THE IMPACT OF SENSE OF BELONGING INTERVENTIONS ON SOCIAL INTEGRATION AT A SMALL, PRIVATE INSTITUTION

by

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ABSTRACT

AMBER RENEE PERRELL. The impact of sense of belonging interventions on social integration at a small, private institution. (Under the direction of DR. MARK D'AMICO)

Higher education institutions continue to struggle with encouraging retention for first-year students. Prior research has shown that establishing social integration during the first-year of college is a crucial component of a successful transition and has a positive influence on student persistence and academic success (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993). Social integration has historically been defined in terms of peer connections and involvement (Tinto, 1993); however, recent research has explored the importance of sense of belonging as an important psychosocial component in the transition to college (Strayhorn, 2012a). Sense of belonging focuses on feelings of fit, perceptions of social support, and feeling as though one matters to the community. The current study sought to explore the conceptual framework in which sense of belonging was included as a component of social integration. Moreover, this study explored whether institutional action could influence first-year students' overall social integration through a focus on peer connections, involvement, and sense of belonging.

This quasi-experimental, quantitative study analyzed the influence of a campus intervention focused on social integration, called the Belonging Reinforcement Intervention (BRI). The BRI program was delivered to first-year students at a small, private institution during the first three weeks of their collegiate experience. The Belonging Reinforcement Intervention included researched components related to social belonging and normalizing students' not feeling an immediate sense of fit (Walton &

Cohen, 2011a), reinforcing institutional commitment and belonging through communications (Hausmann et al., 2007), and research focused on peer mentoring as a way to encourage campus involvements (Peck, 2011). The study used a national instrument, the Mapworks Transition Survey, to determine if this intervention could influence the various components of social integration.

The findings from the study support a comprehensive view of social integration that includes sense of belonging. The findings further indicate that students who participated in the BRI program showed statistically significant increases in peer connections, involvement, and the current study's social integration scale which included sense of belonging. Furthermore, the findings suggest that the BRI program was particularly beneficial for Hispanic students with their intent to become involved and for female students for their overall social integration. The results of this study have implications for future institutional interventions and developing lasting programs that will help first-year students to succeed and persist in their college experience. The conclusions presented suggest that a broader definition of social integration can allow institutions and researchers to better understand and support the challenges students face during the transition to college.

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CHAPTER 1: INTRODUCTION

Successful social integration has been consistently shown to have positive influence on student persistence and academic success (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993; Woosley, 2003). "Other things being equal, the greater the individual's level of social and academic integration, the greater the subsequent commitment to the institution and commitment to the goal of graduation, respectively" (Pascarella & Terenzini, 1983, p. 215). For first-year students, the establishment of social integration is a crucial component of the transition to college (Renn & Reason, 2013; Strayhorn, 2012a; Tinto, 1993). This period of transition when "new students have yet to acquire the norms and patterns of behavior appropriate to incorporation in the new communities of the college" (Tinto, 1993, p. 97) is vital to whether a student will be successful and persist at the institution.

Sense of belonging is an important component of the development of social integration and has been shown to influence student persistence and academic success (Haussmann, Schofield, & Woods, 2007; Strayhorn, 2012a; Walton & Cohen, 2007, 2011a). Sense of belonging reinforces a student's psychosocial connection to the institution through feelings of mattering, a sense of membership, and the building of relationships that reinforce importance within the community (Elliott, Kao, & Grant, 2004; Strayhorn, 2012a; Schlossberg, 1989). Belonging is especially important for students from underrepresented populations as evidence indicates these students struggle to develop this type of community connection, especially on predominantly White campuses (Hurtado & Carter, 1997; Strayhorn, 2012a).

Prior research has urged higher education administrators and faculty to focus on specific programs or direct interventions that can reasonably enhance persistence of students (Pittman & Richmond, 2008; Strayhorn, 2012a; Tinto, 2006-2007). It is important to consider how specific institutional programs and interventions focused on sense of belonging influence social integration, especially for students from specific populations. This research examined how an early intervention program focused on sense of belonging can influence social integration of first-year college students.

Overview of Literature

Tinto (1993) defines social integration as "interactions among students…central to the development of the important social bonds that serve to integrate the individual into the social communities of the college" (p. 118). Researchers have evaluated this definition of social integration by considering student involvement in the campus community, the development of meaningful peer relationships, and more recently, sense of belonging (Bean & Metzner, 1985; Braxton, Hirschy, & McClendon, 2004; Strayhorn, 2012a; Tinto, 1993; Wolf-Wendel, Ward, & Kinzie, 2009). Tinto's (1993) model of institutional departure held social integration as one of the key influences in whether or not a student would persist. Strong social integration reinforces a student's connection to the institution and can help to compensate for struggles in the classroom (Pascarella & Terenzini, 1983, 1991, 2005). Social integration has also been linked to the development of institutional commitment, academic success, and persistence (Braxton et al., 2004; Rovai, 2002, 2003; Pascarella & Terenzini, 1983; Tinto, 1993).

Tinto's (1993) original theory was followed by many clarifications and additions that focused on socialization (Weidman, 2006), institutional actions that reinforce

socialization (Astin, 1993; Braxton et al., 2004; Pascarella & Terenzini, 2005), peer relationships (Astin, 1993; Kuh, 1995), and involvement and engagement (Astin, 1993; Berger & Milem, 1999; Kuh, 1995; Milem & Berger, 1997). Furthermore, Strayhorn's (2012a) model for college students' sense of belonging was foundational in considering its contribution to social integration. These varying approaches and theoretical underpinnings of social integration are reviewed in Chapter 2.

Social Integration Constructs

The constructs most commonly associated with social integration are involvement and peer relationships (Beil, Reisen, Zea, & Caplan, 1999; Chapman & Pascarella, 1983; Pascarella & Terenzini, 1983, 2005; Porter & Swing, 2006; Tinto, 1993). Tinto (1993) specifically identifies extracurricular activities and peer group interactions as the behaviors associated with social integration. Only recently have researchers begun to consider the importance of sense of belonging as a psychosocial variable of social integration (Herrero & Gracia, 2004; Hoffman, Richmond, Morrow, & Salomone, 2002-2003; Strayhorn, 2012a; Walton & Cohen, 2007, 2011a). The review of literature examined each of these social integration constructs and considered their interconnectedness.

Campus involvements buttress students' connection to the institution, helps students build peer relationships, and can support the development of overall belonging (Astin, 1993; Berger & Milem, 1999; Strayhorn, 2012a; Tinto, 1993). Involvement, as defined by Astin (1984), relates the level of student learning and personal development with the quality and quantity of their involvement in campus programs. The quality of the engagement is identified by Astin (1984) as crucial to understanding the overall

influence. Although Astin's (1993) theory generally referred to both academic and social involvements, the theory is most widely used to reference students' involvement in extracurricular programs on campus, such as clubs and organizations, recreational activities, or fraternity and sorority membership (Strayhorn, 2012a). Campus involvements can reinforce sense of belonging to the institution as they allow students to find a niche in the community that will provide social support (Hausmann et al., 2007; Hurtado & Carter, 1997; Malaney & Shively, 1995; Roberts & Brown, 1989; Schussler & Fierros, 2008; Strayhorn, 2012a). Moreover, campus involvements have also been linked to greater influences on ethnic minority student populations' social integration, retention, and success (Arminio et al., 2000; Malaney & Shively, 1995; Sutton & Kimbrough, 2001). A prevailing theme in the literature suggests that ethnic minority students felt most comfortable and had a greater sense of inclusion in organizations that matched their racial identity group (Arminio et al., 2000; Ferrari, Cowman, & Milner, 2010; Sutton & Kimbrough, 2001).

The development of peer relationships is another important consideration in the development of social integration. Peer relationships have been noted by many researchers to have influence on social integration and thus persistence (Astin, 1993; Chapman & Pascarella, 1983; Kuh, 1995; Pascarella & Terenzini, 1983). Variables associated with peer relationships have ranged in the research from conversations with other students, number of friendships, number of romantic dates, and informal contact with peers (Chapman & Pascarella, 1983). Furthermore, peer relationships are associated with students' perceptions of social support and mattering (Hughes & Smail, 2015; Rayle

& Chung, 2007-2008). Thus, establishing strong peer relationships could lead to a greater sense of belonging.

Finally, sense of belonging has emerged as a more recent consideration in the components associated with social integration. Strayhorn (2012a) defined sense of belonging as "students' perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g. campus community) or others on campus (e.g. faculty, peers)" (p. 3). Strayhorn's (2012a) model of sense of belonging is based on Maslow's (1954) hierarchy of needs and emphasizes the necessity of belonging for success. Strayhorn (2012a) argues that belonging helps to determine whether a student will experience positive outcomes, such as happiness, growth, and persistence, or negative outcomes, such as mental health issues.

Prior research has indicated various positive outcomes associated with students developing a strong sense of belonging. Additionally, sense of belonging has been shown to not only impact academic major choice (Morrow & Ackermann, 2012; Murphy & Zirkel, 2015) and academic success (Walton & Cohen, 2011a), but also overall sense of well-being and happiness (Hurtado & Carter, 1997; Johnson et al., 2007; Museus & Maramba, 2011; Pittman & Richmond, 2007, 2008; Stephens, Hamedani, & Destin, 2014; Strayhorn, 2012a; Walton & Cohen, 2011a). Prior research has linked sense of belonging to motivation (Freeman, Anderman, & Jensen, 2007; Zumbrunn, McKim, Buhs, & Hawley, 2014) and helping students establish resiliency (Cohen & Garcia, 2008; Stephens et al., 2014; Walton & Cohen, 2011a; Zumbrunn et al., 2014).

Furthermore, prior research has noted the significant impact sense of belonging can have on underrepresented populations (Hurtado & Carter, 1997; Johnson et al., 2007; Museus & Maramba, 2011; Stephens et al., 2014; Strayhorn, 2008, 2012a; Walton & Cohen, 2011a). Walton and Cohen (2007) note that "socially stigmatized groups are more uncertain of the quality of their social bonds and thus more sensitive to issues of social belonging" (p. 82). Research has shown that developing a strong sense of belonging for ethnic minority students reinforces their connection to the institution and their overall social integration, leading to greater persistence and academic success (Hurtado & Carter, 1997; Tovar, Simon, & Lee, 2009; Walton & Cohen, 2007, 2011a).

Sense of belonging, as a social integration construct, is different, but arguably interconnected with the other constructs. Whereas involvement and peer relationships focus on the behaviors students engage in to establish integration, belonging focuses on the students' perceptions and their psychosocial connection to the institution. As there are limited studies that utilize belonging as a component of the social integration construct, the present study adds to the literature by considering this idea. Furthermore, this study considers the association between an intervention focused on belonging and a student's overall social integration.

Conceptual Framework

The conceptual framework for the current study integrated previous theoretical frameworks and models. Specifically, Tinto's (1993) model of institutional departure and Astin's (1993) theory of student involvement provided foundational understanding for the importance of involvement and peer relationships. Strayhorn's (2012a) model of students' sense of belonging provided foundation for the importance of belonging and its

influence on student outcomes related to social integration. These three components were combined in the current research to evaluate social integration in a more holistic manner. The inclusion of sense of belonging as a component of social integration is a unique component of this research. Furthermore, Kuh's (1995) theory of engagement was influential in understanding how institutional actions would influence these components of social integration. Therefore, the conceptual framework for the current study integrated peer connections, involvement, and belonging as elements of social integration that must be encouraged through institutional action. Figure 1 below diagrams the conceptual framework for the current study.

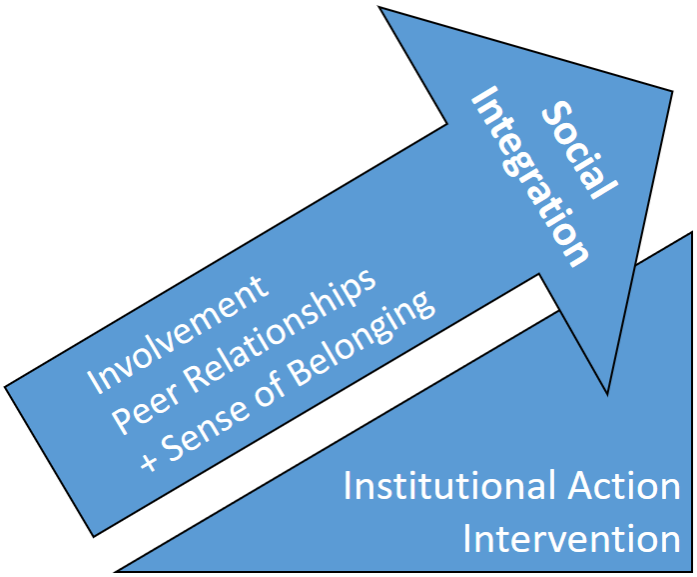

Figure 1. Conceptual framework.

Statement of Problem

At the heart of this research is reducing the problem of student attrition. Recent data from the National Center for Educational Statistics (2016) indicates that from 2013

to 2014 the average student retention at private, non-profit institutions from first year to second year was 81%. This figure, although not overly alarming, includes many elite, highly selective private institutions that hold a much higher rate. At smaller, less-selective institutions, like the institution studied in this research, retention rates are much lower – 72.7% at the researched institution from 2013 to 2014. Prior research has clearly indicated that a lack of social integration is directly connected to attrition (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993). Furthermore, social integration has also been shown to influence academic success (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993).

A concern raised in existing research was the need for greater focus on specific interventions and strategies for institutions to encourage social integration in first-year students (Strayhorn, 2012a; Tinto, 2006-2007). Scholars recommend institutions develop intentional strategies, best practices, and programs to support students (Kuh, Kinzie, Schuh, Whitt, & Associates, 2010; Strayhorn, 2012a; Tinto, 2006-2007). Furthermore, no studies reviewed focused on an integrated approach that would reinforce social integration through strategies to reinforce belonging, peer relationships, and involvement within one combined program. The present study considered how an integrated intervention with these specific strategies could be associated with greater overall development of social integration among first-year students.

It is also not clearly defined in the research how interventions focused on belonging are influential in a small, liberal arts focused private institution. The focus on small, private universities is a central component of this study and provided an examination of the influence of social integration on an institution of this type and size.

The review of literature on sense of belonging found 29 research studies focused on the topic (See Table 2). Of those, only four identified their participants as from private institutions. Of those four institutions, two were identified as "elite" and one was identified as mid-sized.

Moreover, prior research has indicated that sense of belonging interventions can have greater significance for ethnic minority populations; however, further evidence of that relationship for students is needed, particularly within small, private universities (Hurtado & Carter, 1997; Strayhorn, 2012a). First-generation students have also been shown in existing research to struggle with the integration to college. Thus, the current study evaluated the influence of the designed intervention on students from various ethnicities and first-generation students.

Furthermore, the instrument used to assess social integration in the current study, the Mapworks Transition survey, has not been analyzed specifically for its reliability within a small, private institution sub-population. The current research contributed to the instrument's usefulness with private institutions.

In addition to the impact of the institutional type and size on social integration (Astin, 1993; Chapman & Pascarella, 1983; Chickering & Reisser, 1993; Kezar, 2006; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Pike & Kuh, 2005; Tinto, 1975, 1993), the context of when and how social integration is interwoven into the student experience is also an important component of the current research. The literature related to social integration largely focuses on students in their first-year of college as this is when students are at the greatest risk of drop-out (NCES, 2016; Tinto, 1993; Upcraft, Gardner, Barefoot, & Associates, 2005). The first-year of a student's collegiate experience is

crucial in determining a student's success and persistence. The complexity of the transition to college led to the development of many programs to provide first-year students a smooth transition, including the first-year seminar, which helps students navigate the shift to life at college (Greenfield, Keup, & Gardner, 2013; Habley, Bloom, & Robbins, 2012; Hunter & Linder, 2005; Kuh et al., 2010; Tinto, 1993; Upcraft et al., 2005). The first-year seminar structure provides a pivotal framework for providing a focus on social integration. The timing for reinforcing social integration is also particularly important. Evidence indicates that experiences occurring within the first few weeks of a first-year student's time on campus are the most profound in determining overall social integration (Hoffman et al., 2002-2003; Pascarella & Terenzini, 1983; Tinto, 1993; Upcraft, et al., 2003; Woosley, 2003). This study evaluated how an early intervention program was associated with the social integration of first-year students at a small, private liberal arts institution.

Purpose of the Study

The current study focused on social integration as a necessary precursor for retention by analyzing how institutions can provide specific programmatic interventions to reinforce belonging, peer relationships, and involvement. The intervention developed incorporated several separate strategies and practices that were shown to reinforce belonging specifically, but that also may support the development of peer relationships and campus involvements for first-year students. This research analyzed the intervention's association with social integration for first-year students at a small, private institution. Furthermore, the researcher examined the intervention's association with social integration specifically for ethnic minority students and other sub-populations.

Intervention

Intervention Literature

Little research has provided insight into how institutions can promote sense of belonging during the college experience. Strayhorn (2012a) points out that there is a lack of understanding in "how organization or institutional attributes, conditions, ethos, or practices influence college students' sense of belonging" (p. 13-14). Tinto (2006-2007) specifically called on institutions to develop strategies and commit resources to move from theory to action. The need for additional research on the specific interventions that would influence belonging and social integration is a central focus of this study. Interventions reviewed in the research of sense of belonging range from institutional practices to strategically designed interventions. Of the 29 studies reviewed that focused on sense of belonging, only six separate institutional practices or interventions were identified (see Table 2). Two interventions specifically included in this study focus on strategies to normalize feelings of fit within the community (Walton & Cohen, 2007, 2011a, 2011b; Walton, Murphy, Logel, Yeager, & The College Transition Collaborative, 2017) and strategies to reinforce belonging through institutional communications and gifts (Hausmann et al., 2007; Soria & Stubblefield, 2015). These various interventions influence sense of belonging by reinforcing students' connection to the institution and their importance to the community. Consistently, these interventions have also been shown in the literature to reinforce social integration through peer relationships and involvement (Hausmann et al., 2007; Soria & Stubblefield, 2015).

One institutional practice not discussed in the consideration of belonging was peer mentoring. Peer mentoring is a very focused institutional program recommended in the

literature for first-year students (Upcraft et al., 2005). Many first-year seminars have included peer mentoring as a programmatic way to build peer relationships and support students' transition to college (Crisp, Baker, Griffin, Lunsford, & Pifer, 2017; D'Abate, 2009). Evidence in the literature clearly supports the impact of peer mentoring on retention and academic achievement (Collings, Swanson, & Watkins, 2014; Crisp & Cruz, 2009; Folger, Carter, & Chase, 2004; Holt & Berwise, 2012; Leidenfrost, Strassnig, Schutz, Carbon, & Schabmann, 2014; Mangold, Bean, Adams, Schwab, & Lynch, 2002-2003). However, despite social integration techniques being utilized as part of many peer mentoring programs (i.e. organizing social activities, connecting students with peers, encouraging involvement, etc.), there is limited research directly linking peer mentoring to social integration (Colvin & Ashman, 2010; Crisp et al., 2017; Folger et al., 2004; Holt & Berwise, 2012; Peck, 2011). Peer mentors have an opportunity to model positive behaviors, provide support, offer recommendations, promote self-responsibility, encourage involvement, and encourage students to be successful (Crisp et al., 2017; D'Abate, 2009; Ender & Newton, 2000; Jacobi, 1991; Peck, 2011). As much of the research on belonging reinforces the need for interpersonal relationships, it seems natural that peer mentoring would be an influential intervention to reinforce belonging and by doing so, increase social integration. This lack of research connecting peer mentoring with sense of belonging is another important gap in the literature.

Belonging Reinforcement Intervention (BRI)

The current research expands upon the literature regarding sense of belonging interventions to integrate these various strategies and practices into one comprehensive intervention program. Upcraft et al. (2005) noted the importance of intervention

combinations as means to "positively affect persistence" (p. 44). Specifically, the strategies chosen were research based, focused on belonging, and were shown in prior research to be beneficial for ethnic minority students. Furthermore, the strategies selected benefited social integration by not only encouraging belonging, but also supporting the development of peer relationships and fostering involvement. Three research based strategies were combined to create the Belonging Reinforcement Intervention (BRI) program.

The foundational strategy for the BRI program was an intervention focused on social belonging. Walton and Cohen (2011a) found that a brief intervention, which emphasized the normalcy of a student feeling that they are "not fitting in" by reinforcing the short-term nature of those feelings, bolstered their sense of belonging. The one-hour intervention was particularly impactful on African American students as their academic performance and well-being remained higher than the control group for several years after the intervention (Walton & Cohen, 2007, 2011a).

The second intervention technique integrated into the BRI program focused on reinforcing institutional commitment and belonging through communication (Hausmann et al., 2007). In the study by Hausmann et al. (2007), the intervention focused on emphasizing students' connection to the university through reinforced messages from university administrators and university-branded gifts. These interventions were shown to have an impact on sense of belonging for students, but also helped to decrease the decline of belonging over time (Hausmann et al., 2007). This longitudinal experimental study by Hausmann et al. (2007) was conducted at a large, public institution.

Finally, research on peer mentoring was considered as another component of the BRI program. Peck's (2011) program, which integrated peer involvement mentors into a first-year seminar to reinforce the importance of finding campus co-curricular involvements, was found to have positive outcomes. The mentors in the program worked with first-year students individually to tailor recommendations on ways to become more involved. Peck (2011) recommended this specific peer mentor structure as it led to increased retention and involvement on campus. A similar strategy was utilized in the BRI program to connect students with peers, co-curricular activities, and to buttress feelings of belonging for first-year students.

Research Questions

1. What is the reliability and validity of the scale scores in Mapworks used to measure the construct of social integration when used at a small, private institution?
2. Do students who participate in the Belonging Reinforcement Intervention (BRI) have higher social integration (across multiple scale scores) than those who did not as measured by the Mapworks survey?
3. Is there a differential treatment effect on students from various demographic backgrounds (gender, ethnicity, state residency, and first-generation status)?

Significance

First-year college students experience higher rates of attrition and struggle with the transition to college (Astin, 1993; Chickering & Reisser, 1993; Tinto, 1993; Upcraft et al., 2005). Feelings of marginality and a lack of connection with the institution reinforces this lack of integration and can result in both academic and psychosocial

challenges, particularly for students of underrepresented populations (Chickering & Reisser, 1993; Schlossberg, 1989; Walton & Cohen, 2007). This study considered how the BRI program influenced social integration by focusing on sense of belonging through strategies designed to normalize feelings of fit, support connection to the university through institutional communication, and providing first-year students with support through peer mentoring.

This study addressed several gaps in the literature around social integration and sense of belonging. The study provided additional insight into sense of belonging specifically at small, private institutions. Furthermore, it added to existing literature to consider how an institutional program, like the BRI program, can be used to influence social integration. Finally, it considered the influence of the BRI program on social integration and belonging based on background characteristics.

Research Design

This quasi-experimental, quantitative research design investigated how the Belonging Reinforcement Intervention (BRI) was associated with social integration and other scale scores at a small, private institution. Particularly, this study examined the relationship between the BRI program and social integration when considering student demographic characteristics, including ethnicity, first generation status, gender, and state residency. The treatment year (Fall 2017) was compared to years when the BRI program was not available (Fall 2015 and Fall 2016).

The current study was conducted at a private, selective, liberal arts institution in an urban setting of the southeast. Per institutional data in 2016-2017, the university had 1,139 traditional undergraduate students, with an additional 478 adult students and 713

graduate students for an overall campus population of 2,330 students. The campus is largely residential for traditional undergraduate students, with 89% of first-year students living on campus. The institution is among the most diverse private institutions in its state, with 37.1% identifying as mixed race, international, or ethnic minority populations, 55.8% identifying as White, and 7.1% unreported.

The study's participants included all first-year students for the 2017-2018 school year (387 students) at the institution and used data previously collected about students from the 2015-2016 and 2016-2017 school years (approximately 500 total students). The BRI program was developed based on existing literature to support students' development of belonging and was integrated into the required first-year seminar course. The program included new elements – the social belonging intervention and reinforcing institutional connection through communication - to further support sense of belonging of first-year students. The BRI program also sought to reinforce the existing peer mentor programs. The peer mentoring program at the institution had been previously implemented, but the contact between the peer mentors and the first-year students was limited. The BRI program included more intentionality for peer mentor contact outside of the class and engaged the mentors specifically in getting first-year students involved on campus. The BRI program was developed specifically for the institution being examined as part of the first-year seminar; however, the strategies could be implemented at any institution. The program was delivered during the first three weeks of the fall 2017 semester. A more in-depth review of the program and research design is provided in Chapter 3. The research questions examined are outlined in Table 1.

Table 1

Summary of Research Questions & Methods for Analysis

Research Question	Predictor Variable (Independent Variable)	Criterion Variable (Dependent Variable)	Statistical Test
Question 1 – What is the reliability and validity of the scale scores in Mapworks used to measure the construct of social integration when used at a small, private institution?	Campus Involvement; Peer Connections; Sense of Belonging	Mapworks Social Integration Score Present Study Social Integration Composite Score	Exploratory Factor Analysis
Question 2 - Do students who participate in the Belonging Reinforcement Intervention (BRI) have higher social integration (across multiple scale scores) than those who did not as measured by the Mapworks survey?	Non-treatment Years – Fall 2015, Fall 2016 Treatment Year – Fall 2017	Mapworks Social Integration Score/Present Study Sense of Belonging Score Present Study Social Integration Composite Score Mapworks Peer Connections Score Involvement Score	Independent Samples *t*-Test
Question 3 - Is there a differential treatment effect on students from various demographic backgrounds (gender, ethnicity, state residency, and first-generation status)?	Student demographics – Ethnicity; Gender; State Residency; First-Generation Status	Mapworks Social Integration Score/Present Study Sense of Belonging Score Present Study Social Integration Composite Score Mapworks Peer Connections Score Involvement Score	Factorial ANOVA

To analyze the relationship of the program with social integration, the researcher utilized an existing assessment that evaluates adjustment to the institution as part of retention efforts. The Mapworks survey is based on the theoretical underpinnings of Tinto's (1993) model of institutional departure (Skyfactor, 2016). Skyfactor (2016) has conducted factor analyses on the scales in the survey and Cronbach's alpha reliability scores to ensure the internal consistency of the scales. Those prior analyses indicate the social integration scale as defined by the Mapworks survey had a .901 Cronbach's alpha and the peer connections scale had a .927 Cronbach's alpha. Furthermore, Skyfactor (2016) has ongoing analyses of the convergent validity and divergent validity, which supports the relationship between the scales and persistence.

Question one of this study further analyzed the scale factors used by Mapworks and a new scale of social integration recommended by the researcher. The Mapworks survey scale for social integration is limited to questions of belonging, fit, and satisfaction with social life on campus. Based on the current research, the researcher identified these as a scale of sense of belonging. The researcher utilized an exploratory factor analysis to evaluate a new composite scale score of social integration based on the conceptual framework presented in this study. Additionally, other scale scores provided in Mapworks were analyzed through exploratory factor analysis and statistical analysis to determine reliability and validity. This analysis contributed to the overall assessment of the Mapworks instrument at small, private institutions.

Quantitative analysis was used in this study to analyze the impact of the program delivered. Nonequivalent cohort groups were utilized to compare the treatment year (Fall 2017) with years in which the BRI program was not provided (Fall 2015 and Fall 2016).

Using both descriptive and inferential statistics, this research considered the relationship of the BRI program to changes in students' social integration across multiple scale scores. Descriptive statistics were utilized to analyze the sample population from year to year, as well as to evaluate differences in social integration by demographic characteristics. Various factorial analysis of variance (ANOVA) tests and an independent samples *t*-tests were used to evaluate the association of the BRI program and demographic groups across the various social integration scales. The Statistical Package for the Social Sciences (SPSS) was utilized to conduct the data analysis.

The findings of this study inform the use of an integrated institutional program (BRI program) and its association with social integration. Specifically, the study considered how the value-added components of the BRI program may or may not influence social integration. Moreover, the study analyzed how this program may be related to social integration specifically for students of various demographic backgrounds. These findings will allow higher education administrators at small, private institutions to better understand how they can make a meaningful impact on students' social integration through programmatic changes and reinforcement.

Definitions

The concepts of integration, engagement, and involvement have often overlapped in the research of college students; thus, it is important to consider these definitions individually (Strayhorn, 2012a; Wolf-Wendel et al., 2009).

Attrition. The "longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems…continually modify his goal and institutional commitments in ways which lead

to persistence and/or to varying forms of dropout" (Tinto, 1975, p. 94). Thus, attrition is defined as the process by which a student drops out of college altogether.

Engagement. Engagement involves the "time and energy students devote to educationally sound activities inside and outside of the classroom, and the policies and practices that institutions use to induce students to take part in these activities" (Kuh, 2003, p. 25). Although this definition is similar to involvement, engagement specifically links student behaviors to educationally purposeful activities (Astin, 1993; Kuh, 1995; Kuh et al., 2006; Strayhorn, 2012a; Wolf-Wendel et al., 2009). Educationally purposeful activities are defined by Kuh et al. (2006) as those that are highly correlated with persistence and academic success, such as first-year seminars. For example, student engagement would focus on students spending meaningful time and energy within a living and learning community that is required by the institution and built into their first-year experience.

First-generation students. First-generation students are defined differently by various researchers, ranging from those whose parents have never attended college to identifying first-generation students as those where a parent may have had some college (Mayhew et al., 2016; Smith, 2015). In the current study, the institution defined first-generation students as neither parent having earned a 4-year degree. This definition is consistent with Upcraft et al. (2005) who defined first-generation students as those "whose parents' highest level of education is a high school diploma or less" (p. 22).

Integration. Student's perceptions of their interactions with peers, faculty, and staff, as well as involvement in co-curricular activities contribute to their integration (Tinto, 1993). Integration also relates to the perception of fit to the community and the

institution (Pascarella & Terenzini, 1983; Wolf-Wendel et al., 2009). Wolf-Wendel et al. (2009) also emphasize that "integration is about students forming relationships with peers, faculty, and staff and is about the sense of belonging that students develop" (p. 416). In the review of the terms connected to integration, including involvement and engagement, Tinto refers to integration as a greater focus on a perception of fit (Wolf-Wendel et al., 2009).

Involvement. Astin (1984) defined involvement as the investment of time and the psychological and physical energy students devote to their academic experience. Involvement is different from engagement in that it focuses on the student's actions and does not link the action to institutional programs (Wolf-Wendel et al., 2009). Involvement has been primarily related to extracurricular activities, but was initially considered for both academic and social purposes (Astin, 1984; Wolf-Wendel et al., 2009).

Persistence. Persistence is defined by Hagedorn (2005) as a student's continuation of college from one year to the next until degree completion. Persistence is the students' action to stay in college, as compared to retention which focuses on the institution's role in keeping students from year to year (Hagedorn, 2005; Tinto, 2006-2007).

State residency. For the purpose of this study, state residency is used to reference in-state versus out-of-state residential demographics.

Retention. Hagedorn (2005) defines retention as an institutional evaluation of a student's continuation of college from one year to the next until completion.

Sense of belonging. Sense of belonging is defined as "a student's perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by and important to the group (e.g., campus community) or others on campus (e.g. faculty, peers)" (Strayhorn, 2012a, p. 3).

Organization of the Study

This first chapter outlines the general framework of the study. In Chapter 2, the literature associated with social integration, the constructs of social integration, the interventions related to belonging, the literature around peer mentoring, and other considerations of the context of social integration are reviewed. In Chapter 3, the author outlines the methodology used in this study. In Chapter 4, the findings from the data collected in this quantitative study are presented. In Chapter 5, the author provides a discussion of the findings, as well as recommendations for future research and practice.

Summary

Social integration has been identified as a key influence in student retention, student success, and well-being (Tinto, 1993). Researchers have recommended institutions engage in intentional programs to support social integration (Strayhorn, 2012a; Tinto, 2006-2007; Upcraft et al., 2005). The Belonging Reinforcement Intervention (BRI) was developed to support social integration through strategies focused on sense of belonging. Those strategies include emphasizing the normalcy of not fitting in right away, institutional communication, and peer mentoring. The BRI program was developed for a small, private institution in an urban area of southeastern United States. This study examined the impact of the program on social integration as measured through a national retention software system survey - the Mapworks Transition survey.

Information obtained in this study analyzed the association between the BRI program and social integration. This research provides higher education professionals with specific strategies that can influence sense of belonging in first-year students and thus, social integration.

CHAPTER 2: LITERATURE REVIEW

The theory of institutional departure developed by Tinto (1975, 1993) is the seminal theoretical framework for exploring how involvement and peer relationships impact social integration, leading to greater persistence. Tinto (1975, 1993), along with many other researchers, have identified very clear evidence that social integration predicts student success and persistence (Astin, 1993; Berger & Milem, 1999; Kuh et al., 2006; Kuh et al., 2010; Pascarella & Terenzini, 1991, 2005; Spady, 1971; Terenzini & Reason, 2005; Wolf-Wendel et al., 2009). Constructs of social integration in Tinto's (1993) model include extracurricular activities and peer group interactions. More recent research has included the importance of sense of belonging as another important factor in the construct of social integration as it relates to students' connection to the university, sense of "fit", and perceptions of mattering (Beil et al., 1999; Brooman & Darwent, 2014; Pittman & Richmond, 2007, 2008; Strayhorn, 2008, 2012a, 2012b; Tinto, 1993; Walton & Cohen, 2007, 2011a).

Using the conceptual framework outlined in Chapter 1 and more fully articulated below, the current study examined the association between a newly implemented belonging intervention, the Belonging Reinforcement Intervention (BRI), and social integration and belonging for first-year students. This chapter begins with a review of the theoretical frameworks used to understand social integration. Additionally, literature related to the three constructs of social integration (involvement, peer relationships, and sense of belonging), as well as their influence on student outcomes, are considered. The association of background characteristics, such as ethnicity, state residency, gender, and first-generation status, was also considered within the various constructs. This review of

literature considered intervention strategies associated specifically with sense of belonging. Particular focus was given to intervention strategies and practices that were utilized in the BRI program – normalizing lack of fit, institutional communication, and peer mentoring with a focus on involvement. Finally, the contextual factors for providing social integration, including institutional size, first-year students, first-year seminars, and timeliness of interventions were considered. The literature related to each of these themes is summarized in Table 2.

Table 2

Identified Themes in the Literature

Theme	Sources
Social Integration Theory	
Theories associated with social integration	Social Integration Theory: Chapman & Pascarella, 1983; Durkheim, 1951; Spady, 1971; Tinto, 1975, 1993, 1996, 2006-2007; Wolf-Wendel et al., 2009 Critiques of Tinto's (1975, 1993) Theory: Bean & Metzner, 1985; Braxton et al., 2004; Hurtado & Carter, 1997; McCubbin, 2003; Renn & Reason, 2013; Strayhorn, 2012a; Tierney, 1999 Socialization Theory: Weidman, 2006; Weidman, DeAngelo, & Bethea, 2014; Involvement & Engagement: Astin, 1984, 1993; Berger & Milem, 1999; Kuh, 1995, 2003; Kuh et al., 2006; Milem & Berger, 1997; Tinto, 1975, 1993; Wolf-Wendel et al., 2009 Sense of Belonging: Beil et al., 1999; Brooman & Darwent, 2014; Elliot et al., 2004; Hurtado & Carter, 1997; Maslow, 1954; Schlossberg, 1989; Strayhorn, 2012a, 2012b Institutional Influence: Astin, 1993; Kuh, 1995, 2003; Kuh et al., 2006; Wolf-Wendel et al., 2009

Social Integration – Outcomes & Influence on Student Characteristics	Bunn, 2004; Galyon, Heaton, Best, & Williams, 2014; Hart, 2002; Kennedy, Scheckley, & Kehrhahn, 2000; Kuh et al., 2006; Lehman, 2007; Liu, Magjuka, Bonk, & Lee, 2007; Lotkowski, Robbins, & Noeth, 2004; Pascarella & Terenzini, 1991, 2005; Rovai, 2002, 2003; Tinto, 1975, 1993
Constructs of Social Integration	
Involvement – Outcomes & Influence on Student Characteristics	Arminio et al., 2000; Astin, 1984, 1993, 1999; Berger & Milem, 1999; Ferrari et al., 2010; Foubert & Grainger, 2006; Harper & Quaye, 2007; Hurtado & Carter, 1997; Kuh et al., 2006; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Kuh et al., 2010; Milem & Berger, 1997; Pascarella & Terenzini, 2005; Ringgenberg, 1989; Roberts & Brown, 1989; Lotkowski et al., 2004; Renn & Ozaki, 2010; Strayhorn, 2008; Sutton & Kimbrough, 2011; Sutton & Terrell, 1997; Tinto, 1975, 1993, 2006-2007; Upcraft et al., 2005; Woosley, 2003
Peer Relationships – Outcomes & Influence on Student Characteristics	Astin, 1993, 1996; 1999; Armino et al., 2000; Berger & Milem, 1999; Chapman & Pascarella, 1983; Chickering & Reisser, 1993; Dennis, Phinney, & Chuateco, 2005; Ferrari et al., 2010; Greenfield et al., 2013; Hughes & Smail, 2015; Johnson et al., 2007; Kuh, 1995; Lotkowski et al., 2004; Morrow & Ackerman, 2012; Murphy & Zirkel, 2015; Padget, Johnson, & Pascarella, 2012; Pascarella & Terenzini, 2005; Rayle & Chung, 2007-2008; Renn & Reason, 2013; Strayhorn, Lo, Travers, & Tillman-Kelly, 2015; Sutton & Kimbrough, 2001; Tinto, 1975, 1993; Upcraft et al., 2005; Wolfe, 1993
Sense of Belonging – Outcomes & Influence on Student Characteristics	Beil et al., 1999; Brooman & Darwent, 2013; Cohen & Garcia, 2008; Cohen, Steele, & Ross, 1999; Dweck, Walton, & Cohen, 2014; Elliot et al., 2004; Freeman, Anderman, & Jensen, 2007; Gillen-O'Neel & Fuligni, 2013; Hausmann, Schoefield, & Woods, 2007; Hoffman et al., 2002-2003; Hurtado & Carter, 1997; Inkelas, Daver, Vogt, & Leonard, 2007; Johnson et al., 2007; Kennedy et al., 2000; Lehman, 2007; Lotkowski et al., 2004; Maestas, Vaquera, & Zehr, 2007; Mangold et al., 2003; Maslow, 1954; Meeuwisse, Severiens, & Born, 2010; Mehta, Newbold, & O'Rourke, 2011; Morrow & Ackerman, 2012; Museus & Maramba, 2011; Murphy & Zirkel, 2015; Nora & Cabrera, 1993; O'Keefe, 2013; Palmer, O'Kane, & Owens, 2009; Pittman & Richmond, 2007, 2008; Rayle & Chung, 2007-2008; Ringgenberg, 1989; Roberts & Brown, 1989; Romano, 2000;

	Schussler & Fierros, 2008; Schlossberg, 1989; Soria & Stubblefield, 2015; Stephens et al., 2014; Strayhorn, 2008, 2012a, 2012b; Strayhorn et al., 2015; Tinto, 1993; Tovar et al., 2009; Walton & Cohen, 2007, 2011a; Walton et al., 2017; Yeager & Walton, 2011; Yeager, Walton, & Cohen, 2013; Zumbrunn et al., 2014
Sense of Belonging Interventions & Practices	
Interventions utilized in the BRI Program	Normalizing Concerns of Fit: Cohen & Garcia, 2008; Stephens et al., 2014; Walton & Cohen, 2007, 2011a; Walton et al., 2017; Yeager et al., 2013 Institutional Communication: Hausmann et al., 2007 Peer Mentoring: Astin, 1993; Bierema & Merriam, 2002; Bowling, Doyle, Taylor & Antes, 2015; Budney, Paul, & Bon, 2006; Chickering & Reisser, 1993; Colvin & Ashman 2010; Crisp, 2009; Crisp & Cruz, 2009; Crisp et al., 2017; D'Abate, 2009; Ender & Newton, 2000; Folger et al., 2004; Hill & Reddy, 2007; Hixenbaugh, Dewart, Drees, & Williams, 2006; Holt & Berwise, 2012; Jacobi, 1991; Kuh et al., 2010; Leidenfrost et al., 2014; Lotkowski et al., 2004; Mangold et al., 2003; Morrow & Ackerman, 2012; Peck, 2011; Pittman & Richmond, 2007, 2008; Rayle & Chung, 2007-2008; Rieske & Benjamin, 2015; Rodger & Tremblay, 2008; Sanchez, Bauer, & Paronto, 2006; Strayhorn, 2006; Sutton & Terrell, 1997; Tinto, 1975; Zevallos & Washburn, 2014
Other Sense of Belonging Interventions & Practices	Social Networking: Nalbone et al., 2016; Strayhorn, 2008 Strayhorn, 2012b; Vaccaro, Adams, Kisler, & Newman, 2015 Living and Learning Communities: Berger, 1997; Inkelas et al., 2007; Johnson et al., 2007; Schussler & Fierros, 2008; Strayhorn, 2008 Learning Environment: Hoffman et al., 2002-2003; Inkelas et al., 2007; Meeuwisse et al., 2010; Yeager et al., 2013; Zumbrunn et al., 2014 Common Experiences: Schlossberg, 1989; Soria & Stubblefield, 2015

Context for Social Integration	
Institutional Type & Size	Astin, 1993; Chapman & Pascarella, 1983; Chickering & Reisser, 1993; Kezar, 2006; Kuh et al., 2006; Pascarella & Terenzini, 2005; Pike & Kuh, 2005; Reason, Terenzini, & Domingo, 2007; Tinto, 1975, 1993
First-Year Students & First-Year Seminars	Alexander & Gardner, 2009; Barefoot, Fidler, & Center for Study of First Year Experiences, 1992; Barefoot et al., 2005; Barton & Donahue, 2009; Berger, 1997; Colton, Connor, Schultz, & Easter, 1999; Davis, 1992; DeAngelo, 2014; Freeman et al., 2007; Goodman & Pascarella, 2006; Greenfield et al., 2013; Hoffman et al., 2002-2003; Hughes & Smail, 2015; Keup & Barefoot, 2005; Keup & Petschauer, 2011; Kuh et al., 2008; Kuh et al., 2010; Lotkowski et al., 2004; Renn & Reason, 2013; Palmer et al., 2009; Pascarella & Terenzini, 2005; Porter & Swing, 2006; Schnell & Doetkott, 2002-2003; Schnell, Louis, & Doetkott, 2003; Schlossberg, 1989; Tinto, 1993, 2006-2007; Upcraft, Gardner, Barefoot, & Associates, 2005; Vaccaro et al., 2015; Wolf-Wendel et al., 2009; Wolfe, 2013
Timeliness	Astin, 1993; Elkins, Braxton, & James, 2000; Hoffman et al., 2002-2003; Pascarella & Terenzini, 1983; Tinto, 1988, 1993; Upcraft et al., 2005; Woosley, 2003

Social Integration Theory

Theories Associated with Social Integration

In his seminal work, Tinto (1975) provided the foundational theory related to social integration as a component of his research of college student departure for traditional, residential colleges. Tinto's (1975) work was based on previous research from Spady (1971) and Durkheim's (1951) theory of suicide, which highlighted the impact of integration on decisions to remove oneself from the community. Spady's (1971) model was particularly interesting as it defined social integration as a student's perception of their sense of belonging, whether they felt they 'fit in' on campus, and the

warmth of students' interpersonal relationships. Tinto (1975) expanded on these models to focus on background characteristics that influence decisions, as well as goal commitment, institutional commitment, and specific behaviors associated with persistence. In his research on attrition, Tinto (1975, 1993, 2006-2007) provided evidence that social integration reinforces academic learning, student satisfaction, and encourages persistence.

According to Tinto's (1975, 1993) model of institutional departure, social integration is a result of strong relationships with peers and participation in extracurricular activities – See Figure 2 for Tinto's (1993) model. Chapman and Pascarella (1983) identified predictors of social integration to include informal social activities, organized extracurricular activities, conversations with other students, number of dates (romantic), and informal social contact with faculty. These factors influence a student's commitment to the community and institution.

The idea of institutional commitment and fit is an important element of Tinto's (1993) model of institutional departure. Tinto (1993) stated that "individuals who perceive themselves as having established competent membership, both socially and intellectually, are more likely to express a strong commitment to the institution" (p. 208). That commitment to the institution is often challenged by an incongruence with students' expectations. Furthermore, Tinto (1975; 1993; 1996) found isolation, or lack of social integration, had a crucial influence on student departure. Tinto (1993) defined isolation as "the absence of sufficient interactions whereby integration may be achieved" (p. 50). The combined impact of incongruence and isolation negatively impacts a student's ability to become fully committed to the institution and to feel a sense of community. Tinto

(1996) further suggested that isolation reinforces feelings of marginality and feeling unconnected with the institution.

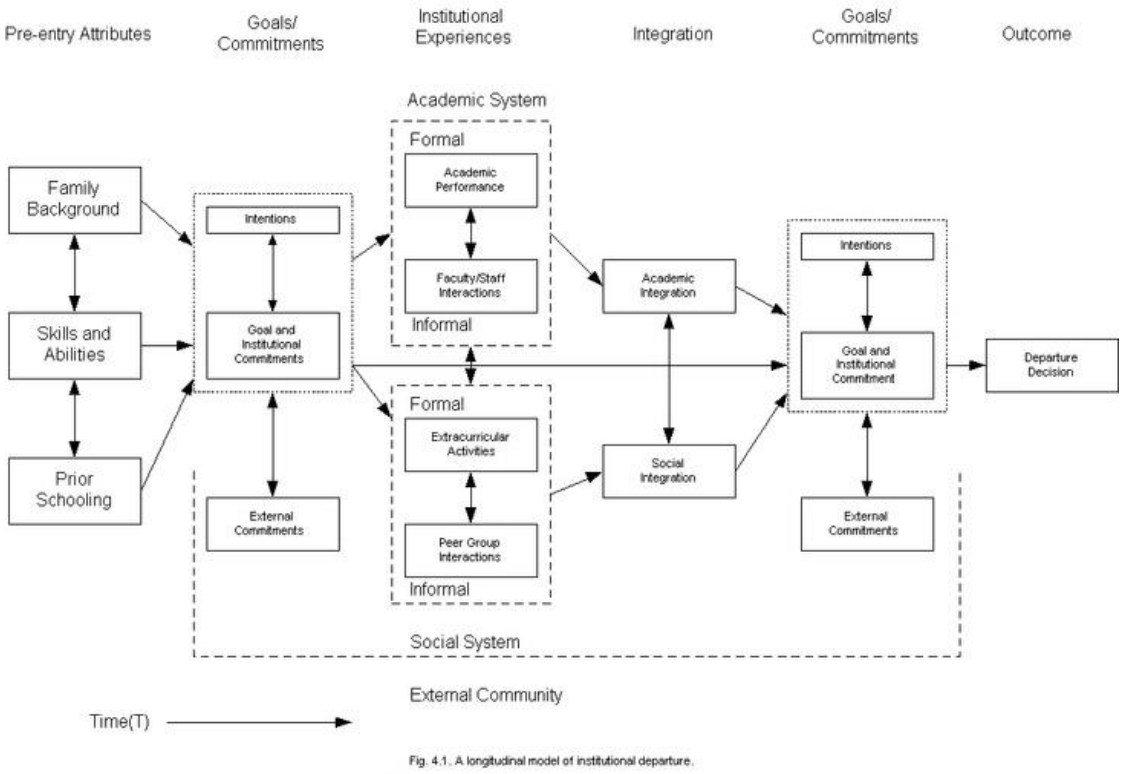

Figure 2: Tinto's (1993) Longitudinal Model of Institutional Departure (p. 114)

Critiques of Tinto's (1993) Model of Institutional Departure. Although Tinto's (1975, 1993) model of institutional departure is the most highly acknowledged regarding social integration, it has been criticized over the years (Braxton et al., 2004; McCubbin, 2003; Renn & Reason, 2013). Some argue that Tinto's (1975) theory is only applicable at a residential university (Braxton et al., 2004; Renn & Reason, 2013). Bean and Metzner (1985) for example, argued that Tinto's (1975) model focused only on the traditional student experience and lacked attention to the nontraditional student (adult

students) experience. Tinto (1993) did acknowledge that the model was designed with the traditional, residential college student in mind; thus, the update to his seminal work expanded his original model to include the nontraditional student, specifically considering the commuter student, but remaining focused on the traditional "brick and mortar" class experience. In this revised model, the importance of classroom engagement to provide both academic and social integration for nontraditional students was a differentiating factor as it acknowledged the need to create integration experiences that would target the commuter student (Tinto, 1993).

Bean and Metzner's (1985) student attrition model expanded on Tinto's (1975) to focus on the nontraditional student. The nontraditional student was defined broadly by Bean and Metzner (1985), but specifically considered how age, enrollment status (part-time or full-time), and campus residency (residential verses commuter) impacted the applicability of Tinto's model. The authors suggested that environmental factors, such as employment and family responsibility, keep nontraditional students from establishing the same type of social integration as their traditional counterparts (Bean & Metzner, 1985). Furthermore, Bean and Metzner (1985) clarified that nontraditional students are more likely to be independently responsible for their finances. In Tinto's (1975) work, student finances were based on parental socioeconomic status. Bean and Metzner (1985) argued that these environmental and financial variables represented crucial differences in how to apply social integration concepts to the nontraditional student. Hence, these differentiating factors must be considered in how social integration strategies and techniques are applied to nontraditional students.

Another critique of Tinto's model (1993) was the lack of focus on race/ethnicity. Authors contend that Tinto's (1993) model did not take into consideration important cultural influences on social integration among varying racial groups (Hurtado & Carter, 1997; Strayhorn, 2012a; Tierney, 1999). For example, for Latino students, family relationships and cultural support can have a strong influence in social integration (Hurtado & Carter, 1997). This differs from Tinto's (1993) model in which he suggests that students need to "dissociate themselves from the communities of the past" (p. 96).

Finally, authors argue that Tinto's (1993) model of institutional departure is too focused on behaviors, such as holding a leadership role in a club or going on dates (Hurtado & Carter, 1997; Strayhorn, 2012a). Hurtado and Carter (1997) recommended a merging of Tinto's (1993) model and Spady's (1971) model to include both the behavioral measures associated with involvement in campus life and the psychological measures related to a student's sense of integration. This critique of Tinto's (1993) model further supports the consideration of sense of belonging as a psychosocial construct of social integration.

Socialization Theory. Weidman's (1989) model of undergraduate socialization differentiated itself from Tinto's (1975) by specifically acknowledging the external impacts and identifying the transition to college as a normative process in which students learn the expected knowledge, attitudes, and skills necessary to succeed (Weidman et al., 2014). According to the framework, "primary socialization occurred through interpersonal relationships (peer and faculty interaction), intrapersonal/learning activities (studying and attending lectures), and integration (incorporation into campus academic and social life)" (Weidman et al., 2014, p. 45). Socialization is an important component

in the transition to college as it focuses on the understanding of the institutional environment, by developing the knowledge, skills, values, and habits of the institution (Weidman, 2006). Tinto's (1993) revised model, which followed Weidman's (1989) model, included external commitments, allowing for the impact of family, work, or other external influences on the overall social integration and the possibility of these outside influences causing the student to retreat from the institution.

Involvement and Engagement Theory. Another important contribution in the theoretical foundations of social integration were those that focused on involvement. The key contributor to the importance of involvement in student success was Astin (1984, 1993). Astin's (1984) theory of involvement asserted "quite simply, student involvement refers to the amount of physical and psychological energy that the student devotes" (p. 297). Astin (1993, 1999) emphasized that involvement is not just showing up, but that the quantity and quality of time invested is pivotal. As mentioned previously, Kuh (1995, 2003) and Kuh et al. (2006) also recommended a focus on the students' actions and their investment of time and energy into their educational experience.

In the later revision of his initial model (Tinto, 1975), Tinto (1993) included the influence of involvement on social integration and addressed its importance for first-year students. Tinto (1993) specifically focused on the interactions between the behaviors students exhibited and their perceptions of social integration. Berger and Milem (1999) and Milem and Berger (1997) offered research that combined Astin's (1993) theory of involvement and Tinto's (1993) model of institutional departure, linking involvement directly with social integration, peer support, and persistence. Kuh (2003) and Kuh et al. (2006) further connected involvement with institutional action to ensure that students'

time and energy were invested into educationally purposeful activities and programs, not just any campus activity. The importance of the institutional action in the encouragement and support of students' involvement is a key consideration in the current study.

Sense of Belonging Model. Strayhorn (2012a) designed the college students' sense of belonging model to explain the influence of belonging, but also to provide a guide that would be applicable to practice and the development of institutional policies. Strayhorn's (2012a) model emphasized the importance of feeling connected and mattering within the community. The model's foundation was based on Maslow's (1954) hierarchy of needs, and thus stressed the importance of belonging as a fundamental need for all students. The author emphasized the importance that belonging takes on "in certain spaces and contexts (e.g., classrooms, residence halls), at certain times (e.g., [later] adolescence), and among certain populations" (Strayhorn, 2012a, p. 26). This emphasis on developing belonging within a variety of contexts is particularly important in the current research as it highlights the importance of timing. Furthermore, Strayhorn (2012a) argued that if students satisfy their need to belong within these various settings, they will experience positive outcomes allowing them to move on to self-actualization (Maslow, 1954). Failure to achieve a sense of belonging can lead to negative mental health concerns and frustration (Strayhorn, 2012a).

Strayhorn (2012a) identifies several core elements of belonging. The author focused on belonging as a basic human need that is driven by human behavior. As mentioned earlier, another important core element was the heightened importance of belonging within certain settings and contexts, such as the transition to college (Strayhorn, 2012a). Sense of belonging is also associated with feelings of mattering that

influence a student's intentions to commit (Elliot et al., 2004; Schlossberg, 1989; Strayhorn, 2012a). Strayhorn (2012a) also identifies the importance and effect of social identities on belonging (Roberts & Brown, 1989; Romano, 2000). Strayhorn (2012a) states "social identities (e.g., race/ethnicity, gender, class, sexual orientation, religion) converge and intersect in ways that simultaneously influence sense of belonging" (p. 22).

These core features of Strayhorn's (2012a) model of college students' sense of belonging help to distinguish belonging as a psychosocial element of social integration (Hurtado & Carter, 1997). Particularly, understanding belonging as a human need that is influenced by feeling that one matters, strengthens its importance as a construct of social integration.

Institutional Influence on Social Integration

Braxton et al. (2004) offered their own interpretation of social integration to consider a broader impact. The authors suggested six variables of social integration including the institution's commitment to student development, the potential for students to develop a community connection, institutional integrity in following its mission and values, students taking proactive actions for social adjustment, the investment of energy in making friends and engaging, and the ability to pay (Braxton et al., 2004). This broader view of social integration and its focus on the "economic, organizational, psychological, and sociological conceptual orientations" (Braxton et al., 2004, p. 28) provides a valuable framework to how an institution can develop an organizational model that will enhance first-year socialization of students. Interestingly, these variables highlighted by Braxton et al. (2004) focus not only on the students' actions, but the

actions of the institution and entry demographics such as socioeconomic status and ability to pay.

Kuh (1995) also considered the importance of institutional action in evaluating social integration. Specifically, Kuh (1995, 2003) and Kuh et al. (2006) recommended that engagement was a key influence in student persistence. Kuh et al. (2006) suggested that engagement has two major features. The first feature of engagement is the amount of time and energy the student devotes to educationally purposeful activities (Astin, 1993; Kuh et al., 2006; Kuh et al., 2010; Wolf-Wendel et al., 2009). Educationally purposeful activities were defined by Kuh as those that "lead to experiences and outcomes that constitute student success" (Wolf-Wendel et al., 2009, p. 412). The second element in engagement is how the institution integrates educationally purposeful activities into students' experiences to ensure that they benefit from these programs (Kuh et al., 2006; Kuh et al., 2010; Wolf-Wendel et al., 2009). For example, Kuh et al. (2010) identified several effective institutional practices, including a supportive campus environment such as first-year seminars or peer support, that the authors argued explain high levels of student engagement. Tinto (2006) also recommends institutions need to fully commit with the necessary resources and supporting policies that will address issues related to student persistence. This integration of purposeful activities through institutional action is central to the current study as the program is embedded in a required course to ensure that all first-year students benefit from the program.

Social Integration Influence on Student Outcomes

Researchers have consistently associated successful social integration with positive student outcomes. Specifically, social integration has been shown to lead to

greater institutional commitment, which in turn leads to greater persistence (Kennedy et al., 2000; Kuh et al., 2006; Lotkowski et al., 2004; Tinto, 1975, 1993; Pascarella & Terenzini, 1991, 2005). In their longitudinal assessment of Tinto's (1975) model, Pascarella and Terenzini (1983) found that "academic and social integration not only had important direct effects on persistence, but also had indirect effects through their influence on the causally subsequent constructs of institutional and goal commitment" (p. 225).

The importance of social integration is highlighted by the struggles associated with developing it in the online environment. Several researchers have attributed the dissatisfaction with online classes to feelings of isolation and a lack of social integration and belonging for students in online programs (Bunn, 2004; Galyon et al., 2014; Hart, 2002; Liu et al., 2007). A lack of social integration has been associated with reduced student learning and lower retention in the online environment (Bunn, 2004; Galyon et al., 2014; Hart, 2002; Liu et al., 2007; Rovai, 2002, 2003). Overall, social integration is a key concept for persistence, retention, and institutional commitment.

Furthermore, social integration has been shown to reinforce commitment to the institution for students who are struggling to integrate in the classroom (academic integration) (Kennedy et al., 2000; Lehman, 2007; Pascarella & Terenzini, 1991). In the study by Kennedy et al. (2000), "students persisted despite predictions to the contrary because their successful social integration and feelings of "fit" within the institution seemed to compensate for academic performance that was not consistent with expectations" (p. 11). Social integration reinforces the institutional connection and can help to create shared goals that promote persistence (Mangold et al., 2003; Nora &

Cabrera, 1993). Thus, social integration not only has positive outcomes, but it can offset other struggles in the adjustment to college.

Constructs of Social Integration

As stated earlier, the social integration theory developed by Tinto (1975; 1993) focused on extracurricular involvement and peer relationships as the main constructs of social integration. These behavioral components focus on actions students take to connect socially to their new environment. More recently, sense of belonging has been added as an important consideration of social integration (Hurtado & Carter, 1997; Strayhorn, 2012a). Sense of belonging provides a psychosocial factor to social integration which encourages consideration of the students' perceptions of their fit to the community. These three constructs are further explored in this section.

Involvement

Involvement is a primary construct in social integration as it encourages students to develop tangible connections to the campus community. According to Astin (1984), "the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in the program" (p. 298). Involvement in clubs and organizations have also been shown to help students develop peer relationships and participation in these groups is often a means to develop those relationships (Astin, 1993, 1996; Kuh, 1995; Renn & Ozaki, 2010; Sutton & Kimbrough, 2011; Strayhorn, 2012a).

Outcomes Associated with Involvement. Prior research indicates students who participate in extracurricular activities are more likely to persist in college (Astin, 1984; Berger & Milem, 1999; Kuh et al., 2008; Pascarella & Terenzini, 2005; Upcraft et al.,

2005). Other research has also linked campus involvement to positive student outcomes, including satisfaction (Astin, 1993; Kuh, 1995; Sutton & Kimbrough, 2011), academic performance (Kuh et al., 2008), and psychosocial development (Chickering & Reisser, 1993; Foubert & Grainger, 2006; Harper & Quaye, 2007; Kuh, 1995).

Leadership of campus organizations is also directly connected to greater connection to the institution. Students who are involved in two or more campus organizations have reported stronger sense of community (Ferrari et al., 2010). Furthermore, involvement reinforces an attachment to college that can reinforce belonging (Astin, 1999; Strayhorn, 2012a). Thus, involvement that is of substantial quality and in which students invest the appropriate time and energy, will help students to feel more socially connected and integrated into the campus community.

Student Characteristics Associated with Involvement. The influence of student involvement on social integration for ethnic minority students is particularly important. Prior research has indicated that campus involvements have very particular benefits for ethnic minority populations including social integration (Kuh et al., 2008; Strayhorn, 2012a). The "most powerful experiences were those that demanded sustained effort to complete the various tasks (for example, planning, decision making) as students interacted with people from different groups (for example, faculty, administrators, trustees, employers), and peers from different backgrounds" (Kuh, 1995, pp. 145-146). Engaging in culturally based experiences and involvements can be especially meaningful for ethnic minority populations, like Latinos, whose sense of belonging is connected to their culture (Hurtado & Carter, 1997). These types of cultural involvements are pivotal for ethnic minority populations, but can also be helpful in supporting all students in their

integration with the campus environment (Hurtado & Carter, 1997; Kuh, 1995; Strayhorn, 2012a).

A prevailing theme in the literature suggests that ethnic minority students also felt most comfortable and had a greater sense of inclusion in organizations that matched their identity group (Arminio et al., 2000; Ferrari et al., 2010; Sutton & Kimbrough, 2001). These identity-based groups allowed minority students to feel a sense of connection and community within the campus (Sutton & Kimbrough, 2001; Sutton & Terrell, 1997). Some common examples of identity-based groups are Black Student Associations, Latin American Student Association, and historically African American Sororities and Fraternities. Minority students are more likely to participate in these identity-based student organizations than traditional campus organizations as they connect students to a "niche" of students with similar backgrounds where they can build relationships (Renn & Ozaki, 2010; Sutton & Kimbrough, 2001).

Peer Relationships

Peer relationships are another element within social integration (Astin, 1993, 1996; Greenfield et al., 2013; Pascarella & Terenzini, 2005; Renn & Reason, 2013). Astin (1993) states "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398). Astin (1996) emphasizes that peer groups encourage students to become involved in other aspects of the college experience. Research on peer relationships have focused on the behaviors which indicate the student has established these relationships. For example, Chapman and Pascarella (1983) evaluated peer relationships based on their conversations with other students, number of friendships, number of dates, and informal contact with peers.

However, as indicated earlier, peer relationships can also reinforce the psychosocial connection to the institution. Evidence indicates that when students made friends and felt supported by their college friends, they had a greater sense of mattering (Rayle & Chung, 2007-2008). "Social support of friends and perceptions of mattering significantly predicted levels of academic stress" (Rayle & Chung, 2007-2008, p. 30). Qualitatively, researchers have also stressed the importance of peer relationships as a major consideration in feeling connected to the institution. Hughes and Smail (2015) found that isolation was a concern that many students expressed in their study. Peer relationships and peer support were noted as particularly important during the transition to college and in establishing connection to the institution (Hughes & Smail, 2015). Social connections with formal peer groups has also been shown to be reflective of a strong sense of belonging on campus (Murphy & Zirkel, 2015; Wolfe, 1993). Thus, peer connections can contribute to greater sense of belonging.

The focus on upper-class peer mentors is particularly important when considering peer support and peer relationships. Peer mentor programs are explored in more detail later in this chapter, but it's important to note that these programs are a common way to support peer relationships (Crisp, 2009). Upper-class peers are invaluable in easing the transition to college and are recommended as a component of a first-year seminar (Strayhorn et al., 2015; Upcraft et al., 2005).

Outcomes Associated with Peer Relationships. Peer relationships have been noted by many researchers to be a factor of social integration and thus persistence (Astin, 1993, 1999; Berger & Milem, 1999; Chapman & Pascarella, 1983; Johnson et al., 2007; Kuh, 1995; Morrow & Ackerman, 2012; Pascarella & Terenzini, 1983, 2005). Studies

are “generally clear and consistent in indicating that peer influence is a statistically significant and positive force in students’ persistence decisions” (Pascarella & Terenzini, 2005, p. 418). In a study by Morrow and Ackerman (2012), which analyzed data to consider how motivation and belonging influence persistence, the authors found that peer support was directly linked to retention from first-year to second-year. Peer support has also been strongly related to college adjustment and academic achievement (Dennis et al., 2005). Furthermore, peer relationships can encourage positive academic and social behaviors, the development of values and beliefs, as well as encourage social engagement (Astin, 1993, 1999; Chickering & Reisser, 1993; Kuh, 1995; Lotkowski et al., 2004; Reason et al., 2007; Tinto, 1975).

Student Characteristics Associated with Peer Relationships. Ethnic minority student populations have often relied on the social connections formed with peers to reinforce their social integration. As indicated earlier, racial minority students often engage in identity-based organizations to help them develop peer relationships. These peer relationships with others from similar backgrounds are important in assisting students in their transition and integration into the community (Arminio et al., 2000; Ferrari et al., 2010; Sutton & Kimbrough, 2001). Consequently, these group involvements on campus reinforce the development of strong peer relationships.

In a study of first-generation students by Dennis et al. (2005), students at an ethnically diverse commuter university identified peer groups to be the most helpful in dealing with academic problems. Findings indicated that peer support is a strong predictor of college grades and adjustment to college for first-generation college students (Dennis et al., 2005). Similarly, Padget et al. (2012) found interactions with peers were

associated with increased psychological well-being and a greater sense of social capital for first-generation students. These positive benefits of peer relationships are thus an important consideration in how first-year, first-generation populations can be supported in their transition to the institution and their overall development.

Sense of Belonging

Within the past 20 years, sense of belonging has emerged as an important construct of social integration (Beil et al., 1999; Brooman & Darwent, 2013). Although Tinto's (1993) model did not specifically include belonging as a component of social integration, Hurtado and Carter (1997) proposed that a "focus on social integration that considers both participation in campus life (behavioral measures) and the students' sense of integration (psychological measures)" (p. 326) is best. Participation in campus life has been evaluated through the behaviors associated with peer relationships and involvement, such as number of dates or participation in a club. Thus, including belonging as a factor of social integration provides important consideration of the students' psychosocial connection to the institution and their perception of the campus experience. Strayhorn's (2012a) college students' sense of belonging model provided a framework to understand the importance of belonging as a legitimate element of social integration. Belonging can be evaluated by considering important elements such as a student's perception of mattering, social support, and inclusion (Hoffman et al., 2002-2003; Tovar et al., 2009).

Strayhorn (2012a) and others (Ringgenberg, 1989; Schlossberg, 1989) emphasize the importance of mattering as an element of belonging. "Mattering is defined as the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (Elliot et al., 2004, p. 339). For first-year students, finding ones'

fit within a new community can create anxiety and fear, specifically within the collegiate classroom where that community is redeveloped with each new class and new group of faces (Romano, 2000). Mattering can be reinforced through rituals that allow all members of the community to feel interconnected and that their presence is important (Elliott et al., 2004; Roberts & Brown, 1989). Campus programs, such as orientation programs and first-year seminars, can serve as these rituals as they reinforce mattering and connectedness with the institution and help first-year students become part of the campus culture (Lotkowski et al., 2004; Ringgenberg, 1989). Schlossberg (1989) urges institutions to create programs and practices specifically designed to "help people feel that they matter" (p. 11). Integrating students into the campus environment to reinforce mattering is vital to their transition success (Astin, 1993; Ringgenberg, 1989.

Another important factor related to sense of belonging is social support and community membership. Membership is an important component of belonging as it goes beyond just being enrolled at the institution, but feeling that you are an accepted member of the class and community (Romano, 2000). Moreover, membership is defined as an individual's "perceptions of fitting in and belonging with others" (Pittman & Richmond, 2007, p. 272). Membership within the community is important as members feel they belong and matter to one another.

Furthermore, Roberts and Brown (1989) reinforce the importance of feeling included in the community as a means of developing belongingness. "Expressions of affirmation, when provided in an unconditional manner, seal the message of inclusion to all community members" (Roberts & Brown, 1989, p. 72). Creating a caring environment where students feel supported is another important consideration in

developing a strong sense of community and inclusion within that community (O'Keefe, 2013). Feeling included and supported in a new environment is important to student satisfaction and how students perceive the collegiate environment (Kuh et al., 2006).

Outcomes Associated with Sense of Belonging. Several positive outcomes have been related to sense of belonging. Prior research has shown that sense of belonging was associated with greater student persistence (Hausmann et al., 2007; Kennedy et al., 2000; Mangold et al., 2003; Nora & Cabrera, 1993). Despite poor academic performance, many students persist because of their successful social integration and feelings of fit with their institution (Kennedy et al., 2000). Studies suggest that activities or programs that bring together students facilitate the development of social and learning communities and foster a shared consensus regarding institutional goals that promote persistence (Mangold et al., 2003). Hausmann et al. (2007) argued that belonging is important in establishing institutional commitment and persistence particularly during the first few weeks of the semester as students are introduced to the new environment. Later in the academic year, students begin to focus more on practical factors related to degree attainment that may have a greater influence on persistence (Hausmann et al., 2007). Furthermore, Nora and Cabrera (1993) also noted the importance of belonging and loyalty as measures of institutional fit and commitment, which has been shown to reinforce persistence.

Belonging has also been correlated with better academic performance (Murphy & Zirkel, 2015; Pittman & Richmond, 2007; Walton & Cohen, 2007, 2011a). Experiencing belonging early on has implications on long-term academic engagement and performance (Murphy & Zirkel, 2015; Walton & Cohen, 2007, 2011a). It is important to note that one

study did not link belonging to academic success. Gillen-O'Neel and Fuligni (2013) evaluated the impact of sense of belonging on student achievement and found no association between school belonging and GPA.

Research has also connected belonging to other psychosocial outcomes. Several researchers have found associations between a greater sense of belonging and an increased sense of well-being and happiness (Hurtado & Carter, 1997; Johnson et al., 2007; Museus & Maramba, 2011; Pittman & Richmond, 2007, 2008; Stephens et al., 2014; Strayhorn, 2012a; Walton & Cohen, 2007, 2011a). In the study by Gillen-O'Neel and Fuligni (2013), although belonging was not found to be associated with increased GPA, it was associated with student satisfaction and enjoyment of the school experience among high school students.

Finally, belonging has also been shown to have positive influences on motivation and resiliency. Student perceptions of belonging were associated with classroom motivation in two studies (Freeman et al., 2007; Zumbrunn et al., 2014). In a study of classroom environment by Freeman et al. (2007), the authors considered how classroom belonging impacted institutional or campus belonging. The findings of the study showed that "when students felt a sense of belonging in a particular class, they also reported positive motivational beliefs in relation to that class" (Freeman et al., 2007, p. 214). Furthermore, class belonging was significantly associated with their university belonging (Freeman et al., 2007). Additionally, research has linked belonging with classroom motivation (Cohen et al., 1999; Dweck et al., 2014; Perrell, Erdie, & Kasey, 2017; Yeager & Walton, 2011; Yeager, Walton, & Cohen, 2013; Yeager et al., 2014). Research with college students found that a social-belonging intervention intended to normalize

feelings of insecurity about belonging and acceptance during the first-year of college helped students establish resiliency against these concerns (Cohen & Garcia, 2008; Walton & Cohen, 2011).

Student Characteristics Associated with Sense of Belonging. An important finding related to belonging was its associations with ethnic minority groups at predominantly white institutions. Social integration is especially crucial for minority populations who struggle with feelings of marginality (Ringgenberg, 1989; Schlossberg, 1989). "Stigmatized racial ethnic groups may have especially salient concerns about belonging in school because their social identities make them vulnerable to negative stereotyping and social identity threat" (Murphy & Zirkel, 2015, p. 3). Various authors have identified concerns related to ethnic minority groups and their adjustment to college (Hurtado & Carter, 1997; Johnson et al., 2007; Murphy & Zirkel, 2015; Strayhorn, 2008). Specifically, authors have noted the influence racial climate can have on students' social integration and belonging (Hurtado & Carter, 1997; Johnson et al., 2007). "Pressure to commit cultural suicide and connections to cultural heritage, significantly and indirectly influenced sense of belonging via their impact on cultural adjustment" (Museus & Maramba, 2011, p. 251). Thus, ethnic minority students can feel a sense of uncertainty about their belonging in certain educational settings (Murphy & Zirkel, 2015).

Several studies have specifically linked belonging with academic major choice for ethnic minority populations (Murphy & Zirkel, 2015; Morrow & Ackermann, 2012; Museus & Maramba, 2011; Walton & Cohen, 2007). Murphy and Zirkel (2015) found a sense of social belonging in college can be "affected by these social representations of race when considering future academic choices" (p. 19). Walton & Cohen (2007) found

that minority students struggled to identify students who were “like them” within their academic area of study, which was associated with lower belonging within that academic major. Murphy and Zirkel (2015) also found that a strong sense of belonging in the first few weeks of their college experience had a positive relationship to increased grades for students of color.

Strayhorn (2008) identified that having peers whose interests are different from one’s own and becoming acquainted with students of a different race were predictors for sense of belonging for various populations. Ethnic minority students were found to indicate a higher sense of belonging when they had these diverse interactions. Findings from the study also indicate that White students also benefited from having interactions with students from different racial backgrounds (Strayhorn, 2008). Specifically, a significant predictor of sense of belonging was socializing with students of a different race for White men (Strayhorn, 2008). When minority students participate in educationally purposeful activities that involve interactions with peers from different ethnic backgrounds, they experience positive psychosocial improvements (Harper & Hurtado, 2007). Strayhorn et al. (2015) recommended that providing additional support to Black males during the transition to college may have a positive influence on sense of belonging long term. Reinforcing their confidence in the transition to college can reinforce their sense of being part of the campus community (Strayhorn et al., 2015).

The influence of belonging has also been considered for Latino students (Hurtado & Carter, 1997; Maestas et al., 2007). Hurtado and Carter (1997) emphasized the importance of belonging as a cultural influence in their study of Latino students. The authors assert that Latino students’ perception of the racial climate was predictive of their

sense of belonging; moreover, involvement in social-community organizations buffered this impact (Hurtado & Carter, 1997). In the study, when Latino students felt that racial-ethnic tensions were high on campus they exhibited lower levels of belonging (Hurtado & Carter, 1997). Interestingly, when those same students were involved in identity-based student organizations, they had a relatively higher level of belonging (Hurtado & Carter, 1997).

Prior research has also indicated gender differences in perceptions of belonging. Specifically, associations between women and belonging were identified in the review of literature (Gillen-O'Neel & Fuligni, 2013; Rayle & Chung, 2007-2008; Walton, Logel, Peach, Spencer, & Zanna, 2015). Walton et al. (2015) found that a brief social-belonging intervention helped to improve the academic achievement of women engineering students. Furthermore, in a study by Rayle and Chung (2007-2008), women reported greater perceived social support, greater perceived mattering to school friends, and slightly greater perceived mattering to the college overall.

Finally, prior research has also found associations between belonging and first-generation students (Inkelas et al., 2007; Lotkowski et al., 2004; Mehta et al., 2011; Pittman & Richmond, 2007, 2008). First-generation students have lower levels of social and on-campus involvement, and are not as frequently exposed to social support systems (Mehta et al, 2011). Integrating first-generation students into the campus culture through programs like living and learning communities can provide these students with important support to help ease them into the community and establish a sense of belonging (Inkelas et al., 2007).

Sense of Belonging Interventions & Practices

Institutional interventions as a means of encouraging sense of belonging was a primary focus in this review of literature. Belonging was singled out by the researcher as it is a newer construct in the considerations of social integration and reinforces a student's psychosocial connection to the institution in a unique way. More recent literature has emphasized the importance of psychosocial characteristics and students' perceptions in considerations of persistence (Habley et al., 2012; Harper & Hurtado, 2007). Moreover, prior research has consistently recommended a focus on institutional action to increase social integration of first-year students (Kuh, 2005; Kuh et al., 2010; Pascarella & Terenzini, 2005; Tinto, 2006-2007). Most of this research has focused on broader institutional programs, such as first-year seminars and new student orientation programs. Specifically, Strayhorn (2012a) points out that there is a lack of understanding in "how organization or institutional attributes, conditions, ethos, or practices influence college students' sense of belonging" (pp. 13-14).

This lack of focus on specific practices related to sense of belonging was evident in the review of literature. Over 29 studies evaluating sense of belonging were reviewed and only six different intervention strategies or institutional practices related to belonging were identified (see Table 2). The integrated intervention designed in the current study is intended to reinforce sense of belonging and thus the prior research on belonging interventions was an important area of consideration in its development.

The three elements integrated into the Belonging Reinforcement Intervention (BRI) program are reviewed in depth below. The first two components are specific interventions that have been experimentally examined to determine their influence on

belonging. These interventions were selected to be part of the BRI program as they could easily be integrated into the existing first-year seminar format and evidence from previous studies indicated positive associations with belonging and other outcomes. The first of these two interventions focused on normalizing lack of fit for first-year students (Walton & Cohen, 2007, 2011a). The second intervention which showed positive outcomes on belonging focused on encouraging first-year students' importance to the community through institutional communications and gifts (Hausmann et al., 2007).

The third element of the BRI program focused on peer mentoring. Peer mentoring was considered as an important institutional practice to reinforce sense of belonging. Although research did not specifically link peer mentoring with belonging, and few researchers have connected it with social integration, peer mentoring has a natural affinity to the first-year seminar and connection with peer relationships, making it an important area of interest. Peer mentoring was already part of the first-year seminar at the institution being studied, but the BRI program utilized existing research to create a more robust structure for the program. Thus, an extensive review of the prior literature related to peer mentoring is provided in this section.

Finally, this section includes the review of the four other intervention strategies and institutional practices found in the review of literature on sense of belonging. Although these four areas were not included in the BRI program, they are included in this section to showcase other strategies and practices that were considered within the review of literature. Those strategies and practices evaluated the association with sense of belonging for students who are participating in a living and learning community, taking part in specific types of learning environments, participating in a common institutional

experience, such as a leadership assessment given to the entire first-year class, and being actively engaged on social networking sites.

Interventions Utilized in the BRI Program

Normalizing Lack of Fit. Prior research has documented positive outcomes related to interventions that focus on normalizing the feeling that a student does not fit in during the first-year of their college experience (Cohen et al., 1999; Walton & Cohen, 2007, 2011a; Walton et al., 2015; Yeager & Walton, 2011; Yeager et al., 2013; Yeager et al., 2014). In the signature study by Walton and Cohen (2007, 2011a, 2011b), the authors conducted an experiment to evaluate how an intervention designed to normalize students' feelings that they do not fit within a campus community would influence belonging uncertainty. Belonging uncertainty was defined by the authors as feeling "uncertain of the quality of their social bonds" (Walton & Cohen, 2007, p. 82). The authors argued that this uncertainty about belonging can undermine the academic performance of ethnic minority student populations (Walton & Cohen, 2011a). Therefore, Walton and Cohen (2007, 2011a) sought to explore how an intervention designed to mitigate this uncertainty could improve belonging and achievement. These studies were conducted at a selective university where African American students represented the minority population and academic achievement gaps existed between African American and Caucasian students (Walton & Cohen, 2011b). This experimental design study was conducted with first-year students in their second semester (Walton & Cohen, 2011a, 2011b).

Walton and Cohen's (2011a) intervention was designed to "frame social adversity in school as shared and short-lived" (p. 1448). The messages used in the study encouraged students to consider adversities with fitting in or developing relationships as

common and temporary conditions that are experienced by all students. In the intervention, students reviewed a survey report which ostensibly reflected the views of upper-class students at the institution. The survey, which was purified to clarify the treatment message, "emphasized that upper-year students of all ethnicities worried about their social belonging at first in college but that these concerns dissipated with time and that eventually almost all students came to feel at home" (Walton & Cohen, 2011b, pp. 1-2). This brief, one-hour intervention was reinforced by asking the participants to reflect personally on their own experiences and write an essay to describe how their experiences may be like those in the survey. Students were then asked to turn the essay into a speech that was recorded on video. Students were told that the videos would be shared with future students in hopes to help those students with their transition to the college experience (Walton & Cohen, 2011a). These components of the implementation of the intervention were important as they reinforced internalization of the message delivered in the survey, but also allowed the students to "see themselves as benefactors and not beneficiaries" (Walton & Cohen, 2011a, p. 1448).

Findings from the study showed that the intervention was particularly beneficial for African American students and that the benefits continued for long after the brief intervention – up to three years later (Walton & Cohen, 2011a). For African American students in the treatment group, their GPAs were higher than those in the control group over time. More importantly, the students who received the treatment reported lower belonging uncertainty, lower self-doubt, and had a higher sense of subjective happiness.

Several factors influenced the desire to duplicate this intervention in a different setting and timeline. Walton and Cohen's (2011a, 2011b) intervention was conducted

during the second semester of the first-year. Based on research on the transition to college, it was theorized that this intervention could be more powerful if conducted within the pivotal first three to six weeks of the semester (Woosley, 2003).

The authors also conducted this in a closed, laboratory setting with a small sample size (49 African American students and 43 European American students) at a selective university (Walton & Cohen, 2011b). The institutional type (private verses public) is not identified in the study, but it is identified as being highly selective and having a low African American population (5-15% of the student body) (Walton & Cohen, 2011b). This context concern also informed the design of the current study as a broader application of the intervention could have a more substantial impact.

In a similar program implemented by Stephens et al. (2014) first-year students were exposed to a brief intervention in which stories were shared about the transition to college where the students' backgrounds (upbringing, social status, etc.) were integrated into the stories. The authors hypothesized that by helping students understand that their differences matter they would be "equipping them with the psychological resources they need to effectively transition to college and improve their academic performance" (Stephens et al., 2014, p. 944). The intervention improved psychological adjustment, as well as academic and social engagement.

Stephens et al. (2014) further found that the intervention had significant impact on first-generation students. The authors suggest that the intervention is a "threat reduction approach, which seeks to protect students from threats that can arise from having a potentially stigmatized background or particular social identity" (Stephens et al., 2014, pp. 949-950). Interestingly, this research also improved the psychosocial outcomes for

all students, not just those from underrepresented populations, thus the authors concluded that the intervention could help all students in the transition to college (Stephens et al., 2014).

Overall, the normalizing fit interventions encouraged sense of belonging and increased overall well-being (Stephens et al., 2014; Walton & Cohen, 2007, 2011a). These studies also provide evidence that normalizing fit can lead to greater academic achievement, particularly for specific student populations such as first-generation students and African American students (Stephens et al., 2014; Walton & Cohen, 2007, 2011a). The social belonging intervention from Walton and Cohen's (2007, 2011a) studies has been duplicated with various other groups and the positive outcomes of this intervention have been consistently reported (Walton et al., 2015; Walton et al., 2017). In the research by Walton and Cohen (2007, 2011a), the authors specifically focused on ethnic minority students and found that the intervention was significant for African American students. The study by Stephens et al. (2014) provided further evidence that a normalizing fit intervention can also influence first-generation students.

Institutional Communication and Gifts. Another principal intervention reviewed in this study focused on how institutional communications and gifts could influence belonging. In an experimental study conducted at a large, public institution, students in the treatment group were provided "several written communications from university administrators (e.g. the Provost and/or Vice-Provost for Student Affairs) emphasizing they were valued members of the university community" (Hausmann et al., 2007, p. 808). Participants also received small gifts with the university's logo to

emphasize their connection to their university. The interventions provided in this study were given within the first few weeks of the semester.

Hausmann et al. (2007) found that students who were given the intervention experienced a greater sense of belonging. The authors asserted that "early social experiences students have when they first enter college and the social support they receive during that time are likely to be better determinants of initial levels of sense of belonging than are demographic characteristics or academic experiences" (Hausmann et al., 2007, p. 829). In the study by Hausmann et al. (2007) belonging was measured over time and scores for overall sense of belonging declined over the course of the year; however, participants who received the intervention experienced a less rapid decline in belonging between measurements (Hausmann et al., 2007).

Furthermore, the authors noted that belonging contributed to the students' overall institutional commitment and intention to persist at the beginning of the first year; however, belonging did not continue to be associated with these outcomes throughout the year (Hausmann et al., 2007). The authors suggested this finding relates to the shift in priorities for first-year students; specifically, that as the year progresses the first-year students' institutional commitment and persistence is more associated with more practical factors, like career decisions (Hausmann et al., 2007). These findings contribute to the evidence that belonging interventions are key during the first few weeks of the semester and reinforces the importance of timeliness of such interventions (Hausmann et al., 2007).

An interesting finding in this study was that the effects of student background variables (including race and gender) were limited. Hausmann et al. (2007) indicated that

the sample of African American students was too small to show effect; however, the authors did indicate that peer support was associated with increased belonging for African American students.

Peer Mentoring. Within the past 10 years, peer mentor programs have spread in higher education as another means of supporting first-year student success. Early definitions of peer mentor programs were inconsistent (Jacobi, 1991). In more recent years, those definitions and roles associated with peer mentoring have become clearer, but they still encompass a variety of possible components. Crisp (2009) defines mentoring as "support provided to college students that entails emotional and psychological guidance and support, help succeeding in academic coursework, assistance examining and selecting degree and career options, and the presence of a role model by which the student can learn from and copy their behaviors relative to college going" (p. 189). Mentors provide support in the transition to college by modeling positive behaviors, socializing students to campus, sharing information about the campus culture, and introducing students to their new environment (Crisp, 2009; Crisp et al., 2017; D'Abate, 2009; Ender & Newton, 2000; Hill & Reddy, 2007; Kuh et al., 2006). Thus, authors have connected the need for peer mentoring with the need to develop relationships with peers within the university setting (Ender & Newton, 2000; Folger et al., 2004). Small campuses can utilize peer mentoring to further support student engagement and the community aspect of learning (Kezar, 2006).

Peer mentoring was integrated into the BRI program as it supports the first-year student's transition to the institution and can influence their overall sense of belonging. One interesting peer mentoring program found in the literature focused specifically on

getting first-year students involved in the campus community (Peck, 2011). These involvement mentors encouraged first-year students to consider both short-term involvements, long-term commitments, and helped new students see the long-term benefits of those involvements (Peck, 2011). Peck (2011) found that first-year students with involvement mentors retained at a higher rate than non-participants. In the second year of the program, the involvement mentor program was built into a first-year seminar and the benefits of the program continued (Peck, 2011). Mentees of the program indicated that they were informed about opportunities to get involved, which helped them to feel more inclined to return to campus (Peck, 2011). Thus, elements of the involvement mentor program were integrated into the BRI program.

Peer mentoring programs are consistently linked to positive outcomes in the review of literature. Prior research has associated peer mentoring programs with greater retention (Bowling et al., 2015; Budney et al., 2006; Collings, Swanson, & Watkins, 2014; Crisp & Cruz, 2009; Folger et al., 2004; Mangold et al., 2002-2003; Peck, 2011). In a study of a peer mentoring program by Collings et al. (2014), students not involved in peer mentoring were found to be four times more likely to have considered leaving the institution. "Peer mentoring moderated the impact of transitional stress on perceived social support" (Collings et al., 2014, p. 937).

Prior research has also shown first-year students who are mentored perform better academically (Budney et al., 2006; Crisp & Cruz, 2009; Folger et al., 2004; Holt & Berwise, 2012; Leidenfrost et al., 2014; Rodgers & Tremblay, 2003). Peer mentoring programs often involve upper-class student leaders modeling positive academic behaviors, which may be associated with the increases in academic performance

(Bowling et al., 2015; Folger et al., 2004; Holt & Lopez, 2014; Rodgers & Tremblay, 2003).

In a study of a first-year seminar based peer mentor program at a small, private college, peer mentors were responsible for being a liaison between seminar instructor and students, reviewing students writing, helping students pick classes for the next semester, providing social and emotional support, and planning social events to build camaraderie (Holt & Berwise, 2012). The first-year student's perception of the mentor support in the study was found to be related to mentee grades in the seminar course (Holt & Berwise, 2012). Mentees evaluated their perception of the mentor's support largely on how often the mentor and mentee met, not on the quality of their interactions. This finding reinforces the importance of the frequency of contact in peer mentoring programs.

The quality of the mentoring relationship was noted by Sanchez et al. (2006) to have a significant influence on the success of mentoring programs. Sanchez et al. (2006) found that the quality of mentoring was significantly related to students' overall satisfaction with the university. In addition to general satisfaction, prior research has found peer mentoring programs were positively associated with increased well-being and self-esteem (Collings et al., 2014; O'Brien, Llamas, & Stevens, 2012). These findings were particularly meaningful within the first few days of the semester (Collings et al., 2014).

Although the research relating peer mentoring to social integration is sparse, previous research does highlight the positive influences of peer mentoring on overall social integration. Courses and programs that include peer mentoring and support groups can help improve levels of social involvement, which in turn can increase levels of

institutional commitment and engagement (Mangold et al., 2003; Peck, 2011; Rieske & Benjamin, 2015). Peer mentor programs provide students with important social skill development, community engagement, and social integration (Bierema & Merriam, 2002; Colvin & Ashman, 2010; Hixenbaugh et al., 2006; Kuh et al., 2006; Mangold et al., 2003; O'Brien et al., 2012; Rieske & Benjamin, 2015).

In a study of a peer mentor program as part of a first-year experience class in a large, public university, Colvin and Ashman (2010) identified several benefits of the program related to social integration. In the qualitative study, students identified mentors as trusted friends that encouraged them to become involved inside and outside of the classroom (Colvin & Ashman, 2010). Mentors were further linked to retention, mattering, and friendship development with other peers (Colvin & Ashman, 2010). Interestingly, Colvin and Ashman (2010) also found that women focused more on the friendships developed and support systems of the peer mentoring relationship, whereas men focused on getting help from an equal or peer. These findings support the use of peer mentor programs to influence peer relationships, campus involvements, and belonging as important factors of social integration.

Peer mentor programs are commonly used to support first-generation students specifically (Dennis et al., 2015; Folger et al, 2004; Zevallos & Washburn, 2014). In a study by Zevallos and Washburn (2014), a peer mentoring program that focused on low-income and first-generation students helped students feel connected to the institution. "Mentors have the potential to reduce the stigma associated with underserved students" (Zevallos & Washburn, 2014, p. 29). Students who participated in the peer mentoring program had a better outlook on their college experience and were better able to cope

with the demands of college (Zevallos & Washburn, 2014). Peer mentoring programs for first-generation students were also associated with better academic achievement (Dennis et al., 2015; Folger et al., 2004). For first-generation students, peer support is crucial as students lack the social capital from family members to successfully transition to college (Dennis et al., 2015).

Strayhorn (2006) further recommends that educators work with ethnic minority students to provide peers that will challenge and support their development. Courses and programs that build mentoring and support groups into their designs help improve levels of student involvement, motivation, and academic self-confidence and, in turn, increase levels of institutional commitment and engagement for minority ethnic groups (Mangold et al., 2003).

Other Sense of Belonging Interventions and Practices

In the review of literature associated with belonging, additional institutional and student practices were considered as influential in the development of sense of belonging. Although these practices were not integrated into the BRI program considered in the present study, it is important to note them as considerations in the research on interventions to reinforce sense of belonging. This section highlights the four other areas that were considered as specific practices or strategies to encourage sense of belonging – engaging in social networking, participating in a living and learning community, engaging classroom learning environments, and opportunities for common experiences within the first-year. These practices and strategies were not included in the BRI as they were outside the control of the researcher as part of the first-year seminar (social networking), already existed at the institution (learning communities) or were outside of

the resources available at the institution (multiple living and learning environments and common experience). It is also important to note that these practices may also be linked to social integration; however, this review focused specifically on their contributions to belonging.

Social Networking. Recent research has associated the use of social networking sites to sense of belonging (Nalbone et al., 2016; Strayhorn, 2008 Strayhorn, 2012b; Vaccaro et al., 2015). Nalbone et al. (2016) and Vaccaro et al. (2015) both provide research that supports social networking usage as a positive influence on adjustment to college, interaction with friends, development of relationships, and coping with the separation from family and friends from home. Furthermore, there was some evidence that integrating a social networking component into the first-year seminar increased retention, although the authors indicated those findings varied between semesters (Nalbone et al., 2016).

Contrarily, Strayhorn (2008, 2012b) found that higher social media use was negatively correlated with sense of belonging. Strayhorn (2008) theorized that students who are high users of social media may be less likely to spend time developing meaningful relationships with peers. "Time spent using SNS (social networking sites) takes away from time that could be devoted to establishing meaningful relationships with peers and faculty members on campus, attending a meeting of an on-campus club or organization, or joining a social fraternity or leadership team" (Strayhorn, 2012b, p. 793). Thus, social media can be useful in the transition to college, but higher levels of its use may prevent students from developing relationships and engaging fully in the college experience.

Living and Learning Communities. Communal living on residential campuses encourages the development of peer relationships and reinforces the need for affiliation (Astin, 1993; Berger, 1997; Inkelas et al., 2007; Johnson et al., 2007; Schussler & Fierros, 2008). Schussler and Fierros (2008) examined how participation in residential learning communities for first-year students contributed to their overall sense of belonging. The authors found that residence halls are valuable in helping first-year students establish a social network (Schussler & Fierros, 2008). Furthermore, the living and learning communities examined in this study provided students with a means to develop support groups that integrated them into the "social and academic fabric" (Schussler & Fierros, 2008, p. 84) of the institution. This integration was an important influence and thus the more connected the learning community was with academic and social interactions, the greater the reported sense of belonging among the students (Schussler & Fierros, 2008).

Learning Environment. Meeuwisse et al. (2010) conducted an assessment to consider what elements of the classroom learning environment impacted feelings of belonging. Active and cooperative learning environments were found to positively impact engagement, retention, and belonging in their study (Meeuwisse et al., 2010). This study was conducted in the Netherlands and findings indicated that "teacher and peer interactions were antecedents of students' sense of belonging and that interrelationships between interaction, sense of belonging, and student success are different for minority students compared to their majority counterparts" (Meeuwisse et al., 2010 p. 543). Therefore, again the importance of ethnicity was reflected in evaluating belonging for students.

Additionally, Hoffman et al. (2002-2003) found that academic learning communities helped to facilitate relationship development and helped to incorporate the academic experiences into the social aspects of the campus experience. Learning communities provided first-year students with a common course experience and common struggles that provided "student/peer interactions and helped to create meaningful bonds between students that are characterized by support rather than mere social unions" (Hoffman et al., 2002-2003, p. 252). Thus, Hoffman et al. (2002-2003) provided evidence that learning communities can support the development of sense of belonging, but also provides first-year students a unique common experience.

Common Experiences. Another interesting intervention in the literature focused on developing common experiences for first-year students that would reinforce their identity with the institution (Hoffman et al., 2002-2003; Soria & Stubblefield, 2015). Soria and Stubblefield (2015) analyzed a first-year program which utilized the StrengthsFinder® personality assessment as a means of providing a common experience for all students. StrengthsFinder® is an online assessment that helps individuals identify their five greatest personality strengths. Students were offered multiple opportunities to engage in the first few weeks of the semester to connect their StrengthsFinder® results with those of their peers and peer leaders. The importance of understanding your strengths was also reinforced by the administration during convocation (Soria & Stubblefield, 2015). Findings indicated that "students who discussed their strengths with others at least once in their first semester were, on average, significantly more likely to experience a greater sense of belonging on campus" (Soria & Stubblefield, 2015, p. 361). The common experience of taking the StrengthsFinder® provided students a starting point

for building a sense of community, allowed for relationships to be fostered, and encouraged deeper friendships (Soria & Stubblefield, 2015).

Similarly, prior research recommends the use of rituals and traditions to reinforce belonging and support students through their transition to college (Kuh et al., 2010; Schlossberg, 1989). Rituals are used to help students establish the connection to the new environment by participating in a common university experience, such as a new student convocation. Kuh et al. (2010) offered the example of the University of Kansas "Hawk Week" where students learn the school fight song, learn about the campus mascot, and hear about campus stories and rituals "meant to instill and deepen new students' commitment to graduating" (pp. 119-120). Schlossberg (1989) argued that these ritual experiences help new students attach themselves to a new identity within the campus community.

Context for Social Integration

Prior research recommends institutions make thoughtful and critical decisions regarding how their campus environment, such as campus programs, policies, and practices, will encourage social integration (Habley et al., 2012; Lotkowski et al., 2004; Renn & Reason, 2013; Tinto, 2006-2007). Braxton et al. (2004) recommends institutions develop an integrated design that will allow them to implement policies and practices to create successful programs. The varying elements of the organizational framework of an institution can impact the success of first-year student social integration (Berger, 2000; Braxton et al., 2004; Terenzini & Reason, 2005). The organizational framework can include decisions regarding which best practices are best for that community and how members of the organization will work together to accomplish those best practices

(Berger, 2000). Therefore, it is important that institutions develop a comprehensive plan to encourage social integration that is built into the core structure of the institution, but also into the values and community of the campus.

As one considers social integration, it is important to consider several contextual factors. Many of these contextual factors have emerged in the review of literature and are evaluated independently in this section. For the purpose of the current study, the contextual elements include a consideration of the institutional type and size, the type of student being targeted - first-year students, the first-year seminar as an institutional practice toward encouraging social integration, and the timeliness of interventions to encourage social integration. These contextual factors have shaped much of the existing research on social integration and have influenced changes in how institutions approach social integration over the past 30 years. Each of these contextual factors influence how, when, and where social integration strategies are considered and implemented in higher education.

Institutional Type and Size

The size and type of an institution can influence how students develop personal relationships and how easily they can become involved, both of which are factors of social integration (Astin, 1993; Chapman & Pascarella, 1983; Chickering & Reisser, 1993; Kezar, 2006; Kuh et al., 2010; Pike & Kuh, 2005; Reason et al., 2007; Tinto, 1975, 1993). Astin (1993) found that although institutional size was more influential on student outcomes than institutional type (research, four-year, public, private), both had some influence. Tinto (1975) suggested that larger institutions provide students with more opportunities for personal connections through small sub groups, and therefore, a better

chance that the student will find a social fit within the community. Chapman and Pascarella (1983) provided evidence that institutional type and college size impacts the student's social engagement with campus-sponsored activities and suggested that as the institutional size increased, the amount of informal contact with faculty decreased. Thus, the smaller populations of a small, private university can provide fewer opportunities for students to engage in social activities with peers, but more opportunities to develop faculty relationships (Chapman & Pascarella, 1983; Kuh et al., 2010). Furthermore, personal relationships with peers may be more challenging at small institutions, where students may struggle to find peers they can connect with individually (Tinto, 1975).

Studies suggest that smaller institutions are also more likely to be values and philosophy driven to achieve student engagement (Kezar, 2006; Kuh et al., 2010; Reason et al., 2007). The community on a small campus reinforces a familial environment that supports the student's integration to the campus community (Kezar, 2006; Kuh, 2003). This familial environment on small campuses can be seen most directly in the student's ability to have a more individualistic relationship with faculty and a deeper personal relationship with peers (Chickering & Reisser, 1993). Kezar (2006) stresses that smaller campuses cannot take for granted that the socialization of students will happen automatically because of their small, intimate campus structure. Although these small campuses are intimate environments for learning, they can still create barriers for students in finding a peer niche.

Interestingly, Reason et al. (2007) found in their study of first-year student experiences that it was not the institutional type or size that influences student outcomes (social and personal competence), but the programs and experiences the institution

provided. Thus, although prior research does indicate that there are important differences based on institutional type and size, it is important to specifically consider how institutional type and size may influence programmatic decisions for resources and support of first-year experiences.

First-Year Students

First-year students have been the primary focus of social integration studies over the past 30 years. The focus on first-year students has largely been driven by the institutional priority to increase persistence for this population (Greenfield et al., 2013; Upcraft et al., 2005). Furthermore, first-year students are an important population, in reference to social integration, as their transition to the campus community can influence their ability to develop and learn (Chickering & Reisser, 1993).

According to the National Center for Educational Statistics (2016), retention from first year to second year was 80 percent across all institutional types and 81 percent for both private and public four-year institutions. In 2001, that rate was 73.9 percent at four-year colleges (Upcraft et al., 2005). This considerable increase in retention has been associated with greater focus on first-year students and the programs that support their success in college (Greenfield et al., 2013; Upcraft et al., 2005).

For first-year students specifically, the establishment of social integration is a key component of the transition to college (Barefoot & Fidler, 1992; Renn & Reason, 2013; Tinto, 1993). Barefoot and Fidler (1992) stated that "three interrelated factors which have emerged over and over as predictors of first-year student success are (a) a felt sense of community, (b) involvement of students in the total life of the institution, and (c) academic/social integration during the freshman year" (p. 7). Schlossberg (1989)

suggests the transition to college creates a difficult time of balancing marginality versus mattering. The importance of the transition to college is key – "the college freshmen, marginal at first, can become a part of the community" (Schlossberg, 1989, p. 8). This focus on easing first-year students into the community and helping them to navigate the transition to college is pivotal to social integration.

Adjusting to the new college environment can also be quite challenging for first-year students and how students make meaningful connections can be different for each student (Palmer et al., 2009). First-year programs can help to provide opportunities for those connections in a way that is integrated into the campus culture. However, it is important that university administrators keep in mind the external factors that a student may also be influenced by, such as parents, high school friendships, etc., when considering their desire to form new connections (Barefoot & Fidler, 1992; Greenfield et al., 2013; Hunter & Linder, 2005; Palmer et al., 2009). Tinto (1988) suggested that as first-year students transition to college, they must separate from those relationships from home and high school to successfully incorporate into the collegiate environment; however, more recent research has indicated that these familial connections and relationships from home can have positive benefits (Elkins et al., 2000; Hurtado & Carter, 1997; Tierney, 1999). The institutional actions that are put in place to help new students adjust to college can help students to embrace the transition and become part of the university community, while also supporting connections to their life before college.

A plethora of campus programs have been established to purposefully provide social integration and transitional support during the first-year. These first-year experiences include orientation programs, first-year seminars, bridge programs, academic

learning communities, and living and learning communities (Berger, 1997; Greenfield et al., 2013; Keup & Barefoot, 2005; Lotkowski et al., 2004; Renn & Reason, 2013, Wolfe, 1993; Tinto, 2006-2007). Several researchers have recommended institutions consider their selection of appropriate first-year programs and ensure that institutional resources are available to support these programs (Alexander & Gardner, 2009; Barefoot et al., 2005; DeAngelo, 2014). Regardless of the program, "institutions that achieve first-year excellence place a high priority on the first year among competing institutional priorities and accept a significant share for the responsibility for first-year student achievement" (Barefoot et al., 2005, p. 381). Thus, institutional decisions about policies, procedures, administrative control and organizational structures of first-year programs can shape first-year students' experiences in a profound way (Barefoot et al., 2005; Terenzini & Reason, 2005).

First-Year Seminars

The first-year seminar is one very focused program that has become commonplace and highly recommended in higher education (Barefoot et al., 2005; Greenfield et al., 2013; Hunter & Linder, 2005; Keup & Petschauer, 2011; Kuh, 2003; Kuh et al., 2010). Barefoot (1992) defined the first-year seminar as "a course intended to enhance the academic and/or social integration of first-year students by them (a) to a variety of specific topics, which vary by seminar type, (b) to essential skills for college success, and (c) to selected processes the most common of which is the creation of a peer support group" (p. 49) (as cited in Greenfield et al., 2013, p. 90). Although first-year seminars can take on a variety of styles, all seminars have the intention to assist students with the transition to college (Greenfield et al., 2013; Habley et al., 2012; Hunter &

Linder, 2005; Keup & Peschauer, 2011). The types of first-year seminars have been defined as extended orientations, academic seminars, study skill seminars, those focused on paraprofessional/discipline, and those that are a hybrid of these programs (Barefoot & Fidler, 1992; Greenfield et al., 2013; Hunter & Linder, 2005; Keup & Peschauer, 2011). Regardless of the type, "freshman seminars exist to bridge the gap between the curriculum and co-curriculum and to facilitate student involvement in all aspects of campus life" (Barefoot & Fidler, 1992, p. 8).

First-year seminars are also linked to positive outcomes. Tinto (1993) emphasized that first-year programming has "significant impact on academic achievement, academic persistence, and graduation for its participants" (p. 14). Furthermore, prior research has linked first-year seminar participation with retention and persistence (Colton et al., 1999; Davis, 1992; DeAngelo, 2014; Habley et al., 2012; Kuh et al., 2008; Mayhew et al., 2016; Pascarella & Terenzini, 2005; Porter & Swing, 2006; Schnell & Doetkott, 2002-2003; Tinto, 1993). In a longitudinal study with background variable controls, Schnell and Doetkott (2002-2003) found that first-year students who participated in a seminar experienced significantly greater retention over four years compared to the students who did not participate in a seminar. This study, which controlled for background variables, provides important evidence of the benefits of a first-year seminar (Mayhew et al., 2016; Pascarella & Terenzini, 2005; Schnell & Doetkott, 2002-2003).

It is important to note that a few studies have not found association between first-year seminar participation and retention (Goodman & Pascarella, 2006; Porter & Swing, 2006; Strayhorn, 2009); however, these findings are limited and the authors still stress

other positive outcomes. For example, in a longitudinal review of the signature first-year seminar program at the University of South Carolina, Goodman and Pascarella (2006) found that in most years students who participated in a first-year seminar were significantly more likely to persist from first-year to second-year, however, there were years when the findings were not statistically significant. The overwhelming evidence from the longitudinal study did support the positive influence of first-year seminars on student persistence (Goodman & Pascarella, 2006).

Additionally, in a study by Porter and Swing (2006), first-year seminar programs associated with transition, peer connections, and co-curricular engagement were not associated with early intent to persist. However, Porter and Swing (2006) suggest that these types of seminars are a place of "planting seeds" that will cultivate later and provide students with important information and resources they may need down the line. Thus, in some cases a first-year seminar may not have an immediate impact on persistence, but it may still provide a long-term influence on overall success.

Evidence linking first-year seminar participation with other positive outcomes is less consistent, but still an important consideration in their benefits to students (Keup & Barefoot, 2005). Prior research has associated first-year seminar participation with better academic performance (Barton & Donahue, 2009; Goodman & Pascarella, 2006; Kuh et al., 2008). In a longitudinal study examining the effects of a first-year seminar program on graduation rates, Schnell et al. (2003) found that first-year students who participated in the seminar graduated at a higher rate than the matched group of students who did not.

First-year seminars have also been linked to positive outcomes associated with social integration. Prior research has shown participation in a first-year seminar was

associated with increased engagement in campus activities (Barton & Donahue, 2009; Goodman & Pascarella, 2006; Keup & Barefoot, 2005; Porter & Swing, 2006). Common experiences gained from first-year seminars also have been shown to help cultivate peer relationships (Palmer et al., 2009; Porter & Swing, 2006). Furthermore, a study by Colton et al. (1999) linked first-year seminar participation with an increased sense of belonging.

Despite the outlier studies which do not show a positive association, first-year seminars are associated to positive outcomes for first-year students. Due to this long history of positive outcomes, the first-year seminar is a good environmental context in which to integrate additional strategies to support first-year students' social integration.

Timeliness of Developing Social Integration

The timeliness of establishing social integration for first-year students is especially crucial in the current study. The first three to six weeks of a first-year student's time at college is fundamental in their transition (Astin, 1993; Hoffman et al., 2002-2003; Upcraft et al., 2005; Woosley, 2003). Kuh (2003) recommends that institutions must get to students early to ensure they know what it takes to be successful. Those experiences that take place within the first few weeks on campus have a powerful influence on the first-year students' social integration as they represent a crucial time when students are connecting to the institutional environment through their experiences on campus and with peers (Elkins et al., 2000; Hoffman et al., 2002-2003; Pascarella & Terenzini, 1983; Upcraft et al., 2005; Tinto, 1988, 1993; Wolfe, 1993; Woosley, 2003). Woosley's (2003) research specifically indicated that successful social integration within

the first three weeks of the semester leads to a greater likelihood of degree completion within five years.

Timeliness of interventions has also been associated with positive outcomes specifically for minority populations. Murphy and Zirkel (2015) found that sense of belonging established within the "first weeks of college showed a strong and positive relationship to second semester grades for students of color, but not for White students" (p. 25). This further supports the importance of a timely intervention focused on belonging and its potential positive influence for ethnic minority populations.

Gaps in the Literature

In this review of literature, opportunities for additional research emerged. First and foremost is the need for additional focus on belonging as a component of social integration. Sense of belonging is an important and separate construct of social integration as it reinforces the psychosocial connection to the institution and institutional commitment (Elliott et al., 2010; Schlossberg, 1989; Strayhorn, 2012a).

Prior research has also emphasized the importance of institutions developing integrated campus plans for first-year programming (Berger, 2000; Braxton et al., 2004; Kuh et al., 2010; Strayhorn, 2012a; Terenzini & Reason, 2005; Tinto, 2006-2007). The proposed program provided such an integrated approach as it was delivered as part of a first-year seminar with features designed to influence belonging, peer relationships, and involvement.

Furthermore, although prior research has focused on the importance of belonging, very few specific strategies have been presented in the literature to reinforce belonging in first-year students. Of the review of literature on sense of belonging and social

integration, only six specific interventions and institutional practices related to belonging were identified out of the over 29 studies considered. Pittman and Richmond (2008) recommended for future study a more direct measure of "possible explanatory mechanisms" (p. 356) to better understand what interventions or aspects of freshmen programming were directly contributing to greater belonging. Strayhorn (2012a) further called on institutions to focus on belonging and develop strategies that will better enable students to develop belonging with the institution.

Furthermore, the potential influence of sense of belonging interventions on minority populations is of interest in the current study. Prior research has urged institutions to consider belonging initiatives as a means of countering marginality among minority populations (Hausmann et al., 2007; Hurtado & Carter, 2007; Schlossberg, 1989; Strayhorn, 2008; Strayhorn et al., 2015). This study, and its review of integrated social integration components, provides additional research into the association between these background characteristics and the BRI program.

Finally, there is a noticeable gap in the literature on sense of belonging for small, private institutions. As indicated earlier, institutional type and size has been identified as an influential variable (Astin, 1993; Chickering & Reisser, 1993; Kezar, 2006; Kuh et al., 2010). The review of literature on sense of belonging found 29 research studies focused on the topic; of those, only four identified their participants as from private institutions. Of those four institutions, two were identified as "elite" and one was identified as mid-sized. Thus, this research provided further exploration of a belonging focused intervention at a small, private institution.

Conceptual Framework for Current Study

The current study's conceptual framework combines the work of Tinto (1993), Astin (1993), and Strayhorn (2012a) to provide an integrated perspective of social integration (see Figure 1). Although Tinto's (1993) model of institutional departure serves as the foundation for this framework, it does not provide the full scope of social integration needed for the current study. Tinto's (1993) model included three important aspects of social integration (peer relationships, involvement, and the importance of background characteristics), which were considered in this study. Finally, despite its challenges in considering minority student experiences, Tinto's (1993) model of institutional departure has been consistently linked to student persistence.

To expand upon Tinto's (1993) theory, Astin's (1993) theory of involvement provides an understanding of the behavioral influences of involvement and peer relationships as vital constructs of social integration. Astin's (1993) theory of involvement goes beyond just the act of involvement, but emphasizes the need for those involvements to be of substantial quality and for students to invest time and energy. Astin's (1993) research also contributes to the importance of peer relationships as a contribution to social integration.

Furthermore, the current research was focused on sense of belonging as a more recent consideration in the constructs of social integration. Strayhorn's (2012a) model of college students' sense of belonging provided a framework for the importance of this element and particularly its influence on minority populations, but did not connect it directly with social integration. In the current study, the researcher explored the interconnection between belonging as a psychosocial element of social integration when

combined with Tinto's (1993) original components of peer relationships and involvement.

Finally, Kuh (1995) and Kuh et al. (2006) further refined Astin's (1993) involvement theory to consider engagement, or involvement, in educationally beneficial programs. Kuh's contribution to this conceptual framework is important as it highlights the institutional influence on encouraging students to participate in meaningful and impactful programs. Peer mentoring programs and first-year seminars have been identified in the research of Kuh et al. (2010) as educationally purposeful activities. In the current study, the BRI program was analyzed to determine if it also contributes positively to engagement. Kuh's (1995) engagement concept and its focus on institutional action is a vital component of the current research.

Consequently, the conceptual framework for this study combined the literature reviewed on social integration, involvement, peer relationships, and belonging. This framework suggests that institutional action can influence first-year students in a way that will impact their overall social integration to the institution.

Summary

The importance of social integration as a means for encouraging student persistence has been established in this review of literature. The existing, and widely used, factors of social integration–involvement and peer relationships–have also been examined in this review and their importance to positive student outcomes founded.

Furthermore, this review of literature reveals the need for a greater focus on sense of belonging as a factor in the construct of social integration. Sense of belonging is a distinct concept as it emphasizes students' perceptions of mattering and their fit into the

campus community (Strayhorn, 2012a). Furthermore, research demonstrates that sense of belonging has a direct association with minority populations to reduce marginality and encourage social integration (Hurtado & Carter, 1997; Schlossberg, 1989).

Specific intervention strategies and practices related to belonging, including those that normalize lack of fit and those that focus on institutional communications, have shown positive influence on student outcomes including persistence, academic achievement, and well-being. The benefits of peer mentoring have also been examined as a means of encouraging social integration. Thus, these researched interventions and practices were utilized in the formation of an integrated sense of belonging program - Belonging Reinforcement Intervention (BRI).

The research reviewed in this chapter justifies the need for this intervention and outlines the gaps in the literature that the current study addressed. Within the conceptual framework outlined in this chapter, this study contributes to the growing body of literature related to belonging and provides additional evidence of a belonging focused intervention's association with overall social integration.

CHAPTER 3: METHODOLOGY

This study examined the impact of an integrated program focused on sense of belonging on the overall social integration of first-year students at a small, private institution. This chapter describes the context, sample, design, variables, instruments, procedures, and planned data analysis.

Research Questions

1. What is the reliability and validity of the scale scores in Mapworks used to measure the construct of social integration when used at a small, private institution?
2. Do students who participate in the Belonging Reinforcement Intervention (BRI) have higher social integration (across multiple scale scores) than those who did not as measured by the Mapworks survey?
3. Is there a differential treatment effect on students from various demographic backgrounds (gender, ethnicity, state residency, and first-generation status)?

Context

Setting

This study was conducted at a small, private, selective institution in the southeast United States. The Carnegie Classification of Institutions of Higher Education (2014) identifies the institution as a private, not-for profit Master's university with a focus on arts and sciences. It is further classified as a four-year, highly residential institution (Carnegie Commission, 2014).

Based on 2016 data, the institution had 1,139 traditional undergraduate students, with an additional 478 adult students and 713 graduate students for an overall campus

population of 2,330 students. The campus is largely residential for traditional undergraduate students with 70% of students living on campus. Furthermore, institutional records indicate it is the most diverse among private institutions in the state with 30.4% identifying as mixed race or minority populations, 6.7% identifying as international, 7.1% unreported, and 55.8% identifying as White. The institution's Pell grant recipients represent approximately 20-25% of its traditional student population. The percentage of Pell grant recipients is indicative of financial need of the students attending an institution. In 2011-2012 data from the National Center for Educational Statistics (2015), the average percentage of Pell grant recipients at private, nonprofit four-year institutions was 35.8%. However, according to the Center on Education and the Workforce (Carnevale & Van der Werf, 2017), at selective institutions the average percentage of Pell grant recipients is less than 20%. Thus, the institution being studied has a lower Pell recipient percentage than the national average, but also slightly higher than selective institutions.

As a small, residential institution, the university studied prides itself on an intimate campus experience in an urban setting. The institution has both a liberal arts foundation and a strong focus on professional preparation. Students at the institution have consistently ranked satisfaction with the academic and institutional factors (caring faculty, approachable advisors, and individual attention) as significantly higher than students at comparable national, four-year private institutions based on data from the institution's Student Satisfaction Inventory (2017). However, the same survey data have indicated students at the institution have a slightly lower sense of belonging than students

at similar four-year private institutions. Thus, the current intervention sought to reinforce belonging to encourage overall social integration.

Sample

As the first-year seminar is a required course for all first-year students, the sampling framework for this study includes all first-year students enrolled in the institution. The sample groups represented in the study are the three aggregated cohorts representing the years of the course – Fall 2015, Fall 2016, and Fall 2017. The Fall 2015 and Fall 2016 cohort groups represent years without the Belonging Reinforcement Intervention (BRI). The Fall 2017 cohort group represented the year in which the BRI program was implemented.

The incoming class profiles for each of the cohort groups were compared to ensure compatibility. New student enrollment data indicated both the Fall 2015 and Fall 2016 first-year student classes were similar in their makeup to create the control group. The Fall 2017 first-year student class was also similar in makeup, although larger. Among the first-year class, the Hispanic student population did increase over the three years by 5.6% overall. There was also a noticeable increase in the percentage of students living on campus in the Fall 2017 population as the institution added additional sports teams. Finally, there was a clear increase in the number of Pell eligible students between the two control years and the Fall 2017 population. Table 3 provides a snapshot of key demographic considerations used to compare the cohort groups.

Table 3

Comparison of First-Year Students in Cohort Groups

	Fall 2015 Cohort	Fall 2016 Cohort	Fall 2017 Cohort
Gender	34.9% male 65.1% female	28.7% male 71.3% female	38.0% male 62.0% female
Race/ Ethnicity	8.8% Hispanic 13% African American 63.7% Caucasian 7.7% International 6.8% Other	11.5% Hispanic 10% African American 63.4% Caucasian 7.9% International 7.2% Other	14.4% Hispanic 12.8% African American 62.0% Caucasian 5.0% International 5.8% Other
Financial Aid Status	24.3% Pell 75.7% Non-Pell	20.1% Pell 79.9% Non-Pell	30.9% Pell 69.1% Non-Pell
Average SAT/ACT	ACT Comp: 24 SAT Total: 1050	ACT Comp: 24 SAT Total: 1040	ACT Comp: 24 SAT (redesign) Total: 1109
State Residency	49.3% In-State 43% Out-of-State 7.7% International	48.4% In-State 43.7% Out-of-State 7.9% International	51.3% In-State 43.5% Out-of-State 5.2% International
Residential vs. Commuter	86.6% Residential 13.4% Commuter	90.3% Residential 9.7% Commuter	96.3% Residential 3.7% Commuter

Background

The program implemented in this study was designed to impact social integration of students through strategies and institutional practices focused on sense of belonging. The goal of the program was to increase students' social integration as measured by peer relationships, involvement, and sense of belonging. This section outlines the historical background of the first-year program at the institution and the setting within which the intervention was delivered.

All first-year students at the institution enroll in a required, introductory first-year seminar. The course was developed in 2015 as part of a restructuring of the General Education program at the institution. The seminar is a hybrid seminar as it includes both academic seminar components and extended orientation components (Greenfield et al., 2013). The first six weeks of the course focuses heavily on topics related to the transition to the university, whereas the subsequent 10 weeks focus more on academic components including understanding metacognition, understanding the importance of learning communities, and group work that encourages integrative thinking. The seminar is team taught by full-time faculty members from a variety of disciplines.

Since its inception in Fall 2015, the focus on social integration in the course has been limited. The seminar's co-curricular component is embedded into the course structure, requiring students to attend workshops and programs outside of class. This component of the course is called Student Leadership Development (SLD). The SLD requirements include some extended orientation topics, such as how to handle roommate conflicts or time management skills. The SLD program requirements also include discussion-based workshops that model intellectual discourse. Participation in the SLD program requirements were tracked by peer mentors in both the control and treatment groups.

Additionally, new students have participated in a one hour, in-class session focused on the transition to college called "What I Wish I Knew." This facilitated discussion with upper-class student leaders and peer mentors provided first-year students with personal insight into how to be successful, get engaged, handle roommate concerns, access campus resources, and other strategies for success. The "What I Wish I Knew"

program was designed to provide students with strategies of how to navigate challenges and areas of concern related to the transition to college.

During all three cohort groups, the course has also included assigned peer mentors to each section; however, that relationship with the peer mentors and the course has been tenuous in previous years. In the Fall 2015 and Fall 2016 groups, the peer mentors have facilitated one meeting with the first-year students two days prior to the start of classes as part of the Welcome Weekend programs. The peer mentors have then attended class meetings sporadically and served as a social support for the students. Peer mentors were also asked to connect with the students in their course and to provide support throughout their first semester of college; however, the program coordinator indicates there was little evidence this was done effectively in all classes.

Other social integration programs have also existed in the array of first-year programs at the institution during Fall 2015 and Fall 2016. These programs are an important part of the institution's overall effort to encourage social integration and first-year student success. Those programs include a new student orientation, a summer bridge program for at-risk students, a student convocation program, an optional club and organization fair, residence hall programming, an optional peer mentoring program for first-generation and minority students, an optional peer mentoring program for all students that focuses on group support called Transition 2 University, and many other institutional structures. These elements of the first-year experience remained consistent for the Fall 2017 program or were highlighted as additional opportunities for student engagement.

Intervention

The study conducted evaluated the association between social integration and participation in an intervention designed to enhance sense of belonging and integration. The new program is called the Belonging Reinforcement Intervention (BRI) and was implemented in the Fall 2017 for the first time. The BRI program was implemented during the first three weeks of the Fall 2017 semester. This timeframe is consistent with research designating the first few weeks of the semester as critical for social integration (Astin, 1993; Tinto, 1993; Upcraft et al., 2005; Woosley, 2003). The program included belonging strategies focused on normalizing sense of fit (Walton & Cohen, 2007, 2011a) and encouraging connection with the community through institutional communication (Hausmann et al., 2007). Additionally, as the peer mentoring program integrated into the course structure in the pre-intervention years has been only minimally associated with the course, the BRI program created increased opportunities for engagement with the mentor. Increased contact with peer mentors has been linked in previous research as influential to student success in a first-year seminar (Holt & Berwise, 2012). Furthermore, Sanchez et al. (2006) found that the quality of peer mentoring increased satisfaction and social integration. Thus, the BRI program provided additional support and structure around the peer mentoring program. The BRI program also included additional strategies to reinforce social integration through a greater focus on involvement and the development of peer relationships.

The goal of the BRI program is to increase first-year students' social integration by enhancing their sense of belonging. Furthermore, as this campus has a relatively high ethnic minority student population for a small, private, predominantly White institution

(PWI) – 37 percent ethnic minority - a secondary goal is to enhance the sense of belonging of ethnic minority populations specifically.

The BRI program was delivered through both in-class, curricular requirements and out-of-class, co-curricular elements. For consistency, the interventions provided during Fall 2015 and Fall 2016 (the "What I Wish I Knew" program and the Welcome Weekend meeting with peer mentors) were continued as part of the new model, but combined to reinforce the influence and importance of the peer mentors. Additionally, peer mentors continued to meet during select in-class meetings during the first six weeks of the semester and they tracked student participation in the co-curricular elements of the first-year seminar. Other institutional first-year program opportunities also remained consistent.

The BRI program also included new elements that were recommended as part of the research on social belonging. The new strategies integrated into the first-year seminar reinforced social integration and encouraged peer connections, involvement, and sense of belonging. As most of the strategies within the BRI program were required or strongly encouraged through the course structure, the program was considered a holistic influence on the students' experience.

Table 4 outlines the Belonging Reinforcement Intervention (BRI) program and identifies the components of the program that were new, as well as which program elements were optional verses those that were required.

Table 4

Belonging Reinforcement Intervention Program Outline

Program Component	Optional	Required	Control	Treatment
Welcome Weekend Meeting with Peer Mentor		X	X	X
Belonging Focused Communication from Dean of Students & Provost		All students received.		X
SLD Program: Clubs & Organization Fair or Peer Mentor Meeting		X		X
Social Belonging In-Class Program		X		X
Writing Reflection for Social Belonging Class		X		X
Video Project for Social Belonging Class	X			X
Week 3 Peer Mentor Meeting	X			X

Belonging Reinforcement Intervention Program Descriptions

- Day after Arrival to Campus (August 26) – An introductory meeting was held between the students and their peer mentor. This component of the BRI program established consistency with information and content shared in previous years. At this meeting, the peer mentors establish relationships with their students by facilitating an icebreaker, answering questions about the first-year seminar, and helping students establish peer relationships. The peer mentors also shared about their college experience through the framework

established in the "What I Wish I Knew" program. Some faculty instructors of the first-year seminar also attended this meeting to introduce themselves and meet their students. An outline of the agenda and instructions for this peer meeting is available in Appendix A.

- Week 1 (August 28) – Students were contacted by the Dean of Students and Provost with separate emails "emphasizing that they are valued members of the university community" and reinforcing their membership as part of the campus community (Hausmann et al., 2007, p. 808). L. R. Hausmann (personal communication, March 21, 2017) recommended that these communications should "use 'we' language and invoke images that convey that everyone – from the university administrators to the professors to the staff to the students – are part of a single team/community." Using this guidance, the emails were designed to encourage students to get involved on campus, to establish new relationships, and to reinforce feelings of belonging. See Appendix B for the email from the Dean of Students and Appendix C for the email from the Provost.
- Week 1/Week 2 (August 31 – September 8) – Students were required to attend one of the two following co-curricular programs. These programs were provided outside of class and students signed in to indicate their participation. Participation in one of these programs was a new addition to the SLD program requirements and a new required component of the first-year seminar.
    a. Attend a meeting facilitated by their peer mentor in which the mentor discussed challenges the students faced during their first week of

college. The peer mentor also reviewed the involvement guidebook with students and encouraged them to consider how they plan to become involved on campus. An outline of the Peer Meeting is provided in Appendix D.

The involvement guidebook was created based on the work of Peck (2011) around involvement mentors. The guidebook provided a tool that peer mentors could use with new students to consider the possible options for getting involved on campus. A. E. Peck (personal communication, February 20, 2017) provided a template of the guidebook utilized in his study and this template was utilized to create the guidebook at the institution being studied. The outline of content used in the involvement guidebook is provided in Appendix E.

b. Students could also choose to attend the Clubs and Organizations Fair with their peer mentor to establish campus connections and to identify campus groups in which they plan to become involved. The Club and Organizations Fair was part of the control group experience, but during the treatment year the event was moved back one week to accommodate the involvement of the peer mentors. Peer mentors were on hand at this event to encourage the first-year students to consider the options available and to sign-up to receive additional information from at least three groups. Peer mentors provided students with the involvement guidebook (Appendix E) as part of the event and students

had to have their mentor "sign off" on their attendance for the SLD program requirements.

- Week 2 (September 7) – All first-year students took part in a one-hour, in-class session on social-belonging as outlined in the Walton and Cohen (2007, 2011a) and Walton et al. (2017) research. The outline and facilitator guide for this in-class session is available for review in Appendix F. The session began by having peer mentors share some of their successes and challenges associated with transitioning to college. Then, the first-year students read the College Transition Report (Appendix G) which included general survey data and qualitative comments from upper-class students which normalize feelings of not fitting in. The report was created utilizing the guidelines provided in *The Social-Belonging Intervention: A Guide for Use and Customization* by Walton et al. (2017). After reviewing the report, first-year students were directed into small groups with their peer mentors to reflect on their experiences thus far and how they may be able to relate to the quotes and data presented in the survey report. Peer mentors were directed to lead discussion with the first-year students in these small groups.
- Week 3 Out of Class Assignment (September 8 – 13) - Students were given a required, reflective writing assignment (Appendix H), which directed them "to provide examples from their own experiences thus far of how it may be similar or not to those of the upperclassmen" (Walton et al., 2017). The writing reflection activity helped to reinforce the message conveyed in the social belonging intervention (Walton & Cohen, 2007, 2011; Walton et al.,

2017). The writing reflection was required and was reviewed by the faculty instructor. The content of the reflection was not analyzed as part of this study, but could be considered for future research.

- Week 3 Out of Class Assignment (September 8 – 13) - Students were also encouraged to submit an optional video of themselves reading their reflection. Evidence from previous studies suggests that speaking about your experiences reinforces the learning (Walton & Cohen, 2011). In this video project, students were asked to submit a video that would be shared with their peers and potentially with the incoming students the next year. The guidelines for this optional video assignment are available in Appendix I.
- Week 3 (September 11-15) – Peer mentors scheduled an optional meeting with their students and facilitated discussion about how the first-year students are fitting in on campus thus far. Peer mentors provided resources for first-year students during this meeting to further their social integration. The agenda outline for this meeting is available in Appendix J.
- End of Week 3 (September 15) – The Mapworks Transition Survey was distributed to students to complete. Distribution of the Transition survey was facilitated by the Student Success Coordinator at the institution, using the same process as previous years.
- Week 4 (September 22) – Mapworks survey is due to be completed. Students may opt out of taking the Transition survey without penalty. Reminder emails were sent using the same mechanisms as provided in previous years.

The BRI program integrated the components of each of the pre-intervention years to create a value-added intervention. Although not all elements of the BRI program were required, all students received some element of the intervention. Although it was not possible to track participation in individual elements of the program, additional questions were added to the survey instrument for the treatment group to determine their perception of peer mentoring, the amount of contact they had with peer mentors, and their participation in various components of the BRI program. These questions are available in Appendix K. These questions were analyzed to determine the value added to the first-year experience by the BRI program.

Instrument

Data for this study came from an existing institutional resource, the Mapworks program. The Mapworks program is a "research-based, comprehensive student retention and success platform" (Skyfactor, 2016, p. 3). Based on Tinto's (1993) theory of institutional departure and Astin's (1993) theory of involvement, "Mapworks focuses on the early adjustment of first-year students and emphasizes both academic and socio-emotional adjustment" (Skyfactor, 2016, p. 6). The survey results indicate specific areas that a student may need additional focus to be successful. These results are reviewed with students by an academic advisor to provide them with resources on areas flagged by the system as concerns (e.g., study skills, getting engaged, homesickness).

The evaluation instrument built into the Mapworks program, the Transition Survey, is a component of the course curriculum of the first-year seminar. Students are encouraged to complete the survey and meet with their academic advisor to review their results. The students must complete a writing reflection about their meeting with their

academic advisor and their survey results. By building the survey into the course, the institution has had high participation rates in the survey. In 2015, 95% of the first-year students completed the survey. In 2016, 83% of the first-year students completed the survey. In 2017, 82% of the first-year students completed the survey. The Mapworks survey included its own informed consent and students were informed that survey data would be used in research and individual assessment of students. An additional question was added to the survey in 2017 to obtain informed consent for the current study for students participating in the treatment year, 38 students who completed the survey declined to participate in the study, dropping the usable population for 2017 to 72.4%.

The Mapworks Transition Survey has been evaluated through on-going statistical testing of its validity and reliability. The Transition Survey, which is implemented in week three or four of the first semester, "measures the behaviors and expectations of students entering a college or university" (Skyfactor, 2016, p. 9). Skyfactor (2016) has conducted factor analyses on the statistical groupings in the survey (such as social integration and peer connections) and Cronbach's alpha reliability scores indicate there is internal consistency of the scales. M. Venaas (personal communication, April 6, 2017), research manager at Skyfactor, shared that the full data set is tested annually for continual reliability and validity which supports the relationship between the scales and persistence; however, this testing is not conducted within subpopulations such as small, private institutions.

The existing scales of greatest interest in the current study are identified by Skyfactor (2016) as social integration and peer connections. For the purposes of this study and the conceptual framework employed, the questions associated with the

Mapworks social integration scale are better aligned with a construct of belonging. A list of the questions associated with social integration by the Mapworks instrument (Skyfactor, 2016) are identified in Table 5. Mapworks identifies these scales as those associated with social integration as their scales are intended to flag areas of concern with the transition to college. For the current research, the Mapworks scale for social integration is identified by the researcher as sense of belonging. The Mapworks social integration scale has a .901 Cronbach's alpha reliability based on previous Skyfactor (2016) analysis.

Table 5

Mapworks Transition Survey Questions associated with Social Integration/Present Study Scale for Sense of Belonging

Mapworks Social Integration / Present Study Scale for Sense of Belonging	Response Scale
Overall, to what degree do you belong here?	7-point Likert Scale
Overall, to what degree are you fitting in?	7-point Likert Scale
Overall, to what degree are you satisfied with your social life on campus?	7-point Likert Scale

The second scale from the Mapworks Transition survey instrument that is of interest in the current study is peer connections. The peer connections scale has a .927 Cronbach's alpha reliability based on previous Skyfactor (2016) analysis. Table 6 outlines the questions associated with peer connections by the Mapworks instrument (Skyfactor, 2016).

Table 6

Questions from Transition Survey Associated with Peer Connections

Peer Connections Questions	Response Scale
On this campus, to what degree are you connecting with people: who share common interests with you?	7-point Likert Scale
On this campus, to what degree are you connecting with people: who include you in their activities?	7-point Likert Scale
On this campus, to what degree are you connecting with people: you like?	7-point Likert Scale

The Mapworks Transition Survey does not identify involvement in campus organizations as a component of any of its previously tested factors (peer connections or social integration) or as a separate factor. This failure to include involvement as an element of social integration is surprising as Skyfactor (2016) describes Astin's (1993) theory of involvement as an important component of the theoretical foundations of the Mapworks system. In order to include involvement as a separate scale score, the researcher identified the questions from the Mapworks Transition survey that were most aligned to student involvement. Those questions are identified in Table 7.

Table 7

Questions from Transition Survey for Involvement

Questions for Proposed Involvement Construct	Response Scale
During this term, to what degree do you intend to: participate in a student organization?	7-point Likert Scale
During this term, to what degree do you intend to: hold a leadership position in a college/university student organization?	7-point Likert Scale

As the Mapworks survey instrument scales reflect a focus on retention and providing university administrators with areas of concern for students' transition to college, the survey's scales are not best aligned to the current research to determine the association of an intervention with overall social integration. Thus, question one of this research specifically considered whether an integrated factor of peer connections, sense of belonging, and involvement would also be reliable as a construct of social integration. The proposed construct of social integration used by the researcher can be seen in Table 8 below.

Table 8

Questions from Transition Survey for Current Research - Social Integration Proposed Construct

Questions for Proposed Social Integration Construct	**Response Scale**
Overall, to what degree do you belong here?	7-point Likert Scale
Overall, to what degree are you fitting in?	7-point Likert Scale
Overall, to what degree are you satisfied with your social life on campus?	7-point Likert Scale
On this campus, to what degree are you connecting with people: who share common interests with you?	7-point Likert Scale
On this campus, to what degree are you connecting with people: who include you in their activities?	7-point Likert Scale
On this campus, to what degree are you connecting with people: you like?	7-point Likert Scale
During this term, to what degree do you intend to: participate in a student organization?	7-point Likert Scale
During this term, to what degree do you intend to: hold a leadership position in a college/university student organization?	7-point Likert Scale

The factor analysis completed to analyze research question one in this study provided valuable insight into a combined social integration scale based on current research. By considering this new social integration scale as a means of indicating students' connection to the institution through involvement, peer relationships, and belonging, the researcher analyzed how the revised construct was influenced by the BRI program. Furthermore, this review of the social integration construct provided valuable information to contribute to the Mapworks Transition Survey analysis**.**

Research Design

The quasi-experimental research design is useful in educational research as it "produces quantifiable data that help provide an understanding of how program features influence learner outcomes" (Dimsdale & Kutner, 2004, p. 12). This quasi-experimental study explored the association between participation in the Belonging Reinforcement Intervention (BRI) program and social integration (across multiple scale scores) by comparing non-intervention years with the intervention year. Finally, the researcher evaluated the associations of the BRI program on social integration for specific student populations based on background variables of ethnicity, gender, state residency, and first-generation status.

In educational research, randomized design is often difficult to create. In the current study, a randomized design was not possible as the institution mandated that all students benefit from the BRI program, as all students were enrolled in a common first-year seminar. The first-year seminar at the institution is team taught allowing for all sections, regardless of the faculty instructor, to follow a similar schedule and course design. Thus, the institution felt that the common experience created by this design was

an important element to continue. Therefore, a controlled condition was not possible in this setting.

As random assignment was not possible in this educational setting, the cohort design allows the researcher to make causal inferences (Cook & Campbell, 1979). As noted earlier, the cohort populations of the first-year student classes were similar and the response rate to the survey was high in both pre-treatment groups (85-95%). The treatment group in Fall 2017 had a response rate to the survey of 82%, which was consistent with the pre-treatment years. As the BRI program was implemented to all first-year students and the comparison was based on non-treatment cohort years, this study features nonequivalent cohort groups (Cook & Campbell, 1979). Cohort groupings are worthwhile in quasi-experimental designs because

> (1) some cohorts receive a particular treatment while preceding or following cohorts do not,
>
> (2) it is often reasonable to assume that a cohort differs in only minor ways from its contiguous cohorts, and
>
> (3) it is often possible to use archival records for comparing cohorts who have received a treatment with cohorts who were in the same institution before the treatment began (Cook & Campbell, 1979, p. 127).

The cohort design allowed the researcher to compare the various cohort groups to determine if participation in the BRI program is associated with higher social integration.

Variables

The data provided in this study included institutional, aggregate information about students' gender, ethnicity, residential status, first-generation status, and other basic

student information. Additionally, the data included student responses to the Mapworks Transition Survey. The independent variable in this study is the BRI program.

The dependent variables in this study are separated by those identified and previously tested by Mapworks (Skyfactor, 2016) and additional composite scales developed by the researcher. As indicated earlier, the researcher examined both the Skyfactor scale factors and the newly developed scale score. It is important to note that Skyfactor's scale for social integration was also defined as the sense of belonging scale by the researcher. The dependent variables were analyzed separately to investigate any possible associations with the BRI program. The dependent variables considered in this study, as well as their level of measurement and values are outlined in Table 9.

Table 9

Dependent Variables

Dependent Variables	Level of Measurement	Value
Involvement Intention	Ordinal	Values: 1 (not at all) – 7 (extremely)
Mapworks Peer Connections Scale	Ordinal	Values: 1 (not at all) – 7 (extremely)
Mapworks Social Integration Scale / Present Study Sense of Belonging Scale	Ordinal	Values: 1 (not at all) – 7 (extremely)
Present Study Social Integration Scale	Ordinal	Values: 1 (not at all) – 7 (extremely)

Categorical variables were used in this study to analyze the BRI program's association with social integration for specific sub-populations. The categorical variables considered in this study, as well as their level of measurement, definition, and values are outlined in Table 10.

Table 10

Categorical Variables

Variable	Level of Measurement	Definition/Value
Ethnicity	Categorical (nominal)	Values: African American, Hispanic, White, Other
Gender	Categorical (nominal)	Values: Male, Female
State Residency	Categorical (nominal)	Values: in-state/out-of-state
First-Generation Status	Categorical (nominal)	Values: First-Generation/ Non-First-Generation

Study Procedures

Peer Mentor Selection

The peer mentors at the institution were selected in the spring as part of the institution's campus wide leadership selection process. Peer mentors completed an online application and interviewed with the Student Success Coordinator or Director of General Education. Students selected were notified by the Student Success Coordinator. The peer mentor position was a volunteer position and the student leaders did not receive any financial compensation for participation in the BRI program.

Peer Mentor Format and Training

The BRI program was implemented in Fall 2017. The program's design, materials, and outlines are provided in the Appendix. Peer mentors were assigned to a specific section of the first-year seminar course. In Fall 2017, there were 19 sections of the course and 13 mentors, thus six mentors were assigned to cover two sections. An individual section of the course typically had 20-22 first-year students. Peer mentors were assigned to sections based on their availability to meet with the students during the sections set meeting time. Through this group format, the peer mentors met with students in small group settings and during in-class time.

Training was conducted with the peer mentors in two parts. In a required, two-hour training in April, a general overview of the peer mentoring program and its benefits to student success was provided for the peer mentors. Peer mentors also met with their faculty instructors for their assigned course and had a chance to discuss other opportunities for peer mentors to be engaged in the classroom. Furthermore, in the April training, the researcher provided the peer mentors with an outline of the expectations associated with the BRI program including all meetings the peer mentors would facilitate.

The second training was conducted in August prior to the first required element of the BRI program. The fall training included a thorough review of the BRI program implementation guidelines, including all materials outlined in the Appendix. An outline of the fall and spring training program is available in Appendix L. Trainings for the peer mentors were conducted by the researcher and two other university administrators.

Finally, a meeting was held with the faculty instructors of the first-year seminar during the summer prior to the implementation. In this meeting, the researcher and the

Director of General Education at the institution outlined the elements of the BRI program and its incorporation into the course format and structure.

Implementation of Intervention

The BRI program was implemented through the combined efforts of university administrators, faculty instructors, peer mentors, and the researcher. Only the in-class session, which included Walton and Cohen's (2007, 2011a) normalizing fit strategy, was implemented directly by the researcher. Other components of the BRI program were implemented by the peer mentors or were delivered through administrators. Faculty members were responsible for the collection of writing reflections and video submissions as part of the implementation. This combination of sources helped to prevent researcher bias, despite the researcher's direct role in one component of the implementation and the training of the peer mentors.

An important consideration in the delivery of the BRI program is the implementation fidelity. Implementation fidelity focuses on the degree to which an intervention is delivered in the manner that it was intended (Breitenstein et al., 2010). Breitenstein et al. (2010) recommend various methods to evaluate the implementation fidelity of a study including self-report, observation, and video or audio recordings. To ensure implementation fidelity, peer mentors were asked to complete a self-report of how well they followed the implementation guidelines (Appendix M). Observations and recordings were not possible with the peer mentor meetings as it would have negatively impacted the personal connection between the mentor and the students.

Although the researcher was unable to track participation in the individual components of the BRI program, questions were added to the Mapworks Transition

Survey to have students self-identify which program elements they participated in (Appendix K). This was helpful in considering the value-added by various aspects of the programs based on the participation in the programs components.

Procedures for Collecting Data

All IRB approvals were obtained before the BRI program was implemented. De-identified data were obtained from the institution and student information was removed from the data and coded by the institutional contact; therefore, the researcher had no access to student names, identification numbers, or social security numbers. The data provided included all answers to the Mapworks Transition Survey, as well as official college record information (ethnicity, gender, on-campus residency, Pell status, and state residency).

Data Analysis Procedure

To address research question one, this study began by analyzing the interdependence of the variables to be considered for the composite social integration score. Although the Mapworks survey (Skyfactor, 2016) has conducted previous factor analyses on the scales and questions associated with social integration, this study provided additional analyses of those factors. M. Venaas (personal communication, April 6, 2017), research manager at Skyfactor, shared that previous analyses of the instrument have been at the aggregate level, not at an individual institution. Furthermore, the Mapworks survey identifies social integration with questions focused on belonging, fit, and overall satisfaction with social life on campus (Skyfactor, 2016). This definition by Mapworks is used to predict persistence and to highlight possible challenges students may face in their transition to college.

As the current study utilized the Mapworks survey not to demonstrate challenges with the transition to college, but to analyze more specifically how the BRI program was associated with overall social integration, a broader definition of social integration is more appropriate. This broader interpretation of social integration is based on research presented in this study and included factors identified in the conceptual framework for the study – peer connections, involvement, and sense of belonging.

Thus, for research question one the researcher conducted a factor analysis to determine the correlation of the existing Mapworks scale scores and the more comprehensive scale score developed by the researcher to reflect broader social integration. Factor analysis allows the investigator to reduce the number of variables to a more reasonable number by combining those that are highly related (Huck, 2012). An exploratory factor analysis was completed to determine if the areas related to social integration as indicated in the research prove to be sufficiently correlated (Huck, 2012). A Cronbach's alpha reliability score was analyzed for each of the scales to ensure the internal consistency of the scales. Additionally, exploratory statistics were utilized to ensure normality of the data and to check for unusual response patterns.

After establishing the convergent validity of the construct of social integration, the data were analyzed using both descriptive and inferential statistics. Descriptive statistics were used to evaluate basic differences in all scale scores and demographic characteristics of the aggregate population. The Statistical Package for the Social Sciences (SPSS) was utilized to conduct the data analysis (UNC Charlotte, n.d.).

To address research questions two and three, inferential statistics were utilized to evaluate the association between the treatment (BRI program) and social integration

scores across the cohorts. Specifically, an independent samples *t*-test was used to evaluate the relationship between the treatment and the outcome variables. An independent samples *t*-test is appropriate in this study as the researcher is seeking to compare the means of the two separate population groups (treatment group versus control group) to determine if the difference in the means is statistically significant (Huck, 2012). Additionally, the effect sizes of these relationships were analyzed to determine the practical significance of any differences (Huck, 2012).

To evaluate research question three, a factorial analysis of variance was completed to consider any interaction effects between the treatment and sub-population groups (ethnic minorities, gender, first-generation status, and state residency). These sub-populations were analyzed as there were comparable groups and there was evidence in prior research that the treatment may have a special impact on that population. The factorial ANOVA allows the researcher to consider both main effect and interaction effects of the independent variables being evaluated on the dependent variables (Huck, 2012). Additionally, effect sizes for the differences were considered for any statistically significant differences to determine if there was also practical significance. Finally, a post hoc investigation was also completed to determine where the mean differences were significant.

Delimitations and Limitations

The following delimitations may have impacted this study:

- This study is delimited to the environment of a predominantly White, predominantly residential, small, private institution in the southern United States.

- By utilizing nonequivalent cohort groups, it is important to delimit the ability to establish causality. This research sought to show an association between the BRI program and changes in social integration and belonging.
- Ethnicity, state residency, gender, and first-generation status were the only background variables analyzed in this study, thus the findings are delimited to those variables.
- This study was not able to identify if a specific strategy utilized in the BRI program was more effective than other components (normalizing fit strategy versus institutional communication strategy versus peer mentoring) as the institution identified the first-year students as a protected population. As a protected population, the data were only provided in aggregate form therefore individual participation in the various components of the BRI program was not able to be tracked. Thus, the study is delimited to the influence of the BRI program as a whole.
- Data were collected from a single time point for this study, thus the findings are delimited to the time frame specified.
- The survey data in this study were delimited to the Mapworks survey information. This was chosen as the only tool as there had been consistent collection of data during the comparison cohort years.

The following limitations may have impacted this study:

- The influences on a student's institutional commitment and sense of belonging can be quite varied, so this study is limited by the experiences changed by the

researcher; however, other experiences not factored into this study may have impacted a student's sense of social integration.

- This study examined the differences between cohort years when the treatment was provided versus years when it was not. This design was chosen as a more experimental design in which students would be assigned to treatment and control experiences within the same year was not possible. By using the cohort year comparison, it ensured that all students would be given the same opportunities for development and growth.
- The extent to which some of the interventions were implemented was also a limitation of this study design. Student leaders were trained and given instruction on the implementation of the elements of the intervention, but these peer mentors conducted their programs without direct supervision of the researcher. Thus, these findings are limited to the existence of peer mentoring, not necessarily the quality of that contact as student engagement during those interactions was not evaluated.

Summary

The purpose of the current study was to evaluate the association between the Belonging Reinforcement Intervention (BRI) and social integration across multiple scale scores for first-year students at a small, private institution. The quasi-experimental design used to evaluate the relationship between the intervention and social integration was appropriate in this educational setting as it allowed the researcher to compare treatment versus non-treatment years, while not limiting the benefits of the intervention

to select students. This chapter outlines the institutional background, intervention, implementation plans, and data collection procedures.

Utilizing the existing institutional data from the Mapworks survey allowed for a cohort comparison to evaluate the association between the BRI program and social integration, across multiple scales. However, this survey instrument was intended to highlight retention concerns, therefore the existing scales for social integration were not best suited to the current study. The researcher analyzed the existing scale scores from Mapworks and proposed a new scale score for social integration intended to represent a more holistic view of social integration. Additionally, a new scale score for involvement was created by the researcher. Finally, the overall analysis of the data through an independent samples *t*-test allowed the researcher to determine if there was a statistically significant difference between the means of the treatment and control groups. The factorial analysis of variance allowed the researcher to explore all possible effects and interaction effects between the BRI program and the demographic groups on the various scales associated with social integration.

CHAPTER 4: ANALYSIS OF DATA

The purpose of this research was to analyze the influence of an early intervention program focused on sense of belonging on various social integration scales of first-year students at a small, private university. This chapter provides a description of the participants in the study, an overview of the findings, and additional analyses conducted on the implementation. All analyses were conducted using SPSS version 25.

Participant Summary

Descriptive analysis was conducted on the de-identified survey data provided to the researcher from the institution. For the Fall 2017 treatment group, the survey was distributed to all 387 first-year students. Of those students, 69 did not complete the survey (82% initial response rate) and 38 students did not consent to participation in the research and were removed prior to analysis. The remaining survey participants (280) were included in the data sample, which resulted in a 72.4% response rate for Fall 2017. Data was also obtained from Fall 2015 (278 participants) and Fall 2016 (244 participants). The 2017 response rate (72.4%) was lower than the previous two years, 95% in 2015 and 88% in 2016, but well within acceptable survey response participation. The two control years had smaller cohort groups, but overall larger response rates.

The descriptive analysis conducted on the demographic variables indicated that the final participant groups were consistent in size and demographic makeup. Analysis revealed that the breakdown in the populations by gender, first-generation status, and residency of origin between each of the three years of data collection were consistent. A Pearson Chi Square analysis was conducted and there was no statistically significant association between year and these three variables (See Table 11).

Table 11

Participant Demographics by Year

	Fall 2015 Participants	Fall 2016 Participants	Fall 2017 Participants	Pearson's Chi Square (χ^2) Yearly	Pearson's Chi Square (χ^2) Control vs Treatment
Cohort Group	293	278	387		
Participant Group	278	244	280		
Response Rate	95%	88%	72%		
Gender	34.5% male 65.5% female	26.6% male 73.4% female	31.8% male 68.2% female	3.849	.076
Race/ Ethnicity	8.3% Hispanic 14% African American 70.9% Caucasian 6.8% Other	11.9% Hispanic 11.1% African American 63.1% Caucasian 13.9% Other	6.4% Hispanic 12.9% African American 68.9% Caucasian 11.8% Other	13.241*	3.142
First-Generation Status	28.8% First-Generation 64% Not First-Generation 7.2% No Response	25% First-Generation 67.6% Not First-Generation 7.4% No Response	32.5% First-Generation 62.5 Not First-Generation 5% No Response	2.982	2.072
Financial Aid Status	23.5% Pell 76.6% Non-Pell	18.4% Pell 81.6% Non-Pell	29.3% Pell 70.7% Non-Pell	8.492*	6.751*
State Residency	52.9% In-State 47.1% Out-of-State	49.2% In-State 50.8% Out-of-State	52.1% In-State 47.9% Out-of-State	0.783	0.072
Residential vs. Commuter	78.8% Residential 21.2% Commuter	86.1% Residential 13.9% Commuter	95% Residential 5% Commuter	41.481*	25.891*

Note. * indicates the Chi Square analyses that were statistically significant ($p < .05$)

The Pearson Chi Square analysis on the demographic variables of ethnicity and financial aid status were also conducted by year; however, these results showed a statistically significant difference in the participant groups – ethnicity, $\chi^2(6) = 13.241$, $p = .039$ and financial aid status, $\chi^2(2) = 8.492$, $p = .014$. Ethnicity breakdown was distinctive in the 2016 participant group as the number of White students who completed the survey dropped to 63% compared to 70.9% in the 2015 participant group. The most distinctive difference in the participant groups was the percentage of students who were Pell eligible. As indicated in Chapter 3, the number of Pell eligible students in the cohort population increased in 2017. This increase is also indicative in the survey participant response.

Additionally, the number of students living on-campus was evaluated as the on-campus housing rates of first-year students did increase between the cohort years. The number of students living on campus increased to 95% in the survey participant population for 2017 (up from 79% in 2015 and 86% in 2016). Campus residency was not utilized as a factor in this study; however, this does speak to a shift in the population. The demographic descriptive analyses for the survey participants are summarized in Table 11.

An additional analysis was conducted to compare the control group (Fall 2015 and Fall 2016 combined) with the treatment group (Fall 2017). Gender, first-generation status, and state residency continued to indicate no statistically significant difference between the control and treatment groups. This additional analysis was important as the difference in the ethnic breakdown of the control group (Fall 2015 and Fall 2016) and the treatment group (Fall 2017) was no longer significant, $\chi^2(1) = 3.142$, $p = .370$. Thus, by

combining the control group years, this strengthened the comparability of the populations. The Chi Square analyses indicated that there continued to be a statistically significant difference between the control and treatment groups for financial aid status, $\chi^2(1) = 6.751$, $p = .009$, and campus residency, $\chi^2(1) = 25.891$, $p < .001$. These results are also noted in Table 11.

After reviewing the descriptive statistics for the participants, additional analysis was conducted on the specific questions related to this study to determine the appropriateness of combining the two control years. As all survey data was presented as Likert data on a 7-point scale, it was important to determine if there was a statistically significant difference between the means of the two control years. The means of each question analyzed are listed in Table 12. To determine if it was appropriate to combine the data from the two control years, a one-way analysis of variance was conducted on the survey questions related to this study to determine if there was any statistically significant difference. Although the ANOVA showed statistically significant differences between the three years of data, there were no statistically significant differences between the means of the two control years when examining the posthoc analysis. The visual analysis of the means also confirms this consistency between the 2015 and 2016 survey results, as the means for those years are relatively similar. For example, the questions related to peers differ only slightly between the two control group years. This provides further evidence that the two control years can be combined.

Table 12

Mapworks Transition Survey Question Means

Question	2015 (N = 244) *M (SD)*	2016 (N = 207) *M (SD)*	2017 (N= 260) *M (SD)*
Intend to participate in a student org?	4.55 (2.075)	4.76 (1.905)	5.10 (1.867)
Intend to hold a leadership position?	2.96 (1.952)	2.96 (1.935)	3.47 (1.968)
Connecting with peers who share common interests with you?	5.37 (1.551)	5.33 (1.548)	5.55 (1.543)
Connecting with peers who include you in their activities?	5.54 (1.6)	5.44 (1.581)	5.62 (1.62)
Connecting with peers you like?	5.73 (1.45)	5.76 (1.414)	5.92 (1.365)
Do you belong here?	5.58 (1.578)	5.69 (1.387)	5.77 (1.48)
Are you fitting in?	5.53 (1.53)	5.58 (1.394)	5.69 (1.438)
Are you satisfied with your social life on campus?	5.3 (1.755)	5.34 (1.727)	5.43 (1.644)

Procedure Summary and Results

Research Question 1 – What is the reliability and validity of the scale scores in Mapworks used to measure the construct of social integration when used at a small, private institution?

To determine the reliability and validity of the scale sores in Mapworks used to measure the constructs of social integration an exploratory factor analysis was completed. The exploratory factor analysis was used to analyze the usability of those questions that

most closely aligned to the theoretical foundation of social integration presented in this study. As these are ordinal scales, analyzing for common factors may be over-estimated based on the Likert scale format of these questions.

The factor analysis was conducted in two ways. The first analysis was on 22 questions from the survey. These 22 questions represented various scales already developed by Mapworks – including homesickness, involvement, peer relationships, academic integration, social integration/belonging, and overall institutional experience. From these 22 questions, six factors were suggested with eigenvalues over one. The Kaiser-Meyer-Olkin measure of sampling adequacy was .858, which suggested the sample size was adequate. The Bartlett's test of sphericity indicated statistically significant correlations, $\chi^2(231) = 4885.171$, $p < .001$.

From this more comprehensive factor analysis the six factors recommended suggested that the existing Mapworks scales were clearly represented. The first factor in this analysis included the questions related to the Mapworks social integrations scale, the peer connections scale, and questions about institutional experience. The questions related to involvement were also included in the first factor, but did have lower factor loadings. Through a review of the factor matrix, the additional five factors from this analysis were reduced based on the strength of the factor loadings to homesickness, institutional fit, academic integration and involvement, peer connections and involvement, and involvement independently. Furthermore, the pattern matrix analysis supported the relationship of the questions based on the theoretical concepts of social integration suggested in this research, thus justifying the secondary analysis conducted.

Table 13 identifies the questions associated with the theoretical framework of the current study.

Table 13

Questions Associated with Scales based on Theoretical Framework

Questions	Mapworks Social Integration Scale	Mapworks Peer Connections Scale	Involvement Scale	Present Study Social Integration Scale
Intend to participate in a student organization?			X	X
Intend to hold a leadership position?			X	X
Connecting with peers who share common interests with you?		X		X
Connecting with peers who include you in their activities?		X		X
Connecting with peers you like?		X		X
Do you belong here?	X			X
Are you fitting in?	X			X
Are you satisfied with your social life on campus?	X			X

The second factor analysis focused specifically on the eight questions that were considered as part of the theoretical framework of social integration (Table 13). This principal factor analysis using promax rotation was conducted to more directly focus on the scales analyzed in this research, including the Mapworks social integration scale and the present study social integration scale. The Kaiser-Meyer-Olkin measure of sampling

adequacy was .851, which was above the commonly recommended value of .6, indicating the sample size was large enough. The Bartlett's test of sphericity indicated a statistically significant correlation, $\chi^2(28) = 403.908$, $p < .001$.

The scree plot indicated that two factors could be constructed from the eight questions. The eigenvalues from the factorial analysis for these two factors were above one and the first factor accounted for 56.4% of the variance and the second factor accounted for 18.6% of the variance, for a total of 75% of the variance accounted for between these two variables. These two factors indicate that the belonging and peer relationship questions can be combined for a separate scale and support the use of the involvement scale (Table 14).

In relation to the various social integration constructs considered in this study, the rotated factor matrix confirmed the factors related to sense of belonging and peer connections have a primary factor loading above .7 when combined. This supports the existing Mapworks social integration scale, which had primary factor loadings above .7 for the three items, and the Mapworks peer connections scales, which had primary factor loadings above .8 for the three items. The factor matrix also indicated that the intent to participate in student organizations and hold leadership roles were considered part of the factor, but the factor loadings were smaller and thus suppressed in Table 14. Intent to hold leadership positions was the weakest factor loading of .161 and intent to participate in student organizations had a factor loading of .268 as part of the present study's social integration scale. The eight items of the present study's social integration scale had a statistically significant correlation with each other when analyzed on a Pearson's correlation matrix. These eight items were correlated above .1 when combined, with the

strongest separate correlations between the three scales (Mapworks peer connections, Mapworks social integration, and involvement). Although this is a weak overall correlation it was still statistically significant, thus justifying the eight-item scale recommended in this research.

Table 14

Factor Loadings and Commonalities based on Principal Axis Factoring

Suggested Themes	Questions Considered Part of the Theoretical Framework for Present Study's Social Integration Scale	Belonging & Peer Relationship Scale	Involvement Scale
Involvement	Intend to participate in a student organization?		.768
	Intend to hold a leadership position?		.620
Peer Connections	Connecting with peers who share common interests with you?	.836	
	Connecting with peers who include you in their activities?	.850	
	Connecting with peers you like?	.846	
Mapworks Social Integration/ Belonging	Do you belong here?	.707	
	Are you fitting in?	.874	
	Are you satisfied with your social life on campus?	.846	

Note. Factor loadings < .3 are suppressed.

The second factor revealed in the factor matrix indicated a strong factor loading between the involvement scale questions, but no other questions. These two questions had primary factor loadings above .6. This was supported in the correlation matrix which

indicated the involvement scale questions had a statistically significant correlation, r = .536, $p < .001$.

Through the exploratory factor analysis, the eight questions analyzed revealed consistency across the Mapworks Social Integration Scale and the Mapworks Peer Connections Scale; however, more importantly the analysis showed that these two scales have both a high enough factor loading and are correlated strongly enough with each other to be combined. This new scale, the Belonging & Peer Relationships Scale, can be seen in the structure of the factor analysis in Table 14.

Additionally, the Cronbach's Alpha was analyzed for each of the scales to determine the internal reliability (Table 15). The Cronbach's Alpha of the Mapworks peer connections scale was .925 and the Mapworks social integration scale was .905, which indicates both Mapworks scales were reliable from this sample at a small, private institution. For the purposes of the current study, the involvement scale was added to the considerations. The Cronbach's Alpha of the involvement scale was .698; which is relatively high considering the scale only consisted of two items. The present study's social integration scale had a Cronbach's Alpha of .845, which also indicates internal reliability. Finally, based on the factor analyses, the additional scale which combined peer relationships and belonging questions had a Cronbach's Alpha of .928 confirming its internal reliability.

The factor analyses were conducted on all three years of data combined as the questions were the same, but yearly analyses were also conducted for comparison. The analysis of the data for each year independently showed consistency with the structure of the factor matrix and correlations. The factor matrix spread was consistent between years

with the questions related to belonging and peer connections showing high factor loadings.

Table 15

Descriptive Statistics for Various Social Integration Scales (N = 802)

Scale	No. of items	Mean (SD)	Cronbach's α
Mapworks Peer Relationships	3	5.558 (1.431)	.925
Mapworks Social Integration/Belonging	3	5.513 (1.448)	.905
Involvement Scale	2	3.977 (1.724)	.698
Present Study Social Integration	8	5.143 (1.163)	.845
Belonging & Peer Relationships Scale	6	5.528 (1.345)	.928

Research Question 2 - Do students who participate in the BRI have higher social integration (across multiple scale scores) than those who did not, as measured by the Mapworks survey?

To address the second research question, do students who participate in the BRI have higher social integration (across multiple scale scores) than those who did not as measured by the Mapworks survey, an independent samples *t*-test was conducted to determine the variance between the means of the treatment group (2017) and the control groups (2015 and 2016). Table 16 summarizes the results of the independent *t*-test results related to Question 2.

Table 16

Independent Samples t-Test for Treatment

Scale	Group	*N*	*M*	*SD*	*t*	*p*	Hedges unbiased *d*
Mapworks Peer Connections	Treatment	280	5.693	1.398	1.987	.047	.149
	Control	490	5.481	1.445			
Mapworks Social Integration	Treatment	280	5.614	1.399	1.466	.143	.110
	Control	487	5.455	1.474			
Involvement	Treatment	278	4.252	1.654	3.356	.001	.252
	Control	489	3.82	1.745			
Present Study Social Integration Scale	Treatment	280	5.304	1.13	2.913	.004	.218
	Control	495	5.052	1.173			
Belonging & Peer Connections Scale	Treatment	280	5.654	1.3	1.961	.05	.147
	Control	493	5.457	1.365			

There are some limitations related to normality as the Likert scale data shows a skewed box plot. As Levene's test of Equality of Variance is greater than .05 for all of the variables, equal variance is assumed. Independence of observations is met as each dependent variable is being analyzed separately and the answers to those questions are independent. The sample is random as it represents a large percentage of the cohort and population variance is not known.

An independent-samples *t*-test was conducted to compare the Mapworks peer connections scale between the treatment and control groups. There was a statistically significant difference in the scores between the treatment group ($M = 5.693$, $SD = 1.398$) and the control group ($M = 5.481$, $SD = 1.445$); $t(768) = 1.987$, $p = .047$. The Hedges

unbiased pooled effect size for the Mapworks factor for peer connections was .149 showing a small effect. The analysis indicated a *p* value of .047 which is less than the alpha of .05, thus we reject the null hypothesis, and conclude that there is sufficient evidence to support the claim that the Mapworks peer connections score is associated with the treatment. Thus, the treatment had a small effect on the peer connections scale.

Next, an independent-samples *t*-test was conducted to compare the Mapworks social integration scale between the treatment and control groups. There was not a statistically significant difference in the scores between the treatment group ($M = 5.614$, $SD = 1.399$) and the control group ($M = 5.455$, $SD = 1.474$); $t(765) = 1.466$, $p = .143$. The evaluation of the equality of means test showed a *p* value of .143 which is greater than the alpha of .05, thus we fail to reject Ho, and conclude that there is not sufficient evidence to support the claim that the Mapworks Social Integration score is associated with the treatment. These results indicate the treatment did not have a statistically significant impact on the Mapworks social integration score.

Next the involvement score was analyzed. There was a statistically significant difference in the involvement scores between the treatment group ($M = 4.252$, $SD = 1.654$) and the control group ($M = 3.82$, $SD = 1.745$); $t(765) = 3.356$, $p = .001$. The involvement score showed a .252 effect size when analyzed via Hedges unbiased pooled effect size, which is still considered a small effect. The *p* value of .001 is less than the alpha of .05, thus we reject the null hypothesis, and conclude that there is sufficient evidence to support the claim that the present study's involvement score is associated with the treatment. The treatment had a small effect on the involvement scale.

Finally, the present study's social integration composite score was analyzed with an independent samples *t*-test to determine a difference in the means between the treatment and control groups. There was a statistically significant difference in the present study's social integration score between the treatment group (M = 5.304, SD = 1.13) and the control group (M = 5.05, SD = 1.173); $t(773) = 2.913$, $p = .004$. The Hedges unbiased effect size of the present study's social integration score was .218, which is a small effect. Since this p value of .004 is less than the alpha of .05, we reject the null hypothesis, and conclude that there is sufficient evidence to support the claim that the present study social integration composite score is associated with the treatment. Thus, there was a small effect on the present study's social integration scale for the treatment group.

Based on the factor analysis, an additional scale was recommended that was added to the study where belonging and peer connections were combined. This new scale was analyzed using an independent samples *t*-test to determine if there was a difference between the treatment and control groups. There was a statistically significant difference in the belonging and peer connections score between the treatment group (M = 5.654, SD = 1.3) and the control group (M = 5.457, SD = 1.365); $t(771) = 1.961$, $p = .05$. However, the Hedges unbiased effect size of this difference was low (.147). Thus, although the difference was statistically significant there was a small effect on the treatment group on the scale which combined belonging and peer connections.

These *t*-tests indicate sufficient evidence of statistically significant differences between the treatment group and the control group scores related to peer connections, involvement, the present study's social integration score, and the belonging and peer

connections scale. The results also suggest that there is not a statistically significant difference between the treatment and control groups related to the Mapworks social integration scale.

Research Question 3 – Is there a differential treatment effect on students from various demographic background characteristics?

To determine if there was a between-subject treatment effect based on demographic background variables a factorial analysis of variance (ANOVA) was conducted. The factorial ANOVA allows the researcher to compare the interaction effects of two independent variables, in this case the treatment and various demographic variables, with the dependent variables, in this case the various social integration scores.

Ethnicity. A first set of factorial ANOVA tests were used to determine if ethnicity had an interaction effect with the treatment against the various social integration scales. The institutional ethnicity scales were combined to create a simplified grouping of White, African American, Hispanic, and Other Races. In analyzing the effect size for these factorial ANOVA tests, the partial eta squared was reviewed to analyze the variance between the different effects.

The first scale score analyzed was peer connections. The Levene's test of equality was statistically significant ($p < .001$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. The main effect of ethnicity was statistically significant on peer connections, $F(3,762) = 8.52$, $p < .001$, $\eta^2 = .032$, with the posthoc Tukey analysis indicating statistically significant difference between White students ($M = 5.709$, $SD = 1.308$) with both Black students ($M = 5.084$, $SD = 1.721$) and Hispanic students ($M = 5.002$, $SD = 1.726$). The post hoc Tukey

analysis also revealed a statistically significant difference between Hispanic students and students in the other category (M = 5.629, SD = 1.3). The main effect of treatment on peer connections was not statistically significant, $F(1, 762) = 1.69$, $p = .194$. The interaction effect of treatment and ethnicity were also not statistically significant, $F(3, 762) = .899$, $p = .441$.

The next analysis considered the influence of ethnicity and treatment on the Mapworks social integration scale. The Levene's test of equality was statistically significant ($p = .016$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. The main effect of ethnicity was statistically significant on the Mapworks social integration scale, $F(1, 759) = 5.759$, $p = .001$, $\eta^2 = .022$, with the posthoc Tukey analysis indicating statistically significant differences between White students (M = 5.666, SD 1.351) and both Black students (M = 5.047, SD = 1.64) and Hispanic students (M = 5.105, SD = 1.713). The Hedges unbiased effect size for the difference between White students and Black students indicated a moderate effect (d = -.442). The Hedges unbiased effect size for the difference between White students and Hispanic students was also moderate (d = -.401). The observed power (.950) was also high, supporting the practical significance. The main effect of treatment on the Mapworks social integration score was also statistically significant, $F(1, 759) = 5.446$, $p = .020$, $\eta^2 = .007$, with the posthoc Tukey analysis indicating a statistically significant difference between treatment group (M = 5.614, SD = 1.399) and control (M = 5.455, SD = 1.474). Both the effect size and power of this significance was low. The interaction effect of treatment and ethnicity was not statistically significant, $F(3, 759) = 1.904$, $p = .127$.

A factorial analysis of variance was then completed to consider the influence of ethnicity and treatment on the involvement scale. Levene's test of equality was statistically significant (p = .05) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. The main effect of ethnicity was not statistically significant on the involvement scale $F(3, 759) = .857$, $p = .463$. The main effect of treatment on the involvement scale was statistically significant, $F(1, 759) = 6.298$, $p = .012$, $\eta^2 = .008$, with the posthoc Tukey analysis indicating a statistically significant difference between treatment group ($M = 4.252$, $SD = 1.654$) and control ($M = 3.82$, $SD = 1.745$). The interaction effect of treatment and ethnicity was statistically significant, $F(3, 759) = 2.766$, $p = .041$, $\eta^2 = .011$. In analyzing the Tukey posthoc comparison, these interaction effects were statistically significant between the control Hispanic group ($M = 3.087$, $SD = 1.852$) and the treatment groups for three different populations - White students ($M = 4.32$, $SD = 1.593$), Black students ($M = 4.278$, $SD = 1.705$), and the Hispanic students ($M = 4.529$, $SD = 1.494$). Table 17 demonstrates the means and effect sizes for the interaction effects. Thus, the differential treatment effect was most impactful for Hispanic students. The partial eta squared effect size and observed power of these significance tests were low, indicating that although there is statistical significance there may not be strong practical significance. The Hedges unbiased effect size was analyzed to determine the effect size for the Hispanic population treatment versus control groups. This analysis showed the effect size related to the outcome was high ($d = .805$).

Table 17

Interaction Effect for Treatment x Ethnicity for Involvement Effect

	Control *M(SD)*	Treatment *M(SD)*	Hedges unbiased *d*
White	3.883 (1.642)	4.32 (1.593)	.269
Black/African American	3.968 (1.914)	4.278 (1.705)	.167
Hispanic	3.087 (1.852)	4.529 (1.495)	.805
Other Races	4.026 (2.013)	3.682 (1.96)	-.171

Finally, a factorial ANOVA was conducted on the two independent factors (ethnicity and treatment) on the present study's social integration scale. Levene's test of equality was statistically significant ($p = .043$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. The main effect of ethnicity was statistically significant on the present study's social integration scale, $F(3,767) = 6.833$, $p < .001$, $\eta^2 = .026$, with the posthoc Tukey analysis indicating a statistically significant difference between White students ($M = 5.276$, $SD = 1.084$), Black students ($M = 4.808$, $SD = 1.315$), and Hispanic students ($M = 4.65$, $SD = 1.401$). The effect size was low on this significance; however, the observed power was high at .977. The main effect of treatment on the present study's social integration score was also statistically significant, $F(1, 767) = 7.369$, $p = .007$, $\eta^2 = .01$, with a statistically significant difference between treatment group ($M = 5.304$, $SD = 1.13$) and control ($M = 5.052$, SD = 1.733). Both the effect size and power (.774) of this significance were low. The interaction effect of treatment and ethnicity were not statistically significant, $F(3, 767) = .417$, $p = .741$.

Gender. Next factorial analysis of variance was conducted on the four social integration scale scores and the independent variables of the treatment and gender. The first analysis compared gender and treatment with the Mapworks peer connections scale. Levene's test of equality was statistically significant ($p = .002$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was no statistically significant main effect for gender related to the peer connections scale, $F(1, 766) = .118$, $p = .731$. There was no statistically significant difference between the treatment and peer connections, $F(1, 766) = 1.345$, $p = .247$. Finally, there was also no statistically significant interaction effect of treatment and gender, $F(1, 766) = 3.359$, $p = .067$.

A factorial ANOVA was also conducted on the independent variables of treatment and gender on the Mapworks social integration scale. Levene's test of equality was statistically significant ($p = .007$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was no statistically significant difference between men and women and the Mapworks social integration scale, $F(1, 763) = 1.559$, $p = .212$. There was no statistically significant difference between the treatment and the Mapworks social integration scale, $F(1, 763) = .583$, $p = .446$. Finally, there was also no statistically significant interaction effect of treatment and gender on the Mapworks social integration scale, $F(1, 763) = 2.419$, $p = .120$.

Next the factorial ANOVA was conducted on the involvement scale. Levene's test of equality was statistically significant ($p = .002$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was a statistically significant difference between males and females and the involvement scale,

$F(1, 763) = 22.242$, $p < .001$, $\eta^2 = .028$, indicating a main effect between men (M = 3.569, SD = 1.845) and women (M = 4.16, SD = 1.636). This main effect had a low effect size, but an acceptable observed power of .997. There was also a statistically significant difference between the main effect of treatment and the involvement scale, $F(1, 763) = 7.488$, $p = .006$, $\eta^2 = .01$, with a statistically significant difference between treatment group (M = 4.252, SD = 1.654) and control (M = 3.82, SD = 1.745). Both the effect size and the observed power of .780 were lower thus this effect has low practical significance. Finally, there was no statistically significant interaction effect of treatment and gender, $F(1, 763) = 1.730$, $p = .189$.

A final factorial ANOVA was conducted on the present study's social integration scale and the influence of the independent variables of treatment and gender. Levene's test of equality was statistically significant ($p = .001$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was no statistically significant difference between men and women related to the current study's social integration scale, $F(1, 771) = 1.759$, $p = .185$. There was no statistically significant difference between the treatment and the current study's social integration scale, $F(1, 771) = 3.809$, $p = .051$. There was a statistically significant interaction effect of treatment and gender related to the present study's social integration scale, $F(1, 771) = 4.226$, $p = .04$, $\eta^2 = .005$. This interaction effect was statistically significant for women only, between the control group (M = 5.031, SD = 1.245) and treatment group (M = 5.40, SD = 1.1). The partial eta squared effect size and observed power (.537) of the interaction effect were both low, thus there is low practical significance to this relationship. The Hedges unbiased effect size was also analyzed between the females in the control group

verses those in the treatment group and was found to be a small effect size (d = .312). This interaction effect is outlined in Table 18.

Table 18

Interaction Effect for Treatment x Gender for Present Study Social Integration Scale

	Control *M(SD)*	Treatment *M(SD)*	Hedges unbiased *d*
Female	5.031 (1.245)	5.404 (1.1)	.312
Male	5.099 (.996)	5.089 (1.167)	-.009

State Residency. The next phase of factorial analysis of variances were conducted to analyze the influence of state residency (in-state students verses out-of-state students), treatment, and possible interaction effects on the various measures of social integration. The concept of state residency was analyzed as the groups were almost equal in size and it could be theorized that how far a student goes away to college could influence their overall social integration.

The first analysis compared state residency and treatment with the Mapworks peer connections scale. Levene's test of equality was statistically significant (p = .001) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was a statistically significant main effect for state residency and the peer connections scale, $F(1, 766) = 11.126$, $p = .001$, $\eta^2 = .014$, indicating a statistically significant effect between in-state students (M = 5.376, SD = 1.554) and out-of-state students (M = 5.752, SD = 1.259). There was also a statistically significant main effect for treatment and peer connections, $F(1, 766) = 4.018$, $p = .045$, $\eta^2 = .005$, indicating a

statistically significant difference between treatment group (M = 5.693, SD = 1.398) and control group (M = 5.481, SD = 1.445). Finally, there was no statistically significant interaction effect of treatment and state residency on peer connections, $F(1, 766) = .655$, $p = .419$.

Next, a factorial ANOVA was used to compare state residency and treatment with the Mapworks social integration scale. Levene's test of equality was not statistically significant ($p = .105$) for this analysis, thus equal variance is assumed. There was a statistically significant main effect for state residency and the Mapworks social integration scale, $F(1, 763) = 4.819$, $p = .028$, $\eta^2 = .006$, indicating a statistically significant difference between in-state students (M = 5.393, SD = 1.521) and out-of-state students (M = 5.64, SD = 1.358). There was not a statistically significant difference between the treatment and the Mapworks social integration scale, $F(1, 763) = 2.201$, $p = .138$. Finally, there was also no statistically significant interaction effect of treatment and state residency for the Mapworks social integration scale, $F(1, 763) = .150$, $p = .699$.

Next, the factorial ANOVA compared state residency and treatment with the involvement scale to determine if there was a possible interaction effect or main effect. Levene's test of equality was not statistically significant ($p = .552$) for this analysis, thus equal variance is assumed and the condition of homogeneity is met. There was no statistically significant difference between in-state and out-of-state students and involvement, $F(1, 763) = 1.878$, $p = .171$. There was a statistically significant difference between the treatment and involvement, $F(1, 763) = 11.041$ $p = .001$, $\eta^2 = .014$, with a statistically significant main effect between treatment group (M = 4.252, SD = 1.654) and control group (M = 3.82, SD = 1.745). Finally, there was not a statistically significant

interaction effect of treatment and state residency on the involvement scale, $F(1, 763) = .704$, $p = .402$.

Finally, the current study's social integration scale was evaluated to determine if there was a main effect or interaction effect with the independent variables of state residency and treatment. Levene's test of equality was statistically significant ($p = .009$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was a statistically significant difference between in-state ($M = 5.044$, $SD = 1.264$) and out-of-state students ($M = 5.248$, $SD = 1.037$) and the current study's social integration scale, $F(1, 771) = 4.491$, $p = .034$, $\eta^2 = .006$. There was also a statistically significant difference between the treatment and the current study's social integration scale, $F(1, 771) = 8.433$, $p = .004$, $\eta^2 = .011$, with a statistically significant treatment effect between treatment group ($M = 5.304$, $SD = 1.13$) and control group ($M = 5.052$, $SD = 1.173$). Finally, there was not a statistically significant interaction effect of treatment and state residency for the present study's social integration scale, $F(1, 771) = .962$, $p = .327$.

First Generation. The final set of factorial analysis of variance tests were conducted on the four social integration scale scores and the independent variables of treatment and first-generation status. The first analysis compared first-generation status and treatment with the Mapworks peer connections scale. Levene's test of equality was not significant ($p = .083$) for this analysis, thus equal variance can be assumed. There was no significant difference between first-generation status and peer connections, $F(1, 725) = 2.386$, $p = .123$. There was a statistically significant difference between the treatment and peer connections, $F(1, 725) = 4.836$, $p = .028$, $\eta^2 = .007$; with a statistically

significant difference between the control group (M = 5.481, SD = 1.445) and the treatment group (M = 5.73, SD = 1.397). The effect size was low and the observed power (.593) for this variance was moderate. Finally, there was no statistically significant interaction effect of treatment and first-generation status, $F(1, 725) = 0.000$, $p = .997$.

Next a factorial ANOVA was used to compare first-generation status and treatment with the Mapworks social integration scale. Levene's test of equality was not significant ($p = .163$) for this analysis, thus equal variance is assumed. There was not a statistically significant difference between first-generation status and the Mapworks social integration scale, $F(1, 722) = 2.619$, $p = .106$. There was no statistically significant difference between the treatment and Mapworks social integration scale, $F(1, 722) = 2.348$, $p = .126$. Finally, there was also no statistically significant interaction effect of treatment and gender, $F(1, 722) = .022$, $p = .882$.

A factorial ANOVA was also conducted to compare first-generation status and treatment with the involvement scale to determine if there was a possible interaction effect or main effects. Levene's test of equality was significant ($p = .022$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was a statistically significant difference between first-generation status and involvement, $F(1, 723) = 4.051$, $p = .045$, $\eta^2 = .006$, between first-generation students (M = 3.791, SD = 1.873) and non-first-generation students (M = 4.089, SD = 1.661). There was also a statistically significant difference between the treatment and involvement, $F(1, 723) = 12.684$, $p < .001$, $\eta^2 = .017$, with difference noted between the treatment group (M = 4.269, SD = 1.663) and control group (M = 3.843, SD = 1.754).

Finally, there was no statistically significant interaction effect of treatment and first-generation status with the involvement scale, $F(1, 723) = 1.483$, $p = .224$.

Finally, the current study's social integration scale was evaluated to determine if there was a main effect or interaction effect with the independent variables of first-generation status and treatment. Levene's test of equality was significant ($p = .045$) for this analysis, thus equal variance cannot be assumed and the outcomes of the ANOVA are limited. There was a statistically significant difference between first-generation status and the current study's social integration scale, $F(1, 730) = 5.231$, $p = .022$, $\eta^2 = .007$, with the difference noted between first-generation students ($M = 5.006$, $SD = 1.311$) and non-first-generation students ($M = 5.221$, $SD = 1.098$). The effect size of this variance was low and the observed power (.627) was moderate. There was also a statistically significant difference between the treatment and the current study's social integration scale, $F(1, 730) = 10.154$, $p = .002$, $\eta^2 = .014$, with an interaction effect between treatment group ($M = 5.329$, $SD = 1.14$) and control group ($M = 5.056$, $SD = 1.178$). The effect size of this variance was low, but the observed power (.889) was high. Finally, there was no statistically significant interaction effect of treatment and first-generation status, $F(1, 730) = .303$, $p = .582$.

Summary of Research Question 3. The statistically significant results from the various factorial analysis of variance tests presented in this section to address research question 3 are summarized in Table 19.

Table 19

Statistically Significant Relationships between Social Integration Scales and Treatment x Demographic Variable Factorial Analyses

		Mapworks Peer Connections Scale	*Mapworks Social Integration Scale*	*Involvement Scale*	*Present Study Social Integration Scale*
Ethnicity	Ethnicity Only	**	***		***
	Treatment Only		*	**	**
	Ethnicity x Treatment Interaction			*	
Gender	Gender Only			***	
	Treatment Only			**	
	Gender x Treatment Interaction				*
State Residency	State Residency Only	***	*		*
	Treatment Only	*		***	**
	State Residency x Treatment Interaction				
First-Generation Status	First-Generation Only			*	*
	Treatment Only	*		***	**
	First-Generation x Treatment Interaction				

*statistically significant at p < .05
** statistically significant at p < .01
*** statistically significant at p < .001

Implementation Analysis

To evaluate the implementation process of the intervention, several factors were considered. These included survey responses from the students who received the

treatment and a general survey of the peer mentors used to implement the Belonging Reinforcement Intervention. This section provides more details about these analyses as a component of the implementation fidelity and additional findings related to the intervention impact.

Intervention Participant Evaluation

Additional questions were added to the Mapworks Transition survey in 2017 to evaluate the effectiveness of the peer mentors (see Appendix K). These questions were not asked previously, so comparison data from the control years was not available. The data from these questions were used to analyze the participant's perception of one part of the intervention - the peer mentor components. The two questions added analyzed how the first-year students would evaluate the level of contact with the peer mentor and their overall relationship with the peer mentor.

Peer Mentor Contact. Survey participants in the treatment group were asked to evaluate the frequency of contact with their peer mentor, as this was a component highlighted in the research as integral to peer connections and belonging. The question defined contact as emails, meetings, lunch, or informal contact. For the purposes of this research and for maximum impact of the Belonging Reinforcement Intervention, contact with the peer mentor was expected to be at least once per week (4-5 contact points within the 3-week intervention), which was indicated by 39.9% of the participants. Additionally, 41.4% indicated they had sporadic or in-class only contact with their peer mentor, which would indicate approximately 2-3 contact points within the intervention time frame. Finally, 18.2% of survey participants indicated they had no contact with their peer mentor. Figure 3 indicates the breakdown in peer mentor contact.

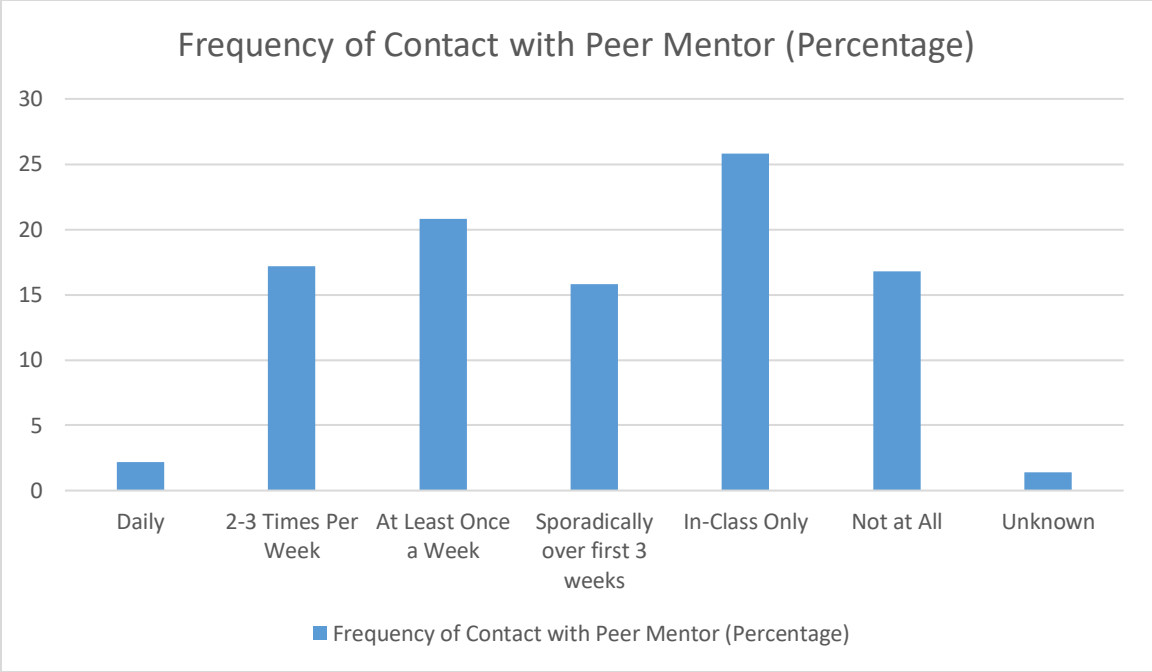

Figure 3. Contact with peer mentor frequency chart (Full Scale).

A one-way analysis of variance was conducted to determine if peer mentor contact influenced the various social integration scores. The first analysis considered all seven scales represented in the frequency of contact with the peer mentor listed in Figure 3; however, as the seven levels of the peer mentor contact resulted in small sub-groups, the scale was reduced to three levels of contact (none, limited, regular). No contact represented the "not at all" and "unknown" responses. Limited contact represented the "in-class only" and "sporadically" responses. Regular contact represented the "daily", "2-3 times a week", and "at least once a week" responses as these constituted the ideal conditions of the treatment. Figure 4 represents the reduced peer mentor contact groups.

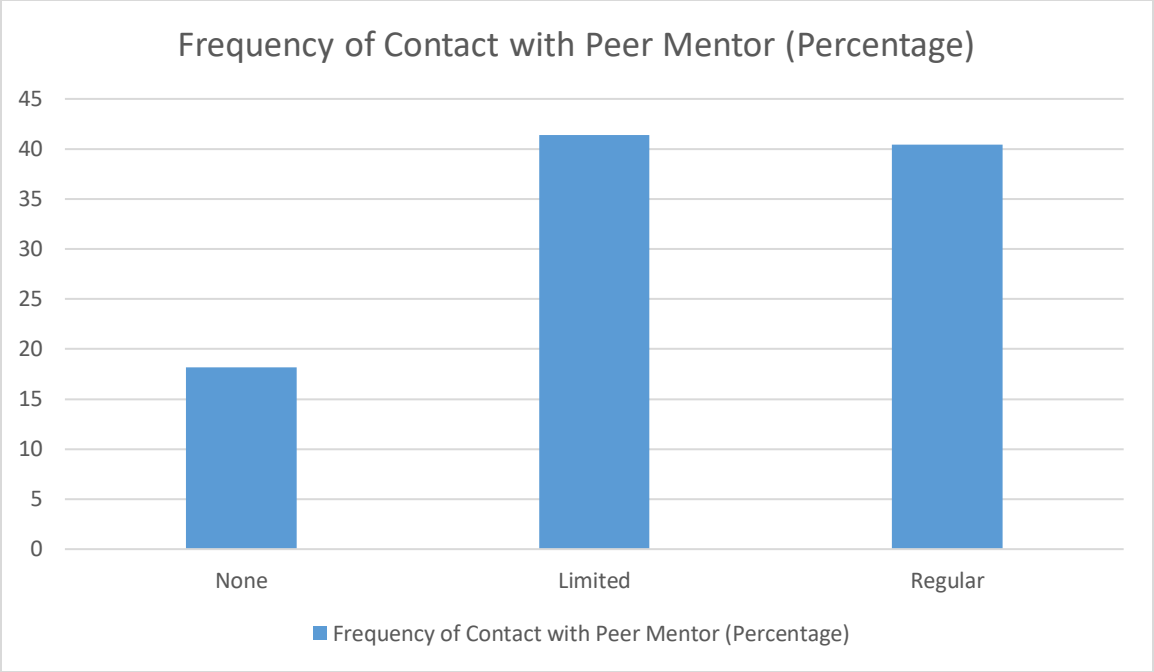

Figure 4. Contact with peer mentor frequency chart (3 Groups).

A one-way ANOVA was conducted on the social integration scale scores and these subgroupings related to level of peer mentor contact. All the scales achieved the homogeneity of variance assumption in this analysis, except for the Mapworks social integration scale which was statistically significant (p = .01) and thus those outcomes have limitations in their interpretation. There were no statistically significant differences between the level of contact and peer connections, $F(2, 277) = 2.928$, $p = .055$, $\eta^2 = .021$, or the Mapworks social integration scale, $F(2, 277) = .877$, $p = .417$, $\eta^2 = .006$. The difference in the involvement scale responses were statistically significant when associated with the peer mentor contact, $F(2, 275) = 8.107$, $p < .001$, $\eta^2 = .056$, with statistically significant difference between the no contact groups (M = 3.42, SD = 1.582) and both the limited contact (M = 4.427, SD = 1.597) and regular contact groups (M = 4.442, SD = 1.644). The partial eta squared effect size of the difference indicates a

moderate effect. Additionally, the present study's social integration scale was also statistically significant for an association with peer mentor contact, $F(2, 277) = 4.659$, $p = .01$, $\eta^2 = .033$, with statistically significant interaction between the no contact group ($M = 4.892$, $SD = 1.191$) and the regular contact group ($M = 5.463$, $SD = 1.056$). The partial eta squared effect size indicates a small effect for this difference.

Peer Mentor Relationship. Additionally, the intervention participants were asked to evaluate their relationship with the peer mentor. The average response to this question was 5.06 ($SD = 1.391$) on a 7-point Likert scale, indicating a slightly satisfied response by survey participants. The relationship with peer mentors was not evaluated in previous years, therefore there is no comparison data for these data; however, this indicates that the relationship was at least satisfactory.

A one-way ANOVA was used to analyze the differences between the means of each of the peer mentor contact groups with their rating of peer mentor relationship. This analysis was used to determine if the level of contact impacted how the student rated their peer mentor relationship. The Levene's test for homogeneity of variance was statistically significant for this analysis ($p < .001$), thus this assumption is not met and the outcomes of this analysis are limited. This one-way ANOVA indicated a statistically significant relationship between the level of peer mentor contact and how the first-year students rated their peer mentor relationship, $F(2, 275) = 22.14$, $p < .001$, $\eta^2 = .139$. The partial eta squared indicates a large effect size difference. Furthermore, the difference in the means was statistically significant between all three groups according to the post hoc Tukey analysis – no contact ($M = 4.12$, $SD = 1.118$), limited contact ($M = 4.97$, $SD = 1.328$), and regular contact ($M = 5.57$, $SD = 1.334$). Thus, how students evaluated peer

mentor contact was associated with how they rated their relationship with their peer mentor.

Finally, analyses were conducted to determine if there was a correlation between the participant's rating of the peer mentor relationship and the various social integration scales. The correlation between peer mentor relationship and the peer connections scale was statistically significant, $r = .186$, $p = .002$. The correlation between peer mentor relationship and the Mapworks social integration scale was also statistically significant, $r = .227$, $p < .001$. The correlation between peer mentor relationship and the involvement scale was statistically significant, $r = .212$, $p < .001$. Finally, the correlation between the current study's social integration scale and the peer mentor relationship scores was also statistically significant, $r = .259$, $p < .001$. All of the Pearson correlation coefficients indicate a small, positive correlation between the students' rating of the peer mentor relationship and the various social integration scores.

To further evaluate the association between the peer mentor relationship rating and the various social integration scales, an additional one-way analysis of variance was used to determine if there were any statistically significant variances between the means. The 7-point Likert scale rating for the peer mentor relationship was reduced to three categories to better highlight any differences in the variance of the means. The findings related to the peer mentor ratings and the various social integration scales are noted in Table 20.

The Levene's test of homogeneity of variance was statistically significant for the peer connections scale ($p < .001$), the Mapworks social integration scale ($p = .002$), and the present study's social integration scale ($p = .001$), thus this assumption is not met and

the outcomes of these analyses are limited. The variance in the means of the peer connections scale were statistically significant, $F(2, 275) = 6.383$, $p = .002$, $\eta^2 = .044$, specifically this difference was statistically significant between those who responded that the relationship with their peer mentor was average ($M = 5.44$, $SD = 1.533$) and those that responded above average ($M = 6.019$, $SD = 1.08$). This indicates a moderate effect size for the association between the peer mentor rating and the peer connections scale.

The variance in the means related to the Mapworks social integration scale was also statistically significant, $F(2, 275) = 7.414$, $p = .001$, $\eta^2 = .051$, specifically this difference was statistically significant between those who responded that the relationship with their peer mentor was above average ($M = 5.936$, $SD = 1.133$) and both the below average group ($M = 4.667$, $SD = 1.841$) and the average group ($M = 5.394$, $SD = 1.503$). This was a moderately high effect size for the difference. Finally, the variance in the means of the present study's social integration scale was also found to be statistically significant, $F(2, 275) = 10.882$, $p < .001$, $\eta^2 = .073$, with statistically significance difference between the above average group ($M = 5.631$, $SD = .874$) and both the below average group ($M = 4.514$, $SD = 1.386$) and the average group ($M = 5.079$, $SD = 1.227$). Thus, the difference between the means was statistically significant and the effect size high for these differences.

Finally, a one-way ANOVA was conducted on the difference in the means related to the involvement scale and the three, peer mentor relationship sub-groups. Levene's test of homogeneity of variance was not statistically significant ($p = .102$) for the involvement scale question when compared with the peer mentor relationship ratings, thus this assumption was met and equal variance is assumed. The variance in the

involvement score in relation to the peer mentor relationship rating was statistically significant, $F(2, 273) = 6.613$, $p = .002$, $\eta^2 = .046$, with the difference again being statistically significant between those that rated their peer mentor as above average ($M = 4.63$, $SD = 1.506$) and both the below average group ($M = 3.167$, $SD = 1.56$) and the average group (M = 4.03, SD = 1.715).

Table 20

Peer Mentor Relationship Rating Statistically Significant Differences by Scale

	Below Average Peer Mentor *M(SD)*	Average Peer Mentor *M(SD)*	Above Average Peer Mentor *M(SD)*	Hedges unbiased *d*
Peer Connections Scale		5.44 (1.533)	6.019 (1.08)	.428
Mapworks Social Integration Scale	4.667 (1.841)		5.936 (1.133)	1.061
		5.394 (1.503)	5.936 (1.133)	.4
Involvement Scale	3.167 (1.56)		4.63 (1.506)	.964
		4.03 (1.716)	4.63 (1.506)	.368
Present Study Social Integration Scale	4.514 (1.386)		5.631 (.874)	1.214
		5.079 (1.227)	5.631 (.874)	.509

Peer Mentor Implementation Fidelity

Separately, the peer mentors were surveyed to determine how they would self-evaluate the implementation of their components of the intervention as those aspects were not monitored by the researcher. All 13 of the peer mentors completed the assessment (Appendix M). The various questions on the assessment were based on a 5-point Likert scale. Additionally, open ended questions were asked to get general feedback from the peer mentors related to their experience and to obtain suggestions for improvement. Table 21 provides the means of the key survey responses related to peer mentor implementation components.

Table 21

Peer Mentor Evaluation (Based on a 5-point Likert Scale)

Program Component	Evaluation Score *M* (*SD*)
Welcome Weekend Meeting with Peer Mentor	4.38 (.65)
SLD Program: Peer Mentor Meeting	3.92 (.86)
Social Belonging In-Class Program	4.46 (.899)
Week 3 Peer Mentor Meeting	3.15 (1.68)
Overall Assessment of First 3 Weeks	3.92 (.49)

Peer mentors were asked to evaluate their overall training (fall and spring). The average peer mentor rating for their overall training was a 3.92 (*SD* = .95). Furthermore, the peer mentors were asked to evaluate the various contacts they had with their students.

During the first week of the semester, 92% of the peer mentors indicated that they had met with their classes twice and 100% met with their class at least once.

Peer mentors positively evaluated their experiences with students related to the involvement guidebook and encouraging involvement. Mentors evaluated their group meetings with their students during Week 2 as successful (M = 3.92, SD = .86). The peer mentor implementation survey responses indicated that the involvement guidebook was a good tool for helping students consider ways to get involved on campus. Furthermore, peer mentors indicated that most students chose to attend the club and organization fair, versus the group meeting; but that by requiring the program it showed students the importance of involvement. Mentors did note that there was a challenge associated with students finding their mentors at the club and organization fair and recommended that in the future a central location for the mentors be designated.

Additionally, the peer mentors were asked to evaluate the various components of the implementation plan and how closely they felt they followed the implementation guide. Overwhelmingly, the peer mentors indicated that the in-class intervention of the College Transition Report was implemented accurately according to the implementation guide (M = 4.46, SD = .899). Additionally, 92% of the peer mentors indicated that they felt the College Transition Report was a good tool to reinforce the idea that transition takes time.

Summary

This chapter presented the results of this study which sought to evaluate the influence of the Belonging Reinforcement Intervention on social integration at a small, private institution. The study included two years of data from Fall 2015 and Fall 2016 (N

= 522), which represented the control group. The study also included the treatment group, which included the students who agreed to participate in the research and who were provided the interventions in Fall 2017 (N = 280). Descriptive statistics were used to analyze the group demographic breakdown and the groups were found to be similar.

The data were analyzed to answer the three research questions in this study. An exploratory factor analysis was conducted to determine the reliability of the scales used in the study. The results of the factor analysis supported the use of the four scales presented in this study – the Mapworks peer connections scale, the Mapworks social integration scale, the involvement scale, and the present study's social integration scale. Additionally, a fifth scale was recommended in the factor analysis that combined the Mapworks peer connections scale and social integration scales.

To address the second research question, an independent samples *t*-test was conducted to determine if the Belonging Reinforcement Intervention (treatment) influenced the social integration of students on the various scales. This t-test results indicated a statistically significant relationship between the treatment and control group for all social integration scales, except the Mapworks social integration scale.

Finally, to address the third research question, 16 separate factorial analysis of variance tests were conducted to determine if there was a differential treatment effect in response to the social integration scales when controlled for demographic variables of ethnicity, gender, state residency, and first-generation status. These analyses indicated that although there were main effect differences on various scales of social integration related to the demographic variables or the treatment group, there were only statistically significant interaction effects for ethnicity and involvement ($p = .041$) related to Hispanic

students, as well as gender and the new social integration scale (p = .04) for female students.

Additional analyses were also presented in Chapter 4 to demonstrate the effectiveness of the intervention and the implementation fidelity. These analyses indicated some influence on the level of peer mentor contact and the relationship of the peer mentor, with the various social integration scales. Data was also provided related to the implementation of the peer mentor components of the intervention, indicating that the implementation guide was followed well by the student mentors.

CHAPTER 5: DISCUSSION, CONCLUSIONS, & RECOMMENDATIONS

This chapter provides a discussion of the findings from the study. The purpose of this study was to evaluate the influence of the Belonging Reinforcement Intervention on social integration of first-year students at a small, private institution. This quasi-experimental study compared treatment and control group cohort populations to determine the influence of the treatment.

Chapter 5 begins with a discussion of the findings related to the various research questions, along with the researcher's conclusions related to the findings and comparisons to existing literature. Next, a discussion of the intervention and findings related to the implementation of the Belonging Reinforcement Intervention is provided. Finally, this chapter provides implications for future research and recommendations related to first-year student social integration programs and practice.

Discussion and Conclusions

Research Questions

This section reviews the findings as related to the three research questions in this study and provides discussion of the possible linkages to the existing literature related to social integration, peer connections, involvement, and belonging. It is important to note that these findings are limited to students at a small, private institution. The three research questions analyzed are listed below.

1. What is the reliability and validity of the scale scores in Mapworks used to measure the construct of social integration when used at a small, private institution?

2. Do students who participate in the Belonging Reinforcement Intervention (BRI) have higher social integration (across multiple scale scores) than those who did not as measured by the Mapworks survey?
3. Is there a differential treatment effect on students from various demographic backgrounds (gender, ethnicity, state residency, and first-generation status)?

The findings from research question one supported the use of the Mapworks social integration scales at a small, private institution. The Mapworks scales (both social integration and peer connections) were found to have high correlations and high factor loadings as part of the exploratory factor analysis. The correlations of these scales were consistent with the previous testing completed by Skyfactor (2016). Content validity was assessed for the questions and was deemed appropriate based on research and existing studies. Thus, the Mapworks scales were reliable and valid at a small, private institution.

Interestingly, the two Mapworks factors (peer connections and social integration) were also found to have high correlation and high factor loadings with each other. This suggests that these separate scales could be combined to create a more holistic view of social integration within Skyfactor's (2016) existing framework. For the purposes of the current study, these two areas were combined and considered in research question one and two as the belonging and peer connections scale.

The findings related to the reliability and validity of the involvement scale were also important in consideration of the current study's combined scale. The two items used to assess involvement were highly correlated and had high factor loadings justifying the reliability of this scale, despite the limited number of questions. The content validity of these questions was appropriate for the research being conducted; however, the

involvement related questions did focus solely on intent to become involved in clubs or organizations and to take leadership, which could be a limiting perspective of involvement. Astin (1993) suggested that involvement should focus on both the quantity and quality of the involvement. Further research regarding the assessment of involvement may provide a stronger scale; however, for the timing of the current study intent is the best measure.

Finally, the conceptual framework recommended in the current study integrated previous theoretical frameworks. Tinto's (1993) theory of institutional departure suggested that extracurricular activities and peer group interactions made up social integration. The importance of involvement/extracurricular activities was also emphasized in Astin's (1993) theory of student involvement. The current study integrated these concepts along with Strayhorn's (2012a) model of students' sense of belonging that emphasized the importance of fit and feeling that one mattered as part of a community. The current research sought to evaluate the appropriateness of a scale that combined these three components of social integration - peer connections, social integration/sense of belonging, and involvement – into the present study's social integration scale. The content validity of this scale was supported through prior research and various previous surveys that have been conducted around the three separate concepts. The findings related to the present study's social integration scale suggested that the eight items included in the scale were highly correlated. The factor loadings for the involvement scale questions were low when compared to those for the Mapworks peer connections scale and the Mapworks social integration/sense of belonging scale;

however, internal reliability was strong. Thus, the current study's social integration scale is appropriate for use at this small, private institution.

The findings from research question two indicate that students who participated in the BRI program showed statistically significant increases in the assessments related to involvement, peer connections, and the current study's social integration scale. As the effect size of all the mean differences were low, the practical significance is limited. These findings suggest that the BRI program was beneficial toward the development of social integration for first-year students.

The association between the BRI program implementation and involvement was statistically significant and reflects elements of the BRI which may have been more influential. Within the intervention, the involvement guide was a new addition to the institution and the peer mentors indicated it was a good tool to facilitate the conversation of ways to get involved. These findings support the benefits of peer involvement mentors as found in Peck's (2011) research. Furthermore, the use of Involvement Guidebook as part of the BRI program, which was recommended in Peck's (2011) study, may have been a key component of the statistically significant improvement in the involvement and peer connections scales. Although Peck's (2011) research focused on retention, first-year students in Peck's study did indicate they were more aware of opportunities to get involved. The current research would support this finding by Peck (2011) as increases in intent to get involved were associated with the BRI program.

Additionally, to accommodate the peer mentor contact at the club and organization fair, the fair was moved back one week in the semester compared to the control years. In considering this change in timing, it is possible that having the

additional week allowed students more time to reflect on their potential involvements. This suggests that although the first three weeks of the semester are influential, students may also need more time to get their bearings before being "thrust" into campus involvements. Furthermore, these findings mirror prior research which suggests that social adjustment within the first few weeks of college are a "critical factor in the early part of a student's college experience" (Woosley, 2003, p. 4; Tinto, 1993). Not only are the first few weeks critical, the present study suggests that institutions must be mindful to provide students time to establish themselves first. The findings related to the increases in the involvement scale suggest that the change in the timing of the involvement fair and reinforcement of involvement by peer mentors helped to reinforce involvement intention of first-year students.

Furthermore, the findings suggest that the emphasis of the intervention on peer mentoring in a group format likely had a positive impact on peer connections. The emphasis of the group format is important as the opportunities to meet with their peer mentor, along with other students from their class, may have had a positive impact on their overall connection with other peers. This finding supports prior research which indicated that peer mentoring in a group format can help to reinforce peer connections (Colvin & Ashman, 2010; Crisp, 2009; Ender & Newton, 2000; Folger et al., 2004; Kezar, 2006). Colvin and Ashman (2010) specifically found that peer mentoring programs provided in group settings reinforced friendship development; which was supported in the current study's statistically significant increases in peer connections.

An interesting finding related to research question two was that the Mapworks social integration scale, which was considered in the current study as the sense of

belonging scale, was not found to be statistically significantly different between the control and treatment years. Although the components of the BRI program were implemented holistically, the various elements were added in a hope to influence specific components of social integration recommended in the current study's conceptual framework. Given the focus on belonging and fit in the intervention this was surprising and suggests that the in-class session based on *The Social-Belonging Intervention: A Guide for Use and Customization* by Walton et al. (2017) was not a strong component of the BRI program. It is important to note that most of the prior research related to the social belonging intervention focused on students later in their first year of college (spring semester), thus the current findings may indicate that the impact of this intervention is more substantial later in the first year of college (Walton & Cohen, 2011a, 2011b; Walton et al., 2017). The lack of change in sense of belonging may also be associated with the message that was delivered as part of the in-class social belonging intervention. The social belonging intervention focused on normalizing the idea that students should feel like they fit in immediately, therefore the timing of the survey only two weeks after the in-class session would likely not reflect a change in belonging yet. The premise behind normalizing that belonging takes time would suggest that it would take time for students' to then reflect a greater sense of belonging.

Furthermore, it suggests that the components of the BRI program that were most effective were those that focused on peer connections and involvement. Particularly, involvement showed the highest statistically significant difference between the control group and treatment group. This further provides support that a focus on involvement

can help support a student's overall social integration and peer connections, supporting previous research by Astin (1993) and Peck (2011).

Finally, the treatment group did show a statistically significant increase in their overall social integration using the scale presented in this study. This provides sufficient evidence that the BRI program, as a holistic intervention, is associated with social integration when considering peer connections, involvement, and sense of belonging. The effects of the BRI program are primarily driven by the peer connections and involvement components, but as belonging was part of the present study's scale it does suggest that it was a contributing factor. Furthermore, this supports the conceptual framework presented in this study which aligns interventions connected to peer connections, involvement, and belonging as likely to influence overall social integration using the current study's scale.

The association of the BRI program with changes in peer connections, involvement, and the current study's social integration scale also supports prior research that recommends institutional intervention to influence student experience (Kuh et al., 2006; Kuh et al., 2010; Tinto, 2006; Wolf-Wendel, et al., 2009). Tinto (2006) recommended that institutions commit resources toward addressing student persistence through purposeful activities and programs. The BRI program had a positive influence on social integration, which hopefully will result in a positive influence on student persistence.

The findings from research question three indicate that there were statistically significant interaction effects between race and treatment for involvement and for gender and treatment for the present study's social integration scale. No interaction effects were

found for state residency or first-generation status; however, there were main effect differences within each sub-population.

Prior research had focused on the influence of the College Transition Report and interventions to normalize feelings of fit on African American students (Walton & Cohen, 2011a, 2011b); however, the current study did not show an interaction effect to support the findings of Walton and Cohen (2011a, 2011b) related to African American students. This finding relates to the previous findings associated with research question two and the lack of overall influence of the BRI program on sense of belonging. It further suggests that the social belonging intervention as recommended by Walton and Cohen (2011a, 2011b) may not have had similar impacts on African American students when the intervention was delivered in week two of the first semester (as was done in the current study), verses delivering the intervention during the second semester (as was part of the prior research).

An interaction effect for race and treatment was statistically significant for students' intent to be involved, specifically for Hispanic students at this small, private institution. Hurtado and Carter (1997) suggested that belonging was important to Latino students and was reinforced when those students became engaged in social-community organizations. Strayhorn (2012a) also indicated that cultural involvements were pivotal for ethnic minority populations in developing their overall social integration. The findings in the present study support this prior research related to Hispanic students as it indicates the intervention likely had an influence on encouraging involvement for this population. The benefit of the BRI program on Hispanic student involvement may be related to the support provided by the peer mentors to get involved. However, as the

Mapworks survey evaluated the intent to be involved and not the actual quality or quantity of involvement, as recommended by Astin (1993), nor does the survey evaluate the type of involvement to determine if cultural organizations were a specific focus for the Hispanic students, further research is necessary to understand the influence of the BRI on this population's campus engagement.

Moreover, the benefit of the BRI program on Hispanic student involvement may be related to the increase in the Hispanic student population on the campus. The increase was gradual and not statistically significant between the control and treatment years; however, the shift in population may have led to more encouragement by Hispanic peers outside of the BRI program to become involved. This mirrors Strayhorn's (2012a) suggestion that Hispanic students utilize social organizations to help support their sense of belonging and social connections.

Furthermore, the findings related to race indicated that there were main effect differences for racial groups for all questions, except involvement. This difference would be expected at a small, private institution that is predominately White as minority populations would likely consider peer connections and social integration differently than their White peers. This also provides further support for the interaction effect related to Hispanic students in the treatment when considering intent to be involved, as there was not a statistically significant racial difference for involvement as a main effect. Thus, statistically significant racial differences at the institution did not exist related to involvement and only when combined with the treatment was the interaction effect for Hispanic students noted.

A statistically significant interaction effect for gender and treatment was also found for the present study's social integration scale. This interaction effect was found to be statistically significant for women only, between the treatment group and those in the control group. Although the effect size was low for this relationship, it is an interesting finding as it suggests that the BRI program was particularly beneficial for female students. Furthermore, as this finding was related to the present study's social integration scale it supports the interventions influence on women across all areas of social integration considered in the present study.

The current study's findings mirror those of Walton et al. (2015) in which a brief social-belonging intervention had positive benefits for women engineering students. Thus, the interaction effect finding related to women and participation in the BRI program supports prior research which indicated that sense of belonging and peer connection interventions can have a significant influence on women (Rayle & Chung, 2007-2008; Gillen-O'Neel & Fuligni, 2013; Walton et al., 2015). Furthermore, Colvin and Ashman (2010) indicated in their qualitative study of peer mentoring influences that "women see relationship benefits and men see academic benefits" from peer mentoring (p. 132). The current findings indicate that women benefited more from the BRI program, which may be associated with their greater appreciation for the benefits of peer mentoring toward peer connections and social integration. Given the inter-relation of the scales, it was interesting to find that there were no main effect differences between men and women for peer connections, social integration, or the present study's social integration scale. There were gender main effect differences for involvement, which was not surprising given that women at the institution being studied were more involved in

clubs and organizations than their male counterparts. Again, the lack of difference in gender as a main effect for the present study's social integration scale, further emphasizes the importance of the interaction effect with the BRI program.

Finally, the main effect findings for state residency and first-generation status were an interesting component of the analysis. State residency was shown to have main effect differences for peer connections, the Mapworks social integration/sense of belonging scale, and the present study's social integration scale. Interestingly, this main effect difference was statistically significantly higher for out-of-state students versus in-state students in all three of these scales. Through the review of research on social integration and belonging, only one study referenced evaluating whether students were in-state residents as a variable of influence (Soria & Stubblefield, 2015). Soria and Stubblefield (2015) found statistically significant associations between state residency and predicting first-year STEM students' sense of belonging; however, this association was not discussed by the authors specifically. Despite Tinto's (1975, 1993, 1997) focus on background variables as an important predictor of student success, none of that work references state residency as one of the variables previously considered. Prior research has not focused on the difference of state residency as it relates to sense of belonging and social integration.

This finding provides sufficient evidence to suggest that out-of-state students place a greater focus on belonging, peer connections, and social integration as first-year students at this small, private institution. This may be related to their lack of local support networks from friends or family within the state; whereas, in-state students may benefit from peer connections and social relationships within the state that lessen their

focus on these areas. Research from Collings et al. (2014) indicated that during the transition to college, students struggle with developing "an equivalent social network and support system similar to that of pre-university friendships" (p. 940). The findings presented in this study suggest that this may be true and result in students from outside the immediate area/state placing greater emphasis on establishing social integration in their new institution.

Furthermore, first-generation status was found to have main effect differences for involvement and the present study's social integration scale; however, no differences were found for this sub-population related to peer connections or the Mapworks social integration scale/sense of belonging. This finding supports previous research that indicates students who are first-generation may struggle with social integration and figuring out how to integrate into campus engagement opportunities (Mehta et al., 2011). Dennis et al. (2005) suggested that peer groups were an important source of support for first-generation students. These findings indicate that at this small, private institution, first-generation students were provided supportive peer connection opportunities, that were no different than non-first-generation students. The findings also indicate that there was no statistically significant difference for first-generation students related to the Mapworks social integration/sense of belonging scale. This is impactful as prior research has suggested that peer connections can help to increase general sense of well-being for first-generation students (Padget et al., 2012). These findings contribute to the overall understanding of first-generation students at small, private institutions.

Overall, the conclusions of this study indicate that the BRI program had a small effect on the peer connections and involvement of first-year students at this small, private

institution. Furthermore, the present study's social integration scale, which combined the elements of peer connections, belonging, and involvement, was found to be a reliable and valid construct of social integration for this study. The students who received the BRI program indicated statistically significant increases in their social integration when analyzing this scale; thus, supporting the positive, yet small, effect of the intervention on overall social integration. The influence of the intervention was most beneficial for Hispanic students in terms of their intention to become involved and women for their overall social integration.

The Belonging Reinforcement Intervention

This section provides analysis and conclusions related to the intervention's implementation as part of this study. Additionally, the researcher shares findings and conclusions related to specific BRI components. Although these findings were not part of the research questions in the current study, they provide additional insight into the peer mentoring component of the intervention.

The conceptual framework developed in this study sought to provide an integrated intervention that would influence sense of belonging, peer connections, and involvement to have an overall influence on social integration. The Belonging Reinforcement Intervention created in this study utilized various methods from existing literature to create a comprehensive intervention strategy that would reinforce social integration of first-year students (Hausmann et al., 2007; Peck, 2011; Walton & Cohen, 2007, 2011a). These strategies included institutional communication to reinforce belonging within the community (Hausmann et al., 2007), an in-class intervention to focus on the normalcy of students feeling they don't fit in immediately called the social belonging intervention

(Walton & Cohen, 2007, 2011a), and a focus on peer mentorship that would enhance campus involvements (Peck, 2011).

The implementation of these main components of the intervention were achieved successfully as part of the present study; however, there were some elements of the intervention plan (Table 4) that were not successful. The first major component of the intervention were the institutional communications. Recommendations from L. R. Hausmann (personal communication, March 21, 2017) were utilized in the formation of the messages. These were delivered as planned and emailed to all first-year students by the Dean of Students and Provost of the institution within week one of the fall semester.

The next major component of the intervention was the in-class session which presented the College Transition Report as part of the social belonging intervention (Walton & Cohen, 2007, 2011; Walton et al., 2017), focused on peer mentor prior experiences, and reinforced the normalcy of feeling that one does not "fit in" immediately. The in-class intervention followed the guidelines presented in this study (Appendix F). In the implementation fidelity survey given to the peer mentors, the student leaders overwhelmingly indicated that the College Transition Report (Appendix G) was a useful tool to reinforce the normalcy of transition concerns. The peer mentors also indicated in the implementation survey that the guidelines for the in-class session were followed as outlined.

Following the in-class session, students were required to complete writing reflections about the College Transition Report. These reflections were submitted to their faculty instructors and were not evaluated as part of this research. One element that was not successfully encouraged in the intervention was the optional video message for

students to complete after the in-class session. Walton and Cohen (2011) utilized video messages in their implementation of the College Transition Survey as a means of reinforcing learning. Within the BRI program, this component of the intervention was intended to reinforce the students' understanding of the challenges associated with transitioning to college; however, the incentive to complete the video was not sufficient. Only one student completed the optional video message, thus this element cannot be considered part of the final intervention.

Finally, the most multifaceted component of the intervention focused on interaction with peer mentors in various settings. These interactions were designed to reinforce specific messages and to provide structured settings for the peer mentors to help first-year students in the transition to college. As these elements of the intervention were implemented by peer mentors and could not be monitored, the implementation fidelity survey provided insight into the completion of these elements.

As revealed in the findings from the implementation fidelity survey, the peer mentors indicated that the intervention was followed closely for the Welcome Weekend Meeting, which was the first element of the intervention. Additionally, the peer mentors indicated that the intervention guide was followed closely for the SLD Program: Club and Organization Fair or Peer Mentor Meeting (Appendix D). Specifically, peer mentors indicated that the involvement guidebook (Appendix E) was a good tool to facilitate the conversation with students about involvement. Peer mentors did recommend in the implementation survey that their interaction with students at the club and organization fair could have been better structured. They recommended providing a table as a central point for the students to find the peer mentors. These two interactions with the peer

mentor took place within the first two weeks of the semester and gave the peer mentors specific times in which to interact with their students. Based on the review of the implementation survey, these components of the intervention were effectively implemented and the adjustments to the program recommended by the peer mentors would be included in future iterations of the BRI program.

Additionally, as the intervention components were implemented, additional in-class time was added by the faculty to have the peer mentors come to the first and second class meetings during the first week to review the plans the first-year students had for their co-curricular program attendance. Thus, additional peer mentor time was built in that was not part of the original intervention strategy. This in-class peer mentor time during the first week of the semester were also part of the control group experiences.

The final component of the intervention, the Week 3 Peer Mentor Meeting, was unable to happen as planned in the intervention. Originally, the Mapworks Transition Survey was intended to be distributed to the students at the end of Week 3, which would have allowed the peer mentors to have meetings during that week prior to the survey distribution. However, the survey coordinator scheduled the Transition survey to be distributed at the beginning of Week 3, thus this component cannot be included as part of the final intervention. Furthermore, despite the timing of the survey distribution, the peer mentors found that the optional nature of the Week 3 meeting resulted in many students not attending. The peer mentors recommended that in the future the Week 3 meeting be reinforced in the course curriculum through a required element similar to the required meeting during Week 2. This assessment aligns with prior research from Holt and

Berwise (2012) in which the authors recommended that important components of social integration be required for students.

Interestingly, only 40% of the first-year students who completed the implementation fidelity question regarding peer mentor contact on the Mapworks Transition Survey indicated they had regular contact (daily, 2-3 times a week, or at least once a week) with their peer mentor. Purely by following the minimum expectations of the peer mentors for attending in-class meetings and required co-curricular programs, the first-year students would have had 2-3 contacts per week with their peer mentor prior to the survey distribution. However, when completing the survey, students were asked to evaluate the frequency of contact and 41% indicated they had limited contact (sporadic or in-class only contact), with another 18% indicating they had no contact with their peer mentor.

As all mentors indicated they attended the in-class meetings and co-curricular responsibilities, this indicates that either the first-year students did not consider the in-class or required components part of the contact, they did not find the contact meaningful, or that peer mentors did not follow the protocol. This inconsistency in the first-year students' evaluation of the amount of contact with the peer mentors' account of contact is consistent with prior research from Holt and Lopez (2014). Holt and Lopez's (2014) findings indicated that mentees did not "notice or recognize the significance of their mentors' offers to help" (p. 428). This lack of awareness by the first-year students may be based on their level of desire to interact with the mentor or indicate that although mentors were present, they were providing focused support to a small group of students (Holt and Lopez, 2014). This finding could also indicate that the size of the groups that

were managed by the peer mentors were not appropriate for meaningful interaction between the peer mentor and the first-year students.

The frequency of contact is an important concept in the current study as prior research indicated that frequency of contact could be more meaningful to students than the quality of the contact (Holt & Berwise, 2012). In this study, intentionality in the design was around frequency of contact and ensuring that first-year students felt that a peer mentor was accessible to them regularly. Findings indicated that the level of peer mentor contact (regular contact, limited contact, or no contact) as indicated by the first-year student, influenced the overall perception of their relationship and represented statistically significant differences in the means of the involvement scale and the present study's social integration scales. Thus, this study supports existing research which indicated that frequency of contact with a peer mentor is key toward social integration and the relationship with their peer mentor (Colvin & Ashman, 2010; Holt & Berwise, 2012). Furthermore, Strayhorn (2012a) provided evidence from a study of first-year students participating in a bridge program that increases in the number of positive interactions with peers were linked to increases in sense of belonging and membership. The findings presented here support Strayhorn's (2012a) research and indicate that the number of interactions can influence overall social integration based on the conceptual framework presented in this study.

Recommendations for Practice

Given the findings in this study, the following section highlights recommendations for practice related to social integration interventions with first-year students. First, it is important that campus interventions like the BRI program are

continued to provide support for first-year students. Tinto (2006-2007) stated "it is one thing to identify effective action; it is another to implement it fully… and to see it endure" (p. 8). The implementation of the Belonging Reinforcement Intervention had a positive influence on peer connections, involvement, and overall social integration; however, the lack of influence on sense of belonging was surprising given the components of the BRI which focused on belonging. Therefore, the BRI program itself should be continued and emphasis placed on strengthening the program to ensure it can endure at the institution. Furthermore, it is recommended that similar programs be developed at other institutions that would enhance first-year students' adjustment to college by reinforcing feelings of fit and providing additional social integration support. This recommendation supports the work of Kuh et al. (2006) and Kuh et al. (2010) in which the authors recommend institutions integrate educationally purposeful activities into students' experiences to ensure they benefit from the programs.

To further influence belonging, additional focus on the social belonging intervention may need to be provided in future iterations of the BRI. A. Li (personal communication, May 22, 2017), from the College Transition Collaborative, indicated that current projects related to *The Social-Belonging Intervention: A Guide for Use and Customization* by Walton et al. (2017) have moved to an online program that students could participate in prior to arriving to college. An online format for the social belonging intervention components of the BRI could further enhance this aspect of the intervention and provide additional in-class time for discussion. Additionally, allowing students to process the College Transition Report, prior to in-class discussion could be beneficial to

this component of intervention. Thus, the online program should be considered for future iterations of the BRI program.

Additionally, the most passive component of the BRI program was focused on reinforcing institutional commitment and belonging through communication (Hausmann et al., 2007). Through this part of the intervention, first-year students received two intentional e-mail communications from university administrators reinforcing their connection to the university and encouraging students to get engaged. As this component was passive, its influence as part of the BRI program is the most untenable; however, prior research indicated that this intervention (coupled with logo-bearing gifts) was associated with a higher initial institutional commitment and less rapid decline of institutional commitment over years (Hausmann et al., 2007). Hausmann et al. (2007) recommended that this type of simple and inexpensive intervention could be implemented at institutions to affirm institutional commitment and belonging prior to arrival. The findings in this study support the importance of these type of affirmations of institutional commitment. One consideration recommended by Hausmann et al. (2007), that could be considered in future iterations of the BRI program, would be sending the communications prior to the students' arrival on campus to establish sense of belonging even earlier.

Based on the findings of this study, it is also recommended that higher education leaders continue to focus on and maximize the benefits of peer mentorship. This recommendation supports prior research that has highlighted the benefits of peer mentoring (Crisp, 2009; Crisp et al., 2017; D'Abate, 2009; Ender & Newton, 2000; Hill & Reddy, 2007; Kuh et al., 2006). Particularly within the first-year seminar, the peer

mentoring component of the BRI may have helped to influence the statistically significant increases in peer connections and involvement given the peer mentors engagement with the involvement guidebook as part of the intervention, supporting the research by Peck (2011). It is further recommended that institutions integrate peer mentoring in an intentional and structured way in first-year seminars. As the level of contact with peer mentors was also related to their overall social integration, it is important to build these contacts into students' day to day experiences. This recommendation was supported by Holt and Berwise (2012) as they suggested that a minimum number of required contacts be established. The findings from this study suggest that first-year students need peer mentoring to be an integrated component of their first-year to maximize its benefits and to reinforce the number of possible connections with peers.

It is further recommended from these findings that the Mapworks Transition Survey questions related to involvement be expanded to provide a richer understanding of a student's intention to become involved. Astin (1984) suggested that student learning and development was related to the quantity and quality of the involvements; however, with the timing of the survey, it would be difficult to assess the richness of their involvement. Questions related to intent are key to understanding first-year students' plans or commitment to becoming involved, which could influence their actions. Adding additional questions related to involvement could enhance this scale and provide a more comprehensive approach to involvement. Additional questions could include intent to become involved in arts programs (theater or music), campus research with faculty, or involvement with athletics. Furthermore, the survey could assess steps taken to turn

intention into action, such as signing up for a club/organization or attending an interest meeting. Ultimately, a better understanding of the quality and quantity of involvements may lead to more robust understanding of their social integration.

Moreover, based on the findings in this study, it is recommended that higher education administrators and researchers consider sense of belonging as a component of future evaluations of social integration. The conceptual framework suggested in this study was supported through recent research of sense of belonging (Hausmann et al., 2007; Strayhorn, 2012) and the findings related to this new scale suggest that it is a reliable and valid construct of social integration at this small, private institution. This recommendation supports the work by Hurtado and Carter (1997) in which they recommended the combining of Tinto's (1993) behavioral measures of social integration with Spady's (1971) model in which the psychosocial elements of belonging were considered. Thus, it is recommended that the Skyfactor and other higher education researchers consider a scale of social integration which includes sense of belonging. By combining the peer connections scale, the current social integration/sense of belonging scale, and involvement intent, the Mapworks tool can provide a more holistic view of social integration.

Recommendations for Future Research

As this study had various limitations, additional research is needed to continue to understand the influence of belonging interventions on social integration. Given the recommendations for future iterations of the BRI program, continued research is necessary to understand the ongoing impact of the program and if the changes recommended would influence students in a different way or increase the overall effect.

Furthermore, additional research is needed to determine if the findings from this small, private institution can be duplicated in various settings.

The BRI program was implemented as a holistic program, with various components that were required through the course format; however, given the restraints at the institution, it was not possible to track individual student participation in those components. Further research on the individual components of the BRI program, such as the peer mentoring component or the social belonging in-class intervention, could help to pinpoint the areas of greatest influence and to determine if student participation in specific components of the program can be associated with greater influence in peer connections, belonging, or involvement. Prior research has indicated these individual components have benefits for social integration (Peck, 2011; Walton & Cohen, 2011a); however, in Peck's (2011) study the focus was on retention and did not directly assess the involvement peer mentor's association with social integration. Similarly, in Walton and Cohen's (2011a) study, the focus was on belonging, social fit, and academic performance, not peer connections, involvement, and overall social integration. Continued analysis of these previous studies' influences on social integration, peer connections, and involvement would be beneficial to better understand the benefits of these individual components of the BRI program.

Further research is needed on the current study's social integration scale to better understand the appropriateness of this scale for other institutions, such as public institutions and two-year colleges. The current study's social integration scale also needs to be evaluated in terms of its statistical significance in relation to student retention. Although prior research has shown that increasing social integration also increases

retention, most of those studies used the more simplified social integration scale (peer connection and involvement only) which did not include belonging as a component of social integration (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993). Further research is needed to determine if the combined scale suggested in the current study also can be used to predict persistence.

Additional research is also needed regarding the influence of the quantity and quality of peer mentor contact on first-year student success. Holt and Berwise (2012) indicated in their work that the quantity of peer mentor contacts influenced students' overall perception of the peer mentor support. The current study's findings mirrored Holt and Berwise (2012) and sought to provide a high frequency of peer mentor contact. The level of contact with the peer mentor was associated to higher levels of social integration for first-year students within the current study; however, as the level of peer mentor contact was not evaluated in previous years, additional research is needed to determine if increasing the levels of contact as part of the intervention would further influence the level of social integration of first-year students. Furthermore, additional research is needed to better understand whether the quality versus quantity of the peer mentoring is distinctive and would support recommendations from Holt and Berwise (2012) and Rodger and Tremblay (2003) to focus on quantity. This type of research would be beneficial in providing concrete evidence on how to deliver peer mentoring programs for first-year students.

The current study contributed to the research related to social belonging interventions as a support mechanism for ethnically diverse populations and women (Rayle & Chung, 2007-2008; Gillen-O'Neel & Fuligni, 2013; Walton et al., 2015). This

finding does raise questions regarding how marginalized populations, like Hispanic students or women, may respond differently to sense of belonging interventions based on the setting. In Walton et al. (2015), researchers examined the social belonging intervention with female engineering students within a predominately male setting and found that the intervention helped these students improve academically. In the present study, women made up the majority of the campus population, but were also positively influenced by the BRI program with increases in overall social integration. This suggests that minority status did not influence the interventions effect in the current study, but more that it helped to balance out societal expectations and inherent fears of not fitting in. This supports the foundational theory behind the work of Walton and Cohen (2011a; Walton et al., 2015) and additional research from Stephens et al. (2014). Further research is needed to better understand the influence of sense of belonging interventions on these populations and if the diversity of the population within the setting can be contributed to the differences.

Moreover, the findings related to Hispanic students suggest that the BRI program was especially helpful in helping these students increase their intent to become involved. Further research is needed to understand how the type of involvement may also influence this population. Moreover, additional study is needed to understand how the population shift may have also influenced the increase in Hispanic student involvement as associated with the BRI program.

Furthermore, it is necessary to understand the influence of sense of belonging interventions for various settings – public institutions, private institutions, or two-year colleges – and the institutional make-ups that may differ in these various settings. As

noted in Chapter 2, the context (time, place, and setting) for how social integration is supported is key. For example, if an institution's make-up is very multi-racial, the impact of sense of belonging interventions may differ from an institution where the minority populations represent smaller groups. This context issue was highlighted in Walton and Cohen's (2011a, 2011b) research in which the social belonging intervention had a significant impact on African American students, in a setting in which African American students made up only 5-15% of the population. For small campuses, like the one studied in the current research, institutions cannot take for granted that socialization will automatically happen (Kezar, 2006); thus, it is important to understand how the campus population may influence social integration most effectively.

An interesting finding in this study related to the influence of state residency on social integration. Students from out-of-state were found to have statistically significantly higher overall social integration, sense of belonging, and peer connections than their peers from within the state. In the review of literature, only one study analyzed state residency as a background variable related to first-year student retention, but this association was not discussed by the authors (Soria & Stubblefield, 2015). Prior research has not addressed state residency as a component of social integration and despite the low effect size, the findings from the current study warrant additional research. It would also be prudent to further explore whether this difference between in-state verses out-of-state students was more prevalent at a small, private institution verses other institution types. Furthermore, the difference in state residency on social integration may warrant additional study of how an intervention could reinforce social integration, peer connections, and belonging for in-state students specifically.

Summary

The current study sought to evaluate the association between the Belonging Reinforcement Intervention (BRI) and social integration across multiple scale scores for first-year students at a small, private institution. The BRI program provided additional emphasis on peer mentoring, a greater focus on campus involvements, and integrated components of the social belonging intervention (Walton et al., 2017). Furthermore, although most components of the BRI program were implemented effectively for the purposes of this study, future iterations of implementation can refine those components that were not effectively implemented and can provide additional focus on elements of the program that could be enhanced.

The findings and conclusions presented in this chapter indicate that the scale recommended in the current study was an effective tool for measuring social integration. Furthermore, the findings related to research question one indicates that the Skyfactor organization should consider combining peer connections and their current social integration scales to present a more holistic view of social integration. Furthermore, this research highlights the importance of sense of belonging as a component of social integration and an important consideration in student persistence. Based on the current research, it would be recommended that researchers consider the more holistic definition of social integration presented in this research, which includes sense of belonging.

The findings and conclusions presented in this chapter also indicate there was a statistically significant difference for students who participated in the BRI program for peer connections, involvement, and the present study's social integration scale. This finding supports the use of the BRI program to reinforce social integration for first-year

students. Prior research has indicated that institutions should create specific strategies and interventions to support first-year students, thus this specific program was found to have positive influence (Kuh et al., 2010; Strayhorn, 2012a; Tinto, 2006-2007).

Furthermore, the findings presented in this study indicate that the BRI program treatment had statistically significant impact for women's overall social integration and Hispanic student populations involvement. These findings support existing research and suggest that populations that have experienced negative stereotyping in society can benefit from specific interventions that reinforce the normality of struggle in college for all populations (Walton et al., 2017). Further research is needed to better understand the influence of social belonging interventions on these populations and to understand if specific elements of the BRI program were unique in their influence. Furthermore, future research is needed to understand if institutional demographics influence the effectiveness of social belonging interventions.

In conclusion, the current study reinforces the importance of intervention by an institution to support and encourage sense of belonging and social integration. Specifically, the current BRI program provided a positive influence on peer connections, involvement, and overall social integration. It is not enough for institutions to sit back and let students develop these things naturally, but these findings indicate that institutional action can be beneficial. Furthermore, based on prior research, it is presumed that these positive influences on social integration will correspond to greater institutional satisfaction and retention (Astin, 1993; Chapman & Pascarella, 1983; Tinto, 1993; Woosley, 2003). More importantly, effort to help first-year students increase their

social integration and aid in their transition to college can have positive rewards for students' well-being and success; and that, is worth all the effort.

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Appendix A

Welcome Weekend Meeting Agenda

1. Introductions
    - Peer mentors will introduce themselves and the faculty instructor (if applicable).
    - Peer mentors will discuss the general overview of the first-year seminar course and the purpose of the course and its benefits. Course purpose includes:
        i. Helping new students transition to the institution
        ii. Helping new students understand the framework of the institution's learning communities
    - Peer mentor will review the purpose of the peer mentor as part of the first-year seminar course. Peer mentor purpose includes:
        i. Helping new students transition to the institution
        ii. Helping new students get involved in campus and feel that they belong
        iii. Helping new students navigate the first-year seminar course
        iv. Helping new students develop peer relationships
2. Icebreaker
    - Peer mentor will facilitate an icebreaker activity to encourage the first-year students to meet each other.
    - It is important to emphasize that the students will be together throughout the first semester, so they should try to learn each other's names.

3. What I Wish I Knew

    - Peer mentors should discuss the following areas and share insight from your own personal experiences as a new student:

        i. College Life

        ii. Campus Community

        iii. Living with a New Person – Roommate Issues

        iv. Getting Involved

        v. Making Friends – it takes time!

Appendix B

Institutional Communication – Dean of Students

Dear Royals!

Welcome to [institution blinded]! We are excited that you are a member of the [institution blinded] family and part of our campus community. For almost 160 years [institution blinded] has been welcoming new students to campus but you are by far the best (yes, I do say that to every class but this time it is true).

You've survived the first weekend on campus and I wanted to encourage you that the fun has just begun! The next few weeks of your college experience will be filled with excitement, new friends, and new challenges as you complete your transition. Take the time to soak in the fun and utilize your campus resources to ensure you are successful.

Your peer mentor is a great resource for general information about campus life and even helping you find your way around campus – use them! The same is true of our faculty and staff. Our students know we are a caring community and helping you adjust is always one of our favorite things to do.

One great way to get off to a good start is to get engaged in campus life. I want to encourage you to attend the Clubs and Organizations fair this Friday from 1pm – 3pm in Trexler Courtyard. Getting involved on campus is an important way for you to do something you are passionate about, make friends, and to give back to the [institution blinded] community. We hope to see you there!

As you progress through this first semester and year I hope you will remember I have given every student my business card for a reason – Because I care. I love [institution blinded] and I want you to come to love it as much as I and so many others

do. If there is ever anything I can do to help you along the way, please know I will do so. You have my word.

Dean of Students

Appendix C

Institutional Communication - Provost

Dear Royals!

Welcome to [institution blinded]! On behalf of the faculty, staff, and students at [institution blinded], I wanted to welcome you to your new home. At [institution blinded], we value the diverse backgrounds and experiences of all students and as one of our newest members, you are an important and valuable part of the [institution blinded] family.

As you settle into your first semester, be sure that you take a few minutes to consider all the ways that we can help support your transition to college.

You've chosen the advantage of the [institution blinded] experience with small, intimate classes, so talk with your faculty. Get to know them and let them get to know you! You are part of this community and your faculty want to better understand your experiences and goals.

You've chosen the advantages of Charlotte, so spend time exploring the city and make some new friends while you do it. Not sure where to start, talk with your peer mentor or Resident Assistant and find ways to jump in. Help others and yourself settle into your new home, by suggesting a trip to Freedom Park, Cookout, or to check out a local restaurant.

You've chosen to be part of our beautiful, urban campus, so hang out on campus swinging in a hammock or have a cup of coffee to discuss the latest news with a friend. Take a moment and get comfortable in your new home.

You've chosen to be part of a diverse community, so share your own ideas, background, and experiences with others and take a moment to truly get to know others.

We care that you are happy and satisfied with your experience, so speak up and tell us how we can make life at [institution blinded] great! Share your ideas with a faculty or staff member and be part of making [institution blinded] even better!

We are excited to have you as part of our community. Now embrace this new experience and prepare to thrive!

Sincerely,

Provost

Appendix D

Week 1 Peer Mentor Involvement Meeting

Agenda:

1. Introductions – Allow everyone to introduce themselves again. Play a quick icebreaker to encourage them to loosen up and have fun.
2. Discuss first week
    - Encourage students to share any challenges they have faced in the first week of school (classes, faculty, finding way around, roommate concerns).
    - Encourage students to share any successes they have experienced in the first week of school (classes, friendships, fitting in).
3. Discuss the involvement fair (coming up on INSERT DATE)
    - Provide students with the involvement guide and review with them.
    - Talk through club/organization types – Greeks, Social Groups, Religious/Spiritual Groups,
    - Encourage students to check out the options
    - Encourage students to sign up for 2-3 groups they are interested in.
    - Students should complete the involvement guide and you should take a picture of their completed sheet to be able to follow up with them about their plans.

Appendix E

Involvement Guidebook

How big is your appetite?

Describe your typical day…

How many hours are you taking?

Do you have a job?

What time do you wake up in the morning?

How many hours a week do you try to spend studying?

Do you consider yourself a night owl?

Does your major require any outside commitments?

What do you crave?

Would you rather plan or attend activities?

Have you ever volunteered or served your community before?

How important are relationships with family and friends?

At social events, do you enjoy meeting new people?

Do you use a planner or online calendar to stay organized?

Is your faith important to you?

Do you consider yourself a risk taker? Challenging your comfort zone?

Were you involved in high school?

Have you ever performed in a fine arts type event?

Do you get bored easily?

What is your role when doing group work?

Do you feel comfortable sharing your opinions?

Is school spirit important to you?

What is something unique about you?

Where do you see yourself in 5 years?

Are you interested in becoming a student leader?

What are you most excited about in college

Starters/Appetizers

If you enjoy something sweet and special every now and then, this is for you! No long-term commitment required.

Fitness Classes at Center for Recreation and Wellness
Schedules available on online or at the Center for Recreation and Wellness

Student Engagement Events
Over 200 events a year are provided. Schedule available online

Camp Rex: Leadership Retreat
Start the year off with a bang and get signed up for this weekend leadership retreat

Volunteer/Service Project
Weekend Service Days, Community Engagement Fair, MLK Day of Service

Fine Arts Events
Art Exhibits, Concerts, Plays, and many other events. Schedule available online

Movie Nights
Check out the newest releases right here on campus! Schedule available online

Main Course

If you want to find a home away from home and a group of friends that share your interests, then this is for you! Minimum commitment required.

Greek Life
Meet with Fraternity and Sorority Life Advisor for more information!

Intramural Sports
Free agent programs available for independents or sign up as a team.

Clubs and Organizations
- Special Interest Organizations
- Service Organizations
- Spiritual and Religious Organizations
- Honor & Academic Societies
- Multicultural Organizations

University Support Organizations
T2U – peer support groups and L.E.A.D. – mentoring for first generation and minority students

Buffett

If you are looking for an involvement opportunity that is long term and connects you to your peers while providing leadership opportunities, then this is for you! Long-term commitment required. These items are by application or student vote.

Campus Union Board
Plan campus wide events like comedians, karaoke nights, and much more.

Student Government Association
Represent your peers to make change on campus.

Leadership Institute
Get started in this three-tier program to help you develop your leadership abilities.

Arts Groups
Audition for a play or to be part of one of the campus musical groups.

Sides

These involvements won't stay hot for long, get them while you can!

Leadership Summit
Spring semester this student conference is a great way to get a lot of good food at once.

Family Weekend Talent Show

Campus Traditions
Boar's Head, Casino Night, Moravian Love Feast, Exam Break Breakfast

Homecoming & School Spirit
Attend games,

Dessert

Looking for something a little extra? These items are to reward those who get involved and provide an incentive to eating up all you can at [institution blinded].

Awards Convocation
Outstanding student leaders are showcased at this campus-wide awards program.
Diana Award, Social Justice Award, Judy Leonard Scholarship

Student Life Awards
This program showcases all the hard work of student leaders & organizations on campus.
Campus Leader of Year, Emerging Leader of the Year, Student Enthusiast

Make your Selections on your Personal Menu

Meet with your peer mentor to review your involvement choices and to get feedback on the tastiest treats!

Your Peer Mentor/Server: _____

Starter/Appetizers:

_____ _____

What would you like? Contact Name

Main Menu:

_____ _____

What would you like? Contact Name

_____ _____

What would you like? Contact Name

_____ _____

What would you like? Contact Name

Buffett:

_____ _____

What would you like? Contact Name

_____ _____

What would you like? Contact Name

Sides:

_____ _____

What would you like? Contact Name

_____ _____

What would you like? Contact Name

Dessert:

_____ _____

What would you like? Contact Name

Appendix F

Normalizing Transition Concerns – In-class Implementation Guidelines

Hi! My name is ____.

Welcome to our first in-class, SLD session. Today's session is about the transition to college and we hope to provide you with information that will help you as you make the adjustment here at [institution blinded]. You'll have a chance to hear from the peer mentors about their experiences and we will be analyzing some national survey data from upper-class students about their experience transitioning to college. As you may know, the transition to college can go a lot smoother if you know what to expect, so we hope that today's session will give you some time to think about your transition.

After today's session, you'll be submitting a writing reflection to your first-year seminar faculty member about what we discuss. There is also an option for you to create a video about your transition experiences thus far, but I'll describe that more later.

What I Wish I Knew 2.0 –

(This portion of the activity should take up no more than 25 minutes of the class time.)

Before we look at the transition survey, I wanted to have a few of our peer mentors and upper-class students share about some of their experiences in transitioning to college. <Introduce the peer mentors sitting on panel>. These student leaders were sitting in your seats just last year and they are here to help guide you throughout your first semester of college. Today, I'm going to ask them to share some of their experiences with transitioning to college from high school.

(Two peer mentors will be identified to answer each question.)

1. When you think back to your transition to college, what difficulties did you experience? What did you worry about? Some experiences you might think about are:

   - Your experiences in classes,

   - Interactions with other students or with professors

   - Worries about fitting in or making friends

   - Interactions with roommates or challenges with living situations

   - Difficulty studying or working on assignments

2. When you first arrived at [institution blinded], did you worry about whether you fit in or belonged at college? What were those feelings like? How have those feelings changed over time?
3. When you first came to [institution blinded], what were your interactions like with other students? What did other students do that made you feel positively or negatively about yourself or about being at college? How did those experiences change over time?
4. Did any identity or identities of yours - racial/ethnic, gender, religious, socioeconomic, cultural, sexual - make your transition to college easier, more difficult, or both?
5. What are some of the common difficulties you think people have when they start college at [institution blinded] and how do these difficulties change after being at [institution blinded] for a while?

College Transition Survey

Great, let's say a big thank you to the peer mentors for sharing about their experiences. Now we are going to talk about the College Transition Survey. I'll start by giving you a brief summary of the results of the College Transition Survey that I mentioned before. This was a survey that involved a sample of upper-class students randomly selected from various public and private institutions. What is important about this survey was that the respondents were randomly selected so we can rest assured that the views that they expressed are representative of the views of most upper-class students. We can also apply this survey to your experiences here at [institution blinded].

We are going to discuss the quantitative summary data from the survey as a group and then you will break up into small groups with your peer mentors to discuss the qualitative summary.

To start with the quantitative summary, this summary provides you with one aspect of the results that was particularly interesting to us. These results were consistent across different demographic groups in our sample – class year, race, gender, residential college, and so on. What we're doing now is trying to understand the results of this survey and their meaning, and one part of doing this is bringing in people like you – freshman who are in the middle of the transition to college – and getting you to reflect on the survey results and helping us to interpret them based on your actual and recent experiences. So, let's look at page 1 of the survey.

(Review quantitative survey results with full group).

Now, we are going to break up into smaller groups so that you can reflect on the qualitative survey responses.

(Within the small groups, Scholars will ask different students to read the quotes aloud. After reading through all the quotes, the Scholars will ask the following reflection questions and encourage discussion within their groups)

Reflection Questions:

- *How have your experiences so far this year been similar or different to any of these?*
- *Does knowing that some of the struggles associated with transition will get better or decrease help?*
- *What will you do differently after today's SLD session?*

All done. Your writing reflection for this week is about reflecting on why you think people's experience in college develop and change in the way the College Transition Survey describes. As you write your reflection for this week, take some time and reflect on your own experiences so far this semester. Specifically, I want you to consider any aspects of your experiences that are echoed in the survey results you read about. There are instructions on myCourses, but the goal is to really understand how people's experience in college changes over time.

In addition, next fall we may use some of the excerpts of what people write here and show them to students coming to [institution blinded] next year or in subsequent years so they will know what their experience is likely to be like. So, is this something you could do?

You also have the opportunity to create a "video letter" to next year's students describing how your transition to college has been so far and what advice you would give next year's students.

Appendix G

College Transition Report

The information presented below is a condensed report of a survey completed by college Sophomores, Juniors, and Seniors at both public and small, liberal arts institutions. Students completed surveys and in some cases participated in focus groups. Students from all groups reported similar experiences. There were no differences by students' race or gender, class year, type of college, or by type of high school.

Quantitative Summary

Almost all students reported that they worried at first in college about whether they fit in and belonged. Students commonly reported that they:

- Worried about whether other students would accept them in the context of classes and coursework.
- Worried that other students might view their abilities negatively.
- Were concerned about forming study groups or finding partners to work with in labs.
- Worried about making friends.
- Felt intimidated by professors.

But with time, students came to feel that they belonged in college. They reported:

- Feeling comfortable in the academic environment.
- Feeling comfortable working with other students
- Feeling comfortable using Supplemental Instruction and other students as resources.
- Making good friends in college

- Feeling confident that other students and professors viewed their abilities positively.
- Rarely or never feeling uncomfortable participating in class.

Quantitative Summary Conclusions:

Most students experience doubt at first about whether they belong in college. With time, they overcome these concerns and come to feel at home in college.

Qualitative Summary

The quotations below have been selected because they are illustrative of the major findings of the survey. These quotations are representative of the responses of participating students to questions asking them to describe their experience in college, and how this experience had changed since their freshman year. Quotes like these came up again and again on the survey. They have been edited to make them clearer.

"When I first got to college, I worried that I was different from other students. Everyone else seemed so certain it was the right place for them and were so happy here. But I wasn't sure I fit in – if I would make friends, if people would respect me, if it was the right school for me. Sometime after my first year, I came to realize that almost everyone comes to college and feels uncertain at first about whether they fit in. It's just something everyone goes through. Now it seems ironic – everybody feels they are different freshman year from everybody else, when really in at least some ways, we are all pretty similar.

- Senior, African-American female

"I love college and wouldn't trade my experiences here for anything. I've met some close friends, I've had some fantastic experiences, and I've certainly learned a lot. Still, I think the transition to college is difficult, and it was for me. My freshman year I really didn't know what I was doing – I made a lot of causal friends at parties and other social settings and I avoided interacting with professors in class and office hours, I think because I was intimidated by them. It got a lot better once I chose a major I was excited about. I began to make close friends through classes and labs, and I started to get involved in research with one of my professors. Now I am happier than I have ever been. It is really rewarding for me to feel like I belong in the intellectual community here."

- Senior, White female

"I didn't go to a very good high school, and I worried that my high school courses had not prepared me well for college. Honestly, when I got here, I thought professors were scary. I thought they were critical and hard in their grading, and I worried a lot about how they and other students would evaluate me. I was nervous about speaking in class and I didn't like other people to read my papers. Around my sophomore year, I felt more comfortable. I began to enjoy my classes more and I found some close friends who I trusted. I also became more comfortable speaking in class, and sometimes I asked my friends to edit my papers for me. And I saw that even when professors were critical, or their grading hard, it didn't mean they looked down on me or that I didn't belong. It was just their way of motivating high-achieving [institution blinded] students."

- Junior, African-American Male

"When I was in high school thinking about college, a counselor told me I would make the best friends of my life there. I was excited about college, but then again, I was close to

my friends from home. I didn't want to replace them with people I didn't know. So, when I first got to college I kind of stuck to myself. But I ended up feeling isolated. Then I began having lunch with this group of guys and we did other stuff like play video games. It was a little thing, and at first it felt like I was just wasting time, but it was fun and it made me feel less alone. And sometimes it was even helpful. Once, I told the guys I was thinking of taking this class that looked cool, and my friend had taken it and he told me which professor to get. The professor was great, I met him in office hours. He was really generous with his time and he helped me decide what to major in. That was three years ago. Now some of those guys are my close friends. We've gone through college together, and we've helped each other along the way. I realized that you don't have to replace your friends when you go to college or get older. I'm still close with some of my friends from high school, but I made new friends too."

- Junior, White male

"The most difficult transition from high school to college was coming from a situation in which I knew every student for the past seven years into a new situation in which I did not know one student before I arrived. Freshman year even though I met large numbers of people, I didn't have a small group of close friends. I had to work to find lab partners and people to be in study groups with. I was pretty homesick, and I had to remind myself that making close friends takes time. Since then in classes, clubs, and social activities, I have met people, some of who are now just as close as my friends in high school were."

- Junior, Asian-American male

"Freshman year was a learning experience for me. I was unprepared for the workload and differences in grading in college, and I had to learn to budget my time wisely, so I

wouldn't have extreme blocks of time studying and of not studying. After getting burned grade wise several times and feeling stressed out in the process I worried that I wasn't smart enough. Fortunately, a conversation with an upper-class student helped me see that I needed to change my study habits. I learned to study and do my work more effectively than before. Although my start was somewhat rocky, it has felt good to learn from my mistakes, and I am proud of the success I have had."

- Sophomore, Latino male

My first few months of college I didn't really know what I was doing. I don't think most people do. When I left class, I just went to a study lab. When I left the lab, I just went home and did more work. Even in the car, I was just studying. And it wasn't productive. I was just doing the same problems over and over again. I felt stressed, but that how I thought college just is – lonely and hard. But then I talked with a few other students in class and we decided to try studying together. It was really helpful – talking about the class, quizzing each other, and going to the professor with questions helped me understand the material better. And we ended up becoming friends too, so I felt less stressed and lonely too. I still hit the books on my own when I need to. But I learned that talking things through with other people helps me get unstuck when class gets tough or I don't understand a problem. College is a new experience. It takes time to learn how to do it. But you don't have to pick between doing well in class and making new friends or having a good experience. You can do both."

- Junior, African American Female

"As excited as I was to come to college, I must admit that part of me thought I had been accepted due to a stroke of luck, and would not be able to measure up to the other

students. It wasn't until late in my second year that I started to feel comfortable in my own shoes, and to believe that I really was up to par and could totally hold my own. After that, college started to feel a bit like home, and though I still have doubts about myself sometimes they're the kinds of things everybody feels on occasion."

- Senior, Latina female

"Walking into classes for the first time freshman year was uncomfortable to say the least. Particularly when shopping classes, the only thing more intimidating than the other students (some of whom were upper-class), were the professors, who were all so highly regarded in their fields. Now I feel much more relaxed participating in discussions and asserting my opinions. I think everybody here has a common goal - to share knowledge and to achieve together – and for the most part everyone is respectful and supportive of each other's ideas."

- Senior, International/Chinese female

Appendix H

Writing Assignment for College Transition Report

The results of the College Transition Report suggest that, during freshman year students often worry about whether or not professors and other students at [institution blinded] accept them. However, the survey results also suggest that most students eventually become comfortable at [institution blinded] and find a family of people with whom they are close and feel they belong.

In an effort to further understand how the transition to college takes place, describe why you think this would be so – that is, why students might feel initially unsure about their acceptance, but ultimately overcome these fears. Please be sure to illustrate your reflection with examples from your own experiences in classes, seminars, lectures, study groups, social activities, and on campus.

Appendix I

Instructions for Optional Video Assignment

Many first-year students at [institution blinded] have difficulty transitioning to college; however, we know from the College Transition Survey, that the struggles with transitioning will get better over time.

We think that next year's first-year students may benefit from learning more about your experience and what to expect. As a first-year student who has just survived the first few weeks of the semester, think about the ways in which your experience may or may not be different from those described in the College Transition Survey.

Student Life would like to put together a video compilation of current first-year students talking about their adjustment to college and giving advice to next year's new students. Consider the experiences you've had and describe how those experiences may change over time at [institution blinded] based on the College Transition Survey. Consider including any struggles you may have managed during your first few weeks on campus, such as stress, managing time, faculty expectations, roommate problems, finding friends, or getting involved. Include examples from your first few weeks that may help next year's new students to better understand what to expect.

We encourage you to write out your script for the video as if you were writing a letter to an incoming student. In the letter, you would describe your experiences in transitioning to college and provide advice to the incoming student. You can film yourself reading the letter or come up with a creative way to demonstrate your message via video.

Appendix J

Week 3 Peer Mentor Meeting Agenda

1. Introductions – Allow everyone to introduce themselves again. Play a quick icebreaker to encourage them to loosen up and have fun.
2. Discuss transition concerns – Peer mentors should talk with their group about their transition so far. Here are some questions to throw out to help get the conversation going?
    - What's gone well during the first few weeks?
    - How are things going with your classes? What's your favorite class?
    - Are there any classes that you feel like you are struggling in? What have you done to address this feeling?
    - How are you feeling about the first-year seminar? Do you have questions about the course?
    - What SLD programs are you attending in the next topic area? Any concerns with the SLD program?
    - How are things going with roommate relationships? Living in the residence halls?
    - Have you found a club or organization to get involved with? Attended any meetings yet?
3. What I Wish I Knew
    - Peer mentors should discuss the following areas and share insight from your own personal experiences as a new student:
        i. Time Management

ii. Meeting Faculty Expectations

iii. Going Home for the First Time

iv. Setting Priorities

Appendix K

Questions Added to Transition Survey

Have you participated/attended in any of the following programs so far this semester (check all that apply):

- Thrive Institute
- Welcome Weekend Peer Mentor Meeting #1 (August 26)
- Club & Organization Fair
- Peer Mentor Meeting #2 (during Week 1)
- Peer Mentor Meeting #3 (during Week 3)
- T2U
- L.E.A.D. program
- Sed Min Household
- Leadership Institute
- Campus Events/Activities
- Attended an Athletic Event

How would you evaluate your relationship with your peer mentor?

- Use Likert scale (1 - poor to 7 - excellent)

How often have you had contact (email, meetings, lunch, informal contact) with your peer mentor?

- Daily
- 2-3 times a week
- At least once a week
- Sporadically over the past few weeks
- Only during in-class sessions
- Not at all
- I am unsure who my peer mentor is.

Appendix L

Peer Mentor Training

Spring Training Outline

2:00pm – Introductions

2:15pm – Meet with Faculty Instructors

- Director of General Education reviews the purpose and value of peer mentoring.
- Director of General Education reviews basic responsibilities of peer mentor for the first-year seminar.

3:00pm – Fall Timeline

- Researcher provides peer mentors with specific dates and times required for the role.
- Researcher provides an overview of the various components of the BRI program.

3:45pm – Questions

Fall Training Outline

9:00am – Introductions & Icebreakers

9:15am – Review Peer Mentor Program Responsibilities – Student Success Coordinator

What is a peer mentor? Do's and Don'ts. Engaging with Faculty

9:45am – Developing Relationships (Questioning, Listening, & Establishing Rapport)

10:30am – Break

10:45am – Mapworks & SLD Tracking

11:15am – Researcher to Review Belonging Reinforcement Intervention Program

11:45am – Questions

Appendix M

Peer Mentor Implementation Review Survey

1. How many first-year seminar sections were you responsible for this fall?
2. Did you meet with your faculty member prior to the first class to discuss expectations?
3. Did you attend training on August 26th from 9am – 12noon?
4. Overall, how would you assess the peer mentor training? (5-point Likert scale)
5. What recommendations would you make for the peer mentor training?
6. Please rate how well you feel you implemented the agenda for the Introductory Meeting with your class on Welcome Weekend (August 26th)? (5-point Likert scale)
7. How many students attended the Welcome Weekend meeting?
8. In your own words, how did the Welcome Weekend meeting go? What improvements would you recommend for the future?
9. Did you attend the class on Tuesday, August 29th?
10. Did you attend the class on Thursday, August 31st to collect students' co-curricular program plans?
11. How did the in-class interactions go during the first week? Any suggestions for the future?
12. Please rate how well you feel you implemented the agenda for the out of class meeting with your class (held at your set time during week 2)? (5-point Likert scale)

13. How effective was the Involvement Guidebook in helping you talk about ways to get involved on campus? (5-point Likert scale)
14. How many students attended your out-of-class meeting in week 2?
15. In your own words, how did the out-of-class meeting in week 2 go? What improvements would you recommend for the future?
16. Any recommendations on the involvement guidebook to make the better for the future?
17. How many students attended the club and organization fair on Friday, September 8th?
18. How many students did not attend either the out-of-class meeting or the club and organization fair that you are now having to meet with one on one?
19. In your own words, how did having the peer mentors encourage participation in the clubs and organizations fair go? Any suggestions for the future?
20. Please rate how well you feel the agenda for the in-class session on the College Transition was followed? (5-point Likert scale)
21. In your own words, how did the in-class session on the College Transition go? What improvements would you recommend in the future?
22. How could we improve the What I Wish I Knew portion of the program?
23. Do you believe the College Transition Report was a good tool to reinforce the idea of it taking time to find your fit on campus? (5-point Likert scale)
24. Did you hold a Week 3 meeting to get together with your students?
25. Please rate how well you feel you implemented the agenda for the Week 3 meeting (optional meeting for students)? (5-point Likert scale)

26. In your own words, how did the Week 3 meeting go? What improvements would you recommend for the future?
27. Overall, how would you assess the peer mentor program for the first 3 weeks of the fall semester? (5-point Likert scale)
28. Are there any overall changes you would make to the peer mentor program?