AFFECTING RETENTION: THE RELATIONSHIP BETWEEN INTERSECTIONALITY AND STUDENTS' INSTITUTIONAL EXPERIENCES

by

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Abstract

The purpose of my study was to use an intersectional lens to understand the relationship between race and gender and institutional experiences in student retention at a selective predominantly White institution. I used Tinto's (1993) longitudinal model of institutional departure as the foundation to understand students' decision-making processes based on gender and race. Existing research emphasizes the roles that gender, race, and level of involvement play in student retention. The data I analyzed confirmed these previous findings and added the perspective of the intersectionality of race and gender in exploring students' sense of belonging. Female students of color had the lowest mean scores related to a sense of belonging. Furthermore, the two factors most important to students developing a sense of belonging were validation and socialization.

I applied a quantitative criticalist (Stage & Wells, 2014) approach and used the 2015 Diverse Learning Environments (DLE) Survey, developed by the Higher Education Research Institute, to explore any systemic inequities in educational outcomes at Southwest University. Researchers use the DLE survey to assess the capacity of their campus climate and culture to support a multicultural community towards retention and graduation. Examining the instrument through the lens of intersectionality produced more specific results. I used analysis of variance and hierarchical multiple regression to analyze the data.

The results indicated that female students of color at a predominantly White institution are the most at risk of low retention and graduation rates. Consequently, I suggest that reform and changes to educational practices are necessary to increase the validation and socialization of female students of color. It is not enough for college administrators to simply recruit female students of color to college campuses to increase the diversity of the student population.

Crucially, they must deliver on the promises made during the recruitment process by helping to provide an environment and culture at predominantly White institutions that support female students of color in thriving throughout their collegiate experiences until graduation.

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Chapter 1: Introduction

The temperature is hovering around 100 degrees. There are over 350 students, faculty, and staff members on the field. Some of them are covered from head to toe in a mixture of oatmeal and cornstarch, while others are rolling around a tarp smeared with baby oil and flour. Across the field, others have their t-shirts stained as a result of encountering bursting water balloons. Next to them, others are standing wearing clothes covered in mud. An unexpected visitor walking onto this field would evaluate the scene as chaotic and possibly dangerous.

So why would a university spend its resources on taking first-year students to a camp 90 minutes away and exposing them to this chaotic scene just days before the first day of classes? The answer is retention. What an inexperienced spectator may not appreciate is across the field one can hear laughter from students, faculty, and staff members. First-year students are having fun splashing muddy water at a faculty member from the College of Education who will be teaching them in a few days in their first semester in college. They are engaging in conversation with a staff member at the water station about ways to become involved on campus or sitting in a pool of oatmeal with another first-year student sharing an experience that they cannot wait to talk about with their family and friends. Retention is about a sense of belonging (Astin, 1993; O'Keefe, 2013; Tinto, 1993), and this event is based on the nurturing and development of first-year students and their peers, as well as faculty and staff members.

The Issue and Its Importance

Future enrollment in higher education. Universities and colleges are fully aware of the importance of retention as it impacts upon student recruitment, funding, and rankings. With an increased number of students projected to enroll in higher education in the next six years, institutions must do a better job of identifying and creating opportunities to increase retention

rates (Hussar & Bailey, 2016). Habley, Bloom, and Robbins (2012) stated, “Students in the educational pipeline appear to be no better prepared for college than their predecessors, and changing demographics indicate that those population cohorts least likely to be prepared for, enroll in, and succeed at college are increasing dramatically” (p. 383).

In the *Projections of Education Statistics to 2024* released by the National Center for Education Statistics (NCES), Hussar and Bailey (2016) have projected that the percentage of men enrolling in postsecondary education will increase by 11% from 2013 to 2024, while the percentage of women will increase by 16% during the same period. The study also projects the percentage of White students enrolled in elementary and postsecondary education will decrease by 5% from 2012 to 2024, while the number of Black students will remain the same. The report also projected that by 2024 growth in the population of Hispanic students will occur with an increase of 28%, an Asian/Pacific Islander student increase of 18%, and students who identify as two or more races by 38%. Another report, released in 2016 by *The Western Interstate Commission for Higher Education,* indicated that in 2012-2013, 229,000 Hispanic and 268,000 Black students graduated from states in the South (these states included MD, DE, DC, WV, VA, KY, TN, NC, SC, GA, FL, AL, MS, LA, AR, OK, and TX). Furthermore, the report projects that in 2024-2025, the population of Hispanic students in the South will grow to 366,000 and Black students will increase to 282,000 (Bransberger & Michelau, 2016). Growth in the number of Hispanic students is also projected in the West (states include AK, HI, CA, OR, WA, MT, ND, SD, WY, ID, CO, NM, AZ, UT, and NV), where the population of Hispanic students is projected to increase from 279,000 in 2012-2013 to 341,000 in 2024-2025 (Bransberger & Michelau, 2016). As the population of students of color increases, higher education institutions need to evaluate the degree to which they are adequately equipped to assist these students in terms of

retention and, eventually, graduation. Habley et al. (2012) lamented, “Interventions touted to improve retention and persistence to degree have changed little over the last four decades while retention and persistence to degree rates have changed even less” (p.383).

The issue that institutions will soon face is that the two largest populations growing in terms of enrollment are also the two populations that are below the national average in terms of retention. In 2018, researchers from the *National Student Clearinghouse Research Center* stated that the national retention rate among students starting college in the fall of 2015 was 73.4%; the average was 79.2% for White students and 84.2% for Asian students, both above the national average; while the average was 72.5% for Hispanic students and 66.9% for African American/Black students, both below the national average (National Student Clearinghouse Research Center, 2018). Consequently, higher education leaders must evaluate their current practices and processes to ensure they are prepared for the shift in demographics that will soon occur on campuses across the United States.

Importance of Higher Education

The retention and graduation of students of color in and from colleges and universities are important in shaping the country’s future economic, political, and social landscapes. A college education leads to future career success. Career success translates into higher earning potential and higher social standing. The Bureau of Labor Statistics found that people with college degrees are less likely to be unemployed and more likely to have a higher income than people with only a high school degree (“Unemployment Rates,” 2018). Moreover, the level of an individual’s education also impacts upon their political viewpoints and level of participation. Since 2004, college-educated youths have been more likely to participate in the presidential elections than people with only a high school degree or less (CIRCLE, 2016). Lastly, college-

educated people generally have healthier lifestyles and enjoy their retirement more than those who are not college educated; people with college degrees are less likely to smoke and more likely to participate in regular exercise than those without a college degree (Ross & Wu, 1995).

Financial benefits. The Bureau of Labor Statistics website provides data about unemployment rates and earnings by educational attainment. Zimmerman and Woolf (2014) discovered that the more schooling an individual attains, the lower the chances that s/he will experience unemployment and financial hardships. Catherine Ross and Chia-Ling Wu (1995) discovered the same relationship when their study found that the more educated the individual, the less likely the individual was unemployed. The Bureau of Labor Statistics (BLS) report is similar to Ross and Wu's research indicating that people with doctoral degrees have an unemployment rate of only 1.5%, people with master's degrees have a rate of 2.2%, and people with bachelor's degrees have a rate of 2.5%; in addition, unemployment rates are higher for people without college degrees (4.6%); and unemployment rates for people without a high school diploma is the highest with 6.5% ("Unemployment rates", 2018). The BLS report reiterates that the work conducted by Ross and Wu in 1995 was still relevant in 2018. This inverse correlation between level of education and unemployment rate is still evident in the present day.

Furthermore, BLS researchers also reported a correlation between level of education and median weekly earnings. On average, people without a high school diploma can expect to earn only $520 per week, and people with only a high school degree can expect to earn $712 per week, whereas people with a bachelor's degree can expect to earn $1,173 per week and people with a doctorate can expect to earn $1,743 per week ("Unemployment rates", 2018). Projecting this difference in earnings over a typical career lasting approximately 45 years means that the difference between having a bachelor's degree and only a high school diploma is $1,078,740. A

person with a college degree can expect to earn at least one million dollars more over the course of their career than a person holding just a high school diploma.

Political benefits. Universities can influence the levels of students' political activism. Through classroom and extracurricular activities, students can be exposed to different opinions and find ways to engage in political campaigns in line with their own beliefs and values (Flanagan, 2009; Pritzker, Springer, & McBride, 2015). The level of education also impacts upon an individual's political viewpoints and participation. Since 2004, college-educated youths have been more likely to participate in the presidential elections than those holding only a secondary education or less (CIRCLE, 2016). Lastly, students who engage in political activity during college are more likely to continue actively engaging in civic responsibilities after they leave. Therefore, college-educated people can shape the future political trends of a country (Flanagan, 2009).

Health and wellness benefits. Level of education also impacts the health of the individual and the health of the individual's family members. College-educated individuals are more confident asking their doctors questions and are better able to articulate what they are feeling to their physicians. Educated people are more likely to read and follow the instructions on their medication and understand the warning signs of their health (Zimmerman & Woolf, 2014). Going to the doctor can be an intimidating experience for some people. Those with limited education are less likely to ask questions because they do not fully understand what the doctors are asking and remain silent as a result of not wanting to reveal their lack of knowledge (Zimmerman & Woolf, 2014). Well-educated individuals do not share these fears and are more likely to be covered by health insurance and utilize more preventive health care practices (Ross & Wu, 1995). Lastly, people with higher levels of education tend to live in neighborhoods with

more green spaces and adjacent amenities. They have easier access to walking paths for exercise and commercial areas in which to shop and dine than those with less education (Zimmerman & Woolf, 2014).

College-educated individuals also make healthier choices than those without college degrees. They are less likely to smoke and are more likely to have healthy diets and regularly exercise (Ross & Wu, 1995; Zimmerman & Woolf, 2014). People who smoke also increase their risk of contracting lung cancer, liver disease, and emphysema (Ross & Wu, 1995), whereas educated people are more aware of the health risks and have the means to maintain a healthy lifestyle. Zimmerman and Woolf (2014) found diseases such as diabetes, hypertension, heart attacks, and strokes were more common in people with lower levels of educational attainment. In addition, more highly educated people tend to have better social lives. They belong to more community organizations and participate in a variety of social networks. Having a better social life can provide an emotional support system for people to lean on during times of physical stress and emotional sadness. Educated people do not feel as isolated or alone as uneducated individuals (Zimmerman & Woolf, 2014).

A college degree typically leads to greater financial stability, political activism, and lifelong health benefits. In the third quarter of 2018, the BLS reported the unemployment rate for White people aged 25-34 years was 3.3%, whereas for Black/African American people it was 6.1%, 3.7% for Asian people, and 3.9% for Latinx people (“Labor force”, 2018). Furthermore, the latest data released by the US Census revealed that, in 2016, the voting rate for the White population was 65.3%, while for the Black/African American population it was only 59.4% and 47.6% for Latinx (“Voting and registration”, 2018). Lastly, researchers at the Centers for Disease

Control released a report indicating that deaths from chronic heart disease were higher in Black adults than White adults (Schuchart et al., 2018); Black/African American (46.8%) and Latinx (47%) adults aged 20 years and over have higher rates of obesity than White adults who only have a 37.9% rate of obesity (Hales, Carroll, Fryar, & Odgen, 2017); and, in 2016, the infant mortality rate for the Black/African American community (11.4%) and the Latinx community (5.0%) was higher than that of the White community (4.9%; Centers for Disease Control and Prevention, 2018). Accordingly, if the disparities in retention and graduation between students of color and White students continue to exist in higher education, people of color will not be able to participate and benefit from the same opportunities as White people.

Importance of First-Year Retention

To increase graduation rates, universities must begin by addressing the issue of retention. Levitz and Noel (1989) found students' decisions to leave college were reduced by 50% for each year they remained at the university. For example, if a university had 20% of the incoming class leave after the first year of college, the university could expect an additional 10% of the class to leave between years two and three and an additional 5% of the class to leave between years three and four, and so forth. Therefore, the most impactful way to increase graduation rates would be to target and increase the first-year retention rate. Retention rates are connected to the perceived success of an institution and to graduation rates. The impacts of lowered retention rates upon an institution include loss of tuition, recruitment, financial aid, and instructional staff (Habley et al., 2012; Schuh & Gansemer-Topf, 2012). Private institutions use the tuition dollars of students to assist in the operational budget of the university (Barr & McClellan, 2011). Low retention increases the costs of recruitment because the institution needs to recruit another student to fill the space of the departed student. During the admittance process, college administrators award

financial aid packages to offset students' financial burdens. Private schools offer financial aid in the form of tuition discounts or grants. Students who receive tuition discounts and grants do not have to repay these amounts to the institutions. These monies that are invested in the students are lost when the student does not graduate (Habley et al., 2012). Braxton, Doyle, Hartley, Hirschy, Jones, and McLendon (2014) found high retention rates provide stability to the institutional budget. Sudden changes in enrollment can cause private universities to use endowment funds in order to make up the gap (Barr & McClellan, 2011). Retention rates also impact the institution's ranking in the *US News and World Report National University Rankings*. Therefore, an institution's retention rates are important in shaping the public perception of the institution's quality (Braxton et al., 2014).

The future population of higher education points toward an increase in female students and a shift towards more racial diversity (Bransberger & Michelau, 2016). At the same time, higher education leaders have not been able to develop new approaches to significantly increase retention or graduation rates within the last forty years (Habley et al., 2012). Accordingly, this change in student demographics will create new challenges for university leaders to generate new approaches to addressing the issues of retention and graduation. Data on the factors that impact upon retention have been plentiful since the 1970s (Morrison & Silverman, 2012). The factors identified that impact upon student retention in higher education include student characteristics such as sex, socioeconomic status, high school GPA, and standardized test scores (Astin, 1993; McNeely, 1938; Mortenson, 2012; Tinto, 1975). Furthermore, family support and experience with the college process were also identified as key indicators in predicting student retention (Astin, 1993; Peralta, Caspary, & Boothe, 2013; Tinto, 1975).

Lastly, the depth to which students feel involved, integrated, and cared for by the college community is critical to being able to predict whether students will persist at university (Astin, 1993; Hausmann, Schofield, & Woods, 2007; Tinto, 1975). Tinto (1993), Astin (1993), and Hausmann et al. (2007) identified students' sense of belonging as an important aspect in understanding and predicting student retention. Tinto (1993) defined a sense of belonging as the level of integration students were able to achieve within the social and academic system. Astin explained a sense of belonging as the level of involvement attained in academia, faculty, student peers, and work (1993). Hausmann et al. (2007) associated a sense of belonging with interactions with peers and faculty members.

Purpose of Study

Imagine for a second that it is the bottom of the ninth inning of a baseball game. There are two outs and there is a runner on first base. The next hitter coming up to bat can win the game by hitting a home run. The fans want the batter to be successful and are cheering the batter on the best they can. The work of retention is not so different to this. Imagine if the runner standing on first base represents all the first-year students enrolled at a university. The pitcher would represent the various reasons a student may decide to leave an institution in his/her first year. The batter, the most important person in this scenario, is the campus administrator responsible for retaining students. The fans represent the campus community who want to see the batter and the runner succeed. The batter would have a very difficult task in this situation with the stress of all the people counting on the batter to win the game. The probability of the batter hitting a home run in this scenario would be low and this may seem like a daunting task. However, imagine if the batter had a thoroughly developed scouting report of the pitcher. What if the batter knew the probability of what the pitcher was likely to throw in this situation? The

batter would increase his chances of hitting a homerun if he knew exactly what the pitcher was going to throw ahead of time. The scouting report represents the data collected by institutions about the various reasons that students have left. An administrator with good data about students, the campus environment, and the likelihood of students leaving college would be much more likely to hit a "homerun" in initiating retention efforts than an administrator just swinging a bat blindly and hoping for the best. At the very least, the batter moves the runner from first base to second base, therefore, continuing the game and giving the team another chance to move the runner on second base closer to scoring. This analogy illustrates the purpose of this study, which is to narrow down and be better informed about decision-making regarding the action steps an institution needs to take in understanding student retention. The stronger and more detailed the data that college administrators obtain on the student experiences and challenges that may influence students' decisions to remain at the institution, the more prepared administrators will be to make decisions on behalf of the students and the institution.

Research into student retention from the first year to the second year of college at four-year institutions indicates that relationships exist between retention and sex (Horn, 2006) and retention and race/ethnicity (Fleming, 2012). Tinto (1975) developed the longitudinal model for institutional departure, which used students' family backgrounds, skills, ability, and prior schooling to predict student retention. However, each of these studies focuses only upon a single identity or characteristic of a student in describing the relationship between the various identities and the likelihood of retention. Conversely, the theory of intersectionality emphasizes the importance of understanding how the intersecting identities of individuals impact upon their societal experiences (Carbado, Crenshaw, & Tomlinson, 2013).

Research questions. To better understand the relationship between students' intersecting identities and retention, I used an analytical quantitative approach, utilizing analysis of variances (ANOVA) and hierarchical multiple regression, to investigate the relationship between the intersectionality of race and gender with a sense of belonging on a college campus that results in a student's decision to remain or leave. I utilized Tinto's (1993) longitudinal model of institutional departure and Crenshaw's (1989) concept of intersectionality to explore and examine the sense of belonging experienced by students of color and women at a predominantly White institution (PWI) to understand the relationship and provide suggestions for the institution to adopt in order to increase retention. Accordingly, I investigated the following research questions:

1. Are there differences in the sense of belonging between the students' intersecting identities?
2. Above and beyond intersectionality, is there a relationship between the academic/social systems and the students' sense of belonging?

Significance of Study

The field of higher education is a close-knit community that utilizes the knowledge from one institution or field of research to help build and develop research in other fields and institution**s.** Tinto (2006) shared the following as he reflected on the landscape of higher education and the progress made in understanding student retention:

> We have traveled a long way since we first began studying the issue of student retention. We have learned much about the complex character of student persistence and have become more sophisticated in our thinking about

> how to promote persistence for different students and in different settings. But, as the data reveal, it is a journey that has only begun (p.13).

To continue the journey of retention and persistence, this study suggests higher education leaders need to acknowledge the change occurring in the demographics of future student populations and critically reflect on whether their institutions are adequately prepared to accept, enroll, and graduate a more diverse student population. Research has indicated one way of predicting retention and persistence is through examining the factors that influence a student's sense of belonging (Astin, 1993; Hausmann, Schofield, & Woods, 2007; Tinto, 1975). Understanding the relationship between the intersectionality of students' identities and a sense of belonging can provide higher education leaders with a different way to proceed on the journey of retention and persistence.

I conducted the research at a PWI with the strategic goal of further creating environments that promote and foster diversity, equity, and inclusion by increasing the retention of students of color and further understanding the experiences of students of color on campus. One metric the PWI uses to track its progress towards a more diverse population is the demographic characteristics of the new enrolled students each year. Enrolling increasing numbers of students of color does increase the diversity of the campus population in the short term, however, the 2016 graduation rates demonstrate that students of color, except for Asian males, graduated at a lower rate than White students. Therefore, the retention of students of color at the PWI is a concern for the institution. The findings in this study could help the PWI further understand the experiences of students of color and identify ways to create a campus environment that fosters a stronger sense of belonging. Furthermore, the research also adds to the field of retention research

by proposing a different viewpoint regarding exploring the relationship between student demographics and retention.

Retention best practices. Universities are currently implementing numerous practices on campuses with the goal of increasing student retention. Primary Research Group conduct benchmarking surveys for a wide variety of organizations such as colleges, libraries, museums, businesses, and law firms. They have identified some of the best practices for student retention, which include learning communities, first-year seminars, early alert/warning systems, student support services, academic advising, and peer mentoring programs ("Best Practices in Student Retention," 2011). In addition to these practices, orientation programs (Braxton et al., 2014) and living on campus were also found to increase student retention (Astin, 1993). In following Tinto's (1993) suggestions, college administrators have designed retention programs with the following objectives:

1. "Effective retention programs are committed to the students they serve. They put student welfare ahead of other institutional goals" (p.146);
2. "Effective retention programs are first and foremost committed to the education of all, not just some, of their students" (p.146);
3. "Effective retention programs are committed to the development of supportive social and educational communities" (p.147).

Colleges and universities have developed the following initiatives, which are mostly open and available to all students at the institutions, to support the students' social and educational experiences.

Academic advising. Academic advising allows students to interact with faculty outside of the classroom setting. Interaction with faculty has a direct correlation with an institution's

retention and graduation rates (Pascarella and Terenzini, 2005). Academic advising also creates an intentional relationship between a student and a faculty/staff member at the institution. Relationships with faculty play a vital part in a student's choice to remain at or leave an institution (Habley, Bloom, and Robbins, 2012).

Early alert/warning systems. College administrators use early alert/warning systems in many ways. Some administrators utilize mid-term GPAs while others will use absences as an indicator for early intervention. Administrators may choose various interventions ranging from formal approaches, utilizing personal contact from a faculty and staff member, to informal kinds of contact, such as having a staff member send a group email to all students indicating their need for improvement (Tamke, 2013). Researchers have found that early alert or warning systems are effective strategies for increasing retention (Braxton, Hirschy, and McClendon, 2003).

First-year seminars. A first-seminar course is a course designed specifically for first-year students. First-year seminars are usually smaller in size and allow faculty to have more meaningful interactions with students. Professors teach academic skills and practices, including notetaking, study skills, and time management in the seminars and encourage students to use the skills and practices in other courses. A universal model regarding course credit, type of instructor, or the content that is utilized does not exist; however, over 90% of four-year institutions offer the seminars in one of four ways: "(a) extended orientation, (b) academic seminar with uniform content, (c) academic seminar with variable content, and (d) a hybrid" (Skipper, 2017, p.8). The details of these are as follows:

- Extended orientation course content. These courses focus on educating students about the various resources available on campus to help them set academic and career goals,

foster personal development including time management skills, and define the ways they learn best.

- Academic seminars with uniform content. These seminars cover an interdisciplinary topic such as writing or critical thinking. Often this type of class can also fulfill a general education requirement for first-year students.
- Academic seminars without uniform content. These seminars are different to the one described above in that the instructor directs the course content based on their research or areas of interest.
- Hybrids. Hybrid formats are first-year seminar courses that utilize a combination of the three courses previously described.

Researchers at Appalachian State University found that students who enrolled in first-year seminar courses earned higher GPAs and were retained to the second year more than students who did not participate in the course (Friedman & Marsh, 2008).

Learning communities. First-year students enroll in one or more classes during the first semester of college and engage in campus activities together. This helps them to develop a sense of community and furthers their connection to the institution. Learning communities can significantly increase the retention rates of Black men and women (Hotchkiss, Moore, and Pitts, 2006).

Living on campus. Students living on campus are found to be more engaged in activities, participate in intramurals, and overall be more engaged on campus. Pascarelli and Terenzini found students living on campus had higher retention and graduation rates. Astin (1993) also found students living on campus were more likely to develop purposeful relationships with faculty members, increase interpersonal and leadership skills, while learning how to work more

effectively with people from diverse backgrounds (Astin, 1993). This, in turn, deepens the students' affinity for the institution.

Orientation. Through orientation programs, students are informed about the best practices and strategies for success inside and outside of the classroom. By participating in orientation programs, students meet faculty who can clearly communicate to students the expected behaviors and outcomes of students in college. Orientation also serves as an opportunity for students to meet their peers and begin to develop connections (Braxton et al., 2014).

Peer mentoring. Connecting first-year students with upper-division students helps to increase first-year students' confidence in themselves. It also makes them more committed to their collegiate goals because the mentoring program creates a sense of accountability between student and mentor. Morales, Ambrose-Roman, and Perez-Maldonado (2016) found that, through their relationships with mentors, the first-year students gained valuable knowledge about campus resources including connections with faculty and staff members which led to the students feeling more supported and connected to the university.

Student Support Services. Student Support Services is part of TRIO, a federal program with purposeful outreach and programs for underrepresented students. The program provides tutoring, counseling, and workshops to further develop students' remedial skills (Campbell, 2010). TRIO programs such as Student Support Services have shown great success in helping underrepresented student achieve their collegiate goals (Balz and Esten, 1998).

Definition of terms. For consistency and further understanding, I will use the following terms based on the following definitions throughout this study:

Attrition. Attrition describes "the condition where something is worn down or ground down by friction" (Habley et al., 2012, p.13). The term has a negative connotation and institutions should avoid using such terms in describing the behavior of the students. A university deciding to use this term is describing how the people, policies, and programs of the institution have ground the students down so much that they decide to leave (Habley et al., 2012). Due to the term carrying a negative connotation, this study instead utilizes "retention" and "persistence."

Retention. Habley et al. (2012) found, "Retention is usually expressed as a rate or percentage of students who return from one enrollment period to another" (p.8). For accuracy in the data being reported, the study uses retention to indicate first-time full-time students who were enrolled on the 12th day of class in the fall of their first year and enrolled on the 12th day of the following fall semester.

Persistence. In line with Habley et al. (2012), I will be using "persistence" to describe the process in which a "student who enrolls full-time and continuously pursues a degree with the expectation of graduation in about four years" (p.4).

Gender. In this study, "gender" is used to reference students' self-identification as a man or woman. Sex is used to describe the biological characteristics of being male or female.

Graduation rates. Graduation rate is determined by the population of students from the same entering class graduating from the institution within a six-year period (Morse, Brooks, & Mason, 2017)

Intersectionality. Researchers using intersectionality as described by Vivian May (2014) would be "Thinking about social reality as multidimensional, lived identities as intertwined, and systems of oppression as meshed and mutually constitutive" (p.96). This study utilizes intersectionality to examine the dimensions of gender and race for college students just as Kimberley Crenshaw (1989) did with race and sex in authoring "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics."

Latinx. Instead of using Latino or Latina, I have used Latinx to be inclusive of all people in the Latin American community. Latinx is a term that is limited to the US and is not universally used in other countries in the world where the identification of the person is linked to their specific country and not the region; the region of Latin America includes countries south of the US (DeGuzman, 2017).

Predominantly White institutions (PWI). I have used predominantly White institution to identify higher education institutions in the US whose undergraduate and graduate population are composed of more than 50% of White students.

Sense of belonging. Sense of belonging refers to a student's "affiliation and identification with college" (Hurtado & Carter, 1997, p. 338). A sense of belonging also encapsulates students' "perceived peer support, perceived classroom comfort, perceived isolation, and perceived faculty support" (Morrow & Ackermann, 2012, p. 485).

Students of color. The term "students of color" in this study includes all students who identify as Alaskan Native, American Indian, Asian-American, Black/African American, Latinx, Native Hawaiian, or Pacific Islander.

Summary

The research indicates that a person with a college education can expect a healthier and more financially stable life. A college degree leads to more financial success (Ross & Wu, 1995; "Unemployment rates", 2018 Zimmerman & Woolf, 2014), political activism (CIRCLE, 2016; Flanagan, 2009; Pritzker, Springer, & McBride, 2015), and an overall better quality of life (Ross & Wu, 1995; Zimmerman and Woolf, 2014). However, not every student has the same opportunities for success in college. For example, although students of color and females are the two populations projected to increase the most significantly by 2025 (Bransberger & Michelau, 2016; Hussar & Bailey, 2016), students of color and females face very different challenges in college to White and male students. Students of color and females must overcome different academic, social, and interpersonal challenges to White and male students (Fleming, 2012; Habley, Bloom, & Robbins, 2012; Pound, 1989). Specifically, students of color entering a PWI will have to overcome the institution's inherent racism, discrimination, and oppression (Logan, Lightfoot, Contreras, 2017; Pounds, 1989).

To this end, however, students must first be retained by an institution in order to be able to ultimately graduate with a college degree. Although universities use various ways to try to retain students, retention efforts have failed to have a substantial impact on retention rates at private four-year colleges across the US. In 2001, the retention rate of students at four-year private universities was 74.9%. Sixteen years later, in 2017, the retention rate had only increased to 75.5% (American College Testing Program, 2017). Therefore, researchers and university leaders continue to study retention in the hope of being able to improve retention rates at their institutions. The purpose of this study, therefore was to explore the relationship between the intersectionality of students' race and gender and their sense of belonging at a PWI. Beyond the

effects of intersectionality, the study also set out to analyze the relationship between students' institutional experiences and their sense of belonging at a PWI.

Chapter 2: Literature Review

In this chapter, I begin with an overview of the history of retention practices before moving on to a discussion of the current best practices for retention most commonly used by colleges and universities. I then discuss Tinto's (1993) longitudinal model of student departure and explain the DLE survey, before providing a rationale for the utilization of intersectionality to better understand students' sense of belonging as a way to address the issue of retention.

History of Retention

The early years of higher education in the US did not require much focus upon retention because universities and colleges were only set up for specific kinds of training and the cost was heavily subsidized by private benefactors and the government (Rudolph, 1990). For example, Harvard University, the oldest university in the US, was founded with a curriculum based on Greek philosophy and Latin in order to train teachers, religious leaders, and civic leaders; all of whom were White men (1990). In addition, universities tried to make money by selling perpetual scholarships. Perpetual scholarships were sold for approximately five hundred dollars and would guarantee free tuition for one person at a university in perpetuity (Rudolph, 1990). Accordingly, in the beginning stages of higher education in the US, institutions were focused on their own survival rather than the success of their students (Berger et al., 2012). The first retention study ever conducted was in 1937 by John McNeely at the request of the United States Department of the Interior and the Office of Education. McNeely (1938) focused on retention by examining students' personal characteristics, the issues students faced in college, and academic achievements.

Servicemen's Readjustment Act of 1944. The lack and type of students enrolling in higher education changed after World War II when the US Congress passed the Servicemen's

Readjustment Act of 1944, often referred to as the GI Bill of Rights or the GI Bill (Bennett, 1996). The GI Bill made college more accessible for returning service men and women by covering the cost of college. The GI Bill covered tuition of up to $500 per year plus fees. It also provided students with a $65 stipend for veterans and $90 for veterans with dependents (Bennett, 1996). Veteran enrollments following the two years after the conclusion of the war increased from 88,000 veterans in 1945 to 1,150,000 in 1947. As a result, the landscape of colleges and universities had to quickly respond to the influx of veterans seeking to pursue their educational goals. New universities and colleges had to be built to respond to the increase in population, and, thus, the number of college students' graduating doubled between 1942-1952. In 1942, U.S. colleges and universities conferred 213, 491 degrees and, in 1951, the number of degrees had increased to 454,960 (Bennett, 1996). However, the cost of providing veterans with these educational opportunities was great. The Labor Department estimated that the U.S. government spent $14.5 billion dollars on the GI Bill for WWII veterans. However, the Labor Department also estimated that the program netted a profit for the US because veterans with college degrees would make $250,000 more than those without college degrees over their lifetimes. The increase in pay would also mean that veterans would be paying more taxes throughout their lifetimes. Veterans were also having an impact upon the cultures of the institutions. The GI Bill provided educational benefits to all veterans, including veterans who were immigrants and veterans of all races. The increase in the number of veteran students on campuses challenged universities and colleges to rethink the paradigms of college students they had constructed. Bennett (1996) stated, "The GI Bill was also having a profound impact on social culture, tearing down assumptions of ethnic, religious, and racial superiority that were, if possible, even more deeply embedded in the minds of academics than ordinary citizens" (p.249).

The GI Bill also impacted upon the student demographics on college campuses. In 1940, women comprised approximately 40% of the enrollments in higher education in the US. Due to the large number of men who had served in WWII taking advantage of the GI Bill, the percentage of women enrolled in higher education dropped to 32% by 1950. It would take approximately 20 years before the percentage was able to rebound back to 40%. In addition, U.S. colleges and universities were still operating under the doctrine of "separate but equal" and, therefore, the opportunities for military men and women of color were limited compared to their White counterparts (Thelin, 2004). Although women and people of color were afforded financial assistance by the GI Bill, the challenges and discrimination women and people of color faced in the admission process and the campus culture were much greater than those faced by White males. The U.S. Supreme Court did not pass Title IX, which prohibited discrimination based on sex, until 1972; and Brown vs Board of Education, which reversed the Plessy vs Ferguson decision allowing for "separate but equal" public schools, did not occur until 1954.

The 1970s. Berger et al. (2012) identified William Spady's study in the early 1970s as the next significant study to focus on retention. Spady reviewed the studies being conducted across the country in the 1950s and 1960s and categorized them into six types: autopsy, census, case, descriptive, predictive, and philosophical (Spady, 1971). Spady's work attempted to create a retention framework by emphasizing the connections between student characteristics and campus environments. His work laid the foundation upon which future researchers were able to develop retention models. For instance, Spady's research laid the foundational framework for Tinto's (1975) longitudinal model of institutional departure (Berger et al., 2012). Astin's (1972) involvement theory, simplifying Spady's research, stated that the more students were involved on college campuses, the more likely they were to be retained.

The 1980s. Institutions became aware that the influx of students who had entered colleges in the preceding few decades was about to plateau; without increases in enrollment, colleges and universities had to ascertain how they would keep the students that they already had on campus (Berger et al., 2012). A decline in birthrates in the 1960s also resulted in fewer college-age students in the 1980s (Mabry, 1987). The need to investigate how to retain students caused many institutions to turn to developing models and assigning personnel to focus on enrollment management. Mabry (1987) explained the purpose of enrollment management was, "To contact more potential students, influence their decision concerning college attendance and college choice, and retain those students who enroll" (p.6). As a result, universities created enrollment management committees, hired enrollment management coordinators, and developed enrollment management matrices and divisions in order to better understand and develop strategies to retain students (Berger et al., 2012).

The 1990s. In the 1990s, researchers, such as John Braxton from Vanderbilt University, became more interested in the empirical evidence rather than the theoretical principles of retention. Braxton tested Tinto's (1993) longitudinal model of institutional departure. Through careful analysis, Braxton, Sullivan, and Johnson (1997) found moderate or strong support for the following eight of Tinto's (1993) thirteen propositions:

1. Students' demographics entering college will affect their initial commitment to the institution.
2. Students' demographics entering college will affect their level of commitment to graduation.
3. The greater the academic integration, the higher the commitment to the goal of graduation.

4. The greater the social integration, the higher the commitment to the institution.
5. The student's initial institutional commitment directly impacts upon the subsequent level of institutional commitment.
6. The student's initial goal commitment to graduation directly affects the subsequent level of commitment to graduation.
7. The higher the level of subsequent commitment to the institution, the greater the likelihood of retention.
8. A higher level of commitment to the goal of graduation can offset the low level of commitment to the institution, and vice versa, in influencing student retention.

The 2000s. In the early 2000s, retention became a focus at most institutions. The number of researchers studying retention led to the creation of a new journal, *The Journal of College Student Retention: Research, Theory, and Practice* (Berger et al., 2012). The landscape of retention varied across schools and student demographics. Devarics and Roach (2000) reported in 1996, 28% of White people in the age group of 25-29 years had graduated from college, whereas, only 14% of African Americans within the same group graduated from college. Furthermore, based on reports by American College Testing (ACT), nationwide, 25.9% of students entering college did not persist to the second year. In highly selective universities, the retention rate was 92%. However, at less selective institutions, retention rates were at 65% and for institutions with rolling enrollment, the retention rate was 50%. Retention rates were particularly low for those students from underrepresented racial groups, and first-generation and lower socioeconomic backgrounds (Devarics & Roach, 2000). Since the early 2000s, as colleges and universities have become increasingly diverse, more research and studies have focused upon three areas: 1) Historically Black Colleges and Universities and Hispanic-Serving Institutions, 2)

racial climates on PWI campuses, and 3) the effect of organizational behavior on different student groups (Berger et al., 2012).

At present, the outlook for students of color and college success has improved. However, more can be done to increase the retention and graduation rates of students of color at all universities. Researchers at the NCES reported that the overall retention rate for private four-year nonprofit degree granting institutions was 82% for students entering college in fall 2015 (NCES, 2018). However, the retention rate was 67% for Black/African American students and 75% for Latinx students entering private four-year nonprofit degree granting institutions, which are both lower than the national average (National Student Clearinghouse Research Center, 2017). Furthermore, the researchers at the NCES found four-year private institutions with a selectivity rate between 25-49.9% had an overall six-year graduation rate of 74.2%. At those same institutions, the six-year graduation rate was 79.5% for White students and 81.5% for Asian students, which are both higher than the national average. The six-year graduation rate was 47.3% for Black/African American students and 70.1% for Latinx students, which are both lower than the national average (NCES, 2017).

Retention and Transition Models

Since John McNeely started to research student retention in 1937, numerous theorists and researchers have developed an interest in studying the subject. Researchers such as John Summerskills, Alexander Astin, William Spady, John Meyers, David Kamen, Vincent Tinto, John Bean, Barbara Metzner, and Alan Seidman have all contributed to the field of retention by providing different perspectives on the impact and process of student retention (Berger et al., 2012). The next section discusses the following: the connection between Tinto's (1993) stages of integration with Astin's (1993) concept of involvement, the similarity between Tinto's (1993)

model and Schlossberg's (1981) transitions model, and Seidman's (2004) model emphasizing the importance of intervening in students' college experiences to help increase retention.

Alexander Astin. Astin developed the input-environment-output model. Astin stated, "The basic purpose of the model is to assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions" (p. 7). The three stages of Astin's model are similar to Tinto's three stages: *pre-entry attributes, institutional experiences,* and *goal commitment*. Astin (1993) describes his *inputs* as the students' characteristics prior to entering college. Tinto's (1993) *pre-entry attributes* include the student's family background, current academic skills and abilities, and high school experience. Astin's (1993) *environment* refers to the people, programs, and processes to which college students are exposed during their college experiences. Tinto's (1993) model identifies the *institutional experiences* and separates them into the academic and social systems that students experience during college. Astin's (1993) *outcome* describes changes to students' characteristics after being exposed to the environment. Tinto's (1993) g*oal commitment* describes students' commitment to the university and their personal goals based on their integration into the social and academic systems. Both models emphasize the impact of students' involvement or integration on outcomes (Astin 1993; Tinto 1993).

Nancy Schlossberg. Nancy Schlossberg's transitions model was developed for counselors working with adults dealing with major life transitions ranging from marriage to death (Schlossberg, 1984). Schlossberg's "Model for Analyzing Human Adaptation to Transition" can be useful in understanding retention because college attendance is a major moment of transition. She divided transition into two definitions. Schlossberg (1981) described a transition as an "event or nonevent resulting in change or assumption and change of social

networks resulting in growth or deterioration" (p.5). Tinto (1993) describes the college transition process as students having to leave their previous communities and enter the collegiate community. Students must separate themselves from family and friends to learn to make new friends and associations in college. Schlossberg's model also identifies three factors impacting upon an individual's ability to successfully transition life stages: perception of the transition, characteristics of the pre- and post-transition environments, and the characteristics of the individual. Schlossberg (1981) uses *perception of the particular transition* to describe the individual's view of the life change. Whether the person views the transition as positive or negative, gradual or sudden, permanent or temporary, or internal or external will impact upon his/her ability to adapt (Schlossberg, 1981).

Schlossberg's concept of how a person views transition as being positive or negative can be connected to Tinto's (1993) *goal commitment*. Students with a positive view of college, clear personal goals, and commitment to the institution are more likely to be successful than those students that do not have these positive attributes. Schlossberg's *characteristics of the pre- and post-transition* environments are similar to Tinto's *institutional experiences*. Schlossberg's (1981) model emphasizes the importance of internal support systems, such as family and friends, institutional support, and the physical setting in helping people to cope with transition. This is similar to Tinto's informal social and academic systems which include the development of friends and the academic feedback provided by the institution. Lastly, Schlossberg (1981) identified the specific characteristics of an individual that may impact upon their ability to adapt to change. These characteristics include sex, age, stage of health, race/ethnicity and socioeconomic status. Again, these individual characteristics resemble Tinto's pre-entry attributes, especially the family background.

All three models developed by Astin, Schlossberg, and Tinto identify the importance of understanding the characteristics of the individual. Through understanding the individual's characteristics, the models identify factors in the environment/transition that can help or hinder the individual from reaching his/her desired outcomes. With an understanding of these factors, institutions can begin to create a campus culture that fosters a stronger sense of belonging for specific students with specific demographics.

Alan Seidman. Astin's (1993) I-E-O model and Tinto's (1993) longitudinal model for institutional departure both identified the key characteristics that impact upon a student's ability to be successful in college. Schlossberg (1981) provides a model to help higher education to understand the factors students face in their transition to college. Alan Seidman (2004) built upon both Astin's and Tinto's models and developed his own formula called the Seidman Retention Formula: Retention = Early Identification + (Early + Intensive + Continuous) Intervention. Seidman believed in the importance of the early identification of students at risk. Once students have been identified, he believed intervention was essential. His model called for early, intensive, and continuous interventions. Early intervention means to begin the intervention as soon as the student has been identified as at risk. Seidman (2012) noted that an intensive intervention program, "must provide the students with an experience powerful enough to be effective and make the desired change in the student's academic and/or personal behavior" (p. 273). Continuous intervention, as described in Seidman's formula, is an intervention that is persistent until the desired change is achieved. This means the intervention could be a part of the students' entire college experience if needed (2012).

Tinto's longitudinal model of institutional departure. Tinto's model outlines students' experiences, obstacles, and decision regarding whether to leave a university. Figure 1 depicts

Tinto's model and the influences of each stage upon the next stage in a student's departure decision.

Pre-entry attributes. Students have three personal attributes that can influence their likelihood of retention even before they set foot on campus. Tinto (1993) recognized family background, skills and abilities, and prior schooling as the aspects of the students' experience before coming to college that might impact the probability of retention. Family background includes, for example, the student's socioeconomic status, their parents' previous higher education, and the size of the community from which the student comes. Students who come from low-income families, families where neither parent has college experience, or live in rural communities are more likely to drop out than those whose families are highly educated, affluent, and live in urban areas (Tinto, 1975).

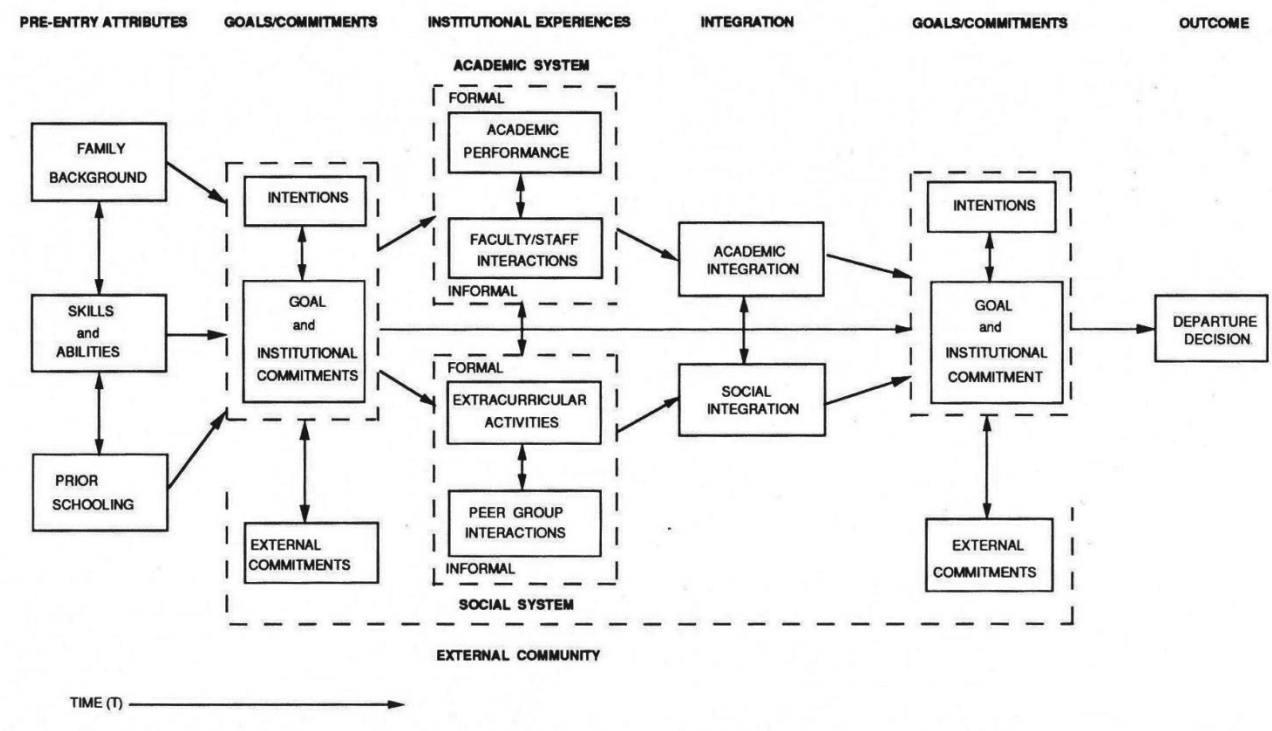

Figure 1. A Longitudinal Model of Institutional Departure. Reprinted from *Leaving College: Rethinking the Causes and Cures of Student Attrition* (p.114), by V. Tinto, 1993, University of Chicago Press. Copyright 1993 by The University of Chicago.

Skills and abilities encompass students' academic and emotional abilities, including high school GPAs, scores of standardized tests, and resilience to challenges (Tinto, 1975). A student's ability to respond to the changing environment of college and the challenges of integrating into a new community has an impact on retention. Students who are emotionally disturbed, impulsive, and experience high anxiety when faced with changing circumstances in their college experiences are more likely to drop out of college than their counterparts (Grace, 1957; Vaughan, 1968). Current research continues to find that students with mental health concerns, such as depression, anxiety, and the inability to manage their stress, have lower GPAs and higher rates of dropping out of college than their counterparts (Parker, Summerfieldt, Hogan, & Majeski, 2004; Parker, Hogan, Eastabrook, Oke & Wood, 2006; Eisenberg, Golberstein, & Hunt, 2009; Jones-Schenk & Harper, 2014). In researching how mental health could negatively impact student success, Kitzrow (2009) found:

> Students with higher levels of psychological distress were characterized by higher test anxiety, lower academic self-efficacy, and less effective time management and use of study resources. They were also less likely to persist when faced with distraction or difficulty and less likely to use effective learning strategies such as academic assistance (p. 650-651).

Furthermore, Kirby, White, and Aruguete (2007) found that standardized test scores were not good indicators for predicting college GPAs for students of color; only high school GPAs and class rank were useful in predicting GPAs in college for students of color.

Prior school experience refers to the type of school and the quality of interaction students had with teachers and counselors. The size of the high school and facilities reflects the socio-economic status of the community, providing students with advantages (Dyer, 1968) which can also be used to predict the likelihood of students' retention in college (Tinto, 1975). For example, if classrooms have smart boards and use new software, students can learn how to navigate the technology in high school, which lessens the learning curve when they arrive on a college campus. The use of technology in the classroom can increase the motivation for students to learn and provide a variety of visual and auditory options that keep students engaged in the learning process (Ozerbas & Bilge, 2016). On the other hand, students who are attempting to learn the new technologies as well as adapting to their new environment are already starting off behind their peers. College classrooms that utilize technology to engage students in the learning process have higher classroom retention rates and a more positive regard for the course content than courses that do not utilize technology (McMahon, 2010). The interactions with teachers and counselors are also very important. Students who seek assistance from counselors and professors tend to have positive results in increasing their GPA (Schwitzer, Moss, Pribesh, St. John, Burnett, Thompson, & Foss, 2018). A student's increased confidence will help him or her to be better prepared to face the challenges that will arise in college leading to a higher likelihood of retention and graduation (Tinto, 1975; Akos & Kretchmar, 2017)).

Goals/commitment. A student's pre-entry attributes affect his/her level of commitment and his/her ability to attain specific goals. A student's level of commitment to graduation is the most important factor in retention (Tinto, 1975). Commitment is divided into goal and institutional commitment. The difference between goal commitment and institutional commitment is that goal commitment refers to students' commitments to their individual goals

(Tinto, 2003), whether the goals are educational or career oriented; while institutional commitment refers to students' commitment to remain at their current institutions. The model suggests that pre-entry attributes can have an impact upon student goal commitment and intuitional commitment and, therefore, these are placed after the pre-entry attributes (Tinto, 1993). The student's expectation of success, combined with family and high school support and expectations, can determine the level of commitment the student has in returning to and graduating from the institution. Students coming to college today may not have a realistic expectation and understanding of the college's academic and social demands; the wider the gap between expectation and real-life experience, the greater the likelihood that the student will leave the institution (Pleitz, MacDougall, Terry, Buckley, & Campbell, 2015).

Students' expectations of success may differ based on gender. Melendez (2016) found that women often have higher levels of commitment to graduation and higher levels of attachment to their institutions than men. Tinto (1975) found students' sex and grades were important factors in determining retention; higher retention is linked to higher grades for males, however, that is the not case for women. The better indicator for predicting female retention is intellectual development. Tinto (1975) found males were more motivated by extrinsic rewards which is represented by the actual letter grade, whereas females were more motivated by intrinsic rewards through the process of personal and academic development (Tinto, 1975). Intrinsic and extrinsic motivation still play vital roles in determining male and female students' commitment to their college goals. Sabine and Dam (2012) found women demonstrated higher levels of motivation, discipline, and time management skills than men; whereas men tend to drop out of college due to poor job markets and for financial reasons. Haemmerlie and Montgomery (2012) also found college women scored higher in the personality traits of prudence and

intellectual curiosity than men. Overall, students who are committed to college and graduation have a higher retention rate than those with a lower level of commitment (Savage, Strom, Ebesu Hubbard, & Aune, 2017).

Institutional experiences. Institutional experiences occur within two forms: the academic system and the social system. Within these systems, there exist formal and informal experiences. Academic systems include formal experience or academic performance (Tinto, 1993). Students' ability to earn good grades adds to their sense of confidence in the collegiate experience and failure to obtain good grades will create anxiety and frustration.

Grades are a reliable indicator of a student's likelihood of graduating; however, grades do not account for whether a student will graduate from that specific institution. Students who believe the institution does not provide adequate academic challenges may decide to transfer to a more rigorous institution to finish their college experience (Tinto, 1993). Saunder-Scott, Braley, and Stennes-Spidahl (2018) found that high school GPAs were an excellent indicator of students' college GPAs but were not a good indicator of retention. Instead, they found that grit and the ability to manage stress was a stronger indicator for retention than GPA.

The informal academic system consists of the interactions students have with the faculty and staff at the institution. The informal academic system can take the form of meetings during office hours, conversations while walking across campus, or participating in common campus activities. Students with strong relationships with faculty members and staff achieve higher GPAs and are retained at a higher level than those who do not have relationships with their faculty and staff (Astin, 1993; Braxton, Doyle, Hartley, Hirschy, Jones, and McLendon, 2014; Laskey & Hetzel, 2011; Pascarella & Terenzini, 2005; Tinto, 1993).

Formal social systems include the students' participation in co-curricular activities (Tinto, 1993). Students can choose to join fraternities and sororities, intramural teams, social clubs, academic organizations, theater troupes, and singing groups to name a few options. Informal social systems are less structured places for students to meet their peer groups and develop friendships. Informal social systems can arise from various situations including students creating peer groups with people who live in the same residence hall, students meeting new peer groups at parties, or meeting someone new by sitting down to lunch beside a stranger. Involvement in co-curricular activities is a strong indicator for success in college (Astin, 1993; Bergen-Cico & Viscomi, 2013; Biddix, Singer, Aslinger, 2018). Furthermore, friendships increase students' sense of belonging to the institution (Hamm & Faircloth, 2005). According to Pittman and Richmond (2008), friendships provide students with "social support, assistance in coping with difficult situations, and the opportunity to engage in social activities" (p. 356).

At the institutional experience stage, Tinto's model acknowledges the different pre-entry attributes students bring with them to an institution. The institutional experience stage also recognizes that pre-entry attributes have an influence on students' goals and level of commitment. Students bring their pre-entry attributes and goals/commitment with them to college. The academic and social systems beget the actual interactions students have with the college. The social and academic systems are where students will encounter the challenges and obstacles to retention. How students successfully navigate these systems has a direct relationship with retention. Institutions with low retention rates often also have lower levels of faculty-student interactions (Tinto, 1993).

However, in the absence of relationships with faculty members, the success of developing friends in the informal social system can offset the importance of developing relationships with

faculty in the informal academic system (Tinto, 1993). Students coming from schooling within which poor study habits were learned and study skills were not properly addressed will struggle to be successful in the formal academic system. For example, Jones (1955) found only 6% of successful college students reported struggling with concentration in high school, whereas 29% of the college students on academic probation reported struggling with concentration in high school. His study concluded successful college students differ from those on probation by knowing how to prepare for exams, taking more notes from textbooks, and understanding how to anticipate what questions may be asked on the test (Jones, 1955). Young, Turnage-Butterbaugh, Deggs-White, and Mossing (2015) found the same concerns that Jones had noted in the 1950s were still evident for students on academic probation in the present. Young et al. (2015) found that students on academic probation scored lower in the areas of "thinking, emotions, control, work, spirituality, self-care, and nutrition" (p. 231). Trombley (2000) also found that high school academic success or struggles followed students into their college experiences. Her study demonstrated that students on probation in college had lower high school GPAs than those students in good standing. In the college selection process, the formal academic and social systems are readily apparent. The challenging aspect for students in the college selection process is that the informal academic and social systems are harder to find and are rarely discussed in the college recruitment process (Tinto, 1993).

Academic and social integration. Academic and social integration is achieved when students can find congruence between the norms and patterns of behavior in their families, high schools, and communities and those of their classroom, faculty and staff interactions, peer groups, and curricular activities (Tinto, 1993). Students encounter the academic and social systems of the college once they arrive. The students' abilities to navigate these systems will

determine the level of academic and social integration they are able to achieve. It is important to recognize, however, that just because students are successful at navigating one system does not necessarily mean they will be successful in traversing the other system (Tinto, 1993).

Integration specifically addresses the level of involvement with which students engage in the social and academic systems. Therefore, it is essential to understand how considering students' pre-entry attributes is important to comprehensively understanding the level of integration. Women and students of color will have more difficulty with social and academic integration than men and White students (Tinto, 1993). Morley (2004) found that students of color in college had a lower sense of belonging because they experienced more homesickness and had to endure more microaggressions than White students. Kim and Sax (2009) found that faculty members encouraged White men to pursue graduate degrees more so than they did women and students of color.

Notably, male students are more likely to experience academic dismissal than female students (Tinto, 1993; Kopp and Shaw, 2016). However, female students are more likely to voluntarily depart from an institution than male students, who tend to persevere until they are forced to leave through academic dismissal (Tinto, 1975). However, in small- or medium-sized institutions, students of color may encounter limitations in regard to the types of organizations and groups that they can join that align with their own interests and beliefs. Using the example of the struggles students of color face in the academic and social systems based on their pre-entry attributes, those challenges are magnified in the integration stage. There is also the question of how well-suited the individual institution is to serve students of color. Without supportive communities and services, these challenges will lead students of color to feel isolated from the

campus culture and feelings of isolation are key reasons students decide to leave an institution (Tinto, 1993; Morley, 2004).

Another student population to which Tinto's model does not apply are non-traditional students; non-traditional students are college students who are older than 25 years, enrolled part-time, and/or do not live on campus (Bean & Metner, 1985). Bean and Metzner were critical of Tinto's social system and argued that non-traditional students emphasized their academic systems significantly more than their social systems (1985). Based on these differences, Bean and Metzner (1985) developed a conceptual model of non-traditional student attrition. Bean and Metzner's model differed greatly from Tinto's (1993) model with more emphasis placed upon the impact of academia on the retention of non-traditional students.

Hurtado and Carter (1997) also suggested that the word "integration" should be used with caution because in marginalized populations "integration" may have more of a negative connotation than as perceived in Tinto's model where integration is viewed as a positive experience. Some students of color may have a harder time integrating if they are less familiar with the academic expectations of college due to a lack of similar expectations in high school (Goward, 2018).

Goal/commitment. The goals and commitment students have prior to coming to college are revisited at this stage. Students' experiences with academic and social systems will translate into their levels of social and academic integration. After students acknowledge their success or failure to integrate, the students re-examine their previous goals and institutional commitments. The model indicates that positive academic integration will lead to stronger goal commitment, and that success in navigating the social system will lead to stronger institutional commitment

(Tinto, 1975). As stated earlier, high goal commitment and high institutional commitment increase the likelihood of students being retained (Melendez, 2016; Savage et al., 2017).

External commitment. External commitments include families, off-campus jobs, and high school communities. These commitments can impact student goals and institutional commitment. The model suggests that students' engagement in the social and academic systems can influence their goals and institutional commitments. Student who live at home, work off campus, or frequently spend time with high school friends struggle to achieve positive academic and social integration (Tinto, 1993). In this regard, external commitments have a greater impact on students of color than White students. For example, Baker and Robnett (2012) revealed that Latinx students are the most likely to work a minimum of 20 hours per week and spend more than 17 hours per week on family commitments. This time dedicated to work and family contributes to lower retention rates because students are not connected to their campus and the amount of time dedicated to part-time jobs and family commitments may interfere with their commitment to their course work.

Students who experience conflicts between family and college expectations are caught in a situation where they are pulled in two directions. Prioritizing college expectations over family expectations can be difficult for students, leading them to feel more stress and anxiety about their collegiate experience. The same can also be said about off-campus jobs. Balancing academic and social schedules may be difficult enough for students. Adding a job that does not support their goal commitment will only further cause conflicts for the students and force them to make difficult choices between integrating into their academic and social communities and fulfilling their work schedules (Tinto, 1993). Torres, Gross and Dadasova (2011) found that students working more than 30 hours a week resulted in obtaining lower GPAs and fewer completed

credit hours than their peers who worked less hours. Dundes and Marx (2006), along with Torres et al. (2011), suggested that students who want or need to work while attending college should be encouraged to work less than 20 hours per week to maximize their ability to be successful in balancing their time. However, this is not a realistic possibility for some students who need to work in order to pay for college. Goldrick-Rab, Anderson, and Kinsley (2016) conducted a study of 3,000 students in 13 public universities and 13 two-year institutions in Wisconsin and found that 50% of the students did not complete college and the main reason was that they could not afford to continue to pay the cost of attending college.

Commuter students face different external commitments than those students who live on campus. Braxton, Hirschy, and McClendon (2004) identified that retention needs for commuter students are different from those of residential students because of the lack of a sense of belonging. Therefore, they developed a model to account for the differences in commuter students. They focused on creating processes and policies on campus to communicate a sense of belonging for commuter students.

To support the development of a sense of belonging, Braxton et al. (2014) suggested that colleges and universities work with the schedules of commuter students by:

1. Having university offices that serve students open at times that are convenient for students who work.
2. Providing information about public transportation options for traveling to and from campus.
3. Having physical facilities for students to study, type papers, and make copies of course materials.
4. Having a physical space open on the weekends.

5. Having the university library open during the weekend.
6. Having ample parking on campus for commuter students.
7. Ensuring access to computers is available on weekends and evenings (p. 62-63).

Outcome/departure decision. In summary, the pre-entry attributes and the goals/commitment students bring into college, their experiences in the academic and social systems leading to their sense of integration into the university, and their level of social and academic integration can either further reinforce or undermine their goals/commitment which may result in their departure decision. Based on the model, the best way to influence or impact upon students' decisions regarding departure would be to target the social and academic systems. Developing practices and policies that encourage a sense of belonging during students' engagement in the academic and social systems can increase integration. Students who feel incorporated into the college community are much more likely to be retained (Tinto, 1993; Astin 1993; Bergen-Cico & Viscomi, 2013; Biddix, Singer, Aslinger, 2018).

Predictors of Success

Tinto (1975) identified the key predictors that gage the likelihood of student success in college. They are family background, individual characteristics, past educational experiences, and goal commitment**.**

Family background. In describing family background, Tinto (1975) specifically identified family income as a predictor of student retention. Palardy (2013) found low-income students enrolled in high schools in which their peers were also from low-income families were significantly less likely to attend a four-year college than their peers from high-income high schools. Individuals from low socioeconomic families were less likely to persist at college than their peers from higher socioeconomic backgrounds (Anderson, 1985; Tolliver, 2013;

Mamiseishvili & Degg, 2013). Living off campus and working part-time jobs create additional challenges for students in being involved on campus and students who are less involved on campus are less likely to persist (Astin, 1993; Torres, Gross and Dadasova, 2011). Furthermore, students from low socioeconomic backgrounds are often the first in their families to go to college and more likely to have attended poor public schools where encouragement from friends and guidance from teachers and school administrators in the college decision process was lacking (Valverde, 1985). This issue reported in 1985 is still an ongoing concern as low-income students are still significantly less likely to graduate high school and succeed in college compared to their higher income peers, all the while making up 50% of the population of public schools (Fox, Ingram, & Depaili, 2016).

Family support is also important for student success. Family income is linked to student retention. The expectation of family contributions or financial support is an indicator of retention (Olbrecht, Romano, & Teigen, 2016). The more money a family earns and can use to support the student, the more likely the student is to be successful in college. Rendon, Jalomo, and Nora (2000), advocating on behalf of students of color, criticized Tinto's model as unfair to students of color because it places the responsibility on the student to separate from their cultural identity in order to succeed in college; thus, they identified that Tinto's (1993) model was based on a student population at the time that was mostly White.

Individual characteristics. Sex (Tinto, 1975) and race (Tinto, 1993) can influence students' college decisions and experiences. Astin (1972) found that women are less likely than men to graduate from college. He also found that Black students were more likely to persist at four-year schools than students of other races. However, this had changed by the time he published another study in 1993 in which he found being female and White were positive

predictors for students being academically successful in college. Since around 1982, women have surpassed men in earning bachelor's degrees (Ewert, 2012). Looking at six-year graduation rates among Division I institutions, the *Women in Academia Report* found that in 2015, 68% of the female students had graduated compared to only 63% of the male students ("The Nationwide Gender," 2017). Furthermore, Tinto asserted that students of color, who have recently had to leave their communities behind to go to college, would have a harder time integrating into the new college environment (1993). This difficulty could lead Black/African American students to decide to drop out. Fleming (2012) found that Black/African American students' college persistence rate was 36.4%, compared to 58% for White students and 62.3 % for Asian students. The U.S. Department of Education reported that in 2015, 59% of students who entered a four-year degree institution in the fall of 2009 had graduated within six years. The women's graduation rate was 62% compared to 56% for men. Based on race, the graduation rate of White students was 63%, the Black students rate was 40%, Latinx students was 54%, and Asian was 73% (NCES, 2016).

Past educational experiences. Tinto's (1975) model identifies high school grades and test scores as having a positive relationship with student retention. Two of the strongest predictors of student success in college have been high school GPA and standardized test scores in high school (Astin, 1993; Astin & Oseguera, 2012; Pascarella & Terenzini, 1991). In 2015, researchers at the NCES emphasized the existence of a growing gap between White and Black students from Grade 4 to Grade 12 in their performance in reading and sciences (Digest of Educational Statistics, 2016). As this gap continues to exist, past educational experiences will continue to be an additional obstacle for students of color to overcome in achieving college success.

Goal commitment. Tinto (1975) noted *goal commitment* as synonymous with an educational plan, educational expectations, or career expectations; noting that the more a student invests in these areas the more likely the individual is to stay in college. Anderson (1985) identified four ways to help promote persistence among students, one of the ways included:

> Helping students identify and clarify purpose for attending college and anticipated outcomes of the college experience. Motivation to persist is in large a measure of function of the meaning a student ascribes to the college experience and how college relates to future aspirations, careers, and desired areas of personal, social, and intellectual development (p. 56).

Once students were in college, Tinto (1993) emphasized the factor that was most important to student decisions to leave an institution was their level of involvement in the academic and social systems. Tinto (1993) believed students who found success in the development of relationships with peers and faculty and had success in the classroom were more likely to stay at their institutions than students who felt isolated and were not doing well academically. A positive relationship exists between higher academic achievement and retention, and the students' level of engagement with faculty, peers, and their academics (Astin, 1993). Simply stated, student who are more involved are more likely to be retained. Furthermore, students who are engaged in the academic and social life of their institution are more likely to graduate (Astin & Oseguera, 2012).

Importance of Understanding Intersectionality

Tinto's model demonstrated the importance of the ability of *pre-entry attributes* to predicting student retention at an institution (1993). Two of these attributes are the student's sex and race. The model identifies the impact of race (Tinto, 1993) and sex (Tinto, 1975) upon a

student's persistence in college. However, the model does not consider the interplay that the various identities students possess has on their college experiences (Braxton, 2000; Hurtado & Carter, 1997; Tierney, 1992).

Crenshaw's Intersectionality Theory

Tinto's (1993) longitudinal model of institutional departure identifies that student characteristics affect retention. Although the model accounts for the interplay between the impact that the formal and informal academic and social systems of the college have upon student retention (Tinto, 1993), it does not take into account the interplay between the various demographic factors of students (Braxton, 2000; Hurtado & Carter, 1997; Museus, Yi, & Saelua, 2017; Tierney, 1992). In this regard, Crenshaw (1989) introduced the concept of the intersectionality of identities, which was grounded in Black feminism and critical race theory. Intersectionality is a valuable analytical tool and method to use in deconstructing the interpretation of social issues (Carbado, Crenshaw, Mays, and Tomlinson, 2013).

Crenshaw introduced the term intersectionality in her work, which advocated for Black women to be treated equally with White women in court rulings around discrimination and sexual violence (Crenshaw, 1989). She pointed out that court rulings did not take into consideration the intersecting identities of Black women. Black women could argue they were being discriminated against because they were women or because they were Black but not both. In cases of sexual violence, the courts protected White women, yet, they did not provide those same protections to Black women (Crenshaw, 1989). Crenshaw used the concept of intersectionality to highlight how the advocacy work conducted around violence against women excluded women of color and women from lower socioeconomic communities.

Intersectionality is important because it gives voices to all the various identities that each person must carry with them throughout their day as they navigate the systems that surround them. Darity describes the significance of intersectionality:

> Social differentiation is achieved through complex interactions between markers of difference such as gender, race, and class. In order to comprehend how an individual's access to social, political, and economic institutions is differentially experienced, it is necessary to analyze how markers of difference intersect and interact (p. 144).

Furthermore, intersectionality has been used in a variety of fields to further understand pertinent issues. Roberts and Jesudason (2013) used intersectionality to identify commonalities and build solidarity between various political activist groups to find common ground around reproductive genetic technology. Artiles (2013) applied intersectionality in his study of special education and race. Lastly, Ocen (2013) utilized the lens of the intersectionality of race and gender to bring awareness to the issue of the mass incarceration of Black women in the criminal justice system.

The idea of analyzing social constructs and issues through the lens of intersectionality has been applied beyond race and gender to political differences, people with disabilities, sexual orientation, and beyond (Carbado et al., 2013). Accordingly, using intersectionality will provide a different lens through which to examine Tinto's model:

> Intersectional researchers would think about how multiple social identities such as race, gender, class, ability status, and sexual orientation intersect and simultaneously influence a student's ability to become deeply integrated within the academic and social life of campus through clubs and

> organizations, friendships groups, and positive peer interactions given the vital role that academic and social integration play in most traditional retention models (Strayhorn, 2017, p. 61).

When used in a quantitative study such as this, intersectionality provides an opportunity for the researchers to make use of the lens in conjunction with a theoretical framework to critically analyze the results (Olive, 2015). This study analyzes the interplay of race and gender with students' experiences in the social and academic systems to further explain students' reasons for deciding to leave an institution.

Retention and Sense of Belonging

The relationship between a sense of belonging and retention has been widely researched and analyzed. Researchers agree that a higher or stronger sense of belonging is strongly correlated to a higher likelihood of retention (Costen & Wozencroft, 2013; Hausmann, Schofield, & Woods, 2007; O'Keeffe, 2013; Thomas, Herbert, & Teras, 2014; Tinto, 2017). Tinto (2017) described a sense of belonging as the students' belief that faculty, staff, and their peers value them as a part of the community along with the belief that they matter and belong. Research over the last two decades has found a sense of acceptance and validation from faculty is vital in developing students' self-esteem and sense of belonging resulting in higher retention (Tinto, 1993; Shelton, 2003; Vogt, 2008; Lillis, 2011; Harrell & Reglin, 2018). Furthermore, research has also found the quality of students' relationships with staff is an important factor in predicting student success in college (Schmitt & Duggan, 2011; Roberts, 2018). Lastly, studies indicate that the deeper the relationships and connectedness students have with their peers, the more likely they are to remain at their current institution (Wilcox, Winn, & Fyvie-Gauld, 2005; Bronkema & Bowman, 2017).

The ability to develop positive relationships is important to students developing a stronger sense of belonging, increasing feelings of mattering and decreasing feelings of marginalization, and is also linked to higher retention (Schlossberg, 1989; Palmer & Maramba, 2012; Jones; 2017). However, students' experiences of opportunities and successes in developing a sense of belonging are different based on demographics. Women and students of color have a more difficult time developing a sense of belonging, feeling as though they matter, and are often more marginalized in their college experiences than White students (Johnson, 2012; Walton & Cohen, 2007; Tachine, Cabrera, & Bird, 2007). Rainey, Dancy, Mickelson, Stearns, and Moller (2018) studied race and gender differences in STEM fields in college and found that women and students of color were grossly underrepresented in the field due to "cultural norms, organizational structures, different access to appropriate secondary preparation, discrimination and harassment, and characteristics of individuals themselves" (p. 1). Therefore, a sense of belonging will be used as a proxy for retention in this study.

Sense of belonging and sex. Women experience a sense of belonging differently to men in college. The most important differences in the development of women's sense of belonging can be found in their choice of major, discrimination based on gender roles, and connections with faculty members. A large quantitative study including 13 public institutions and two private institutions and almost 12,000 participants examined men and women's sense of belonging in an introductory computing class and found women initially scored lower in sense of belonging than men at the beginning of the course. By the end of the course, the gap in sense of belonging had further widened between the men and women; furthermore, women were found to feel less supported by the department and peers (Sax et al., 2018). Good, Rattan, and Dweck (2012) found women had a lower sense of belonging compared to men in fields involving math due to the

misogynist environment found in the classrooms (Good, Rattan, & Dweck, 2012). Women face sex-based discrimination in various forms within the college setting. Smith, Lewis, Hawthorne, and Hodges (2012) identified one form of discrimination as the perception that women lacked quantitative abilities; therefore, women must exert more energy to overcome this misperception and be viewed as equal to men.

Another form of sex-based discrimination can be found in language. Stout and Dasgupta (2011) found that the usage of gender-exclusive language, that is, "usage of pronouns that refer to one gender only and neglect the other, even when talking about women and men" (p. 758), lessened women's sense of belonging and motivation. Faculty members can play a large role in whether women feel a sense of belonging. A qualitative study found female college students were more likely to remain at an institution where the female students felt faculty members were able to vary their pedagogy to include more examples that were inclusive rather than traditional (Booker, 2016). Faculty members may treat women differently than they do men. A study conducted at a research university with 127 faculty found that faculty rated male applicants higher even though the female applicants had identical qualifications, provided more career mentoring to males, and offered lower salaries to equally qualified female applicants than those offered to male applicants (Moss Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012).

Sense of belonging and race. Students of color face more difficulties at PWIs in developing a sense of belonging than White students owing to challenges in finding supportive peer groups (Baker & Robnett, 2012; Hausmann et al., 2007; Johnson, 2012; Walton & Cohen, 2007), connecting with faculty/staff (McCoy, Luedke, & Winkle-Wagner, 2017), and having to overcome microaggressions (Jimenez-Castellano & Gonzalez, 2012; Locke & Trolian, 2018). Walton and Cohen (2007) found that a sense of belonging among students of color at PWIs was

connected to the quality of their friendships; without social connections, students of color feel socially isolated leading to being less interested in their academic study. This is a concern because one of the important factors for students of color in developing a sense of belonging at a PWI is their ability to acquire a supportive peer group (Hausmann et al., 2007). Furthermore, students of color find it more difficult to connect with faculty members. In a qualitative study, in which 31 students of color were interviewed, their experiences indicated that they believed the faculty at PWIs were attempting to "weed them out" and acted condescendingly rather than being supportive and helpful (McCoy et al., 2017). Lastly, in addition to having to overcome the challenges associated with developing meaningful relationships with peers and connecting with faculty members, students of color must also overcome daily microaggressions in order to feel a sense of belonging. Microaggressions are brief verbal and nonverbal behaviors unconsciously demonstrated in everyday settings that send a demeaning message to students of color reinforcing ideas of inferiority and racism (Jimenez-Castellano & Gonzalez, 2012). Students of color participating in a qualitative study shared examples of the microaggressions they face at a PWI and noted examples such as Black/African American women being asked questions about hip-hop music and being encouraged to smile more because they were perceived to be intimidating; and Black/African American men being asked what sport they played (Morales, 2014). Furthermore, Black/African men also reported prejudicial treatment at the PWI. Morales (2014) cited an example in which a Black/African American male student shared his story of being followed through a residence hall by a campus security officer and asked questions even though he was completely sober, while intoxicated White students walking in the same residence hall and making considerable noise were neither stopped nor confronted by the campus security officers.

Student retention is influenced by a sense of belonging. A sense of belonging is experienced differently based on students' gender and race. Therefore, it would benefit institutions wishing to increase retention to analyze their students' sense of belonging through the lens of the intersecting identities of the students' race and gender.

Conceptual Framework

Many researchers in the field of retention identify Tinto's work in 1975 and 1993 as the foundation for analyzing student retention (Fidler & Hunter, 1989; Braxton, Sullivan, & Johnson, 1997; Pascarella & Terenzini, 2005; Hausmann et al., 2007; Braxton, Doyle, Hartley, Hirschy, Jones, & McLendon, 2014). As previously stated, the model explains how students' pre-college attributes impact upon their ability to engage in their college experience resulting in their varying levels of integration into the campus culture. This level of integration impacts upon the student's departure decision (Tinto, 1993). Tinto's pre-college attributes identify students' gender and race as identities that can influence their ability to integrate into a college community.

Tinto (1975, 1993) treats students' gender and race as individual identities. Current researchers have supported Tinto's model identifying race (Habley, Bloom, & Robbins, 2012; Tachine, Cabrera, & Bird, 2017; Walton & Cohen, 2007; Wells & Horn, 2015) and sex (Johnson, 2012; Lewis, Stout, Finkelstein, Pollock, Miyake, Cohen, & Ito, 2017; Rainey et al., 2018) as variables that impact upon a sense of belonging. The commonality in the research, however, is that a sense of belonging is examined only through the lens of one identity. Nonetheless, students do not experience their environments through only one aspect of their identity. To this end, Cole (2009) stated the importance of considering the intersectionality of identities in all stages of research to better understand the inequalities that may exist within structures and processes.

This study seeks to utilize Tinto's framework to analyze the relationship that the intersectionality of sex and race have on students' institutional experiences and their influence upon retention rates at a PWI. Further, the usage of Crenshaw's intersectional lens provides a distinctive perspective through which to better understand students' college experiences and give a voice to specific student groups whose ability to be successfully retained and graduate may be hindered by a PWI's systemic discriminatory practices, policies, or processes.

Chapter 3: Methodology

The purpose of this study was to explore the relationship between the intersectionality of students' race and gender and their sense of belonging at a PWI. Beyond the effects of intersectionality, the study set out to analyze the relationship between students' institutional experiences and their sense of belonging at a PWI. The following questions guided the study:

RQ1. Are there differences in the sense of belonging between the students' intersecting identities?

H_0: There are no differences in the sense of belonging between the students' intersecting identities.

RQ2. Above and beyond the effects of intersectionality, is there a relationship between the academic/social systems and the students' sense of belonging?

H_0: Above and beyond the effects of intersectionality, there is no relationship between the academic/social systems and the students' sense of belonging.

As shared in Chapter 2, previous research and studies have found strong correlations between a sense of belonging and retention. Therefore, for the purpose of this study, I used the DLE's subscale of sense of belonging as a proxy for retention.

Setting

I selected a PWI in the Southwest region of the US as the site for this study and use the pseudonym "Southwest University" (SU) to reference it for the rest of the study. Based on 2015 data, the Carnegie Classification of Institutions of Higher Education categorized SU as a four-year, private, not-for-profit, medium-sized, residential institution; primarily serving full-time mostly White students; and as a more selective university accepting very low numbers of transfer-in students (Indiana University Center for Postsecondary Research, 2016).

In 2015, SU received just over 18,000 applications. Southwest University accepted just under 8,000 students resulting in an acceptance rate of approximately 43%. I selected SU because of two factors important to the present study. First and most importantly, in 2018, the university was undergoing a strategic planning process. Secondly, the university had existing data from surveys and other assessments appropriate for my study. Within that strategic planning process in 2018, the institution identified two goals which were of specific interest to the study. The two goals were as follows:

1. To develop a campus to attract a more diverse student population.
2. To further understand the experiences and increase the retention of faculty, staff, and students from underrepresented backgrounds.

The 2015 graduation rates for students of color compared to White students revealed troubling gaps. Reviewing the graduation rates for students entering SU from 2009, the six-year graduation rate was 75.7% for White males and 80.2% for White females, while the six-year graduation rate for Black/African American males was 41% and 47.1% for Asian males. Furthermore, the six-year graduation rate was 71.4% for Latinx females, 65% for Black/African American females, and 60% for Latinx males. Asian females had the highest six-year graduation rate of 76.2% for female students of color and Latinx males had the highest six-year graduation rate of 60% for male students of color. Although Asian females and Latinx males had the highest six-year graduation rates among students of color, the six-year graduation rate for Asian females was four percentage points lower than White females and the six-year graduation rate for Latinx males was 15.7 percentage points lower than White males at SU. At SU, however, the six-year graduation rates of Black/African American females were higher when compared to similar selective universities across the US. However, the six-year graduation rates for students of color

at SU compared to White students at the institution ranged from eight to 35 percentage points lower and three to 34 percentage points lower than the national average (Table 1).

Based on the university's pre-existing data and its interest in further understanding the experiences of students of color on campus in order to increase retention and graduation, the institution offered a suitable setting in which to base this study.

Table 1. *Six-year Graduation Rates of Students Who Started in Fall 2009*

	Southwest University	National Average
Asian female	76.2%	85.7%
White female	80.2%	81.4%
Latinx female	71.4%	74.4%
Black/African American female	65.0%	53.7%
Asian male	47.1%	80.9%
White male	75.7%	78.3%
Latinx male	60.0%	68.4%
Black/African American male	41.0%	45.1%

Note. Comparison with not-for-profit universities with between 25-49.9% acceptance rate from NCES.

Between 2009 and 2015, the university experienced many changes including a 16.4% growth in undergraduate enrollments. The number of in-state (Texan) students dropped from 75.9% to 52.4% within that timeframe and the number of Asian, Black/African American, and Latinx students increased slightly by 0.8 percentage points and the overall faculty of color population increased by 2.8 percentage points (Table 2). Although this percentage indicated SU had made strides in increasing students and faculty of color, the percentage of Asian, Black/African American, and Latinx students in 2015 was only 20% of the overall undergraduate student population, while faculty of color made up only 14% of the overall faculty. The total cost

of room, board, tuition and fees increased from just under $40,000 in 2009 to just over $55,000 in 2015, an increase of over 40%.

Table 2. *Ethnicities of Undergraduate Students and Full-time Faculty at SU (2009 vs 2015)*

	2009		2015	
	Students (%)	Faculty (%)	Students (%)	Faculty (%)
White	5,580 (73.1)	460 (87.9)	6,610 (73.3)	530 (85.1)
Black/African American	390 (5.2)	n/a[a]	430 (4.9)	20 (3.5)
Hispanic/Latinx	730 (9.5)	n/a[a]	990 (11.1)	30 (4.0)
Asian	240 (3.1)	n/a[a]	230 (2.6)	40 (5.9)
Other	700 (9.1)[b]	n/a[a]	730 (8.1)[c]	10 (1.4)[d]
Total	7,620	520	8,990	630

Note. All numbers have been rounded to the nearest ten to protect the identity of the institution.
[a] Southwest University did not collect specific ethnicities until 2011. In 2009, there were 63 faculty of color.
[b] "Other" students defined students who selected American Indian/Alaska Native, Unknown, or Non-resident.
[c] "Other" students were defined as American Indian/Alaska Native, Hawaiian/Other Pacific Islander, Multi-ethnic, Unknown, or Non-resident Alien.
[d] "Other" faculty were defined as American Indian/Alaskan Native or Non-resident Alien.

In 2015, SU offered over 100 different areas of study and consisted of just under 9,000 undergraduate students, approximately 1,500 graduate students, and around 630 full-time faculty members. The majority of the undergraduate population was female, of traditional age, and White. Females made up over half of the undergraduate population. Students aged 18 and 19 years comprised just over 40% of the undergraduate population and 20-24 year-old students comprised just under 55% of the undergraduate population. White students comprised almost 75% of the undergraduate population and the largest population of students of color was Latinx, representing less than 15% of the population. Furthermore, the undergraduate population was overwhelmingly composed of full-time students with over 95% of students reporting as full-time. The incoming class in 2015 had an average ACT score of just over 27 and an average SAT score

of approximately 1250. The student demographics of SU resemble those of other PWIs found in the same region of the US (Table 3).

Lastly, *US News* ranked SU in the top 120 universities in its *Best National Universities* in 2009 and in the top 80 in 2015. The entering students' high academic achievements and socioeconomic statuses helped increase the institutional ranking while increased diversity among the overall student population helped the university to recruit more students from diverse backgrounds. As enrollment has increased at SU, a gap has arisen in the graduation rates between the students of color and White students. To increase student graduation rates, the university addressed the issue of retention.

Participant Characteristics

The study consisted of data from 318 undergraduate students who attended SU in 2015. I chose to identify the race, gender, age, family income, anticipated financial aid need, high school GPA, intent for fall 2015, full-time or part-time status, method of entry to the institution, job status, and generational status of the participants because these characteristics and demographics were identified in Chapter 2 as characteristics that were helpful in understanding students' decisions to remain at or leave a university by previous researchers. The participants were mostly White and female. An equivalent number of participants were represented across all four class standings (freshmen, sophomore, junior, and senior). Over a third of the participants had no concerns about paying for college and just over 40% of the participants did not plan to work while in college. Furthermore, most participants were highly achieving high school students with A- or A/A+ averages. Table 4 displays the breakdown of the students' demographic characteristics. Overall, the characteristics of the participants were reflective of the overall characteristics of the entire undergraduate student population at SU at the time of attendance.

Table 3. *Southwest University Admission Data Compared to Other Similar PWI for Fall 2015*

	Southwest University	Comparison School #1	Comparison School #2	Comparison School #3	Comparison School #4
Undergraduate students [a]	9,000	14,200	6,400	8,300	6,900
Graduate students [a]	1,400	2,400	5,200	3,200	5,700
% of undergraduate female students [b]	60	60	50	60	50
% of undergraduate students identifying as non-White [b]	30	40	30	30	50
Student to faculty ratio [b]	10:01	20:01	10:01	10:1	10:1
Retention rate [b]	90%	90%	90%	90%	100%
Six-year graduation rate [b]	80%	70%	80%	80%	90%
Median ACT Score	25-30	25-30	28-32	29-32	32-35
Median SAT Score	1170-1340	1140-1310	1220-1410	1240-1410	1430-1590

Note.

[a] Numbers have been rounded to the nearest hundred to protect the identity of the institutions

[b] Numbers have been rounded to the nearest ten to protect the identity of the institutions

Table 4. *Demographic Characteristics of Student Participants (n = 318)*

Characteristics		*n*	% of sample
Race [a]			
	White	269	84.59%
	Black	23	7.23%
	Latinx	49	15.41%
	Asian	18	5.66%
	Other	24	7.54%
Sex			
	Female	233	73.33%
	Male	84	26.40%
	Did not report	1	0.30%
Class Standing			
	Freshman/first-year	64	20.13%
	Sophomore/second-year	68	21.38%
	Junior/third-year	72	22.64%
	Senior/fourth-year	71	22.33%
	Fifth-year senior or more	43	13.52%
Family Income [b]			
	$0-49,999	57	17.92%
	$50,000-99,999	87	27.36%
	$100, 000-149,999	62	19.50%
	$150,000-199,999	27	8.49%
	$200-$249,999	23	7.23%
	$250,000 or more	59	18.55%
	Did not report	3	0.94%
Financial Aid Concerns			
	None (I am confident that I will have sufficient funds)	110	34.59%
	Some (but I probably will have enough funds)	172	54.09%
	Major (not sure I will have enough funds to complete college)	36	11.32%
High School GPA			
	C	3	0.94%
	B-	5	1.57%
	B	20	6.29%
	B+	59	18.55%

(continued)

Characteristics		n	% of sample
	A-	84	26.42%
	A or A+	147	46.23%
Intent for fall 2015			
	Attending your current (or most recent) institution	239	75.16%
	Attending another institution	29	9.12%
	Don't know/have not decided yet	13	4.09%
	Not attending any institution	37	11.63%
Enrollment Status			
	Part-time student	18	5.66%
	Full-time student	300	94.34%
Entry into College			
	First-time freshmen	228	71.70%
	Transfer student	90	28.30%
Work Schedule			
(On-campus)	None	138	43.40%
	1-5 hrs.	18	5.66%
	6 to 10 hrs.	47	14.78%
	11 to 15 hrs.	22	6.92%
	16 to 20 hrs.	9	2.83%
	Over 20 hrs.	12	3.77%
	Did not report	72	22.64%
Work Schedule			
(Off-campus)	None	128	40.25%
	1-5 hrs.	26	8.18%
	6 to 10 hrs.	26	8.18%
	11 to 15 hrs.	16	5.03%
	16 to 20 hrs.	10	3.14%
	Over 20 hrs.	32	10.06%
	Did not report	80	25.16%
Generational Status			
	First Generation	24	7.55%
	Non-First Generation	291	91.51%
	Did not Respond	3	0.94%

Note.

[a] Race allowed students to select from multiple choices that applied to their identities therefore the total *N* is greater than 318 and the total percentage is greater than 100%.

[b] Total does not equal 100% due to rounding percentages to the nearest hundredth.

Research Design

I conducted a quantitative study to determine the relationship between the students' intersecting identities and their sense of belonging at a PWI. Furthermore, I used quantitative methods to unpack the relationship between the students' institutional experiences and a sense of belonging. Quantitative research provides the ability to test and reproduce observations of the world; it allows researchers to develop hypotheses, test them, and draw conclusions from the analysis of data (Rovai, Baker, & Ponton, 2014).

Stage and Wells (2014) applied the term *quantitative criticalist* to researchers who sought to use quantitative methods to reveal the systemic problems concerning the inequities found in educational processes and outcomes; the quantitative criticalist differs from the traditional quantitative researcher, who uses quantitative methods only to confirm a theory or explain a process. Stage and Wells explained that quantitative criticalists, "also included researchers who question models, measures, and analytical practices, in order to ensure equity when describing educational experiences" (2014, p. 1). I used an intersectional approach to conduct a quantitative analysis of Tinto's longitudinal model for institutional departure to give a voice to those students whose experiences may not be represented in Tinto's model. Quantitative criticalists aim to conduct research that identifies the systemic inequalities in educational processes and practices. I examined the institutional experiences for intersecting identities of gender and race to see whether systemic problems exist, thereby, preventing students from developing a sense of belonging. Furthermore, quantitative criticalists guarantee equity in describing the educational experiences of students with intersecting identities of race and gender. I correspondingly ensured that the students' institutional experiences were accurately described and reflected in my study at

SU, comparable to the way in which Crenshaw (1989) used intersectionality to give a voice to Black women in the court system.

I employed descriptive and inferential statistics obtained in conducting this study. The descriptive data describe the parameters of the study and appear in the study in the forms of tables and graphs. I used inferential statistics to answer the research questions. The data I collected from the students' completion of the DLE survey met the requirements for randomization and sample size, therefore, I was able to develop inferences about the entire student population at SU (Coolidge, 2012).

Data Collection Procedures

In 2015, SU collected data through a partnership with the Higher Education Research Institute (HERI). The institute, based at UCLA, has been the administrator of the Cooperative Institutional Research Program (CIRP) since 1973; CIRP includes the Freshmen Survey, Your First College Year, the DLE survey, and the College Senior Survey. In this regard, HERI has conducted surveys at over 1,900 institutions with data collected from over 15 million students and more than 300,000 faculty members (About HERI, n.d.). Through this partnership, SU utilized the DLE survey to assess the racial climate of the institution and compare SU data with other institutions participating in the DLE survey. The Higher Education Research Institute was responsible for the development of the DLE survey and provided SU with the appropriate methods for the administration of the survey, data collection, and data analysis. Southwest University administered the DLE survey in the spring of 2015 to over 3,000 students. I used the DLE data collected by SU to conduct my analysis for the current study. The Southwest University Institutional Review Board granted permission for the research to take place (See Appendix A).

The ethical concerns involved in this study were minimal. Participation in the survey was not tracked, therefore, students did not have to be concerned with any consequences from not participating in the survey. Furthermore, students could opt out of the survey at any time during the process. Students could also omit questions without hindering them from continuing to answer the rest of the questions in the survey. Lastly, the data were stripped of all identifying factors making it impossible to link the responses with the actual students. In the following, I describe (a) the DLE survey, (b) the procedures used to administer the survey to students at SU in 2015, and (c) the procedures I used to determine the sample for the study.

Instrument: Diverse Learning Survey. I used existing data from the DLE survey developed by HERI researchers at the University of California, Los Angeles and conducted by researchers at SU, to better understand the effect of the intersectionality of race and sex on students' institutional experiences. Hurtado and Guillermo-Wann (2013) explained that the DLE survey is "designed to assess campus climate, educational practices, and a set of outcomes focused on retention and citizenship in a multicultural society" (p. 6.). From 2009 to 2010, HERI piloted the DLE survey at 13 colleges and universities nationwide and made site visits to seven institutions. The pilot survey consisted of 151 items. The internal consistency of the instrument was within the accepted limits (Hurtado & Guillermo-Wann, 2013). Since the pilot, an additional 102 campuses have chosen to administer the survey. Researchers from these universities replicated the factors identified in the pilot with findings on their campuses, thereby confirming the survey's external validity.

The 2015 DLE survey was a self-administered, web-based survey that allowed participants to omit questions. All the participating schools used the core section and had the option to include any of the additional six modules including: (a) Classroom Climate, (b)

Transition to the Major, (c) Intergroup Relations, (d) Spirituality, (e) Climate for Transfer at 2-Year Institutions, and (f) Climate for Transfer Students at 4-Year Institutions (See Appendix B). The 2015 core survey had 285 items containing demographic questions about students' identities including gender, race, religion and socioeconomic status. Participants were asked to self-report their level of agreement with dichotomous questions and other questions using 3-, 4-, and 5-point Likert scales. Southwest University selected five out of the six modules to add to the core survey, choosing not to include the Climate for Transfer at 2-Year Institutions. The five additional modules SU selected were: (a) Classroom Climate with 32 items; (b) Transition to Major with 41 items; (c) Intergroup Relations with 34 items; (d) Spirituality with 24 items; and (e) Climate for Transfer at 4-Year Institutions with 30 items, totaling 446 items.

I used the data from the 2015 DLE core survey and the five modules for analysis in this study. The 2015 DLE core survey had 17 factors: 13 factors with good internal consistency and four factors with fair internal consistency. The 13 factors with good internal consistency included:

(a) Positive Cross-Racial Interaction ($\alpha = .897$),

(b) Curriculum of Inclusion ($\alpha = .894$),

(c) Campus-facilitated Co-Curricular Diversity Activities ($\alpha = .984$),

(d) Academic Validation in the Classroom ($\alpha = .893$),

(e) Harassment ($\alpha = .879$),

(f) Discrimination and Bias ($\alpha = .876$),

(g) General Interpersonal Validation ($\alpha = .867$),

(h) Sense of Belonging ($\alpha = .864$),

(i) Habits of Mind (.864),

(j) Institutional Commitment to Diversity (α = .857),

(k) Pluralistic Orientation (α = .820),

(l) Civic Engagement (α = .816),

and (m) Critical Consciousness and Action (α =.814).

The four factors with fair internal consistency included Negative Cross-Racial Interaction (α = .780), Conversation Across Differences (α = .752), Academic Self-Concept (α = .725), and Integration of Learning (α = .716). The Higher Education Research Institute did not provide factors for the five modules because it is optional whether institutions opt these in (D. Harrison, personal communication, November 30, 2018).

I focused on items with a Likert scale of at least five points to identify the questions I would analyze for this study because interval scales need at least four points to be evaluated for internal consistency (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012) and 5-point Likert scales are enough to provide validity (Hinkin, 1998). Although Likert scales are not the same as interval scales, many educational researchers have used Likert scales as interval scales in their studies resulting in the acquisition of very useful information (Wu & Leung, 2017). Harwell and Gatti (2001) found further evidence of numerous educational researchers treating ordinal scales, such as a five-point Likert scale, as interval scales in the *American Educational Research Journal*, *Sociology of Education*, and *Journal of Educational Psychology* within which "educational researchers regularly employ ordinal-scaled dependent variables in analyses typically described as requiring these variables to be interval scaled" (p. 109). After reviewing all the questions, I identified only 82 items in the DLE survey that used a five-point Likert scale.

Furthermore, the DLE survey identifies the factor of a sense of belonging in its assessment of students as "perceptions regarding the institutional climate, campus practices as

experienced with faculty, staff, and peers, and student learning outcomes" ("Diverse Learning Environment Survey," 2017). To construct the factor of a sense of belonging, the researchers asked students to indicate their level of agreement to the following questions in the DLE survey:

1. I feel a sense of belonging to this campus,
2. I feel that I am member of this college,
3. I see myself as part of the campus community,
4. If asked, I would recommend the college to others (See Appendix C).

A sense of belonging encompasses many factors including students' positive emotions toward peers and faculty members, a student's willingness to engage in meaningful ways with the campus community, and the adaptation and acceptance of the in-group's norms (St-Amand, Girard, & Smith, 2017). Based on the students' race and gender, they experience relationships with faculty members and peers, campus involvement, and acculturation to the campus community differently (Tinto, 1975; Parker, Hogan, Eastabrook, Oke, & Wood, 2006; Baker & Robnett, 2012).

Face validity. I used face validity procedures to verify whether the 82 items in the DLE survey measured the concepts of Tinto's academic and social systems. Face validity is a test of internal validity in which researchers use experts to provide constructive insights in order to further advance or modify a study (Salkind, 2010). I identified three campus experts, all with at least 15 years of diversity and student development experiences, to whom I sent the email survey. Each expert independently identified whether they believed the items in the DLE survey met the description of academic and social systems described by Tinto. The experts could choose from Academic System (number 1), Social System (number 2), or neither (number 3). I identified 24 items that all three campus experts agreed met Tinto's definition of academic or

social systems. I believed that if the experts could not reach a consensus, it was best for me to eliminate the items in order to strengthen the validity of the relationship between the DLE items and Tinto's definition of social and academic systems. The experts categorized 13 items as meeting the definition for Social System and 11 questions for Academic System. The experts identified the remaining items as either not applicable to the definitions of Social and Academic Systems or unanimous agreement among all the experts could not be reached (See Appendix D).

Sampling. The researchers at SU, who partnered with HERI in the distribution of the DLE, used stratified sampling procedures (Coolidge, 2012) in order to ensure that an equal number of students from each class year (first-year, second-year, third-year, and fourth-year) were represented. To ensure random selection in each of the class years, the SU researchers used Excel to sort the students by class year, assigning each student in each class year a random number, and then sorting the students numerically. Students randomly assigned numbers 1-875 in each class year were selected to participate in the study. To determine the sample size for the current study, I used Campus Labs, a survey software. The results of the computation indicated that in order to reach 95% confidence level and a 5% confidence interval, the sample size for the current study needed to be at least $N = 368$.

The researchers at SU sent the list of 3,500 students' names and email addresses to HERI, who then sent emails to the students on the list inviting them to participate in the DLE. The Higher Education Research Institute sent the initial email invitation in early February 2015 and followed up with three additional email invitations before closing the survey in early March 2015. To increase the response rate, SU researchers incentivized participation by entering the names of the students who completed the survey into a random draw for a $250 gift certificate. A total of 3,500 surveys were distributed with 386 responses, a rate of 11%. Using Statistical

Package for the Social Science 24 (SPSS) software, I identified that there was at least one missing data item in 68 participants' responses. I eliminated the missing data using list-wise deletion procedures, which resulted in an $N = 317$ for the current study.

Preliminary Analysis and Results

Exploratory factor analysis. I used SPSS v. 24 and conducted an exploratory factor analysis (EFA) of the sample $N = 317$ using a varimax rotation on the 24 DLE items to determine the latent constructs for the social and academic systems. Factors with eigenvalues greater than 1.00 were retained and extracted using principal competent analysis. The highest factor loading for each item was identified and categorized into six factors (Table 5).

Table 5. *Factor Loadings for EFA with Varimax Rotation of DLE Scales*

Items	Activism	Validation	Self-Awareness	Guidance	Engagement	Socialization
Act in Past: Attended debates or panels about diversity issues	**0.515**	-0.077	0.071	0.003	0.55	-0.11
IGR Judge: Participated in a coalition of different groups to address social justice issues	**0.729**	-0.023	0.073	0.139	0.347	-0.092
IGR Judge: Challenged others on derogatory comments	**0.835**	-0.014	0.055	0.008	0.066	0.117
IGR Judge: Reinforced others for behaviors that support diversity	**0.871**	0.066	0.121	0.022	0.07	0.07

(continued)

Items	Activism	Validation	Self-Awareness	Guidance	Engagement	Socialization
IGR Judge: Made efforts to educate myself about other groups	**0.733**	0.041	0.278	0.072	0.103	0.189
IGR Judge: Worked with others to challenge discrimination	**0.879**	0.034	0.143	0.088	0.087	0.12
Validation: Faculty were able to determine my level of understanding of the course material	0.079	**0.813**	0.036	0.043	0.081	0.012
Validation: Felt that faculty provided me with feedback that helped me assess my progress in class	0.074	**0.858**	0.073	0.075	0.08	-0.017
Validation: Felt that my contributions were valued in class	0.064	**0.839**	0.128	0.046	0.139	-0.019
Validation: Felt that faculty encouraged me to ask questions and participate in discussions	0.003	**0.786**	0.042	-0.006	-0.035	0.018
Campus Satisfaction: Overall sense of community among students	-0.089	**0.565**	-0.055	0.127	-0.045	0.342

(continued)

Items	Activism	Validation	Self-Awareness	Guidance	Engagement	Socialization
Discrim. Type: Exclusion (e.g., from gatherings, events)	0.101	**-0.452**	0.017	0.118	0.286	-0.156
Diversity Rating: Ability to see the world from someone else's perspective	0.122	0.007	**0.748**	-0.01	0.144	0.02
Diversity Rating: Tolerance of others with different beliefs	0.172	0.036	**0.833**	-0.032	-0.012	0.113
TM Helpful: Taking a variety of classes from different programs/majors	0.068	-0.047	0.001	**0.766**	0.159	-0.04
TM Helpful: Talking to a counselor/academic advisor	0.021	0.016	-0.08	**0.851**	0.007	0.075
TM Helpful: Finding a supportive faculty member in the major	0.127	0.180	0.051	**0.790**	0.032	-0.081
Act in Past: Performed community service	0.024	0.128	0.223	0.108	**0.556**	0.197
Act in Past: Discussed politics	0.282	0.199	0.003	-0.009	**0.584**	0.079

(continued)

Items	Activism	Validation	Self-Awareness	Guidance	Engagement	Socialization
Act in Past: Attended presentations, performances, or art exhibits on diversity	0.446	0.033	0.199	0.073	**0.614**	-0.077
Ethnic Experience: Had guarded, cautious interactions	-0.014	-0.203	-0.211	0.097	**0.598**	0.207
Ethnic Experience: Socialized or partied	0.107	0.063	0.147	-0.044	0.102	**0.832**
Ethnic Experience: Dined or shared a meal	0.194	0.12	0.098	-0.027	0.145	**0.792**

Preliminary results. The preliminary results from the EFA indicated a six-factor solution. However, one item, "Discrimination Type: Exclusion (e.g., from gatherings, events)" was removed because it loaded negatively compared to the other items which loaded positively. I wanted to keep the data as homogeneous as possible and removing the factor with a negative loading produced a six-factor solution with factor loadings > .500. I reviewed the resulting loading items and decided to label these factors "Activism" (6 items), "Validation" (5 items), "Self-Awareness" (3 items), "Guidance" (3 items), "Engagement" (4 items), and "Socialization" (2 items). I defined "Activism" as students' skills or abilities in utilizing their voices and actions to impact change, "Validation" as activities that enhanced students' confidence in the college setting, "Self-Awareness" as students' perceptions of themselves, "Guidance" as people or activities that provided support for students' to achieve their goals, "Engagement" as students' level of involvement in activities outside of the classroom, and "Socialization" as students'

ability or skills to meet new people. Furthermore, the total variance explained by Activism was (23.1%), Validation (14.2%), Self-Awareness (9.0%), Guidance (6.4%), Engagement (6.2%), and in Socialization (5.1%), for a total of 64.0%. Lastly, the internal consistency of the six factors ranged from strong to poor. The internal consistency was strong for Activism (Cronbach's $\alpha = .901$); good for Validation (Cronbach's $\alpha = .838$); fair for Self-Awareness ($\alpha = .752$), Guidance (Cronbach's $\alpha = .744$), and Socialization (Cronbach's $\alpha = .730$); and poor for Engagement (Cronbach's $\alpha = .655$). Engagement had poor internal consistency, therefore, I removed the factor from further analysis, leaving me with five factors.

Data Analysis

I used ANOVA to determine the means between groups in addressing the research question with categorical independent variables such as race and gender. I used hierarchical multiple regressions to answer the question exploring the significance of relationships with continuous independent variables. I used hierarchical multiple regression to control the order in which the independent variables were entered into the model so that I could identify the changes in R^2. I tested the R^2 to determine whether the change was significant. By using inferential statistics, such as ANOVA and hierarchical multiple regression, I was able to generalize the findings in the study to the larger student population at SU. The study asked two questions:

RQ1. Are there differences in the sense of belonging between the students' intersecting identities?

RQ2. Above and beyond intersectionality, is there a relationship between the academic/social systems and the students' sense of belonging?

To answer RQ1, I used ANOVA to treat the independent variables (IV), gender and race, as categorical variables and the dependent variable (DV), sense of belonging, as a continuous

variable. The results of the ANOVAs allowed me to determine whether to retain the null hypothesis. The null hypothesis was retained where the significance of means was $p > .05$; furthermore, within results where $p < .05$, the difference in means was reported to be significant (Warne, 2014).

To answer RQ2, I used hierarchical multiple regressions to control for the order of the IV, intersectionality and the five factors for academic and social systems, were entered into the model. I wanted to examine the changes in R^2 as each independent variable was entered to ascertain which variables significantly changed the R^2 for the dependent variable sense of belonging. I identified the participants' race and gender and categorized that as intersectionality. Gender was categorized as a biological binary, male or female; race was also categorized as a binary, White students or students of color. Social systems included the factors of Activism, Self-Awareness, and Socialization. Academic system included the factors of Validation and Guidance. Researchers at HERI categorized a sense of belonging, the dependent variable in this study, as a factor with four items with factor loadings > .600 and good internal consistency (α = .860).

Hierarchical multiple regressions. Using hierarchical multiple regressions allowed me to control the order in which I entered the independent variables into the model (Terenzini & Upcraft, 1996; Cohen, West, & Aiken, 2013). I used Tinto's (1993) longitudinal model for institutional departure to determine the order in which I entered the independent variables. Tinto's (1993) model identifies the following order: (1) Pre-entry Attributes, (2) Goals/Commitment, (3) Institutional Experiences, (4) Integration, (5) Goals/Commitment, and (6) Outcome. Therefore, I entered the intersecting identities of gender and race (IV) in Block 1 of the regression model and reported the variance and significance that intersecting identities

accounted for in a sense of belonging (DV). In Block 2, I entered the five factors of the academic and social systems identified by conducting the EFA and reported the amount of variance and significance for each of the five factors (Figure 2). Lastly, I examined the total variance of Block 2 after isolating the amount of variance from Block 1 to analyze the relationship that academic and social systems had on a sense of belonging.

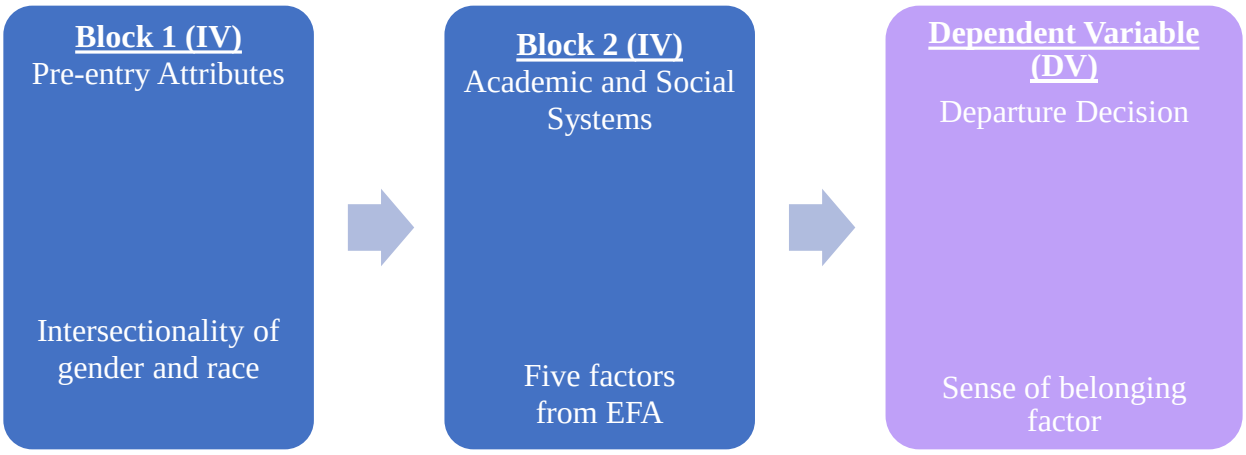

Figure 2. *Order of Independent Variables Introduced into the Hierarchical Multiple Regression*

Limitations

The challenges faced in the data collection processes included the accuracy of the self-reported responses, respondent fatigue, and the biases of the experts during the face validity process. Surveys that ask participants to self-report give rise to questions about validity and reliability (Douglass, Thomson, & Zhao, 2012). Similarly to the questions raised about the participants' self-reported responses in the DLE survey, the experts' categorizations of the DLE questions into academic and social systems are open to bias. Rater bias, in which one rater can interpret meaning differently to another expert, may cast doubt upon the results of the face validity with regard to internal consistency and test-retest reliability (Hoyt, 2002). Furthermore, the DLE survey had over 446 items, leaving the response rates susceptible to survey fatigue, in

which the length of the survey influences the number of students who answer all the questions in the survey (O'Reilly-Shah, 2017).

Chapter 4: Results

Tinto's (1993) longitudinal model of institutional departure emphasizes the consequences of college students' institutional experiences and degree of integration on retention rates. Additional studies found that integration or a sense of belonging differ between college students based on race (Hausmann et al., 2007; McCoy et al., 2017; Locke & Trolian, 2018) and gender (Good et al., 2012; Smith et al., 2018; Sax et al., 2018). This study used the DLE survey to understand the relationship between institutional factors and a sense of belonging, and whether that relationship was moderated by race and gender. The study contributes to the retention literature by employing an intersectional lens in order to include students' sex and race in understanding students' experiences and whether the intersecting identities determine their ability to develop a sense of belonging.

To determine the relationship between institutional experiences and the intersection of race and gender, I asked the following questions:

RQ1. Are there differences in the sense of belonging between the students' intersecting identities?

H_0: There are no differences in the sense of belonging between the students' intersecting identities.

RQ2. Above and beyond the effects of intersectionality, is there a relationship between the academic/social systems and the students' sense of belonging?

H_0: Above and beyond the effects of intersectionality, there is no relationship between the academic/social systems and the students' sense of belonging.

Sense of Belonging and Intersecting Identities

To determine the relationship between race and gender with a sense of belonging, I asked the following question:

1. Are there differences in the sense of belonging between the students' intersecting identities?

I used ANOVA tests to determine whether there were significant differences between groups in the study. One-way ANOVAs were conducted to determine whether students' race and sex were significant in determining *Sense of Belonging* (SOB). Table 6 depicts the mean scores for SOB among the student groups: Students of Color (51.83), White Students (54.54), Male (54.69), and Female (53.41). Next, I separated the data based on gender and ran the ANOVAs again to see whether controlling for gender would result in differences in SOB. Table 7 shows the means scores for SOB between Students of Color (SOC) and White Students when controlling for sex: SOC (Male) 53.66, White (Male) 55.29, SOC (Female) 50.98, and White (Female) 54.39.

Table 6. *Means and Standard Deviation Comparing Race and Gender with SOB*

Students' Identities	*n*	*M*	*SD*
SOC	98	51.83	10.74
White Students	220	54.54	9.92
Total	318	53.71	10.24
Female	233	53.41	10.45
Male	84	54.59	9.58
Total	317	53.75	10.23

Table 7. *Means and Standard Deviations of SOB Controlling for Sex*

Students' Identities	*n*	*M*	*SD*
Male			
SOC	31	53.66	10.27
White Students	53	55.29	9.20
Total	84	54.69	9.58
Female			
SOC	67	50.98	10.92
White Students	166	54.39	10.13
Total	233	53.41	10.45

Table 8 indicates significant differences were found among SOC and White students on the measure of SOB, F (1, 316) = 4.82, p = .029 and between SOC females and female White students and the measure of SOB, F (1, 231) = 5.16, p = .024. There was no significant difference found between males' and females' SOB, F (1, 315) = .971, p = .325 or between SOC males' and White males' SOB, F (1, 82) = .567. p = .454. Therefore, the null hypothesis for question one was rejected based on the significant differences in female SOC's SOB compared to their peer groups.

Table 8. *Analysis of Variance Summary Comparing Race and Sex with SOB*

Source	*df*	*SS*	*MS*	*F*	*p*
Sense of Belonging (Race: White and SOC)					
Between groups	1	499.89	499.89	4.82	0.029*
Within groups	316	32745.9	103.63		
Total	317	33245.8			
Sense of Belonging (Sex: Male and Female)					
Between groups	1	101.70	101.70	0.971	0.325
Within groups	315	32976.8	104.69		
Total	316	33078.5			

Sense of Belonging (Race: Controlling for Males)					
Between groups	1	52.32	52.32	0.567	0.454
Within groups	82	7567.96	92.30		
Total	83	7620.28			
Sense of Belonging (Race: Controlling for Females)					
Between groups	1	553.60	553.60	5.156	0.024*
Within groups	231	24802.9	107.37		
Total	232	25356.5			

Note: *$p < .05$ statistical significance

Sense of Belonging and Academic/Social Systems

I wanted to know how much of SOB was accounted for by students' social and academic systems above and beyond the intersectionality of student's race and gender. Therefore, I asked the following question:

RQ2. Above and beyond intersectionality, is there a relationship between the academic/social systems and the students' sense of belonging?

Academic systems included the variables guidance (GUI) and validation (VAL). Social systems included the variables activism (ACT), socialization (SCL), and self-awareness (SAW). I answered the question by conducting a six-stage hierarchical multiple regression with SOB as the dependent variable. The regression model showed that at stage one, sex and gender contributed significantly to the regression model, F (2, 314) = 3.217, $p < .05$ and accounted for 2.0% of the variation in SOB. Sex and race were entered first to determine how much of the variance of SOB could be accounted for by just sex and race before adding in the social and academic variables. Next, I entered ACT into the model which did not add to the sum of the R^2 and, therefore, was not significant, F (3,313) = 2.140, $p < .095$. Next, I introduced VAL, which resulted in the regression model explaining an additional 24.8% of the variation in SOB and this

change in the R^2 was significant, F (4, 312) = 28.535, $p < .001$. Adding SAW to the model explained an additional 0.1% of the variation in SOB, however, this change in R^2 was not significant, F (5,311) = 22.814, $p < .643$. The next variable, GUI, explained an additional 2% of the variation in SOB and the change in R^2 was significant, F (6,310) = 20.962, $p < .01$. Finally, the addition of SCL to the model explained an additional 10.7% of the variation in SOB and the change in R^2 was also significant, F (7,309) = 28.866, $p < .001$. The two most important predictors of SOB were VAL and SCL; together they were able to uniquely explain 35.5% of the variation in SOB. In addition to the 2% that race and gender were able to account for in the variation of SOB, the academic and social variables were able to explain an additional 37.5% of the variance in SOB. Therefore, the null hypothesis for research question two was rejected based on the 37.5% of variation in SOB that academic and social variables can explain.

Table 9. *Summary of Regression Analysis for Variables Predicting Overall SOB (N = 317)*

	Stage 1			Stage 2			Stage 3			Stage 4		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	51.493	3.007		51.468	3.026		51.967	2.620		51.946	2.624	
ACT				0.050	0.576	0.005	-0.010	0.498	-0.001	-0.007	0.499	-0.001
VAL							5.151	0.501	0.504***	5.146	0.502	0.504***
SAW										0.233	0.502	0.023
GUI												
SOC												
R^2		0.020			0.020			0.268			0.268	
F for change in R^2		3.217*			0.007			105.575***			0.215	

(continued)

	Stage 5			Stage 6		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	52.180	2.592		51.235	2.397	
ACT	-0.021	0.493	-0.002	-0.002	0.455	0.000
VAL	5.162	0.496	0.505***	5.142	0.458	0.503***
SAW	0.209	0.496	0.020	0.208	0.458	0.020
GUI	1.465	0.493	0.143**	1.480	0.455	0.144***
SOC				3.354	0.454	0.327***
R^2		0.289			0.395	
F for change in R^2		8.83**			54.562***	

Note: *$p < .05$, ** $p < .01$, ***$p < .001$

Chapter 5: Discussion

Earning a college degree has positive impacts on people's financial stability, health, and political activism. The value of a college degree cannot be disputed. However, not everyone has the same opportunities and experiences in pursuant of a college degree. The focus of this study was to utilize an intersectional framework to examine students' experiences at a PWI to explore relationships that may influence SOB and, ultimately, retention. Based on the results of the study, I found SOC and, more specifically, female SOC are the most challenged in developing SOB at SU. The following chapter discusses the results reported in Chapter 4 and their implications for practice and research.

Interpretation of Findings

Relationship between sex/race and SOB. The first relationship analyzed was between males and females. The results of the ANOVA indicated no significance between males and females, F (1, 315) = .971, $p > .05$. The lack of significance in SOB between males and females does not align with existing research that found females had lower SOB than males because females faced more discrimination, a lack of support, and stereotypes of being less important than their male counterparts (Stout & Dasgupta, 2011; Smith et al., 2012; Sax et al., 2018). However, the results did show that the females' mean scores (53.41) for SOB were lower than the males' mean scores (54.59). The characteristics of SU may explain why the difference between females and males' SOB may not be significant. First, the ratio of female to male students at SU was 3:2, hence, there were more female students at SU than there were male students. Having more female students may help female students feel more comfortable on campus because they see more females in the classrooms and across campus at social events. Furthermore, the Greek population at SU is approximately 50%. In 2015, there were just under

1,300 females in the first-year class. Of that population, approximately 700 females identified as part of a sorority, which is over 50% of the first-year female students. That is an unusually high percentage when compared to the 2015 CIRP results, in which only 11% of students participating in the national survey estimated a "Very Good Chance" they would join a Greek organization (Eagan, Stolzenberg, Bates, Aragon, Suchard, & Rios-Aguilar, 2015). The percentage of female participation in sorority life at SU is also higher than that of similar universities. In 2018, *U.S. News* reported 33% of females joined a sorority at Comparison University 1, 35% of females at Comparison University 2, 50% of females at Comparison University 3, and 50% of females at Comparison University 4. In 2018, *U.S. News* reported the percentage of females who are members of a sorority at SU had increased to almost 60% ("The Best Colleges in America, Ranked," 2018). High student involvement in sorority life at SU may account for female students feeling, on average, a higher SOB.

The next relationship to explore was between SOC and White students. Analysis of the results from the ANOVAs indicated a significant difference in SOB between SOC and White students, $p = .029$. This finding aligned with earlier research, which found that SOC encountered challenges finding supportive peer groups (Hausmann et al., 2007; Walton & Cohen, 2007; Johnson, 2012; Baker & Robnett, 2012), connecting with faculty/staff (McCoy, Luedke, & Winkle-Wagner, 2017), and having to overcome microaggressions (Jimenez-Castellano & Gonzalez, 2012; Locke & Trolian, 2018). Hausmann et al. (2007) found SOC at a PWI had more difficulty finding a supportive peer group. The difficulty faced by students of color in finding a supportive peer group at SU could be a direct result of the small population of SOC at SU. Compared again to SU's comparison schools, SU ranked towards the bottom with only 27.9% of undergraduate students who identified as non-White, compared to Comparison School 4

(45.2%), Comparison School 1 (35.2%), and Comparison School 2 (34.7%). With a smaller percentage of students spread across campus, it may be difficult for SOC at SU to see their own race reflected on campus as they attend classes, engage in co-curricular activities, or eat in the dining hall. The inability to see other SOC in their classrooms, residence halls, and campus activities may contribute to a sense of isolation and leading to a lower SOB. Universities with large SOC populations provide SOC with more support and opportunities to explore their interests (Reeder & Schmitt, 2013).

Relationship between intersectionality of sex/race and SOB. The next step was using an intersectional lens and exploring the relationship between SOB and students' intersecting identities of sex and race. Based on the results of the ANOVAs, female SOC scored, on average, the lowest on the SOB scale (50.98) compared to male SOC (53.66), White females (54.39), and White males (55.29). The results indicated that the difference between male SOC and White males was not statistically significant, $p > .05$. The difference between female SOC and White females was significant, $p = .024$. The results indicating that female SOC scored the lowest in SOB affirmed existing research that indicates, when examining students' identities separately, SOC (Jimenez-Castellano & Gonzalez, 2012; Walton & Cohen, 2017; McCoy et al., 2017) and females (Rainey et al., 2018; Sax et al., 2018) have a lower SOB than White students and male students.

The intersecting identities of female and SOC are both marginalized populations. As explained in previous sections, female students and SOC have a lower SOB than males and White students. Faculty demographics may contribute to female SOC scoring the lowest in SOB. Regarding the demographics of the faculty members at SU in 2015**,** the population of female students outnumbered the population of male students by 3:2. This proportion was not reflected

in the population of full-time male professors (337) and full-time female professors (288). Additional indications of the gender disparities of the faculty population can be further analyzed by separating the gender breakdown into the various levels of faculty positions. Table 10 shows that the population of female faculty outnumber their male counterparts at the lowest level of faculty positions: lecturers, instructors, and assistant professors. However, as the level of faculty status increase, the ratios change, and male faculty outnumber their female counterparts at the highest levels of faculty ranking, that is, associate professors and professors.

Table 10. *Number of Full-time Faculty Members at SU in 2015*

	Lecturer (%)	Instructor (%)	Assistant Professor (%)	Associate Professor (%)	Professor (%)
Female	19 (66)	50 (62)	79 (54)	93 (46)	47 (29)
Male	10 (34)	31 (38)	67 (46)	111 (54)	118 (71)

Furthermore, the number of full-time faculty members at SU was 625. Eighty-five percent of full-time faculty identified as White (n = 529), compared to 15% of faculty members who identified as faculty of color (n = 96). I found the largest difference between races was at the highest levels of faculty, where 87% of associate professors and professors identified as White and only 13% identified as faculty of color. Numerous studies have indicated a positive correlation between increasing opportunities for students to develop relationships with faculty members and a higher SOB (Hausmann, Schofield, & Woods, 2007; O'Keeffe, 2013; Tinto, 2017) and retention (Astin, 1993; Seidman, 2012; Braxton et al., 2014). However, when SOC females look to engage with the highest-ranking faculty members at SU, they encounter a predominantly White male group of professors.

Relationship between academic/social factors and SOB. In addition to exploring the relationship of sex and gender with SOB, I also investigated the relationship that academic and social factors played in students' SOB. The five factors ACT, VAL, SAW, SCL, and GUI were able to explain an additional 37.5% of the variance in SOB, which was a significant amount, $p < .001$. The two factors that explained the most variance were VAL (24.8%) and SCL (10.7%). In Chapter 3, "validation" was defined as activities that enhance students' confidence in the college setting and "socialization" as students' abilities or skills in developing new social groups. Validation is vital for students' SOB and supports existing research indicating the importance of students achieving early success in their college experiences to help develop their confidence to achieve their goals. Students with wide gaps between expected college success and actual college experience are at a higher risk of leaving the institution (Pleitz et al., 2015). In addition, students' abilities to develop rapport with and receive positive assurances from faculty influence students' confidence levels in achieving academic goals; therefore, increasing their sense of validation at being at the right school (Pascarella & Terenzini, 2005; Laskey & Hetzel, 2011; Braxton, Doyle, Hartley, Hirschy, Jones, & McLendon, 2014).

Furthermore, students' abilities to develop new meaningful relationships with peer groups is also essential to SOB and retention. Socialization as an important factor in explaining SOB supports Tinto's (1993) emphasis upon the importance of institutional experiences and integration into the social and academic systems. Students involved in a variety of co-curricular activities can discover new ways to meet other students with common interests, which allows for the creation of new friendships. Socialization with other students in academic and social clubs and organizations are strong indicators for SOB (Hamm & Faircloth, 2005; Bergen-Cico & Viscomi, 2013; Biddix, Singer, Aslinger, 2018). Furthermore, socialization with peers also

provides students with support groups when students face difficult situations and challenges during the college experience (Pittman & Richmond, 2008).

Limitations of the Study

The Higher Education Research Institute sent the DLE survey to 3,500 students at SU, and while 705 students responded to the email, only 318 students completed the questions necessary to be included in the study. The data were only collected at one institution, which means that the study is not generalizable to all universities. For example, SU is a private university and the student population, campus resources, and policies at SU are very different from those at public universities. Students at private universities may experience more discriminatory policies and practices than students at public universities (Bingham, 2007). To fully understand how the intersection of students' identities influences SOB and, therefore, retention, researchers at other PWIs need to replicate the study. Furthermore, the region of the country in which SU is located may also create more political and social dissonance for students. Southwest University's location in a conservative state may bias the data from being generalized to institutions and students in more liberal states. A more robust stratified sampling of different types of institutions and from all over the country that identify as PWIs would allow the findings to be more generalizable.

Furthermore, the sample size limited how I was able to code the students. I had to code students as SOC or White students due to the limited number of SOC who identified in certain categories. For example, there were three Asian male students, ten Asian female students, 12 Black/African American female students, and one Black/African American male in the group of participants (N = 318). Based on grouping them together as SOC, I could not examine the nuances of each unique combination of gender and race. At institutions, such as Historically

Black Colleges and Universities or Hispanic-Serving Institutions, where there are more diverse student populations, the findings of the study may not be applicable or reproducible.

Implications for Practice

The inclusion of an intersectional lens when addressing SOB and retention could help institutions target implicitly biased and discriminatory practices, policies, or processes which are preventing female SOC from developing SOB. Implicit biases are unintentional actions, which may be interpreted as microaggressions and are difficult to directly measure; whereas explicit biases are intentional actions that are able to be measured using self-reporting instruments (Boysen, 2010). Implicit bias is a professor discussing important figures in history and only identifying White men, implicit bias is a hall director enforcing a quiet-hour policy by addressing the room because of the type of music rather than the volume of music, and implicit bias is a staff member selecting student leaders based on their appearance rather than their qualifications and justifying it as a "better fit." In order to infuse intersectionality into practices, policies, and processes higher education leaders and those preparing to become higher education professionals must first determine their blind spots and be intentional about incorporating intersectionality. The following section addresses the implications of the findings for leaders in higher education and for those preparing or mentoring new student affairs professionals.

Practice for preparing/mentoring new student affairs professionals. In order to prepare new professionals to better serve a more diverse student population, graduate programs may want to explore ways to include more diverse perspectives in their courses. Supervisors of graduate assistants and faculty members can challenge young professionals and graduate students to use their critical thinking to combine and apply existing student development theories to best serve SOC. Faculty can include more diverse voices into courses about student

development theories. For example, in courses focused on retention, it would be important to recognize Tinto's (1993) longitudinal model for institutional departure. However, an additional discussion acknowledging pre-attribute characteristics cannot be the only aspect discussed by practitioners as individual characteristics would also be an important point to make. To fully understand how students' pre-attributes impact their retention, faculty members in graduate programs can emphasize the need for new professionals to look at the intersecting identities of the students. Course instructors could include research from Hurtado (2015), who focused on the college experiences and educational development of SOC, and England (2010), whose research focused on the disparity between sexes in education. Similarly to how a doctor needs to recognize all pre-existing illnesses, symptoms, and medications to best diagnose a pathway for a patient to progress toward recovery, student affairs professionals must learn how to identify and understand the interactions of all the pre-attributes of a student in order to best advise them upon the best path to college success. Student development theories are a foundation for understanding students' college experiences and development, but they do not encompass all students' experiences.

Faculty members can also introduce literature and research from Tierney (1992), Hurtado and Carter (1997), and Braxton (2000), who all challenged Tinto's model as not representative of the interplay that pre-attributes may have on one another in shaping students' college experiences. More specifically, Rendon, Jalomo, and Nora (2000) criticized Tinto's 1993 model for treating SOC unfairly because of the suggestion that for SOC to be successful, they must separate from their cultural identities. New professionals entering higher education are confronting very different student populations than those from as recently as 10 years ago. Professionals seeking to educate themselves about the systemic inequities and how to further use

intersectionality to analyze the students' educational experiences on campus should be encouraged to read Carbado's (2013) research on the possible applications of intersectionality. The importance of young professionals being able to identify the systemic issues preventing SOC from developing SOB at a PWI is vital to help SOC at those institutions to be successful.

For some of the senior high education administrators who attended graduate school from the 1970s to the early 2000s, the student development theories they learned were based upon research conducted on a majority of White students, male students, or a majority of White male students and do not apply to SOC (Hurtado & Carter, 1997; Museus, Yi, & Saelua, 2017). Those theories may not be the best to use to try to understand and serve the growing population of women and SOC enrolling in colleges today. Trying to fit women and SOC into rigid theories from decades ago invalidates their experiences and development, leading them to feel that they do not belong in college. Senior higher education administrators need to become more familiar with Dr. John Braxton's retention research. Braxton's research has challenged Tinto's model and has continued to provide new perspectives and strategies to examine retention in different student populations (Braxton, Hirschy, & McClendon, 2004; Braxton et al., 2014).

New professionals with all their newly acquired knowledge and graduate experience often feel unvalued because they do not think their voices and ideas are welcomed by higher-level university administrators, who are tasked with crafting university-wide policies and practices. Before attempting to take on systemic issues, new professionals need to first determine the needs of their specific university. One strategy for new student affairs professionals to identify the needs of the university is to allow students the opportunity to tell their own stories and not make assumptions based on how students appear or what is in their files or records. The eagerness of new student affairs professionals to showcase their thoughts, knowledge, and

experiences may unintentionally silence the undergraduate students from being able to share their experiences. Student affairs professionals with strong dialoguing skills will more rapidly build a rapport with students because they know how to use open-ended questions to encourage students to open up and share their thoughts, feelings, and experiences. Students will believe the person genuinely cares enough to listen to them, leading to higher levels of feelings of validation and confidence. The use of effective open-end questions encourages students to critically think about their decisions, reflect upon their lives, divulge their fears and insecurities, and share their future goals (AbuSabha, 2013).

Faculty and supervisors can also introduce the concept of microaggressions to better prepare new professionals to counsel SOC and women. In a study that examined the frequency and type of microaggressions people of color encountered in counseling sessions, Hook et al. (2016) found that among 2,212 participants, 81% reported experiencing at least one microaggression in their counseling sessions. The two most common microaggressions were, "denial of stereotypes or bias about cultural issues and avoidance of discussion of cultural issues" (p. 276). Hence how a new professional asks a question is even more important than the act of asking a question. An example of a microaggressive question is asking a Black/African American female student, "How come you look angry today?" The question reinforces the aggressive and emotionally unstable stereotypes of Black/African American females (Morales, 2014). The emphasis this places upon the woman's physical appearance diminishes the content of her character and thoughts. A better question to ask would be, "What's going on in your life causing you to feel the way you do?" While both questions speak to having the student describe how they are doing, the former expresses latent microaggression towards Black/African

American females, whereas the latter is more inclusive and allows the female student to decide what she wants to talk about.

Furthermore, young professionals could learn better strategies for dialoguing with more senior administrators who may not be as familiar with and knowledgeable about intersectional concepts or inclusive practices and unable to relate to populations different from themselves. For example, White males fill the highest leadership levels at universities. Less than one-third of all college and university presidents are female, even though female students outnumber male students on college campuses; in 2016, the average age of college presidents was 61.7 years and the number of presidents who identified as persons of color was 16.8% (Seltzer, 2017).

Today's social and political climate has forced colleges to address the systemic racist and sexist practices that may have been previously acceptable or ignored. Since 2016, with the election of President Donald Trump, student protests on campus have become more prevalent as reported by multiple media outlets such as the *Washington Post* (Svrluga, 2016), *USA Today* (Mascarenhasm, 2016), and *The Chronicle of Higher Education* (Alex-Assensoh, 2016). College students are passionate about social justice issues that address race and gender. Social media hashtags such as #metoo and #blacklivesmatter are just two examples of social justice issues that affect college students. The #metoo movement opened the door for female students to use their voices on campus to speak out against sexual assaults, while the #blacklivesmatter movement was a way for students to speak out against the inequality of the criminal justice system in its treatment of African Americans. University leaders who cling to the claim that they are mission driven while disregarding the environmental and cultural changes on their campuses do so at the great risk of alienating their students, staff, and faculty (Hendrickson, Lane, Harris, & Dorman, 2013). New professionals may feel more qualified to relate to and empathize with students

participating in these movements, however, they are rarely included in the levels of the decision-making process when addressing these concerns. Campus governance decisions in higher education are often made by the Board of Trustees and faculty senates (Hendrickson et al., 2013). For this reason, new professionals need more education on navigating the political landscapes of universities. New professionals may not be included in the decision-making processes; however, the lack of a presence at the decision-making table does not mean that they do not have influence on the decision-making process. Graduate courses can help new professionals better identify the key stakeholders who are invited to a seat at the governing table when campus-wide decisions are made in response to crises and emergencies. New professionals can learn how to identify allies among the stakeholders to inform and educate them on best practices. Washington and Evans (1991) defined an ally as, "A person who is a member of the 'dominant' or 'majority' group who works to end oppression in his or her personal and professional life through support of, and as an advocate with and for, the oppressed population" (p. 195). When the time comes, the allies can become advocates and give voice to the intersectionally disempowered students and ensure those students concerns are also heard (DeVita & Anders, 2018).

Practices for Leaders in Higher Education. The results of the study clearly identified SOC and, more significantly, female SOC as the student population at the highest risk for not developing SOB. Therefore, female SOC should be the highest risk group on which retention efforts and resources are focused at SU. Furthermore, the study indicated the two factors most responsible for explaining the variance in SOB were validation and socialization. Therefore, SU student affairs professionals need to start examining policies, practices, and processes utilizing an intersectional lens to create opportunities for SOC to both socialize and feel validated.

Validation. The study used intersectionality as a lens for a richer understanding of students' experiences to better predict SOB. The results indicated female SOC faced the hardest challenge in developing SOB at SU. In 2015, there were just under 1,300 female SOC, making up approximately 15% of the undergraduate population. The lack of validation may be a product of the campus culture. The campus culture includes artifacts, perspectives, values, and assumptions (Strange, 2003). To increase SOB for female SOC, the university may need to change the narrative of the campus culture and address students' perspectives, values, and assumptions.

A quick glance at the demographics of the faculty and staff indicate most women of color working at SU do so in foodservice and housekeeping. The difference between men and women at the two highest levels of faculty have already been identified. The widest difference appeared in the professors' ethnicities. Among those with the status of professor or associate professor, there were a total of 326 faculty members. Approximately 50 faculty members identified as faculty of color, which accounted for less than 15% of the total faculty teaching at the two highest levels. Furthermore, of the entire full-time faculty population of 625, only approximately 7% identified as female faculty of color. In 2015, just over 20% of the student population identified as SOC and, more specifically, 12% identified as female SOC. The faculty of color population at the two highest levels of teaching and the population of female faculty of color was not reflective of the population of female SOC within the student population. This institutional gap in providing adequate mentors and role models for female SOC may lead students to question whether they really belong at SU. To lessen the gap, the institution needs to intentionally recruit and hire more females of color into the faculty ranks. In addition to hiring more female faculty of color, another strategy to increase faculty of color at the highest levels

would be to provide support and guidance to female faculty of color in the lower ranks of assistant professor, instructor, and lecturer. College administrators could develop workshops and training to help female faculty of color to understand the tenure and promotion processes. Effective mentorship in navigating a male-dominated field is vital for female success (Dougherty, Dreher, Arunachalam, & Wilbanks, 2013). In addition to increasing female faculty of color, the institution should consider hiring more academic and career advisors. Increasing the faculty and staff of color will provide more opportunities for SOC females to connect and feel more validated in their academic and personal goals.

Students form their opinions about faculty members within the first two weeks of the semester (Buchert, Laws, Apperson, & Bregman, 2008). Therefore, to create the best opportunity for female SOC and other SOC to gain a positive perspective of faculty members, college administrators should consider requiring all faculty and staff to undertake trainings and workshops to address microaggression and implicit bias. Microaggression can be broken down into micro-assaults, micro-insults, and micro-invalidation; each in their own way are subtle forms of discrimination towards a marginalized group. The frequency of the microaggression can lead students in the marginalized group to feel isolated, thereby, leaving the institution at a higher rate than students who do not have to encounter microaggressions (Harrison & Tanner, 2018). Currently, faculty and staff are required to complete sexual harassment and Title IX training to ensure faculty do not place either themselves or students in compromising situations. Adding an additional training to help educate faculty and staff to identify, within themselves and their environment, microaggressions and implicit bias would not be challenging since the culture of mandated trainings already exists. What may be preventing White faculty and staff from addressing racist and discriminatory comments are fears of appearing racist, having to take

personal responsibility to end racism, realizing their own racism, and having to confront their White privilege (Sue & Constantine, 2007). Faculty and staff who are trained to identify and address microaggressions create a more welcoming environment in the classroom and on campus. When faculty do not address microaggressions, SOC may view the faculty and staff as complicit with the microaggression.

Furthermore, SU administrators could be encouraged to develop an inclusive crisis management plan to address incidents of hate on campus to ensure the safety of all students. Since 2015, there have been several controversial events on campus leaving marginalized students feeling unsupported by SU administrators and their peers. Marginalized students have experienced a political pundit who talked about strategies to fight radical Islamic terrorism, to a right-wing provocateur suggesting that ideas such as White privilege and microaggressions were myths, and lastly a YouTube instigator who tried to have students convince him that rape culture was a real issue on college campuses. As a result, SOC and female students organized protests and marches. The situation at SU affirmed earlier findings indicating that student activism is often a result of marginalized student groups feeling attacked (Logan et al., 2017). Students' sense of validation is negatively impacted when they feel attacked and not supported by their administration. The institution's response to the students' activism communicates whether students' actions matter or not on the campus. Students who feel as though they do not matter generally fail in college (Duenas & Gloria, 2017; Huerta & Fishman, 2014). In 2016, SU created a cabinet position to specifically manage and provide direction around diversity, equity, and inclusion as a response to the student activism. Notably, students who feel attacked due to characteristics of their identity and decide to voice their discontent to college administrators can develop a strong SOB and validation if administrators and faculty leaders take their concerns into

consideration when addressing the climate and environment at the university (Tucker, Dixon, & Griddine, 2010).

Socialization. In advertising, the practice of "bait and switch" refers to enticing customers with a fantastic offer to get them in the door and when the consumers arrive at the store, they realize the offer is too good to be true and are faced with an offer that is less than ideal (Johnson, 2014). The same concept can be applied to the college admission process. Students of color are prominently displayed on marketing brochures and commercials, exhibited as tour guides and orientation leaders, on hand to welcome prospective SOC on a campus visit, all in the desire to promote the university as a diverse community. However, once SOC enroll and engage in the campus environment as new community members, their actual experience may differ from what was communicated during their campus visit. A university such as SU can attempt to bring in more SOC in order to increase the diversity on campus, however, without addressing the systematic forms of discrimination that exist in the university's policies, processes, and culture SU will continue to struggle to retain SOC. This is evident when looking at the graduation rates among SOC. For example, both White females and White males graduate at a higher percentage than SOC at SU. Graduating female SOC from PWIs believe that the discrimination and challenges they face will help them to be better prepared for the "real world," a world dominated by Whites and males (Hannon, Woodside, Pollard, & Roman, 2016). Female SOC at SU should not have to look at the college experience as an endurance test that measures how much discrimination they are able to tolerate in order to graduate. The experiences female SOC must endure to graduate are in direct contrast to the best practices in higher education where students should be "thriving." Schreiner (2013) described students who are thriving in college as performing at their optimal level in "academic engagement and performance,

interpersonal relationships, and psychological well-being" (p.12). In the past, college faculty and staff have recruited SOC for leadership positions on campus to showcase SOC thriving on their campus, however, SOC have not been intentionally sought out for research partnerships; should this practice change, it would showcase SOC thriving and validate the valuable contributions of SOC to the academic community as well as the social community (Ash & Schreiner, 2016).

Southwest University may want to specifically focus on providing opportunities for female SOC to thrive in their four years in college. In order to do so, SU should increase the opportunities within which women of color are encouraged to pursue academic and personal goals through individual contact with faculty and staff who believe in their worth and empower them to reach their potential (Ash & Schreiner, 2016). Furthermore, female SOC should be able to walk through the campus and see artifacts, such as statues and paintings, that reflect their own identities and not only artifacts honoring the contributions of White men and women. Some campuses communicate unintentional microaggressions through the display of older murals and paintings depicting Black/African Americans as slaves, Latinx as field workers, and White people as scientists. In these renderings; women are also often displayed in passive positions such as seated and men are displayed in active positions such as standing (Strange & Banning, 2001). When women of color attend social events, they should also be able to hear music and dance in styles reflective of their cultures and backgrounds without fear of microaggressions or retaliation (Morales, 2014).

Implementing changes at SU that increase validation and socialization does not have to be difficult. Two instances that could be redesigned and may show immediate upturns in validation and socialization are learning communities and advising. For example, at SU there is a learning community for foreign languages. The framework for how to develop a learning

community already exists on the campus. To further develop opportunities for validation and socialization, SU could investigate creating a thematic learning community that would appeal to SOC. The opportunity to connect with a faculty member and a resident assistant of color and engage in programs designed to validate students' experiences would address issues of both validation and socialization (Braxton et al., 2014; Hamm & Faircloth, 2005). A learning community would also help SOC to meet other SOC. The learning community would act as a supportive space for SOC when they face discriminatory or prejudicial experiences in their collegiate careers. Students in learning communities have a better sense of community, have more opportunity for collaboration with other members in the living community, are generally happier and more satisfied with their experiences, and have an increased SOB to their institution (Wagner et al., 2015).

Moreover, first-year seminars could also be connected to the learning community. At SU, approximately 50% of the first-year students are enrolled in a first-year seminar course. An instructor and student leader are assigned to each section of the course. The student leader's primary role is to act as a mentor for the students in their section. Students from underserved populations participating in a student success program are already grouped together in specific sections of the course. An instructor is intentionally assigned to the section with an interest or expertise in helping students with at-risk factors for retention. A similar model could be created for SOC. The course director could provide SOC with a choice to self-select into a section of the course where the instructor and student leader are both people of color. With both the learning community and first-seminar course, the added lens of intersectionality would advocate for ensuring either the instructor or student leader is female. More opportunities to connect with

professors and student leaders will help to increase female SOC's chances of being successful (Astin & Oseguera, 2012).

Academic advising and student support services are excellent resources for guiding and helping students achieve their goals. The inclusion of an intersectional approach could change the philosophy and approach when working with SOC. A change that would help SOC increase their levels of validation would be to change the approach whereby SOC are viewed via a deficit model and change it to an asset model. Similar to positive psychology, in which psychologists focus on the good things occurring in their patients' lives rather than asking about the negative stressors (Joseph & Murphy, 2012), academic advisors can shift their conversations away from focusing on the challenges SOC and women may face in a specific career or major, and change the conversation to helping female SOC recognize the assets they bring to the career or major. This shift to using positive affirmation would increase students' confidence, validation, and expectations of future success (Clark, Thiem, & Kang, 2017).

Furthermore, SU administrators can use the results of this study to make data-informed decisions about allocating resources that promote retention and graduation. Data-informed decision-making is different to data-driven decision-making; data-driven uses only the data to guide the decision-making process, whereas data-informed suggests researchers understand there are other political and social elements vital to consider in the decision-making process (Shen at al., 2012). In the fall of 2018, SU enrolled approximately 500 SOC, which constituted approximately 22% of the incoming class. Approximately 175 females identified as Latinx and just over 50 identified as Black/African American. The incoming female students who identified as White consisted of almost 950 students. The four-year graduation rate for female students in the fall of 2014 was 67% for Black/African American, 73% for Latinx, and 75% for White

students. If the percentage remains true for this incoming class, this means that of the approximately 175 female Latinx and the 50 female Black/African American students, only 128 female Latinx and 34 female Black/African American students are expected to graduate in 2022. There were approximately 225 incoming female students that identified as Latinx or Black/African American. Based on the trend from 2015, of the 225 female SOC color entering in 2018, only 163 are expected to graduate in 2022. College administrators at SU should invest in resources to help Latinx and Black/African American females achieve the same four-year graduation percentage as White female students. If the four-year graduation rate in 2022 for female Latinx and Black/African American reached 75%, it would translate to an additional four female Latinx students and an additional four female Black/African American students. The success in graduating an additional eight female SOC would also increase the retention rate between the first and second year by almost half a percentage point. For a university that already has a retention rate of over 90%, half a percentage point in retention should be a welcome result. By applying the results of the study to target female SOC, SU could create strategic retention efforts focused on female Latinx and female Black/African American students in order to retain eight additional students to increase the retention rates to equal those of White female students.

University leaders can shift the deficit narrative associated with female SOC and other SOC by simply not treating SOC as numbers. Students of color, and more specifically female SOC, need to be recognized for the richness that they bring to a college campus rather than the challenges associated with their pre-entry attributes. In the 2016-2017 academic year, SU had over 700 students who opted to participate in study abroad in 29 different countries. Students who participate in study abroad programs return with an increased understanding of cultural sensitivity (Cisneros-Donahue, Krentler, Reinig, & Sabol, 2012). However, students' abilities to

interact and engage with different people from other cultures in order to gain deeper cultural sensitivity does not have to be limited to study abroad experiences. College administrators can replicate the experiences on their college campuses by bringing together students from different cultures, religions, and experiences through the lens of cultural exchange for the purposes of learning and celebration rather than diversity training.

A university serious about advocating for the retention of SOC will also need to affirm female SOC when they protest or demonstrate against issues that impact their SOB on the campus and learn to view SOC as an asset and not a deficit. Faculty and college administrators need to create spaces inside and outside of the classroom where SOC feel valued and appreciated (Strange & Banning, 2001). Lastly, college administrators need to explore new strategies to recruit and promote faculty and staff of color to create a more positive environment for SOC who are looking for guidance and role models.

Implications and Suggestions for Research

Since Tinto's (1993) longitudinal model of institutional departure, there have been an abundance of retention and student success studies conducted to better understand the reasons for student departure (Hurtado & Carter, 1997; Balz & Esten, 1998; Kim & Sax, 2009; Kirby et al., 2007; Astin & Oseguera, 2012; Baker & Robnett, 2012; Bergen-Cico & Viscomi, 2013; Bonet & Walters, 2016). Previous researchers focused their studies upon the individual pre-attribute characteristics identified in Tinto's model such as race (Dervarics & Roach, 2000; Morley, 2004; Baker & Robnett, 2012; Fleming, 2012; Costen et al., 2013; Hurtado & Guillermo-Wann, 2013;), gender (Ewert, 2012; Good et al., 2012; Haemmerlie & Montgomery, 2012; Lewis et al., 2017; Rainey et al., 2018), socioeconomic class (Kim & Sax, 2007; Schuh & Gansemer-Topf, 2012; Mamiseishyili & Deggs, 2013; Palardy, 2013; Olbrecht et al., 2016); and previous academic

achievements (Laskey & Hertzel, 2011; Kopp & Shaw, 2016;). For PWI wanting to address and improve the retention and graduation rates by addressing students' college experiences, my study has indicated the value of utilizing an intersectional perspective to best understand the nuances in students' experiences based on their multifaceted identities.

The initial ANOVA results showed a significant difference in SOB between SOC and White students and no significant difference when comparing male and female students. Upon further analysis and utilizing an intersectional lens, I was able to narrow the significance in differences in SOB to female SOC. Intersectionality enabled me to better understand the nuances of the data that I would have missed had I only treated the students' identities as singular characteristics. Utilizing intersectionality in the study helped to uncover the challenge female SOC are faced with in developing SOB at SU. Strayhorn (2017) found social inequalities, such as SOB on a college campus, are the result of a complex interplay of the students' many identities; therefore, utilizing intersectionality "adds rigor to research studies, critiques power relations, changes research goals, shapes epistemologies, defines analytic approaches" (p. 59).

Tinto's (1993) longitudinal model of student departure has been used as the foundation for many retention studies, however additional research has been conducted that has challenged Tinto's model for accuracy and relevancy in describing SOC's experiences in college (Hurtado & Carter, 1997; Braxton, 2000; Guiffrida, 2006; Arroyo & Gasman, 2014). Tinto (2012) acknowledged the unique challenges SOC present in developing social supports at a PWI and their perception of PWI as unsupportive and inhospitable. My research, like many other retention studies, utilized Tinto's model as the foundation to guide the study. My findings supported previous studies that indicated race as a factor in students' retention and SOB. However, by adding the lens of intersectionality to my study even more precise data was yielded which

enabled me to identify the population of students with the lowest SOB. Strayhorn (2017) suggested future research should use an intersectional lens to examine "how students really experience college life as raced, classed, sexed beings operating within larger social forces such as racism, sexism, homophobia, and so forth" (p. 61).

Specifically, researchers seeking comprehensive retention and student success initiatives at universities should adopt a new method of analyzing student data and developing retention efforts utilizing an intersectional lens. The findings in my study affirm Strayhorn's (2017) rationale for utilizing intersectionality in research:

> Intersectional researchers think about how multiple social identities such as race, gender, class, ability status, and sexual orientation intersect and simultaneously influence a students' ability to become deeply integrated within the academic and social life of campus through clubs and organizations, friendship groups, and positive peer interactions given the vital role that academic and social integration play in most traditional retention models (p. 61).

Each student has a different college experience based on the combinations of his/her various identities and how those identities are layered in shaping the college experience. The thousands of intersecting identities of race, sex, socio-economics, gender identity, sexual orientation, first-generation status, DACA, religion, and majors make it very unlikely that two students at a college will have the exact same experience. To best understand a student's experience, researchers would have to isolate the student and only use him/her in the study. The same can be said about retention efforts at universities. To best address retention and student success, therefore, university leaders should consider paying more attention to the research and data collected at the institution and not rely on the national research and data as much in making

decisions. National data may provide generalized best practices to impact retention and student success; however, it does not have the ability to describe the current culture of the individual campuses. Nonetheless, for universities with low retention rates, national data may be helpful in implementing changes to see immediate returns. For example, an institution with low retention rates of around 50% may consider investing in the development of learning communities in their residence halls to increase SOB and, therefore, retention. In the fall of 2018, SU reported a retention rate over 91%. For this reason, the margin to increase retention is much smaller than at other institutions with lower retention rates. Therefore, SU administrators need a strategic and intentional design to marginally increase their retention rate. To this end, the study results showed female SOC have the lowest SOB and are the student population SU should focus on in order to gain marginal increases in overall retention. Had SU utilized national student success data showing the four-year graduation rate of male students as 10 percentage points lower than female students (National Center for Education Statistic, 2016), the university's leadership may have invested human and financial resources in retaining men on campus and missed the opportunity to address the real population in need of attention: females of color.

In this study, I focused on gender and race as SU is a PWI with a strategic plan that includes an intentional focus on better understanding the experiences of SOC on the college campus. However, other demographics of the student body would also be worth further investigation. In 2018, the annual cost of attending SU, including tuition, books, room and board, was estimated at just above $60,000 a year. Furthermore, approximately 50% of the undergraduate students participated in a Greek organization. Therefore, the students' socioeconomic status and Greek affiliation would be of interest as additional identities to layer on top of race and gender in order to further understand the students' SOB.

Lastly, I conducted the study at only SU. It would be useful to reach out and collaborate with other college administrators to conduct research utilizing intersectionality in order to examine students' SOB at similar PWIs. The additional studies could help determine whether the findings in my study were isolated only to SU. Other PWI that conduct a similar study and achieve similar results will also add external validity to the findings and give a voice to female SOC at PWI across the country.

Conclusion

The purpose of the study was to understand the relationship between the intersectionality of students' race and gender with the institutional experiences affecting retention. I used Tinto's (1993) longitudinal model of institutional departure as my framework to better understand the reasons students leave college and inferential statistics to analyze how much the intersectionality of race and gender with institutional experiences can explain SOB and the extent to which intersectionality plays a part in students' SOB. Overall, the findings of the study support the existing research in identifying that SOC have lower SOB and retention than White students. Utilizing intersectionality, I was able to add to the existing research by directing the retention issue beyond race and identifying that female SOC have the lowest SOB. Accordingly, intersectionality can help institutions make decisions and develop efforts to increase SOB. In addition, SU should consider the hiring and promotion practices of its faculty and staff. Addressing the lack of female professors at the professor and associate professor levels should be a priority for SU. Administrators and faculty members at SU also need to develop comprehensive trainings to help faculty and staff identify blind spots in recognizing implicit bias and microaggressions.

Furthermore, as the college student population is ever increasing in terms of diversity of sex, gender, socioeconomic status, immigration status, and other identities, it is also important for higher education researchers to appreciate and utilize intersectionality. In this way, researchers will be better able to understand students' experiences on college campuses and students' reasons for leaving an institution. Lastly, I would advocate for further studies on retention and SOB at PWI focused on the students' intersecting identities including socioeconomic status. I believe the data from my study has emphasized the needs for SOC and outlined strategic initiatives for SOC to receive additional support and resources. It is now up to SU to deliver on their promise.

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Appendix A: Institutional Review Board Approval

Approval Period:

Approval Date: May 10, 2018

Committee Decisions:

- ☐ Approved, Minimal Risk
- ☐ Approved, Expedited
- ☒ Approved, Exempt Status
- ☐ Conditional Approval, with following stipulations:

Approval Number: DRB-1804-136

- ☐ Not Approved, Comments:

Thomas G. Wang
Chair

5-10-18
Date

Appendix B: Diverse Learning Survey

Variable Name	Variable Description
	2015 Diverse Learning Environments Survey (Codebook)
ACE	College I.D.
SUBJID	Subject I.D.
STUID	Student I.D. as entered on form
GRPA	Group Code A
GRPB	Group Code B
PLAN	What do you think you will be doing in fall 2015?
	1=Attending your current (or most recent) institution
	2=Attending another institution
	3=Don't know/have not decided yet
	4=Not attending any institution
ENRLSTAT	Are you enrolled as a:
	1=Not enrolled
	2=Part-time student
	3=Full-time student
START	Where did you begin college?
	1=I started here as a first-time freshman
	2=I started at a different 2-year college
	3=I started at a different 4-year college
SEX	Your sex:
	1=Male
	2=Female
	Are you: (Select all that apply)
	1=Not marked
	2=Marked
RACE1	American Indian or Alaska Native
	Asian
RACE2	East Asian (e.g. Chinese, Japanese, Korean, Taiwanese)
RACE3	Southeast Asian (e.g. Cambodian, Vietnamese, Hmong, Filipino)
RACE4	South Asian (e.g. Indian, Pakistani, Nepalese, Sri Lankan)
RACE5	Other Asian
	Black
RACE6	African American/Black
RACE7	African
RACE8	Caribbean
RACE9	Other Black
RACE10	Native Hawaiian or Other Pacific Islander
	White
RACE11	European
RACE12	Middle Eastern
RACE13	Other White
	Hispanic/Latino
RACE14	Mexican American/Chicano
RACE15	Puerto Rican
RACE16	Central American
RACE17	Other Hispanic or Latino
MULTIRACIAL	Do you identify as multiracial?
	1=No
	2=Yes
CLSSTAND	What is your current class standing? (4-yr schools only)
	1=Freshman/first year
	2=Sophomore/second year
	3=Junior/third year
	4=Senior/fourth year
	5=Fifth-year senior or more

Variable Name	Variable Description
COLLCREDIT	Please indicate how many college credit units you have completed: (2-year schools only) 1=0-24 units 2=25-59 credits 3=60-89 credits 4=90 units or more
	Please indicate the extent to which you agree or disagree with the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
COLOPN01	Opinion: It will take me longer to graduate than I had planned
COLOPN02	Opinion: Faculty empower me to learn here
COLOPN03	Opinion: I see myself as a part of the campus community
COLOPN04	Opinion: At least one staff member has taken an interest in my development
COLOPN05	Opinion: Faculty believe in my potential to succeed academically
COLOPN06	Opinion: I feel that I am a member of this college
COLOPN07	Opinion: Staff encourage me to get involved in campus activities
COLOPN08	Opinion: I may have to choose between financially supporting my family and going to college
COLOPN09	Opinion: If asked, I would recommend this college to others
COLOPN10	Opinion: Staff recognize my achievements
COLOPN11	Opinion: At least one faculty member has taken an interest in my development
COLOPN12	Opinion: I feel a sense of belonging to this campus
COLOPN13	Opinion: I am interested in seeking information about current social and political issues
COLOPN14	Opinion: People in my community are counting on me to do well in college
	How would you currently rate yourself in the following areas: Mark <u>one</u> for each item. 1=A Major Weakness 2=Somewhat Weak 3=Average 4=Somewhat Strong 5=A Major Strength
DIVRATE1	Diversity Rating: Ability to see the world from someone else's perspective
DIVRATE2	Diversity Rating: Tolerance of others with different beliefs
DIVRATE3	Diversity Rating: Openness to having my own views challenged
DIVRATE4	Diversity Rating: Ability to discuss and negotiate controversial issues
DIVRATE5	Diversity Rating: Ability to work cooperatively with diverse people
	Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. 1=Lowest 10% 2=Below Average 3=Average 4=Above Average 5=Highest 10%
RATE01	Self Rating: Academic ability
RATE02	Self Rating: Mathematical ability
RATE03	Self Rating: Self-confidence (intellectual)
RATE04	Self Rating: Drive to achieve

Variable Name	Variable Description
	Since entering this college, how often have you utilized the following services: 1=Not at All 2=Occasionally 3=Frequently
ACADACT01	Acad Act: Writing center
ACADACT02	Acad Act: Tutoring or other academic assistance
ACADACT03	Acad Act: Disability resource center
ACADACT04	Acad Act: Career counseling and advising
ACADACT05	Acad Act: Academic advising
ACADACT06	Acad Act: Transcript review
ACADACT07	Acad Act: Financial aid advising
ACADACT08	Acad Act: Study skills advising
ACADACT09	Acad Act: Student health services
ACADACT10	Acad Act: Student psychological services
	Please indicate the extent to which you agree or disagree with the following statements. This college: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
DIVINST01	Inst Diversity: Encourages students to have a public voice and share their ideas openly
DIVINST02	Inst Diversity: Has a long-standing commitment to diversity
DIVINST03	Inst Diversity: Accurately reflects the diversity of its student body in publications (e.g., brochures, website)
DIVINST04	Inst Diversity: Appreciates differences in sexual orientation
DIVINST05	Inst Diversity: Promotes the appreciation of cultural differences
DIVINST06	Inst Diversity: Has campus administrators who regularly speak about the value of diversity
DIVINST07	Inst Diversity: Has a lot of racial tension
DIVINST08	Inst Diversity: Provides the financial support I need to stay enrolled
	To what extent have you experienced the following with students from a racial/ethnic group other than your own? 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
ETHEXP01	Ethnic Experience: Dined or shared a meal
ETHEXP02	Ethnic Experience: Had meaningful and honest discussions about race/ethnic relations outside of class
ETHEXP03	Ethnic Experience: Had guarded, cautious interactions
ETHEXP04	Ethnic Experience: Shared personal feelings and problems
ETHEXP05	Ethnic Experience: Had tense, somewhat hostile interactions
ETHEXP06	Ethnic Experience: Had intellectual discussions outside of class
ETHEXP07	Ethnic Experience: Felt insulted or threatened because of your race/ethnicity
ETHEXP08	Ethnic Experience: Studied or prepared for class
ETHEXP09	Ethnic Experience: Socialized or partied
	Please indicate the importance to you personally of each of the following: 1=Not Important 2=Somewhat Important 3=Very Important 4=Essential
GOAL01	Goal: Influencing the political structure (e.g., voting, education campaigns, get-out-the-vote efforts)
GOAL02	Goal: Influencing social values
GOAL03	Goal: Working to correct social and economic inequalities
GOAL04	Goal: Helping to promote racial understanding
GOAL05	Goal: Working to achieve greater gender equity
GOAL06	Goal: Being very well-off financially

Variable Name	Variable Description
SEXUALASSAULT	Since you entered this college, have you experienced any unwanted sexual contact? 1=No 2=Yes
UNWANTED01	Did the unwanted sexual contact occur at a time when you were unable to provide consent because you were passed out, drugged, drunk, or otherwise incapacitated? 1=No 2=Yes
UNWANTED02	Did this person use or threaten to use physical force? 1=No 2=Yes
UNWANTED03	Does this person have an affiliation with this institution? 1=No 2=Yes 3=I Don't Know
	Whom have you told about the instance(s) of unwanted sexual contact? (Mark all that apply) 1=Not Marked 2=Marked
UNWANTED04	No one
UNWANTED05	Professor
UNWANTED06	Campus administrator (e.g., Dean of Students)
UNWANTED07	Residence hall staff
UNWANTED08	Campus police
UNWANTED09	Local law enforcement
UNWANTED10	Counselor or therapist
UNWANTED11	Medical professional
UNWANTED12	Friend
UNWANTED13	Parent or guardian
UNWANTED14	Other family member
	How often in the past year did you interact with someone: 1=Not at All 2=Occasionally 3=Frequently
INTERACT01	Interact: From a country other than your own
INTERACT02	Interact: From a religion different from your own
INTERACT03	Interact: From a socioeconomic class different from your own
INTERACT04	Interact: Of a sexual orientation different from your own
INTERACT05	Interact: With a disability
	How often in the past year did you: 1=Not at All 2=Occasionally 3=Frequently
CONSACTION01	Action: Make an effort to get to know people from diverse backgrounds
CONSACTION02	Action: Use different points of view to make an argument
CONSACTION03	Action: Feel challenged to think more broadly about an issue
CONSACTION04	Action: Made connections between ideas I learned in different courses
CONSACTION05	Action: Challenge others on issues of discrimination
CONSACTION06	Action: Apply concepts from courses to real life situations
CONSACTION07	Action: Recognize the biases that affect your own thinking
CONSACTION08	Action: Make an effort to educate others about social issues
CONSACTION09	Action: Critically evaluated your own position on an issue
CONSACTION10	Action: Discuss issues related to sexism, gender differences, or gender equity

Variable Name	Variable Description
	Have you personally experienced the following forms of bias/harassment/discrimination while at this college: 1=No 2=Yes
HARFORM01	Discrim Frequency: Ability/disability status
HARFORM02	Discrim Frequency: Age
HARFORM03	Discrim Frequency: Citizenship status
HARFORM04	Discrim Frequency: Gender
HARFORM05	Discrim Frequency: Political beliefs
HARFORM06	Discrim Frequency: Race/ethnicity
HARFORM07	Discrim Frequency: Religious/spiritual beliefs
HARFORM08	Discrim Frequency: Sexual orientation
HARFORM09	Discrim Frequency: Socioeconomic status
	Please indicate how often at this college you have: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
HAREXP01	Discrim Experienced: Witnessed discrimination
HAREXP02	Discrim Experienced: Reported an incident of discrimination to a campus authority
HAREXP03	Discrim Experienced: Experienced sexual harassment
HAREXP04	Discrim Experienced: Reported an incident of sexual harassment to a campus authority
	Heard insensitive or disparaging racial remarks from:
HAREXP05	Discrim Experienced: Students
HAREXP06	Discrim Experienced: Faculty
HAREXP07	Discrim Experienced: Staff
	Please indicate how often you have personally experienced the following forms of bias/harassment/discrimination while at this college: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
HARTYPE01	Discrim Type: Verbal comments
HARTYPE02	Discrim Type: Written comments (e.g., emails, texts, writing on walls)
HARTYPE03	Discrim Type: Exclusion (e.g., from gatherings, events)
HARTYPE04	Discrim Type: Offensive visual images or items
HARTYPE05	Discrim Type: Threats of physical violence
HARTYPE06	Discrim Type: Physical assaults or injuries
HARTYPE07	Discrim Type: Anonymous phone calls
HARTYPE08	Discrim Type: Damage to personal property
	Have you participated in any of the following academic programs at this college? 1=No 2=Yes
ACADPGM01	Acad Program: Transfer orientation
ACADPGM02	Acad Program: Re-entry student program
ACADPGM03	Acad Program: Honors program
ACADPGM04	Acad Program: Undergraduate research program
ACADPGM05	Acad Program: Faculty/mentor program
ACADPGM06	Acad Program: Academic support services for low-income/first generation students
ACADPGM07	Acad Program: Study abroad program
ACADPGM08	Acad Program: English as a Second Language (ESL) instruction
ACADPGM09	Acad Program: Summer courses

Variable Name	Variable Description
	How often in the past year did you: 1=Not at All 2=Occasionally 3=Frequently
MNDHAB01	Habits of Mind: Ask questions in class
MNDHAB02	Habits of Mind: Support your opinions with a logical argument
MNDHAB03	Habits of Mind: Seek solutions to problems and explain them to others
MNDHAB04	Habits of Mind: Revise your papers to improve your writing
MNDHAB05	Habits of Mind: Evaluate the quality or reliability of information you received
MNDHAB06	Habits of Mind: Take a risk because you felt you had more to gain
MNDHAB07	Habits of Mind: Seek alternative solutions to a problem
MNDHAB08	Habits of Mind: Look up scientific research articles and resources
MNDHAB09	Habits of Mind: Explore topics on your own, even though it was not required for a class
MNDHAB10	Habits of Mind: Accept mistakes as part of the learning process
MNDHAB11	Habits of Mind: Seek feedback on your academic work
MNDHAB12	Habits of Mind: Integrate skills and knowledge from different sources and experiences
	How many courses have you taken at this college that included the following? 1=None 2=One 3=2-4 4=5 or more
CRSTYPE01	Course Type: Mostly online instruction
CRSTYPE02	Course Type: Materials/readings about gender
CRSTYPE03	Course Type: Opportunities to study and serve communities in need (e.g., service learning)
CRSTYPE04	Course Type: Materials/readings about race/ethnicity
CRSTYPE05	Course Type: Materials/readings about socioeconomic class differences
CRSTYPE06	Course Type: A remedial or developmental focus
CRSTYPE07	Course Type: Materials/readings about privilege
CRSTYPE08	Course Type: Opportunities for intensive dialogue between students with different backgrounds and beliefs
CRSTYPE09	Course Type: Materials/readings about sexual orientation
CRSTYPE10	Course Type: Materials/readings about disability
	Since entering this college, how often have you: 1=Not at All 2=Occasionally 3=Frequently
AFFACT01	Affect: Missed class due to personal/family responsibilities
AFFACT02	Affect: Missed class due to employment
AFFACT03	Affect: Felt family support to succeed
AFFACT04	Affect: Contributed money to help support your family
AFFACT05	Affect: Not been able to get into the classes you need because they were full
AFFACT06	Affect: Not been able to take the classes you need because they were not offered/were canceled
AFFACT07	Affect: Had difficulty in commuting/getting to campus
AFFACT08	Affect: Taken classes when most campus services were closed
AFFACT09	Affect: Attended professors' office hours
AFFACT10	Affect: Participated in study groups
AFFACT11	Affect: Read this college's catalog (paper or online)
AFFACT12	Affect: Participated in programs for students who are parents
AFFACT13	Affect: Discussed course content with students outside of class

Variable Name	Variable Description
	Please indicate how often you have experienced the following in class at this college: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
ACADVAL01	Validation: Faculty were able to determine my level of understanding of the course material
ACADVAL02	Validation: Felt that faculty provided me with feedback that helped me assess my progress in class
ACADVAL03	Validation: Felt that my contributions were valued in class
ACADVAL04	Validation: Felt that faculty encouraged me to ask questions and participate in discussions
	Since entering this college have you: 1=No 2=Yes
MOBILE01	Mobility: Taken a course from another institution while taking classes here
MOBILE02	Mobility: Taken a summer course at another college
MOBILE03	Mobility: Taken an online course from another college
MOBILE04	Mobility: Considered transferring to another college
	If "Yes" to MOBILE01, MOBILE02, OR MOBILE03
	Not including this college, have you taken any courses at a: 1=No 2=Yes
OTHERINST01	Other Inst: 2-year or community college
OTHERINST02	Other Inst: 4-year institution
OTHERINST03	Other Inst: Vocational or trade school
	End
	If "Yes" to MOBILE01 to MOBILE04
	In deciding to take courses at another institution or when considering transferring, how important were each of the following reasons? 1=Not Important 2=Somewhat Important 3=Very Important 4=Essential
OTHEREASON01	Other Inst Reason: To fulfill general education requirements
OTHEREASON02	Other Inst Reason: To fulfill requirements in my major
OTHEREASON03	Other Inst Reason: To have a more convenient class schedule
OTHEREASON04	Other Inst Reason: To complete my degree quicker
OTHEREASON05	Other Inst Reason: Tuition was less expensive
OTHEREASON06	Other Inst Reason: The location was more convenient
OTHEREASON07	Other Inst Reason: To challenge myself academically
OTHEREASON08	Other Inst Reason: To earn a degree or certificate that is not offered at this college
OTHEREASON09	Other Inst Reason: Changed my career plans
OTHEREASON10	Other Inst Reason: Wasn't doing as well academically as I expected
OTHEREASON11	Other Inst Reason: Felt like I didn't "fit in" at my college
OTHEREASON12	Other Inst Reason: Was placed on academic probation
OTHEREASON13	Other Inst Reason: Had family responsibilities
OTHEREASON14	Other Inst Reason: Had medical issues
OTHEREASON15	Other Inst Reason: Had money problems and could no longer afford to attend college
OTHEREASON16	Other Inst Reason: Other [Free response]
	End

Variable Name	Variable Description
	Since beginning at this institution, have you: 1=No 2=Yes
STOP	Ever stopped taking classes for more than one term
CONSIDERDROP	Considered dropping out of college
	If "Yes" to STOP
	How important were each of the following in your decision to stop taking classes for more than one term? 1=Not Important 2=Somewhat Important 3=Very Important 4=Essential
STOPREASON01	Stop Reason: Changed my career plans
STOPREASON02	Stop Reason: Wasn't doing as well academically as I expected
STOPREASON03	Stop Reason: Felt like I didn't "fit in" at my college
STOPREASON04	Stop Reason: Was bored with my coursework
STOPREASON05	Stop Reason: Wanted a better social life
STOPREASON06	Stop Reason: Was placed on academic probation
STOPREASON07	Stop Reason: Was primary caregiver for family member(s)
STOPREASON08	Stop Reason: Was tired of being a student
STOPREASON09	Stop Reason: Had medical issues
STOPREASON10	Stop Reason: Had a good job offer
STOPREASON11	Stop Reason: Had money problems and could no longer afford to attend college
	End
	If "Yes" to CONSIDERDROP
	How important were each of the following in your considerations to drop out of college? 1=Not Important 2=Somewhat Important 3=Very Important 4=Essential
CONSDREASON01	Considered Drop Out Reason: Changed my career plans
CONSDREASON02	Considered Drop Out Reason: Wasn't doing as well academically as I expected
CONSDREASON03	Considered Drop Out Reason: Felt like I didn't "fit in" at my college
CONSDREASON04	Considered Drop Out Reason: Was bored with my coursework
CONSDREASON05	Considered Drop Out Reason: Wanted a better social life
CONSDREASON06	Considered Drop Out Reason: Was placed on academic probation
CONSDREASON07	Considered Drop Out Reason: Was primary caregiver for family member(s)
CONSDREASON08	Considered Drop Out Reason: Was tired of being a student
CONSDREASON09	Considered Drop Out Reason: Had medical issues
CONSDREASON10	Considered Drop Out Reason: Had a good job offer
CONSDREASON11	Considered Drop Out Reason: Had money problems and could no longer afford to attend college
	End

Variable Name	Variable Description
	Since entering this college, how often have you: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
GENACT01	Act in Past: Performed community service
GENACT02	Act in Past: Helped raise money for a cause or campaign
GENACT03	Act in Past: Discussed politics
GENACT04	Act in Past: Publicly communicated your opinion about a cause (e.g., blog, email, petition)
GENACT05	Act in Past: Demonstrated for a cause (e.g., boycott, rally, protest)
GENACT06	Act in Past: Worked on a local, state, or national political campaign
GENACT07	Act in Past: Attended presentations, performances, or art exhibits on diversity
GENACT08	Act in Past: Attended debates or panels about diversity issues
GENACT09	Act in Past: Participated in ongoing campus-organized discussions on racial/ethnic issues (e.g., intergroup dialogue)
GENACT10	Act in Past: Participated in LGBTQ Center activities
GENACT11	Act in Past: Participated in Racial/Ethnic or Cultural Center activities
GENACT12	Act in Past: Participated in Women's/Men's Center activities
GENACT13	Act in Past: Participated in Religious/Spiritual clubs/groups
GENACT14	Act in Past: Participated in Disability Center activities
	Since entering this college have you: 1=No 2=Yes
COLACT01	Act in College: Joined a social fraternity or sorority
COLACT02	Act in College: Joined an ethnic or culturally-based fraternity or sorority
COLACT03	Act in College: Taken an ethnic studies course
COLACT04	Act in College: Taken a women's studies course
COLACT05	Act in College: Taken an LGBTQ studies course
COLACT06	Act in College: Joined a racial/ethnic student organization reflecting your own background
COLACT07	Act in College: Played intercollegiate athletics (e.g., NCAA or NAIA-sponsored)
COLACT08	Act in College: Participated in leadership training
COLACT09	Act in College: Joined a club or organization related to your major
COLACT10	Act in College: Joined a racial/ethnic student organization reflecting a background other than your own
COLACT11	Act in College: Joined an LGBTQ student organization
COLACT12	Act in College: Joined a student-run political club
COLACT13	Act in College: Voted in a national, state, or local election
	Please rate your satisfaction with this college in each area: 1=Very Dissatisfied 2=Dissatisfied 3=Neutral 4=Satisfied 5=Very Satisfied
CMPSAT01	Campus Satisfaction: Overall sense of community among students
CMPSAT02	Campus Satisfaction: Racial/ethnic diversity of the faculty
CMPSAT03	Campus Satisfaction: Racial/ethnic diversity of the student body
CMPSAT04	Campus Satisfaction: Racial/ethnic diversity of the staff
CMPSAT05	Campus Satisfaction: Atmosphere for political differences
CMPSAT06	Campus Satisfaction: Atmosphere for religious differences
CMPSAT07	Campus Satisfaction: Atmosphere for differences in sexual orientation
CMPSAT08	Campus Satisfaction: Socioeconomic diversity of the student body
CMPSAT09	Campus Satisfaction: Administrative response to incidents of discrimination
CMPSAT10	Campus Satisfaction: Administrative response to incidents of sexual assaults
CMPSAT11	Campus Satisfaction: Respect for the expression of diverse beliefs

Variable Name	Variable Description
FINCON	Do you have any concern about your ability to finance your college education? 1=None (I am confident that I will have sufficient funds) 2=Some (but I probably will have enough funds) 3=Major (not sure I will have enough funds to complete college)
HSGRAD	Did you graduate from high school? 1=Yes, graduated from high school 2=No, did not graduate from high school, but passed GED test 3=Neither of the above
HSGPA	What was your average grade in high school? 1=D 2=C 3=C+ 4=B- 5=B 6=B+ 7=A- 8=A or A+
TRANSGENDER	Do you identify as transgender? 1=No 2=Yes
LGBTQIDEN	What is your sexual orientation? 1=Heterosexual/Straight 2=Gay 3=Lesbian 4=Bisexual 5=Queer 6=Other
INCOME	Please provide your best estimate of your total family income last year. Consider income from all sources before taxes. 1=Less than $10,000 2=$10,000 to $14,999 3=$15,000 to $19,999 4=$20,000 to $24,999 5=$25,000 to $29,999 6=$30,000 to $39,999 7=$40,000 to $49,999 8=$50,000 to $59,999 9=$60,000 to $74,999 10=$75,000 to $99,999 11=$100,000 to $149,999 12=$150,000 to $199,999 13=$200,000 to$249,999 14=$250,000 or more
	What type(s) of financial aid did you use this academic year? 1=Not marked 2=Marked
FINAID01	Aid: None, did not apply
FINAID02	Aid: None, applied and was turned down
FINAID03	Aid: Aid which need not be repaid (grants, scholarships, military funding, etc)
FINAID04	Aid: Aid which must be repaid (loans, etc)

Variable Name	Variable Description
	Majors: 4-year schools only
MAJOR41	Mark your primary or probable undergraduate major: (4-year schools)
MAJOR42	If applicable, mark your second undergraduate major: (4-year schools)
	1=Art, fine and applied
	2=English (language & literature)
	3=History
	4=Journalism/Communication
	5=Classical and Modern Languages and Literature (except English)
	6=Media/Film Studies
	7=Music
	8=Philosophy
	9=Theatre/Drama
	10=Theology/Religion
	11=Other Arts and Humanities
	12=Biology (general)
	13=Animal Biology (zoology)
	14=Ecology & Evolutionary Biology
	15=Marine Biology
	16=Microbiology
	17=Molecular, Cellular, & Developmental Biology
	18=Neurobiology/Neuroscience
	19=Plant Biology (botany)
	20=Agriculture/Natural Resources
	21=Biochemistry/Biophysics
	22=Environmental Science
	23=Other Biological Science
	24=Accounting
	25=Business Admin. (general)
	26=Entrepreneurship
	27=Finance
	28=Hospitality/Tourism
	29=Human Resources Management
	30=International Business

Variable Name	Variable Description
MAJOR (con't)	31=Marketing
	32=Management
	33=Computer/Management Information Systems
	34=Real Estate
	35=Other Business
	36=Elementary Education
	37=Music/Art Education
	38=Physical Education/Recreation
	39=Secondary Education
	40=Special Education
	41=Other Education
	42=Aerospace/Aeronautical/Astronautical Engineering
	43=Biological/Agricultural Engineering
	44=Biomedical Engineering
	45=Chemical Engineering
	46=Civil Engineering
	47=Computer Engineering
	48=Electrical/Electronic/Communications Engineering
	49=Engineering Science/Engineering Physics
	50=Environmental/Environmental Health Engineering
	51=Industrial/Manufacturing Engineering
	52=Materials Engineering
	53=Mechanical Engineering
	54=Other Engineering
	55=Clinical Laboratory Science
	56=Health Care Administration/Studies
	57=Health Technology
	58=Kinesiology
	59=Nursing
	60=Pharmacy
	61=Therapy (occupational, physical, speech)
	62=Other Health Profession
	63=Computer Science
	64=Mathematics/Statistics
	65=Other Math and Computer Science
	66=Astronomy & Astrophysics
	67=Atmospheric Sciences
	68=Chemistry
	69=Earth & Planetary Sciences
	70=Marine Sciences
	71=Physics
	72=Other Physical Science
	73=Anthropology
	74=Economics
	75=Ethnic/Cultural Studies
	76=Geography
	77=Political Science (gov't., international relations)
	78=Psychology
	79=Public Policy
	80=Social Work
	81=Sociology
	82=Women's/Gender Studies
	83=Other Social Science
	84=Architecture/Urban Planning

Variable Name	Variable Description
MAJOR (con't)	85=Criminal Justice
	86=Library Science
	87=Security & Protective Services
	88=Military Sciences/Technology/Operations
	89=Other
	90=Undecided
	(2-year schools only)
	91=Family & Consumer Sciences
	92=Medicine, Dentistry, Veterinary Medicine
	93=Other Professional
	94=Building Trades
	95=Data Processing or Computer Programming
	96=Drafting or Design
	97=Electronics
	98=Mechanics
	99=Other Technical
	100=Cosmetology
	101=Culinary Arts
	102=Esthetician/Manicurist/Massage
	103=Fire Science
	104=Funeral and Mortuary Science
	105=Interior Design
	106=Paralegal/Legal Assistant
	107=Other Vocational
	108=Forestry
	109=Law Enforcement
	How many hours per week do you work for pay?
	1=None
	2=1-5hrs
	3=6-10hrs
	4=11-15hrs
	5=16-20hrs
	6=21-30hrs
	7=31-40hrs
	8=Over40hrs
WORKHPW1	Work: On-campus
WORKHPW2	Work: Off-campus
	What is the highest academic degree that you intend to obtain?
	1=None
	2=Vocational certificate
	3=Associate (A.A. or equivalent)
	4=Bachelor's degree (B.A., B.S., etc.)
	5=Master's degree (M.A., M.S., etc.)
	6=Ph.D. or Ed.D.
	7=M.D., D.O., D.D.S., or D.V.M.
	8=J.D. (Law)
	9=B.D. or M.Div. (Divinity)
	10=Other
DEGASP	Highest academic degree planned
HIDEGREE	Highest academic degree planned at this college

Variable Name	Variable Description
	What is the average grade you received during your college career, both overall and in your major? (If you don't yet have a major, leave major blank) 1=D 2=C 3=C+ 4=B- 5=B 6=B+ 7=A- 8=A or A+
COLLGPA	Overall GPA
MAJORGPA	Primary major GPA
MILITARY	Military Status 1=None 2=ROTC, cadet, or midshipman at a service academy 3=In Active Duty, Reserves, or National Guard 4=A discharged veteran NOT serving in Active Duty, Reserves, or National Guard
LANGUAGE	Do you speak a language other than English at home? 1=No 2=Yes
	If "Yes" to LANGUAGE
COMFORTLANG	With which language do you feel more comfortable? 1=English 2=Other Language 3=Equally comfortable with English and Other Language
	End
	Please mark the sex of you parent(s) or guardian(s) 1=Male 2=Female
PARSEX1	Sex: Parent/Guardian 1
PARSEX2	Sex: Parent/Guardian 2
	What is the highest level of education completed by each of your parent(s)/guardian(s)? 1=Junior high/middle school or less 2=Some high school 3=High school graduate 4=Some college 5=Associate's degree (A.A. or equivalent) 6=Bachelor's degree (B.A., B.S., etc.) 7=Master's degree (M.A., M.S., MBA, etc.) 8=Doctoral or Professional degree (Ph.D., J.D., M.D., etc) 9=Don't know
PAREDUC1	Educ: Parent/Guardian 1
PAREDUC2	Educ: Parent/Guardian 2
	Do you have any of the following disabilities or medical conditions? 1=No 2=Yes
DISAB1	Disability: Learning disability (dyslexia, etc.)
DISAB2	Disability: Attention-deficit/hyperactivity disorder (ADHD)
DISAB3	Disability: Physical disability (speech, sight, mobility, hearing, etc.)
DISAB4	Disability: Chronic illness (cancer, diabetes, autoimmune disorders, etc.)
DISAB5	Disability: Psychological disorder (depression, etc.)
DISAB6	Disability: Other

Variable Name	Variable Description
POLIVIEW	How would you characterize your political views? 1=Far right 2=Conservative 3=Middle-of-the-road 4=Liberal 5=Far left
CITIZEN	Which of the following most accurately describes your background? 1=My parents/legal guardians and I were born in the United States 2=I was born in the United States; one parent/guardian was not 3=I was born in the United States; both my parents/legal guardians were not 4=Foreign-born naturalized citizen 5=Permanent legal resident 6=Foreign born on student visa 7=Other status
	If CITIZEN is "Foreign-borned naturalized citizen", "Permanent legal resident", "Foreign born on student visa", or "Other status"
AGEARRIVE	At what age did you arrive in the U.S.? 1=Under 5 2=6-12 3=13-18 4=19-25 5=26 or older
	End
SRELIGION	What is your preferred religious identification? 1=Agnostic 2=Atheist 3=Baptist 4=Buddhist 5=Church of Christ 6=Eastern Orthodox 7=Episcopalian 8=Hindu 9=Jewish 10=LDS (Mormon) 11=Lutheran 12=Methodist 13=Muslim 14=Presbyterian 15=Quaker 16=Roman Catholic 17=Seventh-day Adventist 18=United Church of Christ/Congregational 19=Other Christian 20=Other Religion 21=None

Variable Name	Variable Description
AGE	What is your age? 1=16 or younger 2=17 3=18 4=19 5=20 6=21 to 24 7=25 to 29 8=30 to 39 9=40 to 54 10=55 or older
	How many children do you have? 1=0 2=1 3=2 4=3 5=4+
CHILD1	Child: Under 18 years old
CHILD2	Child: 18 years or older
	Module: Classroom Climate
	Please indicate the extent to which you agree or disagree with each of the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
CLSCLIMATE01	CC Climate: I feel comfortable sharing my own perspectives and experiences in class
CLSCLIMATE02	CC Climate: I am able to explore my own background through class projects/assignments
CLSCLIMATE03	CC Climate: I have been singled out in class because of my identy (such as race/ethnicity, gender, sexual orientation, disability status, religious affiliation, etc.)
CLSCLIMATE04	CC Climate: I feel I have to work harder than other students to be perceived as a good student
CLSCLIMATE05	CC Climate: In class, I have heard faculty express stereotypes based on social identity (such as race/ethnicity, gender, sexual orientation, disability status, religious affiliation, etc.)
CLSCLIMATE06	CC Climate: I don't feel comfortable contributing to class discussions
	Please indicate how many of your instructors at this institution: 1=Very Few 2=Less than Half 3=Most, but not All 4=All
PROFESSOR01	CC Instructors: Know students' names
PROFESSOR02	CC Instructors: Value individual differences in the classroom
PROFESSOR03	CC Instructors: Are sensitive to the ability levels of all students
PROFESSOR04	CC Instructors: Help students learn how to bring about positive change in society
PROFESSOR05	CC Instructors: Encourage students from diverse backgrounds to work together
PROFESSOR06	CC Instructors: Communicate high expectations for students' performance
PROFESSOR07	CC Instructors: Turn controversial topics into good discussions
PROFESSOR08	CC Instructors: Encourage students to contribute different perspectives in class
PROFESSOR09	CC Instructors: Share their own experiences and background in class
PROFESSOR10	CC Instructors: Have open discussions about privilege, power and oppression
PROFESSOR11	CC Instructors: Treat all students in class as though they are capable learners
PROFESSOR12	CC Instructors: Include diverse perspectives in class discussions/assignments
PROFESSOR13	CC Instructors: Motivated me to work harder than I thought I could
PROFESSOR14	CC Instructors: Are passionate about what they teach
PROFESSOR15	CC Instructors: Teach students tolerance and respect for different beliefs

Variable Name	Variable Description
	How many of your courses this year involve: 1=Very Few 2=Less than Half 3=Most, but not All 4=All
CRSINCLUDE01	CC Involve: Lectures (exclusively or almost exclusively)
CRSINCLUDE02	CC Involve: Class discussions
CRSINCLUDE03	CC Involve: Student presentations
CRSINCLUDE04	CC Involve: Multiple short papers
CRSINCLUDE05	CC Involve: One or more research papers of 10+ pages
CRSINCLUDE06	CC Involve: Multiple drafts of written work
CRSINCLUDE07	CC Involve: Group projects
CRSINCLUDE08	CC Involve: Lab work
CRSINCLUDE09	CC Involve: Cooperative learning (small groups)
CRSINCLUDE10	CC Involve: Reflective writing/journaling
CRSINCLUDE11	CC Involve: Electronic quizzes with immediate feedback in class (e.g., clickers)
	Module: Transition to the Major
	In thinking about declaring a major, how helpful were the following? 1=Did Not Use/Do 2=Not Helpful at All 3=Not Very Helpful 4=Somewhat Helpful 5=Very Helpful
HELPMAJOR01	TM Helpful: Taking a variety of classes from different programs/majors
HELPMAJOR02	TM Helpful: Exploring how a major leads to specific career options
HELPMAJOR03	TM Helpful: Finding a supportive faculty member in the major
HELPMAJOR04	TM Helpful: Talking to an upperclass student in the major
HELPMAJOR05	TM Helpful: Figuring out my career plans
HELPMAJOR06	TM Helpful: Talking to a counselor/academic advisor
HELPMAJOR07	TM Helpful: Finding a major that has a welcoming environment
	Indicate the extent to which you agree or disagree with the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
BARMAJOR01	TM Barrier: There are too many steps to declare a major here
BARMAJOR02	TM Barrier: I think it does not matter what my major is, only that I obtain a degree
BARMAJOR03	TM Barrier: The availability of jobs is an important consideration for me in choosing a major
BARMAJOR04	TM Barrier: I do not know what I want to do in life
BARMAJOR05	TM Barrier: Regardless of my choice of major, the skills I gain in college will be applicable to any future career
BARMAJOR06	TM Barrier: I think my major should be closely linked to my intended career
BARMAJOR07	TM Barrier: I will be/was unable to get into my first-choice major
BARMAJOR08	TM Barrier: I do not know enough about majors to choose
BARMAJOR09	TM Barrier: I feel pressure from my parents/guardians to pursue a particular major
BARMAJOR10	TM Barrier: Information distributed on majors is useful
BARMAJOR11	TM Barrier: It is important that I find my major interesting, regardless of how “practical” it is
BARMAJOR12	TM Barrier: This campus has many events/activities to help students choose a major
BARMAJOR13	TM Barrier: I am likely to pursue my major at another institution
DECLAREMAJOR	Have you officially declared your major? 1=No 2=Yes

Variable Name	Variable Description
	If major is not declared, then student is finished with this section of the survey.
	In thinking about your primary major, indicate the extent to which you agree or disagree with each of the following: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
DECIDEMAJOR01	TM Decide: I had expected to get better grades than the grades I have earned so far
DECIDEMAJOR02	TM Decide: Faculty are approachable
DECIDEMAJOR03	TM Decide: I feel confident I will succeed
DECIDEMAJOR04	TM Decide: I have a peer support network among students
DECIDEMAJOR05	TM Decide: The faculty and staff demonstrate a strong commitment to diversity
DECIDEMAJOR06	TM Decide: There is a sense of competition between students
DECIDEMAJOR07	TM Decide: There is high quality teaching
DECIDEMAJOR08	TM Decide: Faculty are interested in my development as a student
DECIDEMAJOR09	TM Decide: My parents/guardians are supportive of my choice of major
DECIDEMAJOR10	TM Decide: I am considering changing my major in the future
CHANGEMAJOR	How many times have you changed your major (either officially or unofficially) since entering this college? 1=None 2=One 3=Two 4=Three 5=Four 6=Five or more
	If student answers none, then student is finished with this section, otherwise goes on to next question
	Please indicate the extent to which you agree or disagree with each of the following: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
CHANGEMAJOR01	TM Change: Courses in my previous major were too difficult
CHANGEMAJOR02	TM Change: My previous major was not a good fit for me
CHANGEMAJOR03	TM Change: Students were too competitive in my previous major
CHANGEMAJOR04	TM Change: I was not able to take the courses I needed in my previous major
CHANGEMAJOR05	TM Change: My academic interests have changed
CHANGEMAJOR06	TM Change: My career goals have changed
CHANGEMAJOR07	TM Change: Courses in my previous major required too much time
CHANGEMAJOR08	TM Change: Course materials were too expensive in my previous major
CHANGEMAJOR09	TM Change: I expect to earn better grades in my current major than in my previous major
	Module: Intergroup Relations
	Please indicate the extent to which you agree or disagree with each of the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
IGRPERSONAL01	IGR Personal: It is hard to listen to points of view that challenge my values
IGRPERSONAL02	IGR Personal: I have a clear sense of my racial/ethnic background and what it means for me
IGRPERSONAL03	IGR Personal: I clam up (freeze) when conflict involves strong emotions
IGRPERSONAL04	IGR Personal: I have a lot of pride in my racial/ethnic group and its accomplishments
IGRPERSONAL05	IGR Personal: I would rather hear a person's conflicting view than have them remain silent
IGRPERSONAL06	IGR Personal: I feel a strong attachment toward my own racial/ethnic group
IGRPERSONAL07	IGR Personal: I can help people from different groups use conflict constructively

Variable Name	Variable Description
	While at this college: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
IGRETHNIC1	I have spent time trying to learn more about my racial/ethnic identity group
IGRETHNIC2	I have been in situations where I was the only person of my race/ethnic group
	Please indicate the extent to which you agree or disagree with each of the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
IGRVIEWS01	IGR View: Students here are willing to talk about equity, injustice, and group differences
IGRVIEWS02	IGR View: When people feel frustrated about racial/ethnic stereotypes applied to their group, I feel some of their frustration too
IGRVIEWS03	IGR View: Discrimination in the workplace still limits the success of many people of color
IGRVIEWS04	IGR View: When people feel proud of the accomplishments of someone of their racial/ethnic group, I feel some of their pride as well
IGRVIEWS05	IGR View: Most people of color are no longer discriminated against in this country
IGRVIEWS06	IGR View: There is at least one staff or faculty member here that I can talk to about difficult social justice issues
IGRVIEWS07	IGR View: What one can achieve in life is still limited by one's race or ethnicity
IGRVIEWS08	IGR View: When people express regret about the racial/ethnic biases they were taught, I can empathize with their feelings
IGRVIEWS09	IGR View: Inequalities in the educational system limit the success of people of color
IGRVIEWS10	IGR View: When I learn about the injustices that people of different races/ethnicities have experienced, I tend to feel some of the anger that they do
	How often in the past year have you: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
IGRJUDGE01	IGR Judge: Avoided using language that reinforces negative stereotypes
IGRJUDGE02	IGR Judge: Participated in a coalition of different groups to address social justice issues
IGRJUDGE03	IGR Judge: Challenged others on derogatory comments
IGRJUDGE04	IGR Judge: Reinforced others for behaviors that support diversity
IGRJUDGE05	IGR Judge: Made efforts to educate myself about other groups
IGRJUDGE06	IGR Judge: Worked with others to challenge discrimination

Variable Name	Variable Description
	We are all members of different social identity groups (e.g., gender, race, ethnicity, sexual orientation, socioeconomic class). How often in the past year have you thought about your: 1=Never 2=Seldom 3=Sometimes 4=Often 5=Very Often
IGRIDENTITY01	IGR Identity: Ability/disability status
IGRIDENTITY02	IGR Identity: Age
IGRIDENTITY03	IGR Identity: Citizenship status
IGRIDENTITY04	IGR Identity: Gender
IGRIDENTITY05	IGR Identity: Political affiliation
IGRIDENTITY06	IGR Identity: Race/ethnicity
IGRIDENTITY07	IGR Identity: Religious/spiritual affiliation
IGRIDENTITY08	IGR Identity: Sexual orientation
IGRIDENTITY09	IGR Identity: Socioeconomic class
	Module: Climate for Transfer at 2-Year Institutions
	Please indicate the extent to which you agree or disagree with each of the following statements about this college: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
TRASSIST01	This campus proactively distributes transfer information to students
TRASSIST02	It's easy to find help for applying to colleges/universities here
TRASSIST03	Counselors make transfer a priority at this institution
TRASSIST04	This campus actively helps students/parents apply for financial aid
TRASSIST05	Faculty make transfer a priority at this institution
TRASSIST06	Class sections are available in the evening
TRASSIST07	Student services are available for night students
TRASSIST08	Faculty and staff understand the academic, cultural, social, and economic needs of students who go here
TRASSIST09	Administrators make transfer a priority at this institution
TRASSIST10	This community college promoted transfer at my high school
TRASSIST11	Students learn about transfer requirements at college entry
	Since entering this college, how difficult has it been to: 1=Very Difficult 2=Somewhat Difficult 3=Somewhat Easy 4=Very Easy
CCACT01	Transfer2 Act: Adjust to the academic demands of classes
CCACT02	Transfer2 Act: Access support services outside of "regular" business hours
CCACT03	Transfer2 Act: Figure out which courses count towards your goals
CCACT04	Transfer2 Act: Find parking
CCACT05	Transfer2 Act: Schedule classes for the next semester
CCACT06	Transfer2 Act: Improve my English reading, writing, or speaking skills
CCACT07	Transfer2 Act: Have time to do schoolwork
CCACT08	Transfer2 Act: Find child care
CCACT09	Transfer2 Act: Complete course pre-requisites for an intended major
CCACT10	Transfer2 Act: Pass basic skills or remedial courses

Variable Name	Variable Description
PLANTRANSFER	Are you planning to transfer? 1=No 2=Yes, but I don't have specific plans yet 3=Yes, and I have specific plans
	If "Yes" to PLANTRANSFER
	Since entering this college have you: 1=Not at All 2=Occasionally 3=Frequently
TRPREP01	Transfer2 Prep: Taken courses that provided transfer, financial aid and study skills information
TRPREP02	Transfer2 Prep: Met with a community college counselor about transferring
TRPREP03	Transfer2 Prep: Discussed my academic goals with faculty
TRPREP04	Transfer2 Prep: Talked to a peer advisor about transferring
TRPREP05	Transfer2 Prep: Attended a college fair
TRPREP06	Transfer2 Prep: Talked with a transfer admissions counselor from a four-year institution
TRPREP07	Transfer2 Prep: Participated in a summer program at a four-year institution
TRPREP08	Transfer2 Prep: Sought information for prerequisites in my major
TRPREP09	Transfer2 Prep: Visited a four-year campus
TRPREP10	Transfer2 Prep: Used the transfer course requirements list/transfer plan when registering for classes
TRPREP11	Transfer2 Prep: Was encouraged by faculty or staff to participate in an academic summer program linked with a four-year institution
	Module: Climate for Transfer Students at 4-Year Institutions
TRANSFER	Did you transfer to this college? 1=No 2=Yes
	If "No" to TRANSFER, go to EASE01
TRANSFERFROM	I transferred to this college directly from: 1=A 2-year college 2=A 4-year college or university 3=Another type of postsecondary institution (e.g. technical, vocational, business)
TRANSFERPREP	Did you participate in a transfer preparation program before enrolling here? 1=No 2=Yes
TRANSFERCREDIT	How many courses taken at another institution were accepted for credit here? 1=Very few 2=Less than half 3=About half 4=Most but not all 5=All

Variable Name	Variable Description
	Please indicate the extent to which you agree or disagree with each of the following about your transfer experience:
	1=Strongly Disagree
	2=Disagree
	3=Agree
	4=Strongly Agree
	Before transferring:
TREXP01	Transfer4 Experience: I received helpful advice about the right courses to complete the requirements to transfer
TREXP02	Transfer4 Experience: The courses I took prepared me for the academic demands here
TREXP03	Transfer4 Experience: The guidelines for transferring to this institution were easy to understand
TREXP04	Transfer4 Experience: There was helpful online information available about how to transfer here (e.g. websites)
TREXP05	Transfer4 Experience: I worked with a transfer specialist/advisor from this institution to apply or choose courses
	At this college:
TREXP06	Transfer4 Experience: Campus administrators care about what happens to transfer students
TREXP07	Transfer4 Experience: Many transfer students feel lost once they enroll
TREXP08	Transfer4 Experience: I have received helpful advice about how to succeed here as a transfer student
TREXP09	Transfer4 Experience: Transfer students are a lower priority than students who started here
TREXP10	Transfer4 Experience: Faculty here take an interest in the success of transfer students
	Since transferring to this institution, how often have you:
	1=Not At All
	2=Occasionally
	3=Frequently
TRACT01	Transfer4 Act: Participated in transfer-focused programs/activities
TRACT02	Transfer4 Act: Interacted with other transfer students
TRACT03	Transfer4 Act: Sought information specific to transfer students
TRACT04	Transfer4 Act: Interacted with students who did not transfer
TRACT05	Transfer4 Act: Felt excluded from campus events because you are a transfer student
TRACT06	Transfer4 Act: Felt overwhelmed by academic expectations
	Since entering this college, how has it been to:
	1=Very Difficult
	2=Somewhat Difficult
	3=Somewhat Easy
	4=Very Easy
EASE01	Transfer4 Ease: Understand what my professors expect of me academically
EASE02	Transfer4 Ease: Develop effective study skills
EASE03	Transfer4 Ease: Adjust to the academic demands of college
EASE04	Transfer4 Ease: Manage my time effectively
EASE05	Transfer4 Ease: Get to know faculty
EASE06	Transfer4 Ease: Get to know my way around campus
EASE07	Transfer4 Ease: Figure out which requirements I need to graduate
EASE08	Transfer4 Ease: Find help when I need it
EASE09	Transfer4 Ease: Make friends
EASE10	Transfer4 Ease: Become involved in campus activities

Variable Name	Variable Description
	Optional Questions
	Optional Questions
	1=A
	2=B
	3=C
	4=D
	5=E
OPT01	Optional Question 1
OPT02	Optional Question 2
OPT03	Optional Question 3
OPT04	Optional Question 4
OPT05	Optional Question 5
OPT06	Optional Question 6
OPT07	Optional Question 7
OPT08	Optional Question 8
OPT09	Optional Question 9
OPT10	Optional Question 10
OPT11	Optional Question 11
OPT12	Optional Question 12
OPT13	Optional Question 13
OPT14	Optional Question 14
OPT15	Optional Question 15
OPT16	Optional Question 16
OPT17	Optional Question 17
OPT18	Optional Question 18
OPT19	Optional Question 19
OPT20	Optional Question 20
	Aggregated/Generated Variables
MAJOR1A	Probable Primary Major aggregated
MAJOR2A	Probable Secondary Major aggregated
	1=Agriculture
	2=Biological & Life Sciences
	3=Business
	4=Education
	5=Engineering
	6=English
	7=Health Professional
	8=History or Political Science
	9=Arts & Humanities
	10=Fine Arts
MAJOR (con't)	11=Mathematics/Computer Science
	12=Physical Science
	13=Social Science
	14=Jusitice & Security
	15=Library Science
	16=Technical/Vocational (2-year schools)
	17=Non-technical/Vocational (2-year schools)
	18=Other
	19=Undecided

Variable Name	Variable Description
RETHNIC	Responded to Hispanic or Latino ethnicity 1=No 2=Yes
RRACE	Responded to race 1=No 2=Yes
RACEGROUP	Race/Ethnicity Group 1=American Indian non-Hispanic 2=Asian non-Hispanic 3=Black non-Hispanic 4=Hawaiian non-Hispanic 5=Hispanic - any race 6=White non-Hispanic 7=Two or more races non-Hispanic 8=Unknown
FIRSTGEN	First generation status based on parent(s) with less than 'some college' 1=No 2=Yes
SEXIMP	Sex imputed 1=No 2=Yes
DOBMM	DOB Month
DOBDD	DOB Day
DOBYY	DOB Year
SURVTYPE	Survey Type 1=Web submitted 2=Web partial
	Institutional Characteristics
STRAT	CIRP Stratification Cell 1=Public Universities - low 2=Public Universities - medium 3=Public Universities - high 4=Private Universities - medium 5=Private Universities - high 6=Private Universities - very high 7=Public 4yr Colleges - low 8=Public 4yr Colleges - medium 9=Public 4yr Colleges - high 10=Public 4yr Colleges - unknown 11=Private/Nonsectarian 4yr Colleges - low 12=Private/Nonsectarian 4yr Colleges - medium 13=Private/Nonsectarian 4yr Colleges - high 14=Private/Nonsectarian 4yr Colleges - very high 15=Private/Nonsectarian 4yr Colleges - unknown 16=Catholic 4yr Colleges - low 17=Catholic 4yr Colleges - medium 18=Catholic 4yr Colleges - high 19=Catholic 4yr Colleges - unknown

Variable Name	Variable Description
STRAT (con't)	20=Other Religious 4yr Colleges - very low 21=Other Religious 4yr Colleges - low 22=Other Religious 4yr Colleges - medium 23=Other Religious 4yr Colleges - high 24=Other Religious 4yr Colleges - unknown 25=Public 2yr Colleges - very low 26=Public 2yr Colleges - low 27=Public 2yr Colleges - medium 28=Public 2yr Colleges - high 29=Public 2yr Colleges - very high 30=Private 2yr Colleges - very low 31=Private 2yr Colleges - low 32=Private 2yr Colleges - medium 33=Private 2yr Colleges - high 34=HBCU Public 4yr Colleges 35=HBCU Private 4yr Colleges 36=HBCU Public 2yr Colleges 37=HBCU Private 2yr Colleges 38=HBCU Other Religious 4yr Colleges 39=HBCU Catholic 4yr Colleges 40=HBCU Public Universities 41=HBCU Private Universities 99=Other
STATE	Institution's state
HERIREG	HERI Region 1=East 2=Midwest 3=South 4=West
OBEREG	OBE Region 1=New England - CT ME MA NH RI VT 2=Mid East - DE DC MD NJ NY PA 3=Great Lakes - IL IN MI OH WI 4=Plains - IA KS MN MO NE ND SD 5=Southeast - AL AR FL GA KY LA MS NC SC TN VA WV 6=Southwest - AZ NM OK TX 7=Rocky Mountains - CO ID MT UT WY 8=Far West - AK CA HI NV OR WA 9=Other
HBCU	HBCU Flag 1=Not HBCU 2=Public HBCU 3=Private HBCU
INSTSEX	Institution's sex 1=Male only 2=Female only 3=Co-ed 4=Coordinate
SELECTIVITY	Institutional Selectivity
INSTTYPE	Institution Type 1=University 2=4-year 3=2-year

Variable Name	Variable Description
INSTCONT	Institution Control 1=Public 2=Private
COMPGROUP1	Comparison Group 1 1=Public Universities 2=Private Universities 3=Public 4yr Colleges 4=Nonsectarian 4yr Colleges 5=Catholic 4yr Colleges 6=Other Religious 4yr Colleges 7=Public 2yr Colleges 8=Private 2yr Colleges
COMPGROUP2	Comparison Group 2 1=Public Universities, Private Universities, Public 4yr Colleges 2=Nonsectarian, Catholic, Other Religious 4yr Colleges 3=Public 2yr Colleges 4=Private 2yr Colleges
COMPGROUP3	Comparison Group 3 1=All Baccalaureate Institutions 2=All Two-Year Colleges
	DLE Factors
BELONG_SCORE	Sense of Belonging Factor Score
PERSONALVALID_SCORE	General Interpersonal Validation Factor Score
ACADVALID_SCORE	Academic Validation in the Classroom Factor Score
INSTDIVERSITY_SCORE	Institutional Commitment to Diversity Factor Score
CRITICALCON_SCORE	Critical Consciousness and Action Factor Score
HARASS_SCORE	Harassment Factor Score
DISCRIMBIAS_SCORE	Discrimination and Bias Factor Score
CRIP_SCORE	Positive Cross Racial Factor Score
CRIN_SCORE	Negative Cross Racial Factor Score
CONVERSE_SCORE	Conversations Across Differences Factor Score
CURRICULUM_SCORE	Curriculum of Inclusion Factor Score
DIVERSEACT_SCORE	Co-curricular Diversity Activities (Campus-facilitated) Factor Score
INTEGRATION_SCORE	Integration of Learning Factor Score
HOM_SCORE	Habits of Mind Factor Score
PLURALISTIC_SCORE	Pluralistic Orientation Factor Score
CIVICENGAGE_SCORE	Civic Engagement Factor Score
ACADSELF_SCORE	Academic Self-Concept Factor Score

Website: https://www.heri.ucla.edu/researchers/codebooks/DLE/2015-DLE-Codebook.pdf

Appendix C: Sense of Belonging Factor

COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM at the HIGHER EDUCATION RESEARCH INSTITUTE AT UCLA

2014-2015 Diverse Learning Environments Survey

Factor Report

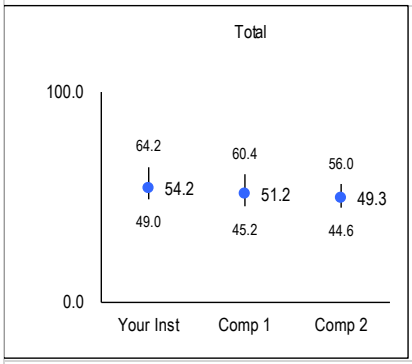
Sense of Belonging

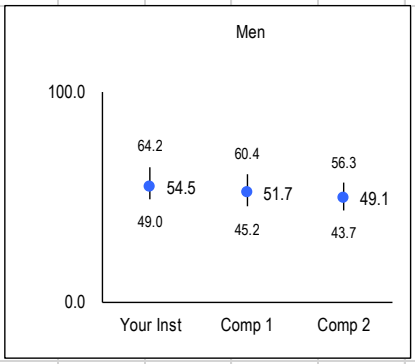
Full-time Respondents

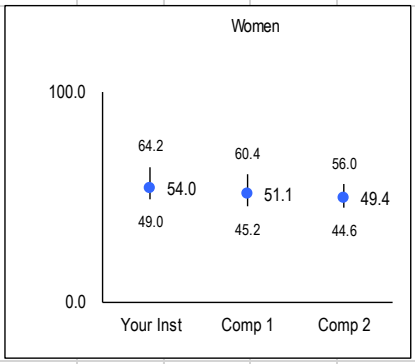
Sense of Belonging measures the extent to which students feel a sense of academic and social integration on campus.

	Total			Men			Women		
Texas Christian University	**Your Inst**	**Comp 1**	**Comp 2**	**Your Inst**	**Comp 1**	**Comp 2**	**Your Inst**	**Comp 1**	**Comp 2**
Total (n)	488	2,690	10,467	132	787	3,258	356	1,903	7,209
Mean	54.2	51.2	49.3	54.5	51.7	49.1	54.0	51.1	49.4
Standard deviation	9.63	10.16	9.91	9.53	10.54	10.28	9.68	9.99	9.74
Significance	-	***	***	-	**	***	-	***	***
Effect size	-	0.29	0.49	-	0.27	0.52	-	0.30	0.47
25th percentile	49.0	45.2	44.6	49.0	45.2	43.7	49.0	45.2	44.6
75th percentile	64.2	60.4	56.0	64.2	60.4	56.3	64.2	60.4	56.0

Note: Significance * p<.05, ** p<.01, *** p<.001







Survey items and factor loadings:

Please indicate the extent to which you agree or disagree with the following statements:

* I feel a sense of belonging to this campus	0.911
* I feel that I am a member of this college	0.846
* I see myself as a part of the campus community	0.775
* If asked, I would recommend this college to others	0.608
Cronbach's α = 0.864	

Appendix D: Face Validity Results

DLE Question: The experts could choose from Academic System (number 1), Social System (number 2), or neither (number 3).	Expert 1	Expert 2	Expert 3	Categorization
Q15. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you experienced faculty were able to determine your level of understanding of course material in class at this college	1	1	1	Academics
Q16. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you felt that faculty provided you with feedback that helped you assess your progress in class at this college	1	1	1	Academics
Q17. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you felt that your contributions were valued in in class at this college	1	1	1	Academics
Q18. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you felt that faculty encouraged you to ask questions and participate in discussions in class at this college	1	1	1	Academics
Q36. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you discussed politics	1	1	1	Academics
Q40. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you attended presentations, performances, or art exhibits on diversity	1	1	1	Academics
Q41. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you attended debates or panels about diversity issues	1	1	1	Academics

(continued)

DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q59. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major, how helpful was to be able to take a variety of classes from different programs/majors	1	1	1	Academics
Q61. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major, how helpful was it finding a supportive faculty member in the major	1	1	1	Academics
Q65. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major how helpful was talking to a counselor/academic advisor	1	1	1	Academics
Q77. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you made efforts to educate yourself about other groups	1	1	1	Academics
Q1. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How would you currently rate yourself in the ability to see the world from someone else's perspective	2	2	2	Social
Q2. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How would you currently rate yourself in tolerance of others with different beliefs	2	2	2	Social
Q5. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How would you currently rate yourself in ability to work cooperatively with diverse people	2	2	2	Social

(continued)

DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q6. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you dined or shared as meal with students from a racial/ethnic group other than your own	2	2	2	Social
Q8. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you had guarded, cautious interactions students from a racial/ethnic group other than your own	2	2	2	Social
Q14. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you socialized or partied with students from a racial/ethnic group other than your own	2	2	2	Social
Q28. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced exclusion (e.g., from gatherings, events) that were bias/harassment/discrimination while at this college	2	2	2	Social
Q34. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you performed community service	2	2	2	Social
Q48. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in overall sense of community among students	2	2	2	Social
Q79. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you participated in a coalition of different groups to address social justice issues	2	2	2	Social

(continued)

DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q80. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you challenged others on derogatory comments	2	2	2	Social
Q81. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you reinforced others for behavior that support diversity	2	2	2	Social
Q82. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you worked with others to challenge discrimination	2	2	2	Social
Q12. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you felt insulted or threatened because of your race/ethnicity with students from a racial/ethnic group other than your own	2	2	3	Non-unanimous
Q9. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you shared personal feelings and problems students from a racial/ethnic group other than your own	2	3	2	Non-unanimous
Q23. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have heard insensitive or disparaging racial remarks from students	2	3	2	Non-unanimous
Q50. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in racial/ethnic diversity of the student body	2	3	2	Non-unanimous
Q53. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in atmosphere for religious differences	2	3	2	Non-unanimous

(continued)

DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q54. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in atmosphere for differences in sexual orientation	2	3	2	Non-unanimous
Q55. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in socioeconomic diversity of the student body	2	3	2	Non-unanimous
Q10. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you had tense, somewhat hostile interactions with students from a racial/ethnic group other than your own	2	3	3	Non-unanimous
Q47. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in Disability Center activities	3	1	1	Non-unanimous
Q60. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major, how helpful was it to be able to explore how a major leads to specific career options	3	1	3	Non-unanimous
Q63. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major, how helpful was in figuring out your career plans	3	1	3	Non-unanimous
Q66. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your ability/disability status	3	1	3	Non-unanimous
Q26. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced verbal comments that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous

(continued)

DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q27. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced written comments (e.g., emails, texts, writing on walls) that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q29. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced offensive visual images or items that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q30. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced threats of physical violence that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q31. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced physical assaults or injuries that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q32. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced anonymous phone calls that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q33. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often you have personally experienced damage to personal property that were bias/harassment/discrimination while at this college	3	2	2	Non-unanimous
Q35. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you helped raise money for a cause or campaign	3	2	2	Non-unanimous

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DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q68. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your citizenship status	3	2	3	Non-unanimous
Q69. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your gender	3	2	3	Non-unanimous
Q70. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your political affiliation	3	2	3	Non-unanimous
Q71. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your race/ethnicity	3	2	3	Non-unanimous
Q72. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your religious/spiritual affiliation	3	2	3	Non-unanimous
Q73. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your sexual orientation	3	2	3	Non-unanimous
Q74. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your socioeconomic status	3	2	3	Non-unanimous
Q78. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you avoided using language that reinforces negative stereotypes?	3	2	3	Non-unanimous
Q20. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have reported an incident of discrimination to a campus authority	3	3	2	Non-unanimous

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DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q21. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have experiences sexual harassment	3	3	2	Non-unanimous
Q22. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have reported an incident of sexual harassment to a campus authority	3	3	2	Non-unanimous
Q39. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you worked on a local, state, or national political campaign	3	3	2	Non-unanimous
Q52. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in atmosphere for political differences	3	3	2	Non-unanimous
Q3. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How would you currently rate yourself in openness to having your own views challenged	1	1	2	Non-unanimous
Q4. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How would you currently rate yourself in the ability to discuss and negotiate controversial issues	1	1	2	Non-unanimous
Q13. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have studied or prepared for class with students from a racial/ethnic group other than your own	1	2	1	Non-unanimous
Q37. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you publicly communicated your opinion about a cause (e.g., blog, email, petition)	1	2	1	Non-unanimous

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DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q42. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in ongoing campus-organized discussions on racial/ethnic issues (e.g., intergroup dialogue)	1	2	1	Non-unanimous
Q43. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in LGBTQ Center activities	1	2	1	Non-unanimous
Q44. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in Racial/Ethnic or Cultural Center activities	1	2	1	Non-unanimous
Q45. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in Women's/Men's Center activities	1	2	1	Non-unanimous
Q62. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring a major how helpful was talking to an upperclass student in the major	1	2	1	Non-unanimous
Q38. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you demonstrated for a cause (e.g., boycott, rally, protest)	1	2	2	Non-unanimous
Q75. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - While at this college, I have spent time trying to learn more about my racial/ethnic identity group	1	2	3	Non-unanimous
Q24. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have heard insensitive or disparaging racial remarks from faculty	1	3	1	Non-unanimous

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DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q25. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have heard insensitive or disparaging racial remarks from staff	1	3	1	Non-unanimous
Q49. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in racial/ethnic diversity of the faculty	1	3	1	Non-unanimous
Q51. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in racial/ethnic diversity of the staff	1	3	1	Non-unanimous
Q56. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in administrative response to incidents of discrimination	1	3	1	Non-unanimous
Q57. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in administrative response to incidents of sexual assaults	1	3	1	Non-unanimous
Q58. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please rate your satisfaction with this college in respect for the expression of diverse beliefs	1	3	1	Non-unanimous
Q64. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - In thinking about declaring your major, how helpful was it to find a major that has a welcoming environment	1	3	3	Non-unanimous
Q76. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - While at this college, I have been in situations where I was the only person of my race/ethnic group	2	1	2	Non-unanimous

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DLE Question	Expert 1	Expert 2	Expert 3	Categorization
Q7. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you had meaningful and honest discussions about race/ethnic relations outside of class with students from a racial/ethnic group other than your own	2	2	1	Non-unanimous
Q11. Please indicate whether you think the following statements reflect a measure of the 'Social Systems', 'Academic System', or neither: - To what extent have you had intellectual discussions outside of class with students from a racial/ethnic group other than your own	2	2	1	Non-unanimous
Q46. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Since entering this college, how often have you participated in Religious/Spiritual clubs/groups	2	2	1	Non-unanimous
Q19. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - Please indicate how often at this college you have witnessed discrimination	3	3	3	Neither
Q67. Please indicate whether you think the following statements reflect a measure of the 'Social System', 'Academic System', or neither: - How often in the past year have you thought about your age	3	3	3	Neither