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The Social Side of Retention: Examining the Social Integration of African American and Latinx Students and their Retention to Graduation

Ashley Taylor Redix
aredix@utk.edu

To the Graduate Council:

I am submitting herewith a dissertation written by Ashley Taylor Redix entitled "The Social Side of Retention: Examining the Social Integration of African American and Latinx Students and their Retention to Graduation." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Higher Education Administration.

Norma T. Mertz, Major Professor

We have read this dissertation and recommend its acceptance:

Pamela A. Angelle, Terry Ishitani, David J. Houston

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

The Social Side of Retention: Examining the Social Integration of African American and Latinx

Students and their Retention to Graduation

A Dissertation Presented for the
Doctor of Philosophy
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DEDICATION

To my wonderful Parents and family

Donald and Rhonda Redix

The Late George and Winifred Jackson

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ABSTRACT

While the rate student enrollment in U.S. institutions of higher education is steadily increasing, retention and graduation rates do not reflect these increases, in turn leading to an ever-present gap in educational attainment (Bailey & Dynarski, 2011; Fischer, 2007; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Morley, 2003; Museus & Quaye, 2009; Zarate & Burciaga, 2010; Zhan & Sherraden, 2011). The gaps in educational achievement are disproportionately larger for the African American and Latinx student populations compared to their Caucasian and Asian peers (Bailey & Dynarski, 2011; Fischer, 2007; Morley, 2003; Museus & Quaye, 2009; Zarate & Burciaga, 2010; Zhan & Sherraden, 2011). Tinto's Theory of Student Departure (1975, 1993) is foundational in retention research, widely used, and has proven to lead to increased academic success and retention. The student integration construct posits that students' integration into the academic and social structure within institutions of higher education shape their retention (Tinto, 1975, 1993). While academic integration and social integration work collectively in this construct, they also work independently to promote student success as well. The purpose of this study is to explore the relationships between student background characteristics and social integration, and the ability to predict student retention to graduation based on student social integration. This study utilized the 2011 National Survey of Student Engagement (NSSE) to assess the impact of social integration and answering the following research questions: 1) Is there a significant difference in the scaled measurement of social integration of first-year and senior level students; 2) Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts; 3) Does social integration predict graduation among African American and Latinx students? The results of this study highlight the importance of social integration and its relations to retention and graduation.

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CHAPTER 1

Introduction to the Study

"By the end of this decade, two in three job openings will require some higher education."

– Barack Obama

Obtaining a high school diploma no longer ensures high school graduates employment, nor does it guarantee economic self-sufficiency or success (Baum, Ma, & Payea, 2013; Holland & Farmer-Hinton, 2009). Completion of a college education however, will increase the likelihood of securing employment or achieving self-sufficiency and success (Baum et al., 2013). The benefits of completing college include more employment opportunities, higher wages, and more opportunities for both social and economic mobility (Baum & Payea, 2004; Baum et al., 2013; Brand & Xie, 2010; Brock, 2010; Carnevale, Rose & Cheah, 2011; Daly & Begali, 2014; DeAngelo, Franke, Hurtado, Pryor, & Tran, 2011; Harlow, 2013; Haveman & Smeeding, 2006; Hill, Hoffman, & Rex, 2005; Hout, 2012; Riddell & Song, 2011). As the demand for college educated workers increases and standard job requirements heighten, the importance of students pursuing a college education will continue to increase (Baum & Payea, 2004; Carnevale et al., 2011; Carnevale, Smith, & Strohl, 2010; Perna, 2005).

Compared to past decades, college student enrollment has drastically increased (Aud, Fox, & KewelRamani, 2010; Gurin, Dey, Hurtado, & Gurin, 2002; Harper, Patton, & Wooden, 2009; McFarland et al., 2017). Enrollment in U.S. institutions of higher education grew from 9.4 million students in 1976 to approximately 17 million students in 2015 (Aud, Fox, & KewelRamani, 2010; McFarland et al., 2017). As the student population in higher education has increased, so has the diversity of the college population (Gurin, Dey, Hurtado, & Gurin, 2002; Harper, Patton, & Wooden, 2009). In 1976, the national college student population consisted of

approximately 9 million (84.3%) Caucasian students, 1 million (9.6%) African American students, 383,800 (3.6%) Latinx students, 197,900 (1.8%) Asian/Pacific Islander students and 76,100 (0.7%) American Indian/Alaskan Native students (Snyder, de Brey, & Dillow, 2016). In 2015, the undergraduate collegiate population consisted of 9.3 million (55%) Caucasian students, 2.3 million (14%) African American students, 3 million (18%) Latinx students, 1.1 million (6.5%) Asian American students, and 132,000 (0.8%) American Indian/Alaskan Native students (McFarland et al., 2017).

While college student diversity and enrollment have increased, students are not graduating at rates comparable to the increased enrollment, particularly for those from historically underrepresented student populations (Brock, 2010; Bound, Lovenheim, & Turner, 2010; Reason, 2009). In 2015, the six-year graduation rate for first-time, full-time students was 59% (McFarland et al., 2017). Currently, approximately 60% of college students persist to graduation (Kena et al., 2016). According to Shapiro et al. (2017), college completion rates for the 2011 cohort were 66.1% for Caucasian students, 69% for Asian American students, 39.5% for African American students, and 48.6% for Latinx students. Thus, Caucasian and Asian American students are more likely to complete college than their African American and Latinx peers (Brand & Xie, 2010; DeAngelo, Franke, Hurtado, Pryor, & Tran, 2011; Fry, 2011; Ginder, Kelly-Reid, & Mann, 2016; Aud et al., 2011; Shapiro et al., 2017; Zarate & Burciaga, 2010).

Institutions of higher education are deeply concerned about the persistent disparities between student enrollment and retention to graduation rates, both within the general student population and among underrepresented student populations (Bailey & Dynarski, 2011; Fischer, 2007; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). In consequence, they have sought to use a variety of research-based strategies to increase student persistence to graduation. Among the

theoretical constructs guiding such strategies is that of student integration. In the development of the student integration construct, Tinto (1975, 1993) posited that students' integration into the academic and social structures within institutions of higher education shaped their retention. Students' interactions with the academic and social environments positively influenced their commitment to the institution which in turn led to a commitment to persist to graduation (Cabrera, Nora, & Castaneda, 1993; Libby, 2006; Tinto, 1975, 1993). A number of well-regarded studies have supported the finding that student integration influences academic success and the likelihood of persistence to graduation (Astin, 1993; Braxton, Hirschy & McClendon, 2004; Braxton, Sullivan & Johnson, 1997; Deil-Amen, 2011; Kuh, 2001; Kuh & Love, 2000; Pascarella & Terenzini, 1980, 1983, 1991, 2005; Reid, 2013; Stage, 1989; Swail, 2004; Tinto, 1975, 1993, 2006).

Academic integration is defined as the benefit associated with the educational experiences that support academic and cognitive development, enhance academic motivation, and measure academic preparedness (Clark, Middleton, Nguyen, & Zwick, 2014; Flowers, 2006; Pascarella & Terenzini, 1980; Tinto, 1975, 1993). Examples of academic integration include classroom involvement, student-faculty interaction, and various other activities with faculty, academic staff, and peers that promote student intellectual development (Ishitani & DesJardins, 2002; Nora, 1993; Tinto, 1975, 1993). Academic integration has consistently been found to be positively related to college student persistence (Baker, Caison, & Meade, 2007; Barnhart, 2011; Clark, Middleton, Nguyen, & Zwick, 2014; Mckenzie & Schweitzer, 2001; Prospero & Vohra-Gupta, 2007; Rienties, Beausaert, Grohnert, Niemantsverdriet, & Kommers, 2012). According to the literature, academic integration leads to a larger academic investment from students as well as increased persistence and retention rates (Clark, Middleton, Nguyen, & Zwick, 2014;

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Rienties et al., 2012; Tinto, 2010). As retention research continues, the focus on academic integration continues to overshadow by far the research on social integration.

Tinto (1975) defined social integration as the interaction between a person and the social system of an institution, and Nora (1993) and Pascarella and Terenzini (1979) further explained it as the development of a strong affiliation with the college social environment both within and outside the classroom through involvement in extracurricular activities as well as formal and informal social interactions with faculty, academic staff, and peers. Research suggests that social integration influence students' level of institutional commitment and satisfaction with the institution along with their experience and sense of belonging, increasing the likelihood of their persistence to graduation (Braxton et al., 2004; Kraemer, 1997; Strayhorn, 2010, 2012; Rienties et al., 2012; Severiens & Wolff, 2008; Tinto, 1975, 2006; Wilcox, Winn, & Fyvie-Gauld, 2005). Research also suggests that students who are not socially integrated into their institutions are less likely to persist to graduation (Rienties et al., 2012; Severiens & Wolff, 2008; Wilcox, Winn, & Fyvie-Gauld, 2005).

A majority of the existing student integration studies have examined academic and social integration as intertwined variables, finding that integration in both areas complemented each other and led to increased student persistence and retention (Astin, 1993; Borglum & Kubala, 2000; Braxton, Hirschy & McClendon, 2004; Braxton, Sullivan & Johnson, 1997; Deil-Amen, 2011; Kuh, 2001; Kuh & Love, 2000; Pascarella & Terezini, 1980, 1983, 1991, 2005; Reid, 2013; Stage, 1989; Swail, 2004; Tinto, 1975, 1993, 2006). However, some researchers have examined one of the two components independently, typically academic integration in relation to student retention and persistence, and found a positive relationship between academic integration and student retention and persistence (Baker, Caison, & Meade, 2007; Barnhart, 2011; Clark,

Middleton, Nguyen, & Zwick, 2014; Mckenzie & Schweitzer, 2001; Prospero & Vohra-Gupta, 2007; Rienties et al., 2012). In contrast, the research investigating the relationship between social integration and student retention and persistence is inconsistent in its findings. In fact, many educational researchers have experienced difficulty in identifying the importance and significance of social integration in relation to student persistence and retention (Bean & Metzner, 1985; Deil-Amen, 2011; Goldstein, Sauer, & O'Donnell, 2012; Mannan, 2007; Rienties et al., 2012; Zepke & Leach, 2010).

The components of the student integration construct include both academic integration and social integration, which operate individually and collectively. However, the existing research suggests that academic integration and social integration shape student retention and persistence in different ways for different student populations (Braxton, Hirschy & McClendon, 2004; Tinto, 1998). Some researchers have suggested that the effect of social integration on student persistence might vary based on student characteristics such as race/ethnicity, socioeconomic status, and family education background (Davidson & Wilson, 2013; Guiffrida, 2006; Karp, Hughes, & O'Gara, 2010; Kraemer, 1997; Nishimoto & Hagedorn, 2003; Pascarella & Terenzini, 1998; Rienties et al, 2012; Tierney, 1992, 1999; Wolf-Wendel, Ward, & Kinizie, 2009). It is relevant to note that many studies of social integration, and for that matter academic integration, have tended to aggregate student populations. While this aggregation of different student populations is not perceived to have limited the findings about the influence of academic integration, it has been proposed that it may well make a difference in the findings about the influence of social integration, perhaps explaining why the findings to date have been inconsistent (Braxton et al., 2004; Guiffrida, 2006; Tierney, 1999; Tinto, 1975).

Researchers that have explored the social integration of non-traditional students have argued the need to continue research on underrepresented student populations in the application of the student integration construct (Karp, Hughes, & O'Gara, 2010; Kraemer, 1997; Pascarella & Terenzini, 1998; Tierney, 1999). Within the current literature, research implications encourage educators to continue the analysis of the social integration process for African American and Latinx students in particular (Braxton et al., 2004; Jackson, 2014; Jacobs & Archie, 2008, Kraemer, 1997). Further, studies call for the expansion of research on how social integration is achieved while controlling for background characteristics such as race, gender, and socioeconomic status, in terms of how these characteristics shape educational commitment, institutional commitment, academic integration, and most importantly, social integration (Braxton et al., 2004; Jackson, 2014; Karp, Hughes, & O'Gara, 2010; Kraemer, 1997; Rienties et al, 2012; Tierney, 1992; Tinto, 1975; Wolf-Wendel et al., 2009).

There is a limited amount of educational research focused on social integration, but an even smaller amount of literature that analyzes the social integration of underrepresented students. As a result, there is a gap in the literature exploring the relationship between social integration and African American and Latinx student populations, as well as the significance of social integration independent of academic integration.

Statement of the Problem

Although the importance of graduating from college is increasing, the graduation rates for African American and Latinx college students continue to be lower than their peers. While many in the field have used student integration constructs to inform their research-based strategies, inconsistent findings about social integration have left the field with a lack of confidence about the relationship between social integration and particular populations. While

several different factors come into play with the persistence and retention of African American and Latinx students, little is known specifically about the social integration of these students. Additional research on social integration and African American and Latinx students might allow for considering new and more effective strategies for better serving these underrepresented student groups (Karp, Hughes, & O'Gara, 2010; Kraemer, 1997; Rienties et al, 2012; Tierney, 1992; Wolf-Wendel et al., 2009).

Purpose of the Study

The purpose of this study is to explore the relationships between student background characteristics and social integration, and the ability to predict student retention to graduation based on student social integration.

Research Questions

The study will be guided by the following research questions:

1. Is there a significant difference in the scaled measurement of social integration of first-year and senior level students?

2. Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts?

3. Does social integration predict graduation among African American and Latinx students?

Significance of the Study

Our understanding of the impact of social integration on African American and Latinx student populations is limited. The current study has significance for both research and practice. This study broadens the knowledge base within educational research on social integration and persistence within higher education by identifying the relationship between social integration and

graduation, as well as the strength of this relationship based on race and ethnicity. This study will also confirm or refute the belief advanced in the literature that social integration may affect specific populations differently than the student population in general. The results of this study will hopefully provide clues to whether social integration may help or limit students.

Results of the study may help practitioners determine if common strategies that are currently being used with these populations are more or less likely to be effective, or need to be replaced with new or different strategies. The findings of the study could serve as the basis for interventions that could increase the retention and persistence rates for these populations. This study will also provide findings to inform both innovative and traditional practices that might better serve the African American and Latinx student populations on campuses across the country.

Definitions of Key Terms

Predominantly White Institution (PWI) is defined as any institutions of higher learning in which the Caucasian student population accounts for 50% or greater of the enrolled student population (Brown & Dancy, 2010).

African American: Individuals who self-identify as Black or African American.

Latinx: Individuals who self-identify as Hispanic or Latino.

Retention to Graduation: is defined as the active enrollment of a student in college and remains enrolled until degree completion.

Graduate: "a former student who has completed a prescribed course of study in a college or university" (Hagedorn, 2005, pp. 6).

Dropout: is defined as individuals who leave college prior to graduation or program completion (Hagedorn, 2005).

Retention: is defined as the institution's ability to retain students from one year to the next (Astin, 1975).

Organization of the Study

This study is organized into five chapters. The first chapter contains an argument for the need for the study, the purpose of the study, and speaks to the significance of the study. It also details the limitations of the study and provides definitions relative to the study. The second chapter provides a critical review of the existing research on integration and retention in terms of race and ethnicity, the retention of African American and Latinx students, and social integration. The third chapter describes the methodology and procedures to be used in the conduct of the study.

CHAPTER 2

Review of the Literature

This chapter provides a critical review of the literature and research regarding the social integration and retention of African American and Latinx students. The first section is a review of what we know about student retention and graduation in general, disaggregated by race/ethnicity. The second section provides a critical examination of the existing research and literature on the Theory of Student Departure (Student Integration Theory), including an overview of both academic and social integration. The third and final section provides a summary of the existing research about social integration, including the social integration of African American and Latinx student populations.

Retention

Although college enrollment has risen, the widening of the educational attainment gap by race/ethnicity has prevailed as a persistent issue in American Higher Education. In 2016, 46% of high school graduates immediately enrolled in college (McFarland et al., 2017). Disaggregated by race and ethnicity, the immediate college enrollment rate was 91.9% for Asian students, 69.7% for Caucasian students, 72% for Latinx students, and 57.3% for African American students (McFarland et al., 2018). While 46% of the 2016 high school graduates immediately enrolled in a four-year college or university in Fall 2016, only 73.9% of the Fall 2016 freshmen were retained through Fall 2017 (McFarland et al., 2018; National Student Clearinghouse Research Center, 2018). Broken down by race, 85.3% of Asian students, 78.6% of Caucasian students, 70.7% of Latinx students, and 67% of African American students were retained through the 2016-2017 academic year and returned Fall 2017 (National Student Clearinghouse Research Center, 2018). After students are retained their first year of college an even lower percentage

were retained till graduation. The total 4-year graduation rate for the 2010 college cohort was 40.6%, while the 5-year graduation rate was 55.8%, and the 6-year graduation rate was 59.8% (Snyder, de Brey, & Dillow, 2019). The four-year graduation rate disaggregated by race/ethnicity was reported with Caucasian students at 45.2%, Asian students at 50%, African American students at 21.4%, and Latinx students at a 31.7% graduation rate (McFarland et al., 2017). The five-year graduation rate for Asian students was 68%, Caucasian students 60.3%, African American students 35%, and Latinx students 48.8% (McFarland et al., 2017). The six-year graduation rate was 73.6% for Asian students, 63.9% for Caucasian students, 39.7% for African American students, and 54.4% for Latinx students (McFarland et al., 2017). Both freshmen to sophomore year retention rates as well as college graduation rates for African American and Latinx students were consistently lower than their Asian and Caucasian peers. These statistics serve as evidence that improving the retention and graduation of all student populations has not been accomplished, and the educational attainment disparities between Asian American, Caucasian, African American and Latinx students in higher education continue to be pervasive (Baker & Robnett, 2012; Brock, 2010; Camara, 2003; Fischer, 2007; Lotkowski, Robbins, & Noeth, 2004; Morley, 2003; Zarate & Burciaga, 2010; Zhan & Sherraden, 2011).

During the last 40 years concerns about the retention and graduation of African American and Latinx students increased as the educational attainment gap grew (Fischer, 2007; Morley, 2003; Museus & Quaye, 2009; Zarate & Burciaga, 2010; Zhan & Sherraden, 2011). Although African American students account for 12% and Latinx students account for 18% of the student population at four-year public institutions, only 45.9% of African American students and 54.9% Latinx students at four-year public institutions graduate within six years (McFarland et al., 2018; National Student Clearinghouse Research Center, 2018). Educational retention research and

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literature suggests several factors contribute to these ever-present disparities. Some of these

factors include inadequate familial support, limited financial resources, inadequate knowledge of

financial assistance, low self-esteem, inadequate academic preparation, feelings of isolation

within the campus community, and low social expectations for attending and graduating (Allen,

1992; Baber, 2012; Bonner & Bailey, 2006; Cabrera, Nora, Terenzini, Pascarella & Hagedorn,

1999; Fischer, 2007; Guiffrida, 2005; Guiffrida & Douthit, 2010; Holmes, Ebbers, Robinson, &

Mugenda, 2000; Hunn, 2014; Leonard, Pearcy, Shehab, & Walden, 2013; Lotkwoski et al., 2004;

Thomas, Wolters, Horn, & Kennedy, 2014). Culturally specific factors have also been identified

as contributing to the disparity in attainment. African American and Latinx students have

identified experiences with discrimination, feelings of isolation, and a lack of opportunities for

integration as obstacles to their retention (Allen, 1992; Baber, 2012; Bonner & Bailey, 2006;

Cabrera et al., 1999; Fischer, 2007; Guiffrida & Douthit, 2010; Guiffrida, 2005; Holmers et al.,

2000; Hunn, 2014; Leonard, et al., 2013; Lotkwoski et al., 2004; Thomas et al., 2014). While

many of the issues African American and Latinx student populations face are similar, there are

some factors that shape student retention that differ.

African American Student Retention. It has been noted in the research that issues

centered around academic preparation, financial resources, and integration strongly influence the

performance, success, retention, and graduation of African American students (Aud et al., 2013;

Fischer, 2007; Guiffrida, 2003, 2005; Guiffrida & Douthit, 2010; Hausmann, Schofield, &

Woods, 2007; Herndon & Hirt, 2004; Hunn, 2014; Leonard et al., 2013; Nelson Laird, Bridges,

Morelon-Quainoo, Williams, & Holmes, 2007). African American students were found to be

less likely than their peers to take advanced STEM courses, advance placement tests, and

advanced foreign language classes in high school (Aud et al., 2013). African American students

who pursued a postsecondary education were often not as prepared academically as their Caucasian peers, adding to the struggle of attaining academic success in college (Guiffrida & Douthit, 2010; Nelson Laird, Bridges, Morelon-Quainoo, Williams, & Holmes, 2007). One of the factors that contributes to the lack of academic preparation and access to educational resources for the African American student population is income (Bowen, Chingos, & McPherson, 2009; Calahan, Perna, Yamashita, Ruiz, & Franklin, 2019; Duncan & Murnane, 2014; Fountain, 2019). The income gap continues to shape student retention in higher education as well (Bowen, Chingos, & McPherson, 2009). The African American undergraduate student population had the highest percentage of students with a family income 200% below the poverty line at 70%, and the highest average cumulative loan amount borrowed of any racial/ethnic group (Calahan, Perna, Yamashita, Ruiz, & Franklin, 2019; Fountain, 2019).

Latinx Student Retention. While there are a multitude of factors that hinder the retention of Latinx students, family relationships and financial background were two consistent factors found in the literature that hinder the retention of Latinx students. Latinx students were more likely than their African American peers to have off campus familial responsibilities. The challenge of managing familial relationships and obligations along with managing a full academic schedule and financial stressors has been found to cause many Latinx students to struggle and persist at lower levels than their peers (Arana, Castaneda-Sound, Blanchard & Aguilar, 2011; Hernandez, 2000; Nelson Laird et al., 2004). The influence of family negatively impacts the educational experience and levels of persistence for Latinx students, establishing a separation from home is essential to increase the likelihood of success for Latinx students (Arbona & Nora, 2007; Hernandez, 2000; Nelson Laird et al., 2004; Tinto, 1975, 1993). Financially, Latinx students are at a large disadvantage in terms of being able to afford college

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(Hernandez & Lopez, 2004). Latinx students are less likely to be born into a family with an income higher than $80,000, less likely to be born in the U.S., and thus limited in the amount of financial assistance they are eligible to receive compared to their peers (Baker & Robnett, 2012; Leonard et al., 2013; Mahaffy & Pantoja, 2012; Nunez & Dobgbin, 2012; Oseguera, Desone & Hurtado, 2009).

Student Integration

As greater interest and concern developed in relation to issues of student retention, various explanations emerged attempting to explain and rationalize the phenomenon. Among these is Tinto's (1975, 1993) foundational retention framework, Theory of Student Departure. Tinto (1975, 1993) posited that student persistence is directly related to student integration into the academic and social systems of the institution. Tinto's Theory of Student Departure is grounded in Van Gennep's (1960) Rites of Passage and Durkeim's (1961) study of suicide. Van Gennep (1960) introduced the rites of passage as stages of separation, transition, and incorporation. Tinto (1975, 1993) applied Gennep's (1960) stages to the college student experience. The separation stage involved the disassociation of individuals from one's family, high school, and community. The transition stage occurred when the student begins to interact in new ways with their new peer group and others associated with their new campus environment. The incorporation stage involved the development of new patterns of interaction through personal contact with peers and establishing of membership within peer groups as a participating member. Tinto acknowledged that the manner in which students experience the stages vary considerably.

Tinto (1975, 1993) also adopted Durkeim's (1961) notion of ecological suicide, which posited that suicide was more likely to occur in individuals who are not integrated into the fabric

of society. In a similar fashion, Tinto's Theory of Student Departure hypothesized that a lack of integration into institutions of higher education (both the academic and social systems) was related to college retention and graduation.

Tinto (1975, 1993) defined academic integration as meeting the standard of the academic system (often evaluated through grade performance) and intellectual development (students' identification and analysis of the norms of the academic system). Academic integration is achieved through academic performance and interactions with faculty and staff in the classroom whose purpose is educating the students. Integrating into the academic system can also be achieved informally through connections with faculty and staff outside the classroom, introduction to different types of academic topics, innovative applications of materials, and collaborative learning opportunities. Tinto posited that academic integration positively influences students' commitment to learning and college completion. Classroom involvement and student-faculty contact in particular has been found to have a significant effect on student retention. Meaningful classroom involvement and contact with faculty within and outside the classroom has been found to lead to a larger academic investment from students and increased rates of retention (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Tinto, 2010). A larger academic investment usually translates to increased amounts of time dedicated to studying, which aids in students' ability to succeed in the classroom. Student-to-faculty interaction increases the overall educational success of students (Tinto, 2010).

Tinto (1975, 1993) defined social integration as assimilation into the social system which occurs primarily through student involvement and participation in peer student organizations, campus extracurricular activities, and interactions with faculty, staff, and administrators. Socially, students who are isolated and lonely are more likely to drop out of college (Astin, 1975,

1999; Tinto, 1993, 2010). Higher levels of social integration, no less academic integration, are hypothesized to result in greater levels of commitment to the institution and increased retention and graduation rates (Astin, 1999; Braxton, Hirschy, & McClendon, 2004; Deil-Amen, 2011; Mallette & Cabrera, 1991; Nora, 1987; Pascarella, 1985; Pascarella & Terenzini, 1980, 1991, 2005; Rendon, 1994; Tinto, 1975, 1993, 2006).

There are many different ways both academic and social integration are perceived to influence retention and graduation (Tinto, 2006). Although academic and social interactions are defined differently, they also influence each other (i.e. peer to peer interaction and academically oriented clubs and student groups) (Astin, 1993; Fischer, 2007; Goldstein, Sauer & O'Donnell, 2012; Herndon & Hirt, 2004; Pascarella & Terenzini, 1991; Tinto, 1975, 1993, 2006). At the same time, Tinto posited that a strong commitment to completing college, even with minimal levels of academic and social integration, would lead to higher levels of student persistence. As the students' level of commitment to the goal of college completion declined, the more likely the students were to voluntarily withdrawn from college (Astin, 1999; Cabrera, Castaneda, Nora, & Hengstler, 1992; Cabrera, Nora, & Castaneda, 1993; Deil-Amen, 2011; Morris, 2002; Pascarella, 1985; Pascarella & Terezini, 1983; Terenzini, Pascarella, Theophillides, & Lorang, 1985; Tinto 1975, 1993).

Libby (2006) studied first-year academic and social integration in relation to retention. This study specifically explored the academic and social integration of first-year students at both four-year and two-year public higher education institutions, and the relation to one-year and six-year retention rates. This study incorporated the 9,100 first-time student sample from the 1996-2001 Beginning Postsecondary Students Longitudinal Study (BPS:1996/2001) sponsored by the National Center for Education Statistics. Libby (2006) found that academic and social

integration was higher for students at four-year institutions compared to students at two-year institutions. Academic and social integration also impacted both one-year and six-year retention rates. Higher levels of both academic and social integration were found in students who were retained after both the one and six year time periods.

Goldstein, Sauer and O'Donnell (2012) looked into students' willingness to engage and how that shaped integration into both the academic and social systems of an institution. This study surveyed 65 second-year business majors enrolled in an introductory accounting class. They found students' willingness to engage and seek help positively shaped academic and social integration. This study's results support Tinto's theory that academic and social integration to have a positive effect on intent to persist. Faculty increase the level of academic integration and improving student retention. Students seeking help from their peers had a positive effect on both academic and social integration, which in turn has a positive effect on retention and persistence.

Shinde (2010) selected a southeastern public university to analyze the relationship between engagement and retention of college freshmen and differences in gender. The study sample consisted of 308 freshmen students (45% male and 55% female) who completed the 2006 National Survey of Student Engagement (NSSE). The results of this study identified Social Engagement and Overall Satisfaction as significant predictors of freshmen retention. Social engagement was more significant in predicting first-year student retention than overall satisfaction. In this study, social engagement had a significant effect on grades and retention. Students involved in co-curricular activities were more likely to be retained into their second year. Retention predictors varied based on students' gender. Social engagement was most significant in predicting retention for male students. Social engagement, overall satisfaction, and faculty accessibility were significant retention predictors for female students.

Cox (2013) explored various indicators that predicted student success for non-traditional transfer students, in accordance with Tinto's theory (1975, 1993). This quantitative study analyzed the relationships between student demographics, student engagement, and student retention. The sample for this study was 317 non-traditional transfer students who participated in the 2010 National Survey of Student Engagement (NSSE) at a small liberal arts university in the southeastern region of the United States. This study found that Caucasian students were more likely to be retained than their peers of any other race/ethnicity. Male students were more likely to be retained than their female peers. Specific behaviors like asking questions in class also increased the odds of student retention. Students that were academically and socially integrated were more likely to be successful and thus positively shaped retention and graduation rates.

Stage (1989) evaluated the effects of academic and social integration on goal and institutional commitment. This study utilized a survey design (administered in Fall 1984 and Spring 1985) to examine 313 students' academic and social integration along with freshmen year attrition at a major public university in the southwest region of the United States. Stage (1989) overall finding revealed that both academic and social integration varied based on gender and race/ethnicity. Male students who were academically integrated were also more likely to be socially integrated. Higher levels of social integration increased the likelihood of academic integration and success for female students. Overall underrepresented student populations had lower academic integration scores, while underrepresented male students were more likely to be socially integrated.

These studies like many others supported Tinto's Theory of Student Departure, while pointing out specific differences in the academic and social integration of students based on their

gender, race/ethnicity, and campus involvement. While academic integration and social

integration have a positive relationship with retention the levels of integration achieved varied

based on gender and race/ethnicity.

Critics of Tinto's (1975) Theory of Student Departure argue that the traditional definition

of integration called for students to remove themselves from social connections of the past and

focus on establishing new connections on campus. Many researchers argue that this philosophy

is not inclusive of the customs and values of many underrepresented student populations

(Davidson & Wilson, 2013; Glen, 2017; Guiffrida, 2005, 2006; Kuh & Love, 2000; Moore &

Upcraft, 1990; Rendon, Jalomo, & Nora, 2000; Swail, Redd, & Perna, 2003; Tierney, 1999).

Tierney (1999) argued the importance of having the ability to affirm who you are, and the

backgrounds you come from for underrepresented student populations. Guiffrida (2006) rejects

the notion of separation from culturally supportive communities and networks for

underrepresented student populations. In the rejection of cultural separation, researchers

challenged the exclusionary definition of integration, which was synonymous with the process of

assimilation (Glen, 2017; Guiffrida, 2006). Guiffrida (2006) argued that the term connection

recognizes the students' sense of kinship without suggesting assimilation to a new place, while

breaking away from former communities of support. Embracing the foundations of Tinto's

(1975, 1993) Theory of Student Departure while incorporating students' cultural identity will

lead to larger investments in the education of underrepresented student populations and an

increased amount of educational success (Guiffrida, 2006; Tierney, 1999).

Social Integration

Educational theorist Vincent Tinto (1975, 1993) defined social integration as the

interactions between a person and the social system of an institution. Kraemer (1997) defined

social integration as the informal interactions between students and faculty, students and staff, and among student peers. Braxton, Hirschy, and McClendon (2004) supported both definitions and defined social integration as the amount of congruence between each individual student and the college or university's social system. Although there are many different definitions of social integration, each definition ascribes to the common theme of a relationship between an individual and an institution's social system. Social integration is fostered primarily through informal peer group interactions, semi-formal extracurricular activities, and interactions with faculty and administrators (Braxton et al., 2004; Tinto, 1975, 1993). Examples of successful social integration include, but are not limited to, friendship support, faculty support, and sense of belonging within the community on campus (Braxton et al., 2004). A review of the literature indicated that the manner in which social integration is attained varies based on many different factors, including student background characteristics, institutional size, and institutional type (Chapman & Pascarella, 1983; Davidson & Wilson, 2013; Tierney, 1999).

There are several benefits realized when students are socially integrated. The literature suggests that social integration influences the level of institutional commitment of students, the likelihood of retention, student satisfaction, and students' sense of belonging (Braxton et al., 2004; Kraemer, 1997; Kuh et al., 2008; Strayhorn, 2010, 2012; Tinto 1975, 1993, 2006). According to Braxton, Sullivan, and Johnson (1997) and Tinto (1975, 1993), higher levels of social integration were positively related to institutional commitment. Further, students' perception of social interactions and social fit are likely to determine the student's social integration and predict the likelihood of student retention (Tinto, 1975, 1993). It is surmised that social integration also influences student satisfaction and sense of belonging (Braxton, Hirschy, Yorke, & Longden, 2004; Hausmann, Schofield, & Woods, 2007; Strayhorn, 2012). Higher

levels of student satisfaction with the affordability of attending college and participating in campus events, result in a higher degree of social integration for students (Braxton et al., 2004). Low amounts of socialization and social integration can lead to low levels of student satisfaction, which increases the likelihood of college attrition (Braxton, Hirschy, Yorke, & Longden, 2004). Sense of belonging, students' perceived social support on campus, feelings of connectedness to others, or feelings of personal importance to others, was reported to be positively associated with social integration, and negatively associated with academic integration (Hausmann et al., 2007; Strayhorn, 2012).

Wilcox, Winn, & Fyvie Gauld (2005) completed a qualitative study that explored the effects of social integration and social development on student retention and/or departure. The study participants included 34 first-year students from the Applied Social Science Program at University of Brighton. The results of this study identified social integration as the more important type of integration in a student's first year. In this particular study, social integration was fostered through informal interactions with staff and faculty, building a network with neighboring students from campus residential communities, and having access to living arrangements that encourage participation in opportunities for social integration.

Severiens and Schmidt (2009) completed a study on academic and social integration in the Netherlands. The purpose of this study was to examine the relationship between a participation in problem based learning (PBL) and the academic and social integration, and program progress. The researchers used a random sample of 305 first-year students from three different psychology curriculum programs at three different institutions. The first program was a PBL where small group activities were utilized to work through the curriculum. The second program utilization a combination of teaching methods as well as group work. The third

program was solely lecture based. This study found that PBL participants had higher levels of academic and social integration. They found a significant relationship between social integration, academic progress, and academic success. Students who experienced formal social integration were more likely to perform better academically, also increasing their progress in the program. While both academic and social integration were examined, the significance of social integration continued to provide evidence that social integration plays a primary role during a student's first year.

The importance of social integration is not only prevalent for first-year students. Chambers (2009) conducted a study to examine the potential role of student engagement on student persistence. This study included 362 students who participated in the Spring 2007 National Survey of Student Engagement (NSSE) at Mountain West Research University. This study found that students who were highly engaged at the end of their first year were more likely to persist to at least their third year. While temporary and long-term persistence is positively shaped by engagement, students who were socially integrated and developed a strong sense of belonging were more likely to be long-term persisters.

While the literature denotes the importance of social integration, some researchers caution against excessive amounts of social integration. Social integration is more complex than academic integration for high levels of social integration can both increase and weaken the likelihood of student persistence (Mannan, 2007; Tinto, 1975, 1993; Zepke & Leach, 2010). Rienties et al. (2012) explored the difference between the academic and social integration of the domestic Dutch student population compared to the international student population. The study sample included 958 respondents (288 Dutch students and 670 International students) to the Student Adaption to College Questionnaire and Social Integration Questionnaire. Rienties et al.

(2012) found both academic and social integration were influenced by student demographics and shaped academic performance. Academic performance was positively associated with academic integration. Students who were heavily involved were less focused on their studies and had lower academic performance. The results of this study contradicted Tinto's theory and found that social integration negatively affected students' academic performance. Students less involved were more likely to perform higher academically. Excessive amounts of social integration distracted the students away from their academic integration, and instead lead them to poor academic performance (Mannan, 2007; Tinto, 1975, 1993; Zepke & Leach, 2010).

African American and Latinx Social Integration

As shown in a prior section, many theorists have defined what social integration means for the overall student body, but these studies failed to examine or highlight the complexities of social integration for African American and Latinx students. The relationship between social integration on campus and persistence of African American and Latinx students has been found to be more complex than simply displaying school spirit and being involved on campus (Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011; Cerna, Pérez, & Sáenz, 2009; Guiffrida, 2006; Hurtado & Carter, 1997; McFeeters, 2012; Tierney, 1999). Granted the social integration process is more difficult for students of color, the social integration process is especially difficult and complex for students of color at Predominantly White Institutions (PWIs) (Gonzalez, 2002; McFeeters, 2012; Strayhorn, 2010, 2012). Students of color commonly encounter difficulties with social integration in college due to cultural differences (Guiffrida, 2006; McFeeters, 2012; Strayhorn, 2008, 2012; Tierney, 1999). Hurtado and Carter (1997) suggested that students of color who grew up in communities that lacked ethnic diversity experienced significant stress from their newfound minority status. Some of the social factors that continue to hinder the

success of African American and Latinx students include feelings of isolation; familial

obligations; marginalization; and self-defeating stereotypes (Castellanos & Jones, 2003; Jacobs

& Archie, 2008; Ortiz, 2004; Strayhorn, 2012).

Johnson et al. (2007) examined the factors that shaped and predicted sense of belonging

among first-year undergraduates from different racial/ethnic groups. This study looked at 2,967

first year students from the 2004 National Study of Living-Learning Programs (34 universities

from 24 states). While a strong sense of belonging is promoted through a successful social

integration into college, this study found that African American, Asian, and Latinx students have

less of a sense of belonging than their Caucasian peers. This study also found living on campus

in residence halls provided social support and inclusivity, which increased students sense of

belonging. Interactions with diverse peers was a driving force in the development of the sense of

belonging for Latinx students, unlike any other racial/ethnic student population.

Baker (2008) examined the effects of involvement in different extracurricular activities

and their impact on student academic performance for African American and Latinx students.

This study utilized data gathered from the National Longitudinal Survey of Freshmen. The

sample used for this study was comprised of 1,907 students (991 African American students and

916 Latinx students) from 27 different selective colleges and universities. The researcher

examined the relationship between active participation in opportunities for social integration and

academic performance. The study found that the effects of involvement in student organizations

on academic performance varied based on the type of organization and the student population.

Political student organizations were ranked the most beneficial for students with a positive

influence on academic performance for African American males and the Latinx student

population. No significant influence was found on academic performance for the African

American female student population that participated in political student organizations. Art-based student organizations had a positive effect on academic performance for the African American student population, and no effect for the Latinx student population. Involvement in athletic student organizations had a negative effect on the academic performance for the Latinx student population, and no effect on for the African American student population. Involvement in either religious student organizations or minority-based student organizations had no effect on academic performance for all groups except the Latina student population. Minority-based student organizations had a negative effect on academic performance for the Latina student population. Involvement in Greek-letter student organizations had a negative impact on academic performance for all student populations. This study reveals how social integration effects academic performance and academic integration differently for the African American and Latinx communities.

Grier-Reed, Arcinue, and Inman (2016) sought to explore if involvement in a specialized program called the African American Student Network (AFAM) increased retention compared to African American students who did not participate. AFAM is a culturally responsive retention program designed to meet the socioemotional needs of African American students at a Predominantly White Institution (PWI) in the Midwest region of the United States. The study compared 147 AFAM students (91 females and 56 males) and 104 non-AFAM African American students from the Fall 2005 cohort of students. Overall the study found that AFAM student retention was significantly higher than the retention of non-AFAM students. On average AFAM students were retained one semester longer than their peers.

Guiffrida (2003) examined the effects of participation in an African American student organization in facilitating social integration at a Predominantly White Institution (PWI). This

study had a total of 88 African American students from a PWI in the northeastern region of the United States. Through focus group interviews and a round of individual interviews this study found that African American student organizations facilitated the social integration of African American students through providing opportunities to connect with faculty, give back to the African American community, and social interactions and connections with peers that identified racially similar.

Nunez (2009) examined factors that shaped the sense of belonging for Latinx students in college. The participants included 4,403 first year students enrolled in the 2000-2001 academic year, across nine different four-year public research universities. Information about study participants was gathered using the Diverse Democratic Project Study. Nunez's (2009) study found that "increasing positive cross-racial interactions, taking a diversity curriculum, engagement in community service, and class participation were positively associated with an increased sense of belonging" (p. 42), but also found that these actions were attributed to what students described as a hostile climate. Faculty investment in the student's development (often associated with academic integration) had a strong and positive effect on sense of belonging. Latino students who experienced a hostile campus environment were more likely to have a decreased sense of belonging.

The educational achievement gap continues to grow for African American and Latinx student populations and serves as a challenge in American higher education. While student integration and engagement are an ever-present topic in higher education retention research, it is important to provide more research exploring the unique factors that shape and/or hinder the integration of African American and Latinx students, and studies that focus solely on social integration of students. Although the research denotes what has been observed in terms of

student integration, the research tends to aggregate academic and social integration. There are far fewer studies that look at student social integration separate from academic integration, and even fewer studies that specifically explore the social integration of underrepresented student populations. This study will broaden the knowledge base within educational research on social integration and retention within higher education, as well as the strength of this relationship based on race/ethnicity.

This literature review has detailed the foundations of student integration, identified supporting studies and critics of the framework, as well as highlighting studies that specifically looked at academic and social integration together. Each study indicated the overarching importance of social integration for student persistence and retention. Understanding social integration for the African American and Latinx student populations is essential to increasing student retention, and closing the educational achievement gap. The purpose of this study is to explore the relationship between student background characteristics, social integration, and student retention.

CHAPTER 3

Methods and Procedures

This study sought to explore the relationships between student background characteristics and social integration, and the ability to predict student graduation based on student social integration. The following research questions framed the conduct of the study:

1. Is there a significant difference in the scaled measurement of social integration of first-year and senior level students?

2. Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts?

3. Does social integration predict graduation among African American and Latinx students?

Chapter Three details the methods and procedures utilized in the conduct of this study. The chapter includes discussions of the research design, site and population used for the study, the sources of data used, the procedures followed in collecting and analyzing the data, and the limitations and delimitations of the study.

Research Design

The research questions were answered using a non-experimental quantitative research design that explored existing data from a national data set, the National Survey of Student Engagement (NSSE), and institutional retention data from South-Eastern State University (pseudonym). A quantitative research design examines the relationship between variables (Creswell, 2014). Given the purpose of the study, the research design selected was the logical choice and allowed for answering the research questions using a relatively large sample of students.

Site and Population

The site of the study was South-Eastern State University (pseudonym). This university is a public, research one institution serving approximately 22,000 undergraduate students. As a Predominantly White Institution (PWI), the demographics of the university include a small population of underrepresented students, similar to student populations at other PWIs across the country. The South-Eastern State University undergraduate student population consists of approximately 78% Caucasian students, 6.5% African American students, 4% Latinx students, 4% Asian/Pacific Islander students, and 0.2% of American Indian students. In 2010-2011 academic year, South-Eastern State University served 5,437 first-year students and 6,369 senior-level students. South-Eastern State University is comprised of 11 colleges and provides approximately 900 programs of study. In 2011, South-Eastern State University 4-year graduation rates were 22.2% for American Indian students, 45.3% for Asian students, 34.3% for Black/ African American students, 36.4% for Latinx students, and 47.4% for Caucasian students. The 6-year graduation rates in 2011 were 33.3% for American Indian students, 76.1% for Asian students, 58.5% for Black/African American students, 66.1% for Latinx students, and 72% for Caucasian students.

The population for this study were all the undergraduate freshmen and senior students who completed the 2011 National Survey of Student Engagement (NSSE) at South-Eastern State University. Table 3.1 provides the count and percentage breakdown by gender and race/ethnicity of the student population that completed the NSSE compared to their peer population that did not complete the NSSE.

Data Sources

Two sources of data were used. South-Eastern State University agreed to provide both

Table 3.1

Race and Ethnicity Percentage of 2011 NSSE Respondents and Peer Population

	First Year Students				Senior Level Students			
	Respondents		Peer Population		Respondents		Peer Population	
Gender	Count	%	Count	%	Count	%	Count	%
Female	388	65%	2589	48%	520	55%	3009	47%
Male	213	35%	2848	52%	429	45%	3360	53%
Race/Ethnicity								
American Indian	3	1%	96	2%	96	9%	41	1%
Asian	34	6%	197	4%	24	2%	191	3%
Black/African American	36	6%	511	10%	26	2%	431	7%
Hispanic/Latinx	11	2%	154	3%	22	2%	122	2%
Caucasian	474	79%	4359	81%	798	77%	5459	87%
Unknown	30	5%	57	1%	59	6%	56	1%

sources of data used in this study. The source of data relative to social integration was obtained

from the 2011 National Survey of Student Engagement (NSSE). Institutional data, including

student graduation and demographic information, was supplied by South-Eastern State

University.

       Social Integration Data. The first source of data, social integration data, was derived

from the National Survey of Student Engagement (NSSE), a national survey distributed to first

year and senior-level undergraduate students at participating 4-year institutions. Originally

developed as a joint effort between the Indiana University Center of Post-Secondary Research

(IUCPR) and the National Center for Higher Education Management Systems (NCHEMS) in

2000, NSSE was designed to measure student engagement through identifying, analyzing, and

comparing the time and energy undergraduate students spend participating in institutional

programs and extracurricular activities that promote student learning and development (Kuh,

2009). The data collected from the NSSE focused on the measurement of academic and social

engagement of students within institutions of higher education (Kuh, 2009).

       The NSSE is comprised of 40 questions. These questions are thematically categorized

into five benchmarks, Level of Academic Challenge, Active and Collaborative Learning,

Student-Faculty Interaction, Enriching Educational Experiences, and Supportive Campus

Environment. The Level of Academic Challenge (AC) benchmark includes ten questions that

assess the participants' perception of assigned academic work, the complexity of assigned tasks,

and the standards used to measure student performance (Kuh, 2009). The Active and

Collaborative Learning (ACL) benchmark is comprised of seven questions centered around

identifying participants actively involved in their education through applied learning activities

and opportunities to collaborate with others in learning and mastering difficult material. The

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Student-Faculty Interactions (SFI) benchmark incorporates six questions that measure the types of interactions students have with faculty both within and outside of the classroom. The Enriching Educational Experiences (EEE) benchmark uses eleven questions to capture activities for learning within and outside the classroom to assist students in "synthesizing, integrating, and applying their knowledge" (Kuh, 2009). The Supportive Campus Environment (SCE) benchmark utilizes six questions to measure institutional commitment to student success, and the development of working and social relationship on campus.

This study utilized specific questions within the Supportive Campus Environment (SCE) and Enriching Educational Experiences (EEE) benchmarks to measure the social integration of NSSE participants. The five SCE questions utilized focus on social relationships the participants forged with faculty, staff, and peers as defined by Tinto (1975, 1993). The researcher used eight questions from the EEE benchmark were selected to measure the students' integration outside of the classroom as highlighted in the social integration research (Braxton et al., 2004; Tinto, 1975, 1993; Wilcox et al. 2005). Appendix A contains all the questions the researcher used to measure the social integration of all participants.

Institutional Data: Retention to Graduation. South-Eastern State University maintains institutional retention records for each student documenting their retention to graduation. In this study, the researcher used the institutional retention data from South-Eastern State University to determine each participants' graduation status. South-Eastern State University provided the researcher with institutional retention data for all the 2011 NSSE participants.

Institutional Data: Student demographics. Student demographic data related to race/ethnicity, gender, nationality, class level, transfer status, enrollment status, residential status, and parents' highest level of education were provided by South-Eastern State University. These

demographic variables were intentionally selected and often highlighted within educational

research as factors that shape student retention (Carter, 2006; Crede & Borrego, 2014; Duggan &

Pickering, 2008; Huhn, 2006; Ishitani, 2006; Kozeracki, 2001; Rienties et al., 2012; Schudde,

2006). The race/ethnicity and gender variables provided traditional demographic information

about the participants. The nationality variable indicated whether or not the student was an

international student. Class level information distinguished between the first-year and senior

level participants. Transfer status denoted if the participant was a first-time student at South-

Eastern State University or if the student transferred to South-Eastern State University from

another institution. Enrollment status indicated whether the student was full-time or less than

full-time. Residential status provided a description of the participants' living arrangements.

Parents' highest level of education provided information on the highest level of education

completed by the participants' father and mother. All student demographic variables were used

to best identify and analyze predictors of graduation for the 2011 NSSE participants.

Procedures

While South-Eastern State University provided the researcher with their approval to

conduct the study, additional approval was sought from the South-Eastern State University

Institutional Review Board (IRB). Upon approval from the South-Eastern State University, a

formal request to solicit the raw data from the 2011 National Survey of Student Engagement

(social integration data), institutional retention records, and student demographic information

was submitted to South-Eastern State University. University officials explained that all student

demographic information reported on the NSSE was verified by South-Eastern State University

prior to the delivery of such data to the researcher. After access to the data was granted, each

data element was checked and/or recoded in preparation of the data for statistical analysis. As

noted by NSSE (2012), although NSSE data are ordinal in nature, it can be used as interval data and analyzed using parametric tests. Statistical Package for Social Sciences (SPSS) was used to complete the statistical and parametric analyses for this study. This software was selected to align with the formatting of the data provided by South-Eastern State University.

While NSSE provided coding for the student demographic information, all variables were thoroughly examined for errors and consistency in comparison to the values assigned in the code book. All variables were reviewed or recoded to align with the definitions this study utilized. A composite social integration score was calculated using the summation of scores from specific NSSE questions the researcher used to measure social integration.

The institutional retention data were used to create a dichotomous student grouping variable. The first group was comprised of the students who were retained to graduation, coded as '1'. The second group was comprised of student who did not complete their tenure at South-Eastern State University, coded as '0'. Appendix B provides a breakdown of the original and updated coding for all student demographic information variables used in this study.

Data Analysis. After all data coding was completed, descriptive statistics were used to measure the tendencies and variances within the sample data, and to evaluate the integrity of the data in preparation of this study's parametric testing. The Data Analysis Schema, Table 3.2, illustrates the specific parametric tests used to answer the research questions of this study. All statistical analysis tests were conducted using an alpha value of .05.

Research Question 1. An independent sample t-test was utilized to address the first research question, determining the differences between first-year and senior level student social integration. The categorical dependent variable used was class level. The class level variable was divided into two categories, first-year students and senior level students, to represent all

Table 3.2

Data Analysis Schema

Research Question	Independent Variable(s)	Dependent Variable(s)	Statistic Procedure
#1	Class Level	Social Integration	T-test
#2	Race/Ethnicity & Graduation	Social Integration	ANOVA
#3	Social Integration & Student Demographic Information	Graduation	Logistic Regression

NSSE participants. The independent variable used to answer this question was social integration. A composite score for student social integration was generated during the beginning stages of the research and was used for analysis of this question. The independent sample t-test is an inferential statistical method to analyze the difference in means of two distinct groups. For this study, the independent sample t-test analyzed the difference in the social integration mean score of the first-year student group and the senior-level student group. The assumptions that needed to be met prior to completing the t-test were the assumption of normality and homogeneity of variance. Normality indicates that the spread or distribution of the sample scores are perfectly symmetrical and the reflects a bell curve. The second assumption, Homogeneity of Variance is the assumption that all comparison groups have the same variance. If homogeneity of variance is violated it can increase the chances of making a type 1 error, the incorrect rejection of a null hypothesis.

Research Question 2. The researcher used a two-way Analysis of Variance (ANOVA) to test the differences in social integration by race/ethnicity and retention status (graduate or dropout) for both the first-year and senior level participants. The ANOVA test was selected because it would best answer the question while determining specifically which factors and interactions account for a significant proportion of variance (Cramer, 2007). The independent variables in this question were race/ethnicity and graduation. This question specifically analyzed the African American and Latinx participants captured in the race/ethnicity variable. Prior to completing the ANOVA, the assumption of normality and homogeneity of variance needed to be met. The assumption of normality was tested using the Shapiro-Wilks test to determine if the spread or distribution of the sample means are similar. Once all assumptions were met the two-

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way ANOVA was completed. The ANOVA was used to analyze how race/ethnicity interacted with graduation in response to social integration.

Research Question 3. Logistic regression was used to answer the third research question, identifying the predictability of retention to graduation based on student demographic information. The dependent variable was graduation. In this study, the dependent variable, graduation, falls into one of two categories, where $Y=0$, accounts for students who discontinued their college enrollment (dropout), and $Y=1$ for students who graduated from college (graduate). Logistic regression is specifically applicable when the dependent variable is dichotomous, as in this study (Harrell, 2001; Menard, 1995, 2010; Pampel, 2000). The independent variables, also referred to as predictors in logistic regression, are normally interval, ratio, or dummy variables (Healy, 2006; Menard, 2010). The independent variables that are used for outcome prediction may be dichotomous, categorical or continuous. Since dichotomous data are not normally distributed, all normality tests are invalid. The independent variable are the student demographic variables previously listed (race/ethnicity, gender, nationality, class level, transfer status, enrollment status, residential status, and parents' highest level of education).

Two assumptions needed to be verified before completing a logistic regression analysis, multicollinearity and goodness-of-fit (Harrell, 2001). Multicollinearity measures the shared variance or the amount of overlap between the independent variables. A smaller shared variance would allow the researcher to measure the effect of each independent variable more accurately. Collinearity makes it difficult to estimate and interpret effect sizes because the data includes relatively no information about the effect of changing one variable while holding another variable constant. Collinearity is tested through the analysis of Variance Inflation Factors (VIFs). According to O'Brien (2007), practitioners must be careful when utilizing VIFs to test

collinearity, for the misuse of this data can compromise the validity of the entire study. Goodness-of-fit evaluates how well the data selected can predict certain outcomes for the dichotomous dependent variable. The Goodness-of-fit test, Hosmer-Lemeshow test, also measures the fit of a logistical model against the data the model is analyzing based on the grouping and distribution of predicted probability (Harrell, 2001, pp. 231; Peng & So, 2002).

The results from a logistic regression depict the changes in probability of experiencing an event due to a one-unit change in the independent variable(s) (Pampel, 2000). Within this study, logistic regression will be utilized to predict the probability of student graduation in college while accounting for various independent factors, such as race, level of social integration, and other background characteristics. Logistic regression in the form of probabilities and odds expresses expression of the likelihood of an event occurring (Pampel, 2000). The odds ratio will be used to depict the likelihood of an event occurring compared to the odds of that event occurring for a reference group (Harrell, 2001). The coefficient of determination, also called Psuedo R-squared (R^2) in logistic regression, will be used to measure the proportion of variance that is explained by the independent variable(s) (Menard, 1995). Utilizing the pseudo R-squared allows for the comparison of logistic regression models with other statistical models of analysis such as linear probability, analysis of variance, and discriminant analysis when predicting the observed values (Menard, 1995).

Delimitations and Limitations

It is important to acknowledge the limitations of this study. The study is delimited to understanding social integration and retention of African American and Latinx students at a large, public, Predominantly White University (PWI) in the South. As a result, the findings of the study cannot speak to or accurately explain social integration of African American or Latinx

students at any other public, private, for-profit, small, large, or research 1 colleges or universities. While the findings of the study may be suggestive for other similar institutions, the results of this study are limited to the institution studied. Using data from the National Survey of Student Engagement (NSSE) provides a couple limitations for this study as well. One of these limitations was the age of the data. South-Eastern State University most recently only participated in the 2011, 2014, and 2017 NSSE. The 2011 NSSE data are the only year where institutional retention data are available for the participants for both 4-year and 6-year graduation rates. Another limitation for this study is the lack of customization of the instrument. Since we are using a secondary national dataset, the questions participants answered are already set and questions specifically addressing social integration or newly found methods were not incorporated into the survey. A third limitation for this study is the population sample. The cohort used for this study includes a non-paired sample of freshmen and senior students, and only examines one-year of their college tenure. A paired sample would allow for a progression analysis students' social integration. A final limitation to this study is the small sample size of the African American and Latinx students. The small size of the samples can contribute to the difficulty of identifying and measuring significant differences across populations.

Summary

This study focuses on comparing the impact of social integration and student demographic information on student graduation. This chapter reintroduced the purpose of this study and the research questions that guided this study. After the research design was detailed, the variables used as well as the methods of data collections were thoroughly detailed. The method of analysis for each other research questions was also presented. The findings of the study will be examined in Chapter 4.

CHAPTER FOUR

Findings

The purpose of this study was to explore the relationships between student background characteristics, enrollment, class level, and social integration and the ability to predict student graduation based on social integration. The study addressed the following research questions:

1. Is there a significant difference in the scaled measurement of social integration of first year and senior level students?

2. Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts?

3. Does social integration predict graduation among African American and Latinx students?

This chapter presents descriptive statistics of the participants of the study and inferential statistics' findings from the analysis conducted to answer the research questions that guided this study. The chapter begins with a demographic profile of study participants. Next, the findings related to each of the three research questions are presented. A summary of the findings appears at the end of the chapter.

Demographic Information

A total of 1,742 students participated in the 2011 NSSE at South-Eastern State University. For the purpose of this study, data from 1,516 participants were used due to missing records and survey responses. Table 4.1 includes a breakdown of the student characteristics and demographic information. As may be seen in Table 4.1, the participants included 1,353 graduates and 163 dropouts. There were 892 female participants and 624 male participants. The class level breakdown included 589 Freshmen participants and 927 Senior participants.

Table 4.1
Participant Demographic Information & Student Characteristics

	Count	Percentage
Graduation Status		
Graduate	1,353	89.25%
Dropout	163	10.75%
Gender		
Male[a]	624	41.16%
Female	892	58.84%
Class Level		
Freshmen	589	38.85%
Senior[a]	927	61.15%
Race/Ethnicity		
American Indian/Native American	7	0.46%
Asian/Pacific Islander	59	3.89%
Black/African American	72	4.75%
Caucasian[a]	1,308	86.28%
Latinx	40	2.64%
Multiracial	27	1.78%
Decline to state	3	0.20%
Nationality		
Domestic[a]	1,488	98.15%
International	28	1.85%
Enrollment Status		
Full-time Enrollment[a]	1,446	95.38%
Part-Time Enrollment	70	4.62%
Transfer Status		
First-time students[a]	1,160	76.52%
Transfer students	322	21.24%
Unknown Transfer Status	34	2.24%
Residential Status		
On-Campus[a]	582	38.39%
Commuter	866	57.12%
Fraternity/Sorority Housing	13	0.86%
Unknown Housing	55	3.63%
Parent's Education		
Below High School	28	1.85%
High School/GED	175	11.54%
Some College	176	11.61%
Associate Degree	106	6.99%
Bachelor's Degree[a]	499	32.92%
Master's Degree	348	22.96%
Unknown Parent Education	184	12.14%

[a] Reference groups in inferential analysis for research question three.

The participants' race/ethnicity was reported by South-Eastern State University and included seven American Indian/Native American students, 44 Asian/Pacific Islander students, 72 Black/African American students, 1,300 Caucasian students, 38 Latinx students, 25 Multiracial students, and 30 students that declined to state their race/ethnicity. A majority of the student participants were domestic students (1,488) and 29 were international students. This study included 1,446 full-time students and 70 part-time students. A total of 1,160 first-time students, 322 transfer students, and 34 students with an unidentified transfer status were included in this study. Residential status included 582 students living on-campus, 866 commuter students, 13 students in fraternity/sorority housing options, and 55 students whose housing options were not identified. Parent's education incorporated both the mother's and father's highest reported educational attainment. There were 28 students whose parents had below a high school education, 175 students whose parents received a high school diploma or passed the GED, 176 students whose parents had some college experience, 106 students whose parents were Associate degree recipients, 499 students whose parents completed Bachelor's degrees, 348 students whose parents were Master's degree recipients, and 184 students that did not disclose their parent's educational attainment.

Findings of the Study

Research Question 1: Is there a significant difference in the scaled measurement of social integration of first year and senior level students?

An independent sample t-test was used to explore the measured difference in social integration composite scores between first-year (Freshmen) students and senior level (Senior) students. Before the start of the t-test analysis, the assumptions of normality and homogeneity of variance were tested. The coefficient of skewness was used to evaluate the normality of the

sample distribution. Normality is achieved when the skewness coefficient is zero or close to zero. Parameters for normal distribution are typically set between -0.5 and 0.5. The skewness coefficient was -.128 overall, -.148 for Freshmen, and -.100 for senior level students, indicating that the normality assumption was met. The average social integration composite scores of 589 Freshmen participants (M = 40.74, SD = 6.41) compared to the 927 Senior participants (M = 40.14, SD = 7.13) demonstrated very similar results for social integration. The assumption of homogeneity of variance assumption was violated based on the Levene's Test of Equality of Variances, p = .005, and equal variance was not assumed. Overall, the t-test comparing the social integration composite scores for Freshmen and Senior was statistically insignificant, t(1347.86) = 1.695, p = .09. These results indicated there was no significant difference in the scaled measurements of social integration of first year (freshmen) and senior level students.

Research Question 2: Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts?

A two-way Analysis of Variance (ANOVA) was used to explore the relationship between graduation and race/ethnicity on students' social integration scores. Prior to conducting the ANOVA, the assumptions of normality and homogeneity of variance were tested. The coefficients of skewness for the dropout population were -.435, and -.082 for the graduate population, again indicating a normal distribution. The assumption of homogeneity of variance was evaluated using Levene's Test of Equality of Variance. The test resulted in a p-value of .241, meeting the assumption of equal variance. Overall, graduates (M = 40.71, SD = 6.79) had higher average social integration composite scores compare to the dropouts ((M = 37.64, SD = 6.73). African American graduates (M = 42.80, SD = 8.04) had a higher average social integration composite score compared to African American dropouts (M = 40.81, SD = 4.25).

Latinx graduates ($M = 41.13$, $SD = 6.17$) had a higher average social integration composite score compared to the Latinx dropouts ($M = 35.88$, $SD = 7.08$). Table 4.2 shows the ANOVA descriptive statistics for graduation status by race/ethnicity. The average social integration composite score for both African American graduates and dropouts was higher than the average social integration composite scores for both the Latinx graduates and dropouts.

The effect sizes (partial η^2) were also calculated to determine the strength of interaction between the independent variables of graduation status and race/ethnicity and social integration. Table 4.3 displays the summary results for the ANOVA that analyzed graduation status and race/ethnicity. The interaction effect between graduation and race/ethnicity was not significant $F(5, 1503) = 0.528$, $p = 0.755$. The main effect for race/ethnicity was also not statistically significant $F(6, 1503) = 1.585$, $p = 0.148$, partial $\eta^2 = 0.006$. There was a significant main effect for graduation status at the $p<.05$ significant level $F(1, 1503) = 10.759$, $p = 0.001$, partial $\eta^2 = 0.007$, indicating an extremely small effect size. The reported effect sizes (partial η^2) for both independent variables, graduation status and race/ethnicity, determined each variable's strength of interaction with social integration was extremely small.

Given the insignificant interaction effect found in Table 4.3, the mean difference in social integration by graduation status needed to be examined for African American and Latinx students separately. Thus, two additional two sample t-tests were conducted. The first t-test analyzed the difference between the average social integration composites scores of the 56 African American graduates ($M = 42.80$, $SD = 8.04$) compared to the 16 African American dropouts ($M = 40.81$, $SD = 4.25$). The assumption of normality and homogeneity of variance were tested before the analysis. The normality assumption was met with a skewness coefficient of -.263 overall, and -.391 for African American students. The assumption of homogeneity of

Table 4.2

Descriptive Statistics for Graduation Status by Race/Ethnicity

Graduation	Race/Ethnicity	Mean	Std Deviation	N
Dropout	American Indian/Native American	32.00	14.14	2
	Asian/Pacific Islander	38.33	3.79	3
	Black/African American	40.81	4.25	16
	White	37.48	7.01	130
	Latinx	35.88	7.08	8
	Multiracial	36.25	9.84	4
	Total	37.64	6.91	163
Graduate	American Indian/Native American	42.00	6.89	5
	Asian/Pacific Islander	41.34	7.30	56
	Black/African American	42.80	8.04	56
	White	40.54	6.73	1,178
	Latinx	41.13	6.17	32
	Multiracial	41.04	5.33	23
	Unknown	45.00	8.72	3
	Total	40.71	6.79	1,353

Table 4.3

ANOVA Summary Table of Social Integration by Graduate Status and Race/Ethnicity

Source	df	MS	F	p	Effect Size
Graduate	1	496.820	10.759	0.001*	0.007
Race	6	73.197	1.585	0.148	0.006
Graduate * Race	5	24.399	0.528	0.755	0.002
Error	1503	46.178			
Total	1516				

Note. MS = Mean squares, effect size = partial η^2.

variance was violated based on the Levene's Test of Equality of Variances, p = .032, and equal variance was not assumed. The t-test results revealed a statistically insignificant different between the social integration of African Americans students, t(47.821) = 1.318, p = .194. These results indicated there was no significant difference in the scaled measurements of social integration of African American graduates and African American dropouts.

The next two sampled t-test measured the difference in the average social integration composite scores of the 32 Latinx graduates (M = 41.25, SD = 6.17) compared to the eight Latinx dropouts (M = 35.88, SD = 7.08). The assumption of normality was met with the skewness coefficient of -.021 overall, and .065 for Latinx students. The assumption of homogeneity of variance was met based on the Levene's Test of Equality of Variances, p = .757. The t-test comparing the social integration of Latinx students was statistically significant, t(38) = 2.093, p = .043. The reported effect size (Cohen's d) determined the variable's strength of interaction with social integration was large. Overall, these results indicated there was a large significant difference in the scaled measurements of social integration of Latinx graduates and Latinx dropouts.

Research Question 3: Does social integration predict graduation among African and Latinx students?

A logistic regression was used to identify the predictability of retention to graduation based on social integration and student demographic information. This analysis also incorporated additional demographic background information, including class level, nationality, enrollment status, transfer status, residential status, and parent's highest level of education, to see if those factors might also be predictors of student graduation. The assumptions of Goodness-of-fit and multicollinearity were tested prior to analysis. Goodness-of-fit for this model was tested using

the Hosmer-Lemeshow test. The test resulted in a p-value of .241, indicating that the model adequately fit the data. Variance Inflation Factors (VIFs) were calculated to test the assumption of multicollinearity. The Variance Inflation Factors (VIFs) are given in Table 4.4 showing all VIF values were between 1 and 5, which indicated the assumption of multicollinearity was met.

Logistic regression calculates an odds ratio that explains the odds of an event occurring compared to that of the reference groups. An odds ratio less than 1 indicates a decreased likelihood of an event occurring, while an odds ratio greater than 1 indicates an increased likelihood of an event occurring (Healy, 2006; Pampel, 2000). A percentage change is often calculated from the odds ratio, (Odds Ratio – 1) * 100, to assist in the interpretation of logistic regression results (Pampel, 2000). The independent variable reference groups utilized for this question were male (Gender), Senior (Class Level), Caucasian (Race/Ethnicity), domestic (Nationality), first-time (Transfer Status), full-time (Enrollment Status), on-campus (Residential Status), and parents with a bachelor's degree as their educational attainment level (Parent's Education). As shown below, the logistic regression yielded significant results in the areas of class level, race/ethnicity, transfer status, enrollment status, and parent's educational attainment. For each unit increase in social integration composite score, students were 7 percent more likely to graduate. The odds ratio indicated that Freshmen were 89 percent less likely to graduate than senior students. Black/African Americans were 56 percent less likely to graduate than their Caucasian peers. Statistically significant results for the transfer status variable indicated transfer students are 53 percent less likely to graduate than student who started their educational career at the institution as a first-year first-time student. Statistically significant results for the enrollment status variable indicated that part-time students were 85 percent less likely to graduate than full-time students. Students with parents whose highest educational attainment level was a high

Table 4.4
Collinearity Testing using Variance Inflation Factors

Independent Variables	VIFs
Gender	
Female	1.025
Class Level	
Freshmen	2.153
Race/Ethnicity	
American Indian/Native American	1.006
Asian/Pacific Islander	1.21
Black/African American	1.044
Latinx	1.034
Multiracial	1.019
Decline to state	1.067
Nationality	
International	1.266
Transfer Status	
Transfer	1.249
Enrollment Status	
Part-time	1.124
Residential Status	
Commuter	2.26
Fraternity	1.07
Unknown	1.279
Parents' Education	
Below high school	1.077
High school diploma/GED	1.245
Some college	1.208
Associates	1.141
Masters	1.317
Unknown	1.343

school diploma or GED were 54 percent less likely to graduate and students with parent who completed some college were 58 percent less likely to graduate than students whose parents completed a Bachelor's degree. A summary of the findings for research question three are listed in Table 4.5.

In summary, based on the logistic regression results, higher social integration composite scores resulted in a higher likelihood of graduation. Although African American students were significantly less likely to graduate, the findings suggest that higher social integration composite scores would likely lead to increased odds of graduation for African American students. Even though the results for the Latinx students were found to be statically insignificant, we can conclude that higher social integration composite scores for all students would likely lead to increased odds of graduation for Latinx students as well. In terms of the research question, then, social integration appears to be a predictor of African American and Latinx graduation.

Summary

Chapter 4 presented findings from the study of 1,516 participants of the 2011 NSSE at South-Eastern State University. The results from research question one indicated that there was no significant difference in scaled measurement of social integration of first year (freshmen) and senior level students. The results from research question two revealed that there was a significant difference in the scaled measurement of social integration of graduates and dropouts and African American students. Results from research question three highlighted the statistically significant relationship between social integration as a predictor of graduation for African American and Latinx student populations. In chapter 5, the findings of the study will be presented along with a discussion of those findings. In addition, implications of the study and recommendations for future research are presented.

Table 4.5
Logistic Regression Coefficients and Odds Ratio

	B	Wald	Exp(B)	P
Social Integration Composite Score	0.07	27.60	1.08	0.00*
Gender				
Female	0.20	2.58	1.35	0.28
Class Level				
Freshmen	-2.22	55.55	0.11	0.00*
Race/Ethnicity				
American Indian/Native American	-1.62	2.59	0.20	0.11
Asian/Pacific Islander	1.08	2.69	2.95	0.10
Black/African American	-0.83	6.11	0.44	0.01*
Latinx	-0.86	3.53	0.42	0.06
Multiracial	-0.08	0.02	0.93	0.89
Decline to state	18.85	0.00	154221586.70	1.00
Nationality				
International	-0.21	0.06	0.81	0.80
Transfer Status				
Transfer	-0.75	8.04	0.47	0.01*
Enrollment Status				
Part-time	-1.91	30.03	0.15	0.00*
Residential Status				
Commuter	-0.04	0.02	0.96	0.88
Fraternity	17.06	0.00	25641311.37	1.00
Unknown	-0.12	0.06	0.88	0.80
Parents' Education				
Below high school	-0.44	0.55	0.65	0.46
High school diploma/GED	-0.78	7.78	0.46	0.01*
Some college	-0.88	9.767	0.42	0.002*
Associates	-0.61	3.188	0.54	0.074
Masters	0.00	0	1.00	0.999
Unknown	-0.04	0.014	0.96	0.906

CHAPTER V

DISCUSSION AND CONCLUSION

Introduction

Chapter five provides a summary of the study, a summary and discussion of the findings, implications for practice, and recommendations for future research. The summary of the study reviews the need, purpose, research questions, and methodology for this study. The summary and discussion of the findings includes an explanation of the findings and their relationship to existing research and literature in the field. The implications for practice section provides an overview of how the results of this study can shape and influence practices, and the chapter concludes with recommendations for future research.

Summary of the Study

While college retention to graduation continues to be a problem for institutions of higher education, the gaps in educational achievement are disproportionately larger for the African American and Latinx student populations compared to their Caucasian and Asian peers (Bailey & Dynarski, 2011; Fischer, 2007; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Morley, 2003; Museus & Quaye, 2009; Zarate & Burciaga, 2010; Zhan & Sherraden, 2011). Although retention disparities for African American and Latinx students continue to be present in higher education, student integration has proven to lead to increased academic success and retention (Astin, 1993; Braxton, Hirschy, & McClendon, 2004; Braxton, Sullivan & Johnson, 1997; Deil-Amen, 2011; Kuh, 2001; Kuh & Love, 2000; Pascarella & Terenzini, 1980, 1983, 1991, 2005; Reid, 2013; Stage, 1989; Swail, 2004; Tinto, 1975, 1993, 2006). Tinto's Theory of Student Departure (1975, 1993) identified two components of student integration; academic integration and social integration. Academic integration positively influences student's commitment to learning and college completion (Kuh et al., 2008; Tinto 1975, 1993, 2010). Social integration

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influences students' level of institutional commitment and satisfaction with the institution along with their experience and sense of belonging, increasing the likelihood of their persistence to graduation (Braxton et al., 2004; Kraemer, 1997; Strayhorn, 2010, 2012; Rienties et al., 2012; Severiens & Wolff, 2008; Tinto, 1975, 2006; Wilcox, Winn, & Fyvie-Gauld, 2005). While many studies have focused on the academic and social integration of the general student population, little is known about the relationship between social integration and retention to graduation of African American and Latinx students. Subsequently, the goal of this study was to better understand the relationship between student background characteristics, and social integration, while also assessing the ability to predict persistence to graduation based on social integration. The following research questions guided this study:

1. Is there a significant difference in the scaled measurement of social integration of first-year and senior level students?

2. Is there a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts?

3. Does social integration predict graduation among African American and Latinx students?

These research questions were answered analyzing student retention and demographic information and social integration composite scores. The retention data included each student's graduation status and the year the student graduated. The demographic data used in the analysis included race/ethnicity, gender, class level, nationality, transfer status, enrollment status, residential status, and parent's highest level of education. The social integration composite score was a calculated aggregate measurement of social integration using 13 NSSE variables, five variables from the Supportive Campus Environment (SCE) benchmark, and eight variables from

the Enriching Educational Experiences (EEE) benchmark. The Supportive Campus Environment (SCE) benchmark focused on the social relationships' students forged with their peers, faculty, staff, and administrators. The Enriching Educational Experiences (EEE) NSSE benchmark measured student integration beyond the classroom setting.

The study analyzed data of students enrolled at South-Eastern State University that participated in the 2011 National Survey of Student Engagement (NSSE).   The original dataset, consisting of 1,742 students, was cleaned and prepared as described in Chapter Four. The final sample included 1,516 students, 586 first-year students, 927 senior students, 163 dropouts, and 1,353 graduates.

In evaluating the first research question, an independent sample t-test was utilized to determine if there were any differences between first-year students' and senior level students' social integration. The second research question was answered using a series of two-way Analysis of Variance (ANOVA) to test the differences in social integration by race/ethnicity and retention status (graduate or dropout) for both the first-year and senior level participants. Logistic regression was used to answer the third research question, identifying the predictability of retention to graduation based on social integration and student demographic information.

Summary of the Findings

Research question one sought to determine if there was a significant difference in the scaled measurement of social integration of first year and senior level students. The results of the analysis revealed no significant difference in the social integration of first-year and senior level students. Research question two was developed to determine if there was a significant difference in the scaled measurement of social integration for African American and Latinx graduates and dropouts. The results showed a significant difference in graduates and dropouts

overall, as well as for Latinx graduates and dropouts. No significant difference was found between African American graduates and dropouts. Research question three sought to determine if social integration could predict graduation for African American and Latinx students. The results revealed that social integration is a significant factor in predicting graduation for all students, including African American and Latinx students. In summary, this study supported the findings from the literature that indicates the positive impact of social integration on student retention and graduation.

Discussion of the Findings

Research Question One

Based on the frame of the research question, there was an assumption that senior students would have higher social integration scores due to their continued retention and proximity to graduation. Presumably, senior students have had more opportunities to engage in activities and develop relationships on campus that fostered social integration and increased the likelihood of persistence and graduation. While the results from research question one were consistent with findings of previous research and found no significant difference in the social integration of first-year and senior level students, the results were still not expected (Miller, 2012). The researcher's assumption that senior level student would have higher levels was based on previous research where higher levels of social integration resulted in the increased likelihood of retention for first year students (Chambers, 2009; Libby, 2006; Shinde, 2010). The problem with this assumption was it did not account for the fact a majority of the previous studies included homogenous samples based on class level, and/or have not compared first year and senior outside of pairwise samples. Since a majority (89%) of the first-year students in this study graduated, this could

contribute to the higher levels of social integration and lack of difference in the social integration

of first-year and senior level in the test results.

Research Question Two

The results of the analysis that examined the interactions between social integration and

race/ethnicity align with the existing research that examined higher social integration and its

positive relationship with persistence and retention to graduation (Libby, 2006; Goldstein, Sauer,

& O'Donnell, 2012; Shinde, 2010; Stage, 1989; Tinto, 1975, 1993). While the initial analysis

did not yield significant results for race/ethnicity, because previous research highlighted the

complexities of identifying the differences and trends in the social integration of students by

race/ethnicity, it was imperative to examine African American and Latinx students individually

to best answer the research question (Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011;

Baker, 2008; Cerna, Pérez, & Sáenz, 2009; Guiffrida, 2006; Hurtado & Carter, 1997; Johnson et

al., 2007; Lyon, 2007; McFeeters, 2012; Morley, 2003; Tierney, 1999). The results of the

additional two sample t-tests examined the relationship between social integration and

graduation of African American and Latinx students aligned with many other studies that

highlighted distinct differences in social integration of African American and Latinx student in

relation to retention.

Despite the fact that the social integration scores of all African American students were

higher than their Latinx peers, there was no significant difference in the social integration of

African American graduates and African American dropouts. These results make a case for

further examination of specific factors that contribute to the social integration and retention of

African American students (Grier-Reed, Arcinue, & Inman, 2016; Guiffrida, 2003). Aligned

with the expectations of the researcher, this study found a significant difference in the social

integration of Latinx graduates and Latinx dropouts. Similar to these results, the research explains that Latinx students are retained despite dealing with a multitude of barriers to success and integration, such as financial burdens, first-generation status, language barriers, and familial obligations (Dowd, 2008; Gandara & Contreras, 2009; Nunez, 2009; Nunez & Kim, 2012).

While the results of the study were supported by the literature it wasn't until the researcher reflectively looked at campus information and demographics of South-Eastern State University that the results made sense. There are an abundance of factors that contribute to the difference in social integration of African American and Latinx students, thus, the researcher would argue that resources and population size were the factors that contributed most to the difference in results in this study. Based on campus resources and opportunities for social integration, there are more culturally specific groups listed that are marketed to African American students than Latinx students, such as student support, programming, and advocacy groups. Both the African American and Latinx student populations account for a small percentage of the overall sample population making it hard to find significant differences and trends.

While this question was developed to examine the relationship between social integration and race/ethnicity overall, perhaps a different method of statistical analysis would have provided more robust findings. Fortunately, the experiences within this study can inform and contribute to the success of other studies.

Research Question Three

Research question three sought to determine if social integration could predict graduation for African American and Latinx students. Social integration was found to be a strong predictor of student graduation in this study, a finding that was widely supported throughout educational

and retention research (Astin, 1999; Braxton, Hirschy, & McClendon, 2004; Chambers, 2009; Cox, 2013; Deil-Amen, 2011; Goldstein, Sauer, & O'Donnell, 2012; Libby, 2006; Mallette & Cabrera, 1991; Nora, 1987; Pascarella, 1985; Pascarella & Terenzini, 1980, 1991, 2005; Rendon, 1994; Tinto, 1975, 1993, 2006; Wilcox, Winn, & Fyvie-Gauld, 2005). In an effort to conduct a more comprehensive study, additional variables were also examined in the analysis of research question three.

The additional variables explored included gender, nationality, class level, transfer status, enrollment status, residential status, and parents' highest level of education. This study and existing research provided inconclusive results about the impact of gender, nationality, and residential status (Crede & Borrego, 2014; Fass-Holmes & Vaughn, 2014; Kwai, 2010; Pascarella & Terenzini, 2005). This study found no statistically significant results in predicting graduation using nationality, gender, or residential status. The existing research supports the inconclusive results about the impact of gender, nationality, and residential status on retention found in this study (Crede & Borrego, 2014; Fass-Holmes & Vaughn, 2014; Kwai, 2010; Pascarella & Terenzini, 2005; Shinde, 2010). Out of these three variables the one expected to be a significant factor in predicting graduation and was not, was residential status. While there have been no consistent results in the measurement of residential status in terms of graduation, studies like Pascarella and Terenzini (2005) supported the positive and significant relationship between residential status and persistence. Strong relationships between graduation and class level, race/ethnicity, transfer status, enrollment status, and parental educational attainment were also found.

Similar to the research, this study's results indicated that Freshmen were less likely to graduate than senior students (Kena et al., 2016; Mcfarland et al., 2018; National Student

Clearinghouse Research Center, 2018; Pryor et al., 2012; Snyder, de Brey, & Dillow, 2019). In this study Black/African Americans were less likely to graduate than their Caucasian peers. Although Latinx students were 58 percent less likely to graduate, this finding was not statistically significant. The results of this study are representative of the recent educational statistics where only 45.9 percent of African American students and 54.9 percent Latinx students at four-year public institutions graduate within six years (McFarland et al., 2018; National Student Clearinghouse Research Center, 2018; Shapiro et al., 2017). While social integration has a positive relationship with retention to graduation, underrepresented student populations, such as African American and Latinx student populations, are consistently less likely to be retained and/or graduate (Cox, 2013; McFarland et al., 2018; National Student Clearinghouse Research Center, 2018; Pascarella and Terenzini, 2005; Shapiro et al., 2017; Stage, 1989). Results also indicated that transfer students were less likely to graduate than student who started their educational career at the institution as a first-time freshmen. Recent national statistics found 42 percent of transfers of a 2010 cohort completed their bachelors program compared to the 60 percent of first-time full-time freshmen (Shapiro et al., 2017). Based on the research it is hard to specifically identify how social integration shapes the retention of transfer students due to a variety factors that shape and hinder their integration experience (Duggan & Pickering, 2008; Gao, Hugher, Orear, & Fendley, 2002; Laanan, 2007; Townsend & Wilson, 2009). We can associate this complexity with the decreased likelihood of graduating compared to students that start their post-secondary education at South-Eastern State University.

The enrollment status results indicated that part-time students were less likely to graduate than full-time students. The results of this study regarding the likelihood of graduation is aligned with the recent statistics where only 19.5 percent of part-time students graduate, while 82 percent

of full-time students, and 42 percent of mixed enrollment students graduate (Shapiro et al., 2017; Shapiro et al., 2018)

Students with parents whose highest educational attainment level was a high school diploma or GED were less likely to graduate than students whose parents completed a Bachelor's degree. Additionally, students whose parents completed some college were less likely to graduate than students whose parents completed a Bachelor's degree. Reflected within this study, the research has long proven that students whose parents had not attained a college education have lower odds of academic success in college and ultimately graduation (Carter, 2006; Choy, 2001; Ishitani, 2006; Perna, 2000; Perna & Titus, 2005; Soria & Stebleton, 2012; Thayer, 2000; Walpole, 2007).

Implications

The primary research hoped the findings of this study would promote the development of innovative and traditional practices to best serve the African American and Latinx student populations on campuses across the country. While the educational attainment gap continues to grow, something needs to be done to increase educational equity and access. This study and others like it continue to highlight the need for institutions of higher education to focus on the engagement of the whole student. The research shows that engaging the student both within and outside the classroom will improve graduations rates and ultimately start closing the educational gap.

Colleges and universities need to look at other ways to target marketing for involvement of at-risk student populations. New ways for colleges and universities to implement practices that foster a culture of social integration for African American and Latinx students are essential to closing the education gap. The findings from this research as well as many others, suggest that

social integration may be achieved in different ways for African American and Latinx students (Baker, 2008; Davidson & Wilson, 2013; Glen, 2017; Guiffrida, 2005, 2006; Kuh & Love, 2000; Moore & Upcraft, 1990; Rendon, Jalomo, & Nora, 2000; Swail, Redd, & Perna, 2003; Tierney, 1999).

Since there are a variety of ways to promote the social integration of African American and Latinx students, institutions should evaluate the programs and services offered to both communities. The programs and services that are available for African American, such as mentor program, student programming groups, and student advocacy groups, seem to be effectively working as seen in the higher levels of social integration for African American students. However, there is a need to evaluate and expand upon the programs and services that are offered and contribute to the social integration of Latinx students. Furthermore, there is a need to develop programs and activities to help students integrate and succeed academically and socially. Examples of this include surveying students in social experiences that interest them, creating special interest cohort systems to increase student sense of belonging and social integration, and promoting and facilitating more and/or unique opportunities for campus involvement. Both Guiffrida (2003) and Nunez (2009) noted the importance of both African American and Latinx students incorporating cultural aspects to the social integration process.

Recommendations for Future Research

Many of the studies looking at NSSE data look only at first-year students. The researcher was curious to see if there was a difference in the social integration of freshmen and seniors, since seniors are theoretically closer to graduating. Future research should look at a paired sample and analyze social integration of students throughout their educational tenure. This

would allow the field to really look at the trends in social integration and the relationship between retention to graduation and social integration.

This study looked at one particular public research university in the South-Eastern Region of the United States. Future research should explore social integration nationwide, regionally based, and based on institutional characteristics (i.e. rural, urban, Historically Black Colleges and Universities, Hispanic Serving Institutions, private, public, for-profit, etc.).

This study highlighted the differences between student populations based on both demographic information and other student characteristics. At another university, a suggestion to do a mixed methods study, similar to this study, but allowing the researcher to analyze the affective reasoning behind why students indicated what they did would provide insight into implications for future practices.

The current study highlighted the higher levels of social integration, yet African American students are still less likely to graduate. Future research needs to identify the other factors that contribute to decreased odds of retention to graduation. This could be done in a variety of ways to identify trends among ethnicity specific smaller groups. This might be based on student group participation, the region student originated from, type of institution, socioeconomic status of students, or a combination of all of these.

Conclusion

While some students graduate college regardless of if they have successfully socially integrated into the college or university, the current study and educational research suggest social integration influences the retention and graduation of all students. Institutions of higher education have the ability to grow in addressing the gap in access to resources and lessening the barriers to social integration for both African American and Latinx students. Incorporating

inclusive social integration opportunities could prove mutually beneficial for students striving for

success and institutions of higher education looking to graduate and better prepare its students.

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APPENDICES

Appendix A. NSSE questions used to measure Social Integration Data

Benchmark	Number	NSSE Question
	1.	*In your experience at your institution during the current school year, about how often have you done each of the following?*
EEE	1. u.	Had serious conversations with students of a different race or ethnicity than your own
EEE	1. v.	Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
	7.	*Which of the following have you done or do you plan to do before you graduate from your institution?*
EEE	7. a.	Practicum, internship, field experience, co-op experience, or clinical assignment
EEE	7. b.	Community service or volunteer work
EEE	7. c.	Participate in a learning community or some other formal program where groups of students take two or more classes together
EEE	7. f.	Study Abroad
	8.	*Mark the box that best represents the quality of your relationships with people at your institution.*
SCE	8. a.	Relationships with other students
SCE	8. b.	Relationships with faculty members
SCE	8. c.	Relationships with administrative personnel and offices
	9.	*About how many hours do you spend in a typical 7-day week doing each of the following?*
EEE	9. d.	Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)
	10.	*To what extent does your institution emphasize each of the following?*
EEE	10. c.	Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
SCE	10. d.	Helping you cope with your non-academic responsibilities (work, family, etc.)
SCE	10. e.	Providing the support you need to thrive socially

Appendix B. Code Break down of Student Demographic Information Variables

Variable	Original Code	Study Code
Gender	1 = Male	1 = Male
	2 = Female	2 = Female
		0 = Unknown
Race/Ethnicity	1 = American Indian/Other Native American	1 = American Indian/Native American
	2 = Asian/Asian American/Pacific Islander	2 = Asian/Pacific Islander
	3 = Black/African American	3 = Black/African American
	4 = White (non-Hispanic)	4 = White
	5 = Mexican	5 = Latinx (Mexican, Puerto Rican, Other)
	6 = Puerto Rican	6 = Multiracial
	7 = Other Hispanic/Latino	7 = Other
	8 = Multiracial	8 = Decline to state
	9 = Other	
	10 = I prefer not to say	
Nationality	1 = No	1 = Domestic
	2 = Yes	2 = International
Class Level	1 = Freshmen/First Year	1 = Freshmen/First Year
	4 = Senior	4 = Senior
Transfer Status	1 = Started here	1 = First-time student
	2 = Started elsewhere	2 = Transfer student
Enrollment Status	1 = Less than full-time	1 = Part-time
	2 = Full-time	2 = Full-time
Residential Status	1 = Dormitory or other campus housing (not fraternity/sorority)	1 = On campus
	2 = Residence within walking distance of the institution	2 = Commuter (residence within walking and within driving distance)
	3 = Residence within driving distance of the institution	3 = Fraternity or Sorority house
	4 = Fraternity or Sorority house	4 = None of the above
	5 = None of the above	
Parent's Education (includes the highest education level of the Father and Mother)	1 = Did not finish high school	1 = Below high school
	2 = Graduated from high school	2 = High school diploma/GED
	3 = Attend College but did not compute degree	3 = Some college
	4 = Completed an Associate degree	4 = Associates
	5 = Completed a Bachelor's degree	5 = Bachelors
	6 = Completed a Master's degree	6 = Masters
	7 = Completed a Doctoral degree	7 = Doctorate

VITA

Ashley Redix currently serves as a research analyst in the California Community College system. Prior to coming to the California Community college system, Ashley served as a data and systems analyst for the University of Southern California, with several years of experience in student affairs and program development, as well as experience in academic, college, and financial aid advising. Ms. Redix received a bachelor's degree in American Studies with a concentration in Marketing from the University of California, Berkeley in 2010, and a master's degree in School Counseling from the University of Southern California in 2012. Ashley is proud to be an avid student advocate and a transformative and data-driven educator. Her interest in educational research was sparked during the completion of her undergraduate thesis that explored the marketing of higher education to high school students. Ms. Redix's current research interests include access to higher education for underrepresented student populations, college student development, and the integration and retention of underrepresented student populations.