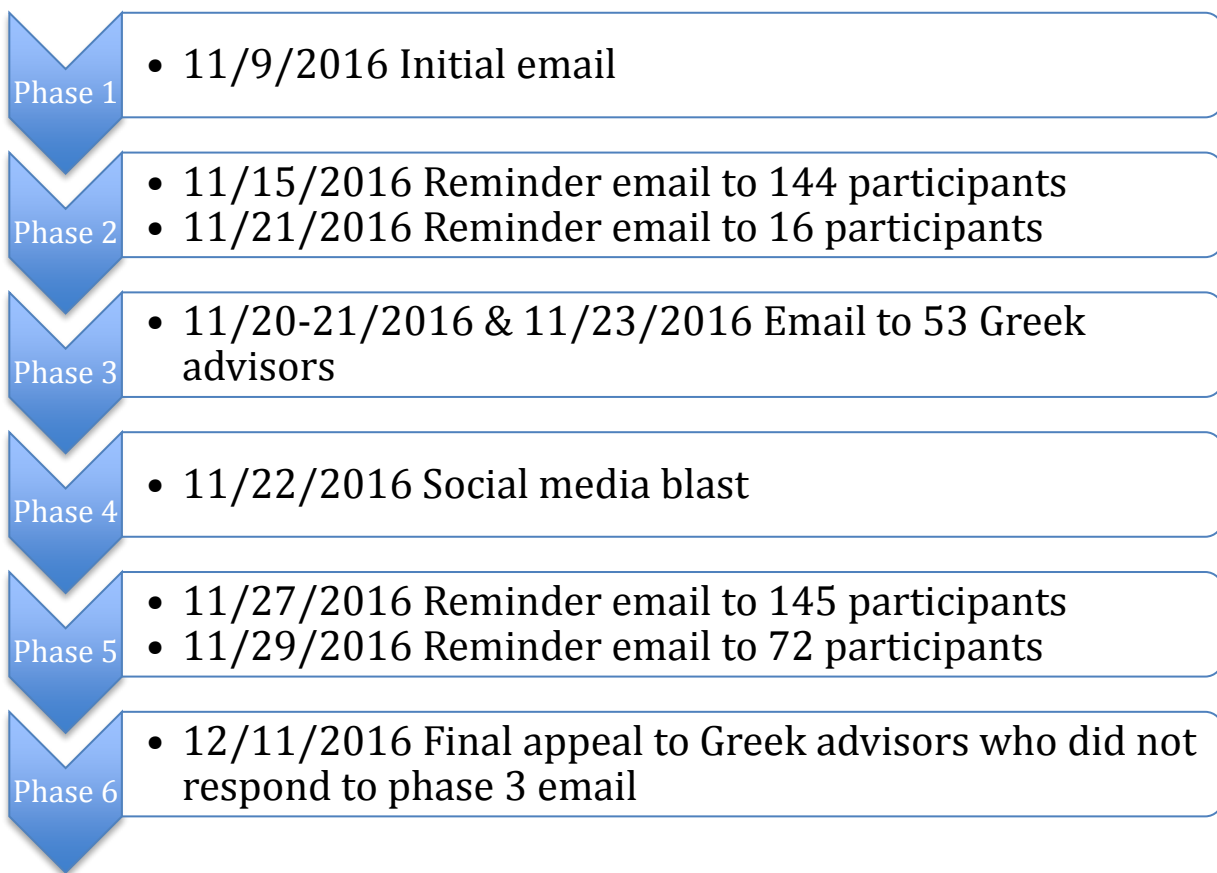


Figure 3. Data collection flow chart

Incentive

An incentive was used to get students to participate in the survey. While there was a reward for participation, there was no consequence for non-participation. The proportion of NSSE schools using incentives increased from 35% in 2010 to 54% in 2014 (“NSSE,” 2017). Sigma Phi Epsilon Executive Director Brian Warren agreed to donate \$100 to the educational foundation of the first 30 chapters who reach a 100% return rate. This fund can be used to send any member to one of the leadership programs the fraternity offers. Research indicates that incentives do not affect data quality indicators (Singer & Ye, 2013; Toepoel, 2012), including item non-response and response distributions such as the NSSE survey. Only a total of two chapters achieved the 100% completion rate, which included Kansas Zeta chapter at Fort Hays State University and California Eta chapter at UC-Davis.

Data Cleaning and Screening

The researcher completed a VLOOKUP function using the email address as the quantifier to merge the results with the demographic data provided by the headquarters. This action allowed for the following information to be merged with the data that were exported from Qualtrics: the date that the participant joined the fraternity, the name of their institution, their chapter’s name, the degree program in which they are enrolled, the major in which they are currently enrolled, their high school grade point average, their high school name, and if they are a legacy member.

Prior to importing the data into SPSS, a spot check was performed to ensure the file merge was done correctly. The data that did not merge using the VLOOKUP function in Microsoft was backfilled and checked for accuracy. Additionally, all submissions that had the RLC response coded incorrectly, or where the “unknown” field was chosen, were changed to

accurately reflect the designation of the chapter. Once these functions were completed, the data were inputted into SPSS.

Once data were entered into SPSS, a check was executed to identify if all responses were exported from Qualtrics with consistent coding. When this was done, it was discovered that one of the campus involvement questions, Q18, was reverse scored compared to the other questions in the subscale, such as how much the campus emphasizes certain opportunities for involvement, Q19. The variable was transformed so that the scaling was in a consistent direction. The race variable was recoded into two categories, White (1) which represented 85% of the population and non-White (0) which was 15%. The RLC grouping variable was also recoded to better reflect the presence of being in the RLC (1 = yes), which was 32% of the respondents and (0 = no) representing the remaining 68%.

Data Analysis

Data analysis took several forms in the present study. First, in order to create a composite average of all of the items related to the engagement indicators under each theme, a new variable for each theme that corresponded to the first research question was created. Three scale scores were created in SPSS by grouping the questions that corresponded to each of the three parts of the first research question. This was done by transforming the variable within SPSS, naming the target variable (e.g., faculty), then combining all of the questions that related to that theme. Table 4 shows each of the questions that correspond to the appropriate scale score.

Table 4

Scale Scores for the NSSE Variables

Name	Research Question	Description	Corresponding Questions
Faculty	RQ1a	Experiences with faculty	Q8_1, Q8_2, Q8_3, Q8_4, Q10_1, Q10_2, Q10_3, Q10_4, Q10_5
Peers	RQ1b	Learning with peers	Q6_5, Q6_6, Q6_7, Q6_8, Q6_9, Q13_1, Q13_2, Q13_3, Q13_4
Cocurric	RQ1c	Co-curricular participation through the campus environment	Q18_1, Q18_2, Q18_3, Q18_4, Q18_5, Q19_2, Q19_3, Q19_4,

Note. The full wording of each item from the NSSE is presented in Appendix A.

Cronbach's alpha scores were obtained to demonstrate the internal consistency reliability of these three scale scores. The scales explored were experiences with faculty, learning with peers, and campus environment through co-curricular experience. To test research question one, three independent-samples t-tests were conducted on these scale scores based on the NSSE themes to determine if there were differences in experience between members in the RLC and those not in the RLC. The researcher was also interested to see if there were any race or class differences; therefore, additional ANOVA tests were run. Lastly, t-tests were run to investigate research question two as it related to differences in GPA and chapter type. The threshold for statistical significance was set at $p < .05$.

CHAPTER 4: FINDINGS

The purpose of this study was to identify if Sigma Phi Epsilon (Sig Ep) members who live in a house where the residential learning community (RLC) program is employed experienced increased academic and social engagement and demonstrated higher GPAs than Sig Ep members not engaged in the RLC program. The first section of this chapter presents the results from Cronbach's alpha tests to show internal consistency reliability for the three scale scores derived from the National Survey of Student Engagement (NSSE). Following this section, the results of t-tests that investigate each research question are reported. ANOVAs using two additional independent variables, race and class year of the student, are reported as well. This procedure allowed the researcher to determine if the student experience had changed depending on students' self-reported racial/ethnic identity and/or year in college (Chen et al., 2009). In the final section, results for the tests on grade point average (GPA) are reported. It is important to note that the Likert scales used in the NSSE are counter-intuitive, wherein 1 = very much and 4 = very little; therefore, mean values closer to 1 show a greater level of engagement. Results are summarized in the final section of the present chapter.

Reliability Estimates for Scale Scores

The results of the Cronbach's alpha test for the 9-item scale "Experiences with faculty" showed a strong internal consistency reliability and internal structure validity in these data ($\alpha = .814$). Item-total correlations for the experiences with faculty construct ranged from 0.447 to 0.572. "Learning with peers" was a 9-item measure with strong internal consistency reliability and internal structure validity, $\alpha = .792$ (range of item-total correlations: 0.381 to 0.563). Similarly, "co-curricular activity" was a 13-item measure with strong internal consistency

reliability and internal structure validity, $\alpha = .859$ (range of item-total correlations: 0.415 to 0.551). All subscales had a value above .7, therefore they have a high level of internal consistency (DeVellis, 2003; Kline, 2005).

Relationship Between Chapter Type and NSSE Benchmark Themes

Table 5 presents mean (sd) scores by chapter type for the three NSSE scale scores.

Table 5

NSSE Scale Scores by Type of Fraternity Chapter

NSSE Scale	RLC (32%)		Non-RLC (68%)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Experiences with faculty	2.33	.51	2.23	.57	2.39	<0.05
Learning with peers	1.87	.51	1.87	.51	-0.04	ns
Co-curricular activity	2.36	.64	2.14	.62	4.49	<0.01

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Experiences with faculty. The result of the t-test that corresponds to part (a) of research question one pertains to both in and out-of-class experiences with faculty. It was demonstrated that experiences with faculty was greater with non-RLC men ($M = 2.23$, $SD = 0.57$) than RLC members ($M = 2.33$, $SD = 0.51$). This difference was small, but statistically significant, $t(530) = 2.39$, $p = .017$, $d = 0.182$. Therefore, men not in an RLC show higher levels of engagement with faculty than their peers in the RLC program.

Faculty experience scores were examined by class year. Means are reported in Table 6. ANOVA results indicated there were no significant main or interaction effects for class year.

Inspection of the means reported in Table 6 indicates that non-RLC students reported higher levels of faculty experiences than RLC students in each of the four class years observed.

Table 6

Means and Standard Deviation for NSSE Faculty Experience Scale Scores by Class and Type of Chapter

Class	RLC			non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Freshman	46	2.46	.48	129	2.25	.54
Sophomore	62	2.31	.54	134	2.26	.62
Junior	59	2.38	.41	130	2.23	.60
Senior	75	2.23	.56	118	2.20	.51

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Mean scores for the faculty experience scale were analyzed by student race. Table 7 reports means (sd). ANOVA results indicated there were no significant main or interaction effects for race. Inspection of the means reveals that the main effect for non-RLC students over RLC students was evident for White students but not for non-White students.

Table 7

Means and Standard Deviation for NSSE Faculty Experience Scale Scores by Race and Type of Chapter

Race	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
White	222	2.35	.50	421	2.24	.56
Non-White	23	2.15	.57	95	2.21	.61

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Learning with peers. Peer learning scores did not differ by type of fraternity chapter: RLC men ($M = 1.873$, $SD = 0.506$) compared to Non-RLC men ($M = 1.874$, $SD = 0.510$). The difference in scores was not statistically significant, $t(759) = -.043$, $p = .971$, $d = -0.003$.

Peer learning scale scores were analyzed by class year. Means are reported in Table 8. There was a significant main effect of class year on peer learning, $F(3, 745) = 4.411$, $p = .004$, partial $\eta^2 = .017$. Planned contrasts and Bonferroni tests revealed that freshmen ($\Delta M = .155$, $p = .040$) and sophomores ($\Delta M = .150$, $p = .033$) reported lower levels of peer learning than seniors. Sophomores also reported lower levels than juniors, $\Delta M = .132$, $p = .018$. For peer learning, the statistical test for an interaction between class year and RLC participation was not significant.

Table 8

Means and Standard Deviation for NSSE Peer Learning Scale Scores by Class and Type of Chapter

Class	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Freshman	46	1.94	.55	129	1.97	.49
Sophomore	62	2.02	.51	134	1.87	.55
Junior	59	1.81	.40	130	1.82	.51
Senior	75	1.77	.52	118	1.83	.48

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Peer learning scale scores were analyzed by race. Means are reported in Table 9. An analysis of variance test indicated there was a significant main effect for race $F(1,757) = 13.88$, $p < .001$, partial $\eta^2 = .018$, but not a significant interaction effect between race and type of chapter.. The mean score for White students was 1.90 (.51) and the mean score for non-White students was 1.70 (.47). Non-White students reported a higher level of peer interactions than White students, and this was the case for both types of chapters.

Table 9

Means and Standard Deviation for NSSE Peer Learning Scale Scores by Race and Type of Chapter

Race	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
White	222	1.90	.50	421	1.91	.51
Non-White	23	1.61	.44	95	1.73	.48

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Co-curricular participation through campus environment. Engagement in campus environment through co-curricular opportunities for Non-RLC fraternity members ($M = 2.14$, $SD = 0.62$) was of a higher quality and was more frequent compared to the RLC members ($M = 2.36$, $SD = 0.64$). There was a moderate significant difference in engagement on campus in favor of the non-RLC men, $t(759) = 4.49$, $p = .000$, $d = 0.347$.

Co-curricular participation was examined by class year. Means are reported in Table 10. There was a significant main effect of class year on co-curricular involvement, $F(3, 745) = 5.71$, $p = .001$, partial $\eta^2 = .022$. Planned contrasts and Bonferroni tests revealed that freshmen reported higher levels of involvement compared to seniors, $\Delta M = .282$, $p < .001$. For co-curricular involvement, the interaction between class year and RLC participation was not significant.

Table 10

Means and Standard Deviation for NSSE Co-curricular Involvement Through the Campus Environment Scale Scores by Class and Type of Chapter

Class	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Freshman	46	2.20	.64	129	2.00	.64
Sophomore	62	2.28	.64	134	2.15	.63
Junior	59	2.41	.57	130	2.14	.54
Senior	75	2.47	.65	118	2.29	.64

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Co-curricular involvement through campus environment was examined according to student race. Means are reported in Table 11. Analysis of variance results indicated there were no significant main or interaction effects for race, $F(1,757) = 5.17$, $p = .023$, partial $\eta^2 = .007$. Inspection of means reported in Table 11 reveals that the main effect favoring non-RLC over RLC chapters was evident for both racial groups.

Table 11

Means and Standard Deviation for NSSE Co-curricular Engagement Through the Campus Environment Scale Scores by Race and Type of Chapter

Race	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
White	222	2.38	.62	421	2.16	.62
Non-White	23	2.18	.79	95	2.04	.59

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Relationship between Chapter Type and GPA

An independent-samples t-test was run to determine if there were differences in GPA between men in the RLC and those not in the RLC in order to address research question two. Means are reported in Table 12.

Table 12

Means and Standard Deviation for GPA by Type of Chapter

Type of Chapter	<i>n</i>	<i>M</i>	<i>SD</i>
RLC	240	3.52	.35
Non-RLC	488	3.30	.43

There were a total of 728 participants, 240 RLC and 488 non-RLC, used in this analysis since some of the freshmen were excluded because they did not have a college GPA at the time of the survey. Some freshmen were enrolled in institutions that are on the quarter system or are

in their second semester, therefore there was a small number who had a GPA. Grade point average was greater for RLC students ($M = 3.52$, $sd = 0.35$) than non-RLC students ($M = 3.30$, $sd = 0.43$). There was a medium effect size difference between the mean GPA scores of RLC and non-RLC participants, $t(568) = 7.10$, $p < .001$, $d = 0.561$.

To check whether the significant difference in college GPA scores favoring RLCs was due to pre-existing differences in academic proficiency at entry to college, an analysis of high school GPAs was conducted. Table 13 reports the high school GPAs by chapter type for all students for whom high school GPAs were available. A t-test confirmed that the two groups did not differ in high school GPA. It appears unlikely, therefore, that the GPA effect associated with RLC participation was due to pre-existing differences in the academic achievement evident in high school.

Table 13

Means and Standard Deviation for High School GPA by Type of Chapter

Type of Chapter	n	M	SD
RLC	179	3.05	1.60
Non-RLC	437	3.06	1.57

College grade point averages were examined by class year. Means for class are reported in Table 14. Analysis of variance results indicated there were no significant main effect for class and the class by chapter type interaction effect was not significant. Inspection of the means reported in Table 14 indicates that the differences in college GPA favoring RLC chapters over non-RLC chapters were evident in each class year.

Table 14

Means and Standard Deviation for Grade Point Average for Class and Type of Chapter

Class	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Freshman	43	3.55	.38	101	3.32	.53
Sophomore	61	3.54	.38	134	3.32	.43
Junior	59	3.53	.32	130	3.26	.41
Senior	74	3.46	.35	118	3.30	.38

College GPAs were examined by student race. Means are reported in Table 15. Analysis of variance results indicated there was a main effect for race, $F(1,724) = 4.50$, $p < 0.05$. The interaction between race and chapter type was not significant. The mean GPA for White students was 3.39, and the mean GPA for non-Whites was 3.28. Inspection of the means reported in Table 15 reveals that the GPA effect for RLCs over non-RLC chapters was present for both racial groups examined.

Table 15

Means and Standard Deviation for Grade Point Average by Race and Type of Chapter

Race	RLC			Non-RLC		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
White	217	3.53	.35	400	3.31	.42
Non-White	23	3.37	.40	88	3.25	.49

Summary

Results of the t-tests indicated that men in the Sig Ep RLC did not experience higher levels of engagement in the NSSE variables included in the research questions. Specifically, men not in the RLC reported higher levels of engagement with faculty and co-curricular programs through campus engagement. Two-way ANOVA results indicated no significant differences between the RLC and non-RLC groups in terms of class year and race when it came to the NSSE faculty involvement variable, however with regard to peer involvement, findings revealed that freshmen and sophomores reported lower levels of peer interactions than seniors. Additionally, Non-White students reported higher level of peer interactions than White students. For co-curricular involvement through the campus, freshmen reported higher levels of involvement compared to seniors and main effect favoring non-RLC over RLC chapters was evident for both racial groups.

Previous research on residential learning communities was not supported by the present study. Research has shown that involvement in an RLC is positively related to engagement on campus (Astin, 1984; Brower & Inkelas, 2010; Tinto, 2003). The present study did not find any relationship between RLC membership and peer involvement. Surprisingly, the present study found non-RLC student had higher levels of faculty involvement and co-curricular engagement than RLC students.

A finding that did support the theoretical framework and previously conducted research was uncovered in the second research question on GPA. Men in the RLC did report significantly higher GPA's than their non-RLC counterparts. The GPA effect favoring RLC over non-RLC chapters was evident for each class year and for both racial groups examined.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

The purpose of this study was to explore academic achievement (defined by GPA) and social engagement of men in Sigma Phi Epsilon fraternity whose chapters sponsored accredited residential learning communities (RLC) compared to those men within the fraternity who were not associated with a RLC. In order to better understand the concept of engagement, data from the National Survey of Student Engagement (NSSE) were requested from all 228 current active chapters of the fraternity. The NSSE is a 47 item instrument that divides survey items into five benchmarks, or what is now referred to as engagement indicators, based on Astin's (1984) theory of student involvement and Chickering and Gamson's (1987) work on principles of good practice. Specifically, the present study examined three of the four engagement indicators, interactions with faculty, interactions with peers, and co-curricular engagement through the campus environment. Grade point average was a fourth variable added to the NSSE survey data to answer the second research question. The NSSE survey, along with a few additional questions, was used to conduct the study in order to address both research questions. The additional questions, which can be seen in Appendix A, pertained to type of residence and the presence of alcohol in the living environment. This final chapter reviews key findings from the research, discusses limitations of the study, highlights implications for practice, and gives suggestions for further research in the area of residential learning communities as a potential behavioral and developmental intervention with undergraduate members for national fraternities.

Discussion of Findings

Previous researchers discovered that regardless of the design of the RLC, positive outcomes were associated with academic and social engagement of the students in them (Sriram & Shushok, 2010; Stassen, 2003; Zhao & Kuh, 2004). The findings reported in prior research

were not replicated in the present study. This study did not corroborate previous research on the positive effects of participating in learning communities with respect to student engagement.

The first finding was that there was not a statistically significant difference between fraternity members in the RLC chapters and those not in the RLC chapters for the variable of peer interaction as measured by the “peer interaction scale” of the NSSE. A second finding was a significant difference for the other two main scale scores of the NSSE for faculty interaction and co-curricular engagement through campus environment. However, both variables were found to have an opposite relationship in which non-RLC chapter members were more engaged than RLC students, which is counter to what prior research has reported. A re-analysis was run on the scale score for faculty interaction using only the questions that related to relationships with faculty, not classroom teaching practices. This analysis showed non-RLC men ($M = 2.49$, $SD = 0.79$) were still more engaged with faculty than RLC members ($M = 2.68$, $SD = 0.73$). There was a small effect size difference between the mean scale score of the re-analyzed faculty interaction between RLC and non-RLC participants, $t(516) p = -3.227$, $p = .001$, $d = -0.25$ (Appendix B).

Importantly, in keeping with prior research, a significant positive effect for RLC membership was found for college GPA. This finding, which answers the second research question, showed a noticeable positive relationship between GPA and status in the RLC. This outcome was consistent with a majority of the research related to GPA and RLC participation (Eck et al., 2007; Johnson & Romanoff, 1999). These findings are discussed at greater length in the paragraphs below.

Experiences with faculty – Significant difference between groups. Faculty experience was defined as students making connections between their studies and their future plans and engaging in effective teaching practices with their teachers (“NSSE,” 2017). Sig Ep purposely

chose to engage the RLC faculty fellow as part of this program by having them hold office hours in the living space. The idea behind this was to provide increased opportunity for the men in the RLC to approach the faculty in academic and non-academic dialogue. These interactions have a positive relationship with academic performance as evidenced by the research mentioned in chapter two of this work. The hope was to use the interactions with their faculty fellow as a pathway to engage with other faculty on campus. Given this, it was surprising that RLC members reported significantly lower levels of faculty interactions than non-RLC members. This finding was not expected given the specific component of the faculty fellow for the Sig Ep RLC and the purpose that is outlined for these individuals. Faculty fellows should show a strong desire and enthusiasm for working with students outside of the classroom in addition to providing guidance and mentorship to brothers in a variety of areas (Sigma Phi Epsilon, 2017). While effective teaching practices may not be the direct responsibility of these individuals, they should be mentoring the men in the RLC on how to make the most out of their academic experience allowing for them to notice these practices and engage in non-academic discussions with faculty more comfortably.

A possible explanation for the lower levels of engagement may be the overall faculty accessibility and teaching style on the campus that the RLC chapters reside. There is speculation that at liberal arts institutions, faculty are more likely to engage in effective teaching practices as opposed to STEM-based and research institutions, which represent approximately a third of the RLC chapters. While faculty at liberal arts colleges may have created these learning environments, perhaps faculty at other types of colleges and universities, such as STEM or research-based institutions, were not been as effective at creating student-centered campuses (Umbach & Wawrzynski, 2005). Another explanation concerns fidelity of implementation. It

may be that faculty fellows at the RLCs were either not present enough or not interacting with students as intended. Another explanation concerns students' knowledge of their fraternity's RLC status. This explanation is discussed in a subsequent section of this chapter. Further research is needed to investigate why this unexpected finding was obtained in the present study.

Peer learning – No difference between groups. It was surprising that there was no difference in learning between peers in the RLC and those not in the RLC. It was anticipated that there would have been a significant difference in the quality of interpersonal interactions since there were clear differences found in the literature between non-affiliated collegiate men in RLCs and not in RLCs. A possible explanation for this outcome is that previous studies have not examined this type of program in an off-campus setting designed the way that the Sig Ep program was developed. An additional explanation could be the confounding variable of the Balanced Man program, which is the continuous educational development program. This program is a non-pledging, non-hazing, four-year, personal, academic, leadership and professional skills development experience. Balanced Man is implemented in 100% of Sig Ep chapters, which could have a stronger effect on the men than anticipated; this may account in part for the reasons respondents all had similar engagement levels with their peers.

Co-curricular participation through campus environment – Significant difference between groups. By senior year, most students are less engaged and therefore are not exposed to programs that promote co-curricular involvement (Kuh, 2003). This finding was echoed in the present research, demonstrating that freshmen were more involved than seniors in co-curricular opportunities. The small but statistical difference in engagement in co-curricular involvement in favor of the non-RLC members suggested that men in the RLC might be finding co-curricular engagement within their chapters' RLC programming rather than needing to go outside the

chapter environment for such connections. This explanation would need further research to confirm.

Grade point average. Involvement in the RLC had a significant, positive association with college grade point average. Men in the RLC had a higher mean GPA ($M = 3.52$, $SD = 0.35$) than those not in the RLC ($M = 3.30$, $SD = 0.43$). National GPA information is not available as a comparison since the NSSE survey does not collect similar data (R. Gonyea, personal communication, February 6, 2017).

When looking at the racial breakdown of the two groups, approximately 82% ($n=421$) of non-RLC members identify as being White compared to 90% ($n=222$) of RLC members who identify as White. Non-white is defined as all members who did not select White as their identity, including Asians. Although there was a difference, it does not mitigate the RLC effect. As shown in Table 15, the GPA effect favoring RLC over non-RLC participants was evident for both White and non-White student groups.

The GPA difference favoring Whites over non-Whites is reflective of national data reported by the United States Department of Education Bureau of Educational Statistics. The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education in the United States and other nations. As indicated in Figure 4, they report a considerably larger proportion of Black and Hispanic students, both affiliated and non-affiliated, who obtain GPAs lower than 2.5 compared to White and Asian students (Liu, 2011). A performance difference favoring Whites occurs among the highest-performing students. These national findings lend credence to the reliability and validity of the present study's GPA findings.

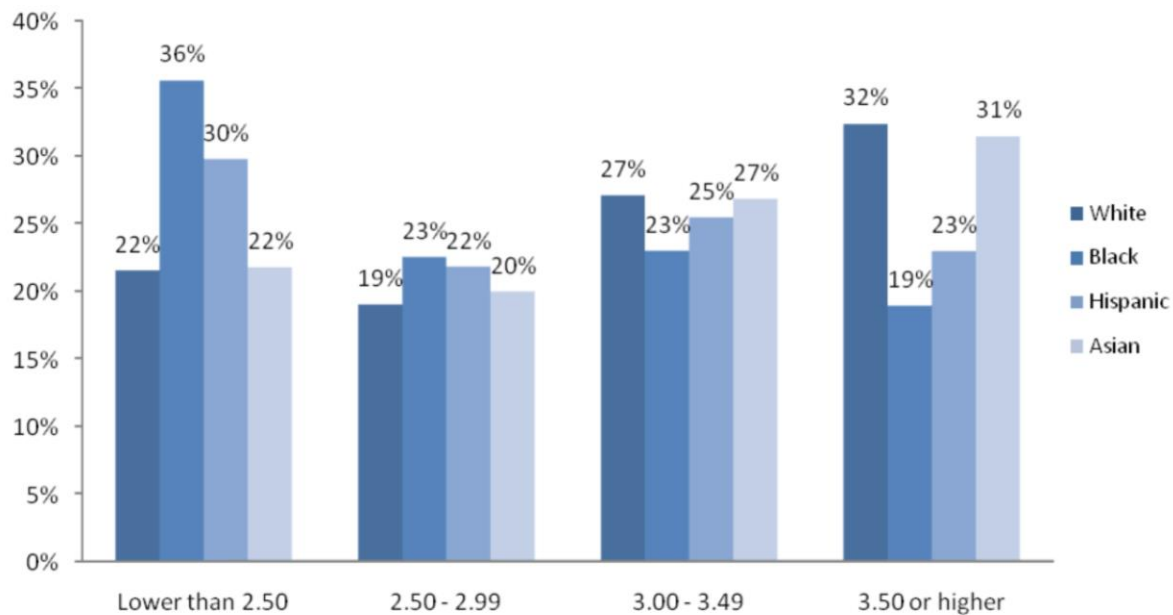


Figure 4. GPA by ethnicity reported from the U.S. Department of Education, National Center for Education Statistics, 2007-08

The outcome of the t-test on high school GPA and type of chapter was very telling. High School GPAs for members of Sig Ep were almost identical between the two types of chapters. Thus, finding a significant positive correlation between GPA and RLC status does not appear to be due to pre-existing differences upon college entry. Additional analysis with propensity score matching to compare members on additional variables, such as major, presence of alcohol in the residential space, and type of institution, might lend additional support to the positive effect of RLC experiences on GPAs.

RLC coding status. To prepare the data for input into SPSS, the researcher had to review the accuracy of the chapter type coding. The number of participants who indicated their chapter type incorrectly or did not know if they were an RLC or not was very telling. Approximately 35% ($n = 271$ of 761) of the respondents did not select the accurate designation for their type of

chapter. Of the 35%, 13% (96 of 761 total responses) of the responses were incorrect, meaning they either thought they were a member of a RLC when they were in fact not, or they thought they were not a member of a RLC when they were in fact a member of such a chapter. These discrepancies were split fairly evenly in their errors. Respondents from Eastern Illinois University, University of Minnesota, and University of Utah were 100% incorrect in all of their chapter type coding, representing that they were an RLC, when they were in fact not an accredited RLC. Washburn University had about 75% of its members indicate that they were an RLC even though that was incorrect. Approximately 22% of respondents (173 of 761) did not know what their chapter designation was. Of the 140 chapters that were represented in the survey, only 10 had 100% of their participants correctly indicate that they were in fact an accredited RLC. A breakdown of the recoding data can be found in Appendix D.

As a result of these discrepancies, it seems reasonable to assume that the RLC designation is not being used as a recruitment tool by many chapters; therefore, it helps the argument that higher-achieving men are not necessarily self-selected into a chapter because it is a RLC. The lack of a significant difference in high school GPA by chapter status also supports the idea that the RLC effect on GPA was not due to a selection bias.

A re-analysis of GPA and the NSSE scale scores was run on a new variable that coded the initial responses for type of chapter (RLC, non-RLC, unknown) into six categories: correctly indicated RLC, correctly indicated non-RLC, incorrectly coded as a non-RLC, incorrectly coded as an RLC, unknown and was in a RLC, and unknown and is not in a RLC. As reported in Appendix C, GPAs of RLC members exceeded those of non-RLC members in all relevant comparisons. Student's actual placements, not their perceptions of placements, were associated with higher GPAs when those placements were RLCs. Additionally, as reported in Appendix E,

the re-analysis of the NSSE scale scores with the re-coded variables according to reported versus actual chapter type revealed the same results that were obtained in the original results. Not knowing what type of chapter the student was from or reporting incorrectly did not change the engagement levels of the members. Even if the student did not know they were or were not in the RLC, the experience overrode the knowledge of such designation.

However, what is most concerning is that these data suggest a lack of training, marketing, presence, and reliable and valid assessment on behalf of the national fraternity and the individual chapters as to what constitutes an RLC. This potentially has grave implications for the faculty fellow, residential scholar, and the Alumni and Volunteer Council, who are supposed to be involved at the chapter level. A qualitative evaluation process in the reaccreditation procedures is needed to augment the quantitative application the RLC chapters fill out each year. This could be very telling about the actual experience the men are having while interacting with the RLC. Before any widespread adoption of the program takes effect, additional evaluation must be conducted.

Limitations

Several limitations in this study exist which warrant consideration when evaluating the outcomes of this research. First, consideration must be given to the small sample size of this study, which makes it difficult to make assumptions regarding the effect of the Sig Ep RLC on its members. Caution should be used when making generalizations about this data due to the small sample size. Second, the NSSE relies on self-reported data therefore it is possible that students are not completely accurate in their responses and may inflate certain aspects of their achievements or behavior.

Student self-reports can be affected by various problems, including the "halo effect," which is the possibility that students inflate certain aspects of their academic achievements or behavior (Gonyea, 2005). Each participant very likely holds his greatest loyalty and connection to his local campus chapter of the fraternity. Thus, when members are asked to complete a survey their first thought is likely to report on their chapter experience in the most favorable terms. However, according to the researchers who oversee NSSE, "Results indicated no significant relationship with social desirability for most benchmarks and subscales. Furthermore, there were no significant relationships between social desirability and the individual items of self-reported grades and overall institutional evaluation" (NSSE, 2012, p. 2).

It is possible that the students who chose to participate in the NSSE survey did so because they are more engaged in their academic experience or are part of high performing chapters and may not be representative of the population. Given the low respondent returns from the chapters, it is likely that most respondents were likely to be those members with the greatest likelihood of having a positive undergraduate experience, thus inadvertently confounding the overall objectives of the study. What can be drawn from these observations is that a method of surveying the members of all chapters needs to be devised that is less dependent on data collected from volunteer respondents, such as an ethnography and qualitative interviewing of members of the RLC.

Fidelity of implementation, meaning that not all chapters coded as RLCs are executing the program as the national fraternity intended it to be, is also an area of concern for these outcomes. It is possible that some of the chapters coded as RLCs just appear to be engaging in the program, and without professional staff being paid to implement the program, as they are in the on campus models, a lack of program fidelity could be an issue. There is an accreditation

process that reviews the status of RLCs every year. However a yearly evaluation similar to how chapters must complete a report for review each year on the general fraternity operations is lacking. Even though this RLC audit does occur, it is more of a check-box approach, as opposed to a quality review of how the program exists in “real-life”.

The scope of this study does not permit the consideration of all factors that may have influenced a Sig Eps experience in the RLC. The study of residentially based learning communities has several unique programmatic features, which limits the generalizations. While this study had participants from a majority of the chapters, many of the chapters were represented by just one member. Therefore, these results must be generalized with caution.

Implications for Practice

Several implications arise from this study. First, while the analysis revealed that RLC members were less engaged with faculty and their campus environment, their GPAs were significantly higher than their non-RLC counterparts; this was true for both White students and students of color. This could support the implementation of this program for campus professionals seeking to create an environment that fosters academic achievement among men, specifically fraternity men, even though many of the members were not aware that they were in a RLC.

Campus professionals often seek programs that can teach high impact practices that have been linked to academic performance. Supported by the current research, the Sig Ep RLC is a strong candidate for enhancing students' GPA. Professionals can use components of this program to create structures for fraternity men living in houses possibly resulting in academic success being part of the culture in the chapter.

A second implication from this study is related to the experience of students of color in the fraternity. The finding revealing students of color are more involved with their collegiate peers should be carefully considered when developing programs to support this population. This is an important and telling indication that RLCs can be a best practice for engaging students of color, and that perhaps fraternities can provide a similar experience, based on the results of this study. Conversely, this study indicated that levels of engagement in co-curricular participation for students who participated in the RLC in their freshman year dropped off by their senior year, suggesting that Sig Ep should work on providing more high-impact learning activities for upperclassmen, including active and collaborative learning and higher-order cognitive activities such as the application of learning or synthesis of ideas (Umbach & Wawrzynski, 2005). Additionally, other high-impact practices as indicated by the NSSE aside from engaging in a learning community can create a synergistic effect on the outcomes such as incorporating service learning, intentional opportunities to engage in research with a faculty fellow, and a culminating senior experience that could tie into the Brother Mentor Challenge of the Balanced Man continuous educational development program of Sig Ep (McCormick, Gonyea, & Kinzie, 2013). These programs could aid in ensuring that any involvement effect does not wear off by senior year.

A final implication points to the results from faculty interaction. They indicate that there is an opportunity to develop a training for the faculty fellows to ensure that their role is clearly understood and that the chapters are making the most of the relationship. An informal conversation with a former faculty fellow for a chapter in New Jersey, Dr. Jonathan Wharton, revealed that this component of the program has the potential to be a signature aspect, but more could be done to maximize this role (J. Wharton, personal communication, November 2015).

Future Research

While the findings suggest a mixed experience for men in RLCs, perhaps not all of the RLC chapters are operating in the way that the program was intended. The fraternity does have an accreditation process that includes a lengthy application process; however, the fraternity lacks a metric to measure performance of said RLC aside from a check box form and paperwork. It is possible that a chapter appears to be executing the program as it was intended, but in actuality, the program lacks the intentionality it espouses to have. Therefore, it may be fruitful to examine only those chapters that the national headquarters can verify as emulating the program as intended.

Another variable to explore is the presence of alcohol in housing. Certain subgroups are at particularly high risk, including White male students, specifically those affiliated with a fraternity (Wechsler, Kuo, Lee, & Dowdall, 2000). The fraternity environment may contribute to high levels of alcohol due to access and culture in the environment, and we know that the misuse of alcohol is related to a decline in academic performance; therefore it would make sense to also conduct research on the RLC in environments where the entire facility is substance free. A reduction in behavioral incidents seems to be related to a dry housing environment, despite a fellow fraternity, Phi Delta Theta, being unable to demonstrate this outcome since the implementation of their alcohol free housing policy approximately a decade ago (B. Warren, personal communication, January 20, 2017).

The negative finding for faculty engagement can inspire future research to examine the difference in experience within the RLC chapters. It is possible that across various RLCs, students experience different levels of engagement with their faculty fellow. One can theorize that some fellows execute their role on a more involved level than others, which may lead to a

disparity amongst engagement with faculty for these chapters. Perhaps the issue lies within the type of contact that the men in the RLC have with the faculty fellow. Kuh (2003) reported on the importance of substantive versus casual contact with faculty to student learning gains: "What is clear is that student-faculty interaction matters most to learning when it encourages students to devote greater effort to other educationally purposeful activities during college" (p. 29). Future research can focus on the type of interactions the faculty fellows are having with the men in the RLC.

Other plausible interpretations in the disparity of engagement with their faculty fellow can be the type of institution (liberal arts versus STEM/research). Additional research can be conducted comparing the experience in interaction between RLC members at a liberal arts institution and those at a more STEM/research-based institution. Their teaching versus research focus may carry out in their interactions with the fraternity men.

Lastly, it is suggested that propensity score matching methods be used to create treatment and control groups with roughly the same characteristics. This will be a more advanced way to balance the groups to better observe the "true" effect. This may also reveal gaps in representation of minoritized groups, which also raises an additional question for future research. Are Sig Ep RLC's more present at schools that are high performing, less racially diverse institutions?

Conclusion

The purpose of this study was to attempt to answer whether men in the Sig Ep RLC experience greater levels of engagement with faculty, peers, and campus, and have higher GPAs. The results of this study indicate that the experiences of the Sig Ep men in the RLC are not necessarily reflective of students who participate in on- campus RLC programs run by student affairs professionals. The present results call into question the theoretical connection between

engagement and academic performance, since Sig Ep RLC men reported lower levels of engagement, but attain higher GPAs. However, since about 1/3 of the participants were unaware or indicated incorrectly their RLC status, the results of the present study must be interpreted with caution.

This study contributes to an existing body of research and generates ideas for new research on residential learning communities in locations other than on campus facilities owned and operated by the campus. If institutions are looking to implement programs in their fraternity houses, the Sig Ep RLC can generate some positive outcomes, but is not a proven model for overall increased engagement. Future research on this program can identify opportunities for improvement and best practices.

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Appendix A

The 2016 NSSE

Consent Form

Q1.

You are invited to participate in a research study that is being conducted by Thea Zunick, who is a doctoral student in the Graduate School of Education at Rutgers University. The purpose of this research is to determine the outcomes of men engaged in the Sigma Phi Epsilon Residential Learning Community program.

Approximately 15,000 subjects will participate in the study, and each individual's participation will last approximately 15-20 minutes.

The study procedures include participation in the National Survey of Student Engagement.

This research is confidential. Confidential means that the research records will include some information about you and this information will be stored in such a manner that some linkage between your identity and the response in the research exists. Some of the information collected about you includes your chapter and your fraternity identification number. Please note that we will keep this information confidential by limiting individual's access to the research data and keeping it in a secure location on an external hard drive in the researcher's home.

The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for three years post completion of the survey.

There are no foreseeable risks associated with participating in this survey.

You have been told that the benefits of taking part in this study may be increased support in the execution of this program at the chapter level and/or additional training for members responsible for overseeing this program however, you may receive no direct benefit from taking part in this study.

The first 30 Chapters to have a completion rate of 100% will receive \$100 towards their Educational Fund for the chapter's Balanced Man Scholarship. While there is a reward for participation, there is no consequence for non-participation

Participation in this study is voluntary. You may choose not to participate, and you may withdraw at any time during the study procedures without any penalty to you. In addition, you may choose not to answer any questions with which you are not comfortable.

If you have any questions about the study or study procedures, you may contact myself at Thea Zunick, email thea.schoenberg@gse.rutgers.edu or by phone at 201-216-3366.

If you have any questions about your rights as a research subject, please contact an IRB Administrator at the Rutgers University, Arts and Sciences IRB:

Institutional Review Board
Rutgers University, the State University of New Jersey
Liberty Plaza / Suite 3200
335 George Street, 3rd Floor
New Brunswick, NJ 08901
Phone: 732-235-9806
Email: humansubjects@orsp.rutgers.edu

Please retain a copy of this form for your records. By participating in the above stated procedures, then you agree to participation in this study.

If you are 18 years of age or older, understand the statements above, and will consent to participate in the study, click on the "I Agree" button to begin the survey/experiment. If not, or you are under the age of 18, you may close your browser and not proceed with the survey.

"This informed consent form was approved by the Rutgers University Institutional Review Board for the Protection of Human Subjects on September 21, 2016; Currently, there is no expiration on the approval of this form."

Q2. I am 18 years of age or older, understand the statements above, and will consent to participate in the study.

- ☐ I agree
☐ I do not agree

Block 1

Q3. Please enter your college/university email address (email@college.edu):

Q4. What is the name of the college/university you are currently enrolled in?

Q5.
What is your current academic major?

Block 2

Q6. During the current school year, about how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
Asked questions or contributed to course discussions in other ways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Prepared two or more drafts of a paper or assignment before turning it in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Come to class without completing readings or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended an art exhibit, play, or other arts performance (dance, music, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked another student to help you understand course material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explained course material to one or more students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepared for exams by discussing or working through course material with other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with other students on course projects or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Given a course presentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7. During the current school year, about how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
Combined ideas from different courses when completing assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connected your learning to societal problems or issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examined the strengths and weaknesses of your own views on a topic or issue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learned something that changed the way you understand an issue or concept	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connected ideas from your courses to your prior experiences and knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8. During the current school year, about how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
Talked about career plans with a faculty member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed course topics, ideas, or concepts with a faculty member outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed your academic performance with a faculty member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9. During the current school year, how much has your coursework emphasized the following?

	Very Much (1)	Quite a bit (2)	Some (3)	Very little (4)
Memorizing course material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying facts, theories, or methods to practical problems or new situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluating a point of view, decision, or information source	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forming a new idea or understanding from various pieces of information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10. During the current school year, to what extent have your instructors done the following?

	Very much (1)	Quite a bit (2)	Some (3)	Very little (4)
Clearly explained course goals and requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taught course sessions in an organized way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used examples or illustrations to explain difficult points	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided feedback on a draft or work in progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provided prompt and detailed feedback on tests or completed assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11. During the current school year, about how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
Reached conclusions based on your own analysis of numerical information (numbers, graphs,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

statistics, etc.)				
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluated what others have concluded from numerical information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 4

Q12. During the current school year, about how many papers, reports, or other writing tasks of the following lengths have you been assigned? (Include those not yet completed.)

	None	1-2	3-5	6-10	11-15	16-20	More than 20
Up to 5 pages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 6 and 10 pages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11 pages or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13. During the current school year, about how often have you had discussions with people from the following groups?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
People of a race or ethnicity other than your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People from an economic background other than your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with religious beliefs other than your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People with political views other than your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14. During the current school year, about how often have you done the following?

	Very Often (1)	Often (2)	Sometimes (3)	Never (4)
Identified key information from reading assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewed your notes after class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summarized what you learned in class or from course materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15. During the current school year, to what extent have your courses challenged you to do your best work?

	Not at all										Very much	
	1	2	2	3	3	4	5	5	6	6	7	
Challenge level of your courses this year												

Block 5

Q16. Which of the following have you done or do you plan to do before you graduate?

	Done or in progress (1)	Plan to do (2)	Do not plan to do (3)	Have not decided (4)
Participate in an internship, co-op, field experience, student teaching, or clinical placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hold a formal leadership role in a student organization or group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in a learning community or some other formal program where groups of students take two or more classes together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in a study abroad program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with a faculty member on a research project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17. About how many of your courses at this institution have included a community-based project (service-learning)?

- ☐ All (1)
☐ Most (2)
☐ Some (3)
☐ None (4)

Q18. Indicate the quality of your interactions with the following people at your institution.

	Poor (1)	2	3	4	5	6	Excellent (7)	Not Applicable
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic advisors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student services staff (career services, student activities, housing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other administrative staff and offices (registrar, financial aid, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 6

Q19. How much does your institution emphasize the following?

	Very much (1)	Quite a bit (2)	Some (3)	Very little (4)
Spending significant amounts of time studying and on academic work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing support to help students succeed academically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using learning support services (tutoring services, writing center, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing opportunities to be involved socially	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing support for your overall well-being (recreation, health care, counseling, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping you manage your non-academic responsibilities (work, family, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending campus activities and events (performing arts, athletic events, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending events that address important social, economic, or political issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20. About how many hours do you spend in a typical 7-day week doing the following?

Hours per week

	0 hours	1-5 hours	6-10 hours	11-15 hours	16-20 hours	21-25 hours	26-30 hours	More than 30 hours
Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working for pay on campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working for pay off campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doing community service or volunteer work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing care for dependents (children, parents, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commuting to campus (driving, walking, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21. Of the time you spend preparing for class in a typical 7-day week, about how much is on assigned reading

- ☐ Very little
☐ Some
☐ About half
☐ Most
☐ Almost all

Q22. How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

	Very much (1)	Quite a bit (2)	Some (3)	Very little (4)
Writing clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking critically and analytically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyzing numerical and statistical information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquiring job- or work-related knowledge and skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Working effectively with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing or clarifying a personal code of values and ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solving complex real-world problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being an informed and active citizen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23. How would you evaluate your entire educational experience at this institution?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Q24. If you could start over again, would you go to the same institution you are now attending?

- ☐ Definitely yes
- ☐ Probably yes
- ☐ Probably no
- ☐ Definitely no

Q25. How many majors do you plan to complete? (Do not count minors.)

- ☐ One
- ☐ More than one

Block 8

Q26. What is your class level?

- ☐ Freshman/first-year
- ☐ Sophomore
- ☐ Junior
- ☐

- ☒ Senior
- ☐ Unclassified

Q27. Thinking about this current academic term, are you a full-time student?

- ☐ Yes
- ☐ No

Q28. How many courses are you taking for credit this current academic term?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 or more

Q29. Of these courses you are in this current academic term, how many are entirely online?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 or more

Q30. What have most of your grades been up to now at this institution?

- ☐ A
- ☐ A-
- ☐ B+
- ☐

- ☐ B
- ☐ B-
- ☐ C+
- ☐ C
- ☐ C- or lower

Q31. Did you begin college at this institution or elsewhere?

- ☐ Started here
- ☐ Started elsewhere

Q32. Since graduating from high school, which of the following types of schools have you attended other than the one you are now attending? (Select all that apply.)

- ☐ Vocational or technical school
- ☐ Community or junior college
- ☐ 4-year college or university other than this one
- ☐ None
- ☐ Other

Q33. What is the highest level of education you ever expect to complete?

- ☐ Some college but less than a bachelor's degree
- ☐ Bachelor's degree (B.A., B.S., etc.)
- ☐ Master's degree (M.A., M.S., etc.)
- ☐ Doctoral or professional degree (Ph.D., J.D., M.D., etc.)

Q34. What is the highest level of education completed by either of your parents (or those who raised you)?

- ☐ Did not finish high school
- ☐ High school diploma or G.E.D.
- ☐ Attended college but did not complete degree
- ☐ Associate's degree (A.A., A.S., etc.)
- ☐ Some college but less than a bachelor's degree
- ☐

- ☐ Bachelor's degree (B.A., B.S., etc.)
- ☐ Master's degree (M.A., M.S., etc.)
- ☐ Doctoral or professional degree (Ph.D., J.D., M.D., etc.)

Block 9

Q35. What is your gender identity?

- ☐ Man
- ☐ Woman
- ☐ Another identity, please specify:
- ☐ I prefer not to respond

Q36. Enter year of birth using 4 digits (e.g., 1994):

Q37. Are you an international student?

- ☐ Yes
- ☐ No

Q38. What is your country of citizenship?

Q39. What is your racial or ethnic identification? (Select all that apply.)

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or Other Pacific Islander

- ☐ White
- ☐ Other
- ☐ I prefer not to respond

Q40. Are you a member of a social fraternity or sorority?

- ☐ Yes
- ☐ No

Q41. Which of the following best describes where you are living while attending college?

- ☐ Dormitory or other campus housing (not fraternity or sorority house)
- ☐ Fraternity or sorority house
- ☐ Residence (house, apartment, etc.) within walking distance to the institution
- ☐ Residence (house, apartment, etc.) farther than walking distance to the institution
- ☐ None of the above

Q42. Are you a student-athlete on a team sponsored by your institution's athletics department?

- ☐ Yes
- ☐ No

Q43. Are you a current or former member of the U.S. Armed Forces, Reserves, or National Guard?

- ☐ Yes
- ☐ No

Q44. Have you been diagnosed with any disability or impairment?

- ☐ Yes
- ☐ No
- ☐ I prefer not to respond

Q45. Which of the following has been diagnosed? (Select all that apply.)

- ☐ A sensory impairment (vision or hearing)
- ☐ A mobility impairment
- ☐ A learning disability (e.g., ADHD, dyslexia)
- ☐ A mental health disorder
- ☐ A disability or impairment not listed above

Q46. Which of the following best describes your sexual orientation?

- ☐ Heterosexual
- ☐ Gay
- ☐ Lesbian
- ☐ Bisexual
- ☐ Another sexual orientation, please specify
- ☐ Questioning or unsure
- ☐ I prefer not to respond

Block 3

Q47. Do you live on or off campus?

- ☐ On Campus
- ☐ Off Campus

Q48. I live in a:

- ☐ Fraternity house
- ☐ Unaffiliated house
- ☐ Dorm Room
- ☐ Apartment
- ☐ Family Home
- ☐ Other

Q49. While at college, who do you live with?

- ☐ Fraternity Brothers
- ☐ Other students
- ☐ Family
- ☐ By myself

Q50. Who owns your house/dorm/apartment?

- ☐ College owned
- ☐ Alumni/House Corporation
- ☐ 3rd party vendor (not your college)
- ☐ Landlord who rents to students
- ☐ Parents

Q51. Is your chapter a Residential Learning Community?

- ☐ Yes
- ☐ No
- ☐ Unsure

Q52.
How many semesters have you been living in your current residence?

Q53. Is your current residence substance free (alcohol/drugs)?

- ☐ Yes
- ☐ No
- ☐ Unsure

Q54. My current residence is alcohol free because:

- ☐ it is our choice

Appendix B*NSSE Faculty Re-analyzed Scale Score by Type of Fraternity Chapter for Engagement Levels*

NSSE Scale	RLC (32%)		Non-RLC (68%)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Experiences with faculty outside of the classroom	2.68	.73	2.49	.79	-3.22	<0.01

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement.

Appendix C

Means and Standard Deviation for Grade Point Average for RLC Re-coding Variable and Actual

Type of Chapter

RLC Re-Code	<i>n</i>	<i>M</i>	<i>SD</i>
Correctly indicated RLC	201	3.55	.34
Correctly indicated non-RLC	279	3.38	.39
Incorrectly reported as a non-RLC (is in a RLC)	12	3.48	.42
Incorrectly reported as an RLC (is in a non-RLC)	77	3.18	.49
Unknown and was in a RLC	25	3.27	.33
Unknown and is not in a RLC	134	3.20	.44

Appendix D*Breakdown of the Recoding Data for Chapter Designation*

Self-reported Chapter Type	Actual		Self-Reported		Unknown
	RLC	Non-RLC	RLC	Non-RLC	
Correctly reported RLC	203	0	203	0	0
Correctly reported non-RLC	0	287	0	287	0
Incorrectly reported as a RLC	0	85	85	0	0
Incorrectly reported as non-RLC	13	0	0	13	0
Reported as unknown and was in a RLC	28	0	0	0	28
Reported as unknown and is not in a RLC	0	145	0	0	145
Total	244	517	288	300	173

Appendix E

Re-analysis of NSSE Scores with Recoding Variable for Actual Chapter Type

Mean of NSSE Scale Scores by Type of Fraternity Chapter Recoded: Correctly Self-Report

NSSE Scale	RLC	Non-RLC
Experiences with faculty	2.31	2.21
Learning with peers	1.83	1.86
Co-curricular activity	2.68	2.53

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement. The sample size is reported in Appendix D.

Mean of NSSE Scale Scores by Type of Fraternity Chapter Recoded: Incorrect Self-Report

NSSE Scale	RLC	Non-RLC
Experiences with faculty	2.49	2.22
Learning with peers	2.02	1.93
Co-curricular activity	2.53	2.51

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement. The sample size is reported in Appendix D.

Mean of NSSE Scale Scores by Type of Fraternity Chapter Recoded: Self-Report 'Unknown'

NSSE Scale	RLC	Non-RLC
Experiences with faculty	2.43	2.31
Learning with peers	2.11	1.87
Co-curricular activity	2.68	2.53

Note. NSSE scores can range from 1.00 to 4.00. Lower scores represent higher levels of engagement. The sample size is reported in Appendix D.