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# On-Campus Employment and Retention of First-Time, Full-Time College Students

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MA, University of Iowa, 1994

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Project Study Submitted in Partial Fulfillment

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## Abstract

Retention of 1st-year students is a challenge facing higher education and remains relevant for all stakeholders. Low persistence negatively affects individual students, institutions, and society as a whole. Nationally, a significant number of students have reported working while in college, particularly 1st-generation, low socioeconomic status (SES), and racial and ethnic minority students, those same groups who are at higher risk of experiencing low retention rates. Guided by Tinto's interactionalist model of student departure, binary logistic regression analyses of archival data were used in this retrospective prediction study. The focus was to determine how on-campus employment (OCE), 1st-generation, low-SES, and racial and ethnic minority student status were related to retention to the 2nd year for 1,582 first-time full-time students who entered a 4-year institution in the fall semesters of 2013 to 2015. Students who worked on campus during their 1st year of college were nearly twice as likely to be retained as those students who did not work on campus. Although living on campus was found to be a significant predictor of retention for students who did not work on campus during their 1st year in college, it was not a significant predictor of retention for students who did work on campus. Based on the findings, a white paper was developed, recommending that student employment practices on campus be modified such that 1st-year students, especially those who may not be living on campus, be made more aware of OCE opportunities. Creating a better understanding of the role OCE plays in student retention has positive social change implications for students, faculty members, staff members, and administrators needing to make informed decisions that increase student retention.

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# Dedication

This study is dedicated to my wife Melissa and our children, Hailey, Jack, and Emma. Each of you served as a catalyst for my doctoral journey and the motivation needed to finish this study.

This study is also dedicated to my parents, Elmer and Bernice Bluml, who did not have the opportunity to pursue formal education beyond the eighth grade. Without their unconditional love and support, achieving my EdD would not have been possible.

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# Section 1: The Problem

A challenge facing higher education is the retention of first-year students (Turner & Thompson, 2014). The number of students enrolled in postsecondary institutions increased by 14% between 2005 and 2015 (Snyder, de Brey, & Dillow, 2018). Much of the growth during this time was realized in full-time enrollment. In Fall 2016, the number of students enrolled in postsecondary institutions in the United States totaled 16.9 million, an increase of 3.7 million individuals since Fall 2000. Of these 16.9 million students, 10.4 million attended full time (McFarland et al., 2018). Postsecondary enrollment is projected to grow to 17.4 million students by the year 2027 (McFarland et al., 2018).

As the number of individuals beginning college has increased, the percentage of students leaving the institution in which they initially enrolled remains highest in the first year. Nearly 38% of students who leave their initial institution do so before the start of their second year (Tinto, 2012). Nationally, between 19% (McFarland et al., 2018) and 30% (ACT, 2017b) of first-year postsecondary students who enroll in public 4-year institutions fail to persist to the second year of college. Additionally, just over 44% of first-time, full-time (FTFT) students enrolled in public 4-year open, or less selective, institutions during Fall 2015 failed to return to the same institution for Fall 2016 (ACT, 2017b). Bearing in mind the number of students enrolled in public 4-year postsecondary institutions, the percentage of first-year students failing to persist to the second year represents lost opportunities on a variety of levels (Alarcon & Edwards, 2013; Barnett, 2011; Wolniak, Mayhew, & Engberg, 2012).

Increasing retention rates is important for individual students, institutions, and society as a whole (Tinto, 2012). College degree completion has become essential to individual economic success (Alarcon & Edwards, 2013; Hout, 2012; Oreopoulos & Petronijevic, 2013; Wells & Lynch, 2012; Wolniak et al., 2012) and a societal necessity (Barnett, 2011; Habley, Bloom, & Robbins, 2012; Hout, 2012). Individuals who complete their degree are employed at higher rates, with higher salaries and better benefits (Alarcon & Edwards, 2013; Kena et al., 2016). In general, college graduates save more money, work in better conditions, are healthier, and have longer life expectancies than people who only receive a high school diploma (Habley et al., 2012).

Low persistence rates also affect institutions negatively (Alarcon & Edwards, 2013; Turner & Thompson, 2014). Unrealized tuition, increased recruitment costs, institutional resources lost through investments in tuition discounts, and decreases in university rankings are examples of the adverse effects of low persistence rates on institutions (Alarcon & Edwards, 2013; Habley et al., 2012). Retaining first-year students is particularly critical for institutional success (Turner & Thompson, 2014).

Society, as a whole, benefits from an educated citizenry (Barnett, 2011). A sampling of the public benefits of higher education include increased proceeds from taxes, higher production levels, greater consumption, less dependence on government funded programs, lower rates of crime, more charitable giving, and higher levels of community engagement (Habley et al., 2012). Additionally, educated citizens are less likely to take part in behavior detrimental to the common good (Barnett, 2011). Finally, the country needs more college graduates to meet workforce trends (Habley et al., 2012).

It is projected that more than half of all new jobs will require some sort of postsecondary certificate or degree by 2020 (Carnevale, Smith, & Strohl, 2013).

Three populations likely to see lower than average retention rates include students who are first-generation (Chen & St. John, 2011; Tinto, 2012), low SES students (Chen & St. John, 2011; Tinto 2012), and racial and ethnic minority students (Engle & Tinto, 2008; Tinto, 2012; Watson, 2014). Efforts to increase retention rates are particularly important for these students (Kena et al., 2015).

First-generation students are individuals who are the first members of their families to attend college (Chen, 2005), meaning their parents never enrolled in postsecondary education (U.S. Department of Education, 2011). First-generation students face both cognitive and noncognitive challenges affecting student success at higher rates than non-first-generation students. Examples include job and family responsibilities, being academically underprepared, and feelings of depression (Stebleton & Soria, 2012, p. 7).

Socioeconomic status (SES) is commonly considered to be a combination of an individual's formal education, income and profession. Social class, for individuals or groups, is a common way for SES to be conceptualized (American Psychological Association, 2016). Students from low SES families are less likely to obtain higher levels of postsecondary education compared to students from families with higher SES. A smaller percentage of low SES students (14%) than middle (29%) or high (60%) SES students attain bachelor or higher degrees within 8 years of completing high school (Kena et al., 2015).

College completion varies among racial/ethnic groups as well. Black, Hispanic, American Indian/Alaska Native, and students of two or more races obtain any type of postsecondary degrees at lower levels than do White and Asian students (Ross et al., 2012).

Improving retention rates, particularly for first-year students, is a priority for McGee University (a pseudonym). McGee University is a midsized (approximately 6,500 students enrolled), 4-year, public institution located in the Midwest and is considered a Master's M (medium programs) institution with a primarily nonresidential setting according to the Carnegie Classification system (Center for Postsecondary Research, 2015). McGee University is also one of the nearly 30% of 4-year institutions that had open admissions policies during the 2014-2015 academic year (Kena et al., 2016). Institutions with liberal and open admissions policies have been observed to have large attrition rates between the first and second year (Westrick, Le, Robbins, Radunzel, & Schmidt, 2015).

According to results from the National Survey of Student Engagement (NSSE, 2018), approximately one in five first-year students reported working on campus, while one third reported working off campus. Of the students employed on campus, over 90% worked fewer than 20 hours per week, whereas approximately 34% of students working off campus reported working more than 20 hours each week (NSSE, 2018).

According to McGee University's most recent strategic plan, increasing on-campus employment (OCE) opportunities is a strategy being considered to increase retention. Nationally, a significant number of students have reported working while in

college (Kena et al., 2015). In 2010, White students and students of two or more races were employed at higher rates than undergraduate students from all other racial/ethnic groups. Asian students reported the lowest level of employment, but all racial/ethnic groups of students reported employment rates over 50% (Kena et al., 2015).

Reasons students give for working include changes in higher education funding, increased tuition costs, and lifestyle choices (Bozick, 2007; Chen & St. John, 2011; Hall, 2010; Lang, 2012). Previous research has revealed both significantly positive (Kulm & Cramer, 2006; Pike et al., 2008) and negative (Huie, Winsler, & Kitsantas, 2014; Pike et al., 2008) relationships between student employment and student success.

## The Local Problem

Increasing higher education attainment among state residents was listed as a goal in the 10-year strategic agenda approved by the State Board of Regents in September 2010. According to the vice president for student life at McGee University (personal communication, January 30, 2019), achieving quantifiable progress, specifically a 10% increase in retention and completion rates by the year 2020, was outlined by the Board as an aspirational objective for state institutions, including McGee University.

The necessity of improving retention rates as a measure of institutional effectiveness has been acknowledged at McGee University in the strategic plan, vision statement, and analyses of retention rates. Increasing retention is important to all students, including those at McGee, desiring to reap the future benefits that college graduates accrue. Additionally, low retention rates have a negative effect on McGee's

financial well-being due to lost revenue (vice president for student life, personal communication, January 30, 2019).

To reach the goal set forth by the State Board of Regents, a minimum of 72% of McGee FTFT students will need to be retained by 2020. Progress towards achieving this goal has been made. Students who comprised this cohort in Fall 2016 were retained at a rate of 73%, an increase from 72% in the previous year (U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics [NCES], 2019). Nonetheless, retention must be further explored at McGee in an effort to retain higher percentages of FTFT students as well as to assure retention gains are not lost.

## Rationale

The NCES and ACT both reported that high percentages of FTFT students who enroll at public 4-year institutions in the fall semester return to the same institution the following fall, as shown in Table 1 (ACT, 2017b; McFarland et al., 2018). In contrast to the relatively high persistence rates of all FTFT students enrolled at public 4-year institutions, the retention rate for FTFT students attending less selective 4-year public open institutions, like McGee University, was reported as being much lower (ACT, 2017b; McFarland et al., 2018). Generally, anyone who has earned a high school diploma or equivalent can enroll in open institutions (ACT, 2017b).

Locally, approximately two thirds of FTFT students who enroll at McGee University in the fall semester persist to the following fall (NCES, 2015). Thus, the first-year retention rate of students at McGee University is below the national average for students enrolled at public 4-year institutions. However, McGee University's rate of

retention for first-year students is above the national average for students enrolled in open 4-year public institutions.

Table 1

*Retention Rates for First Time, Full Time Students at Public 4-year Institutions and McGee University*

| Fall cohort | Institutions offering bachelor's and master's | Open institutions offering bachelor's & master's | McGee University |
|---|---|---|---|
| 2012 | 69.0[a] | 55.4[a] | 64.5 [e] |
| 2013 | 69.9[b] | 58.5[b] | 65.5[e] |
| 2014 | 70.4[c] | 56.7[c] | 68.4[e] |
| 2015 | 69.9[d] | 55.8[d] | 71.9[e] |

*Note.*: [a](ACT, 2014); [b](ACT, 2015); [c](ACT, 2016); [d](ACT, 2017b); [e] director of institutional research (personal communcation, January 29, 2019)

Student employment, specifically OCE, is a factor that may influence retention. Huie et al. (2014) noted that students who work on campus might have easier access to academic support services than students who work off campus. Pike et al. (2008) found a positive correlation between working on campus less than 20 hours per week and student success; similarly, Watson (2014) suggested that there are aspects of OCE that positively influence student retention.

Considering McGee University's focus on retention as a measure of institutional effectiveness, the aspirational goal of increasing retention significantly by the year 2020 set by the State Board of Regents, and the desire to create interventions to reduce the barriers that otherwise capable students face, the retention of FTFT students at McGee University was a problem worth studying.

The purpose of this study was to determine if OCE and student characteristics of first-generation, low SES, and racial and ethnic minority status relate to retention of FTFT students at McGee University. Additional student characteristics of gender, living on campus, and academic preparedness were included in the study as secondary variables of interest to determine possible interactions with the primary variables

## Definition of Terms

*First-generation student:* Postsecondary student whose parents never enrolled in college (Ross et al., 2012).

*Full-time enrollment:* College student enrolled with a number of credits equivalent to at least 75% of a normal course load. Full-time enrollment at the undergraduate level is considered to be 12 credit hours or more per academic term (McFarland et al., 2018).

*First-time student:* An undergraduate student attending any postsecondary institution for the first time. Students enrolling in the fall term who earned college credits in high school and/or the prior summer term are included (Snyder et al., 2018).

*Retention:* The outcome of students enrolled in a fall term returning to the same institution the following fall (McFarland et al., 2018).

*Socioeconomic status (SES):* A combined measure of income, education, and social position. SES is categorized into ranges labeled as high, middle, and low (Kena et al., 2016).

## Significance of the Study

Approximately one in five students who were not retained from McGee University's Fall 2014 first-time freshman cohort were not eligible to return due to being academically suspended. Students in this cohort whose cumulative GPA fell below 2.0 in the fall semester, and remained below a 2.0 following the spring semester, were academically suspended for at least 1 semester. Nearly half (49%) of the students in the Fall 2014 first-time freshman cohort who left the institution prior to Fall 2015 were in good standing academically (director of institutional research, personal communication, January 29, 2019). In-state tution for 30 credit hours at McGee University for the 2015-2016 academic year was $6,350 (U.S. Department of Education, Institute of Education Sciences, NCES, 2019). Therefore, it could be argued that the 133 students from the Fall 2014 cohort who were in good academic standing academically but not retained represent lost revenue potential of up to $1 million annually. The cost of attrition data is pertinent to the present study because the sample for this study was comprised of indivuduals who were FTFT students at McGee University in Fall 2013, Fall 2014, and Fall 2015.

Gaining a better understanding of persistence and retention by examining factors related to students returning from one term to the next can help administrators identify areas to improve institutional effectiveness (Watson, 2014). Higher education leaders, particularly those who work in less-selective institutions, must focus more energy and resources on increasing retention levels (Chen & St. John, 2011).

Colleges and universities have the responsibility to ensure all students, including working students, have the opportunity to thrive in the campus environment; however,

many undergraduate students struggle to satisfy the numerous burdens, including work, placed upon them (Perna, 2010). Findings that students who are employed on campus perform better academically than students who work off campus might suggest that postsecondary institutions may be well-served by creating additional OCE opportunities (Huie et al., 2014). Reframing student employment as a method of improving student success and making sure that institutional policies, practices, and structures recognize the role student employment plays in the undergraduate experience are important steps in the right direction (Perna, 2010).

Increasing student retention is identified as a key initiative in McGee University's 2018 strategic plan. This study supports professional education practice at McGee University by providing a better understanding of the role OCE plays in the retention of FTFT students. A study of OCE as it relates to the retention of FTFT students was not conducted previously at McGee University.

Students who work on campus, faculty members, and staff members who supervise these students, as well as administrators making policy and resource allocation decisions, can benefit from this study. Gaining a better understanding of the role OCE plays in the retention of students at McGee University can create the opportunity for students, faculty members, staff members, and administrators to make informed decisions relating to policy development and implementation designed to increase student success, persistence, and ultimately degree attainment. Based upon the results of this study, a position paper with policy recommendations, which will be shared with stakeholders at a variety of levels within the institution, was created (Appendix A).

## Research Question and Hypotheses

The purpose of the study was to determine if OCE and student characteristics of first-generation, low SES, and racial and ethnic minority status relate to retention of FTFT students at McGee University. The student characteristics of gender, living on campus, and academic preparedness were also included in the study as secondary variables of interest in an attempt to identify potential connections with the primary variables of interest.

Research Question: To what extent is retention to the second year predicted by each of the following student characteristics: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness?

$H_0$: None of the following student characteristics is a significant predictor of retention to the second year: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness.

$H_1$: At least one of the following student characteristics is a significant predictor of retention to the second year: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness.

## Review of Literature

One of the most extensively studied topics in postsecondary education is student retention. Retention research has increased in quantity and emphasis over the past several decades, resulting in a plethora of books, journal articles, and conferences dedicated to the topic (Tinto, 2012). Considering nearly half of all college students will not complete their degree within 6 years, there is still plenty of work to be done (Tinto, 2012).

The resources used to conduct the search for literature included the Internet, Google Scholar, and the Walden University library databases. Searches were conducted around the themes of retention and student employment using keywords and phrases such as *college retention, university retention, postsecondary retention, college persistence, university persistence, postsecondary persistence, students at risk, student attrition, student employment, college student employment,* and *on-campus student employment.*

**Theoretical Foundation**

This study was built upon Tinto's (1993) interactionalist theory of student departure, which has been used broadly in studies of postsecondary retention. This theory is based upon the idea that a student's ability to successfully transition to the institution, by engaging socially as well as intellectually, is required if the student is going to persist at the institution. An important aspect of Tinto's theory is that student departure is as much a reflection of the institution as it is the individual student.

Early researchers typically viewed student retention through the lens of psychology (Tinto, 2006b). Students who failed to persist were thought to be less capable or less motivated, possibly both, and blame was placed on the individual, not the institution. Spady (1970, 1971) is credited with originating the idea of shifting the retention burden from students to institutions as the relationship between individuals and society started to become better understood. Spady (1970) hypothesized that the level of social and academic integration with the institution directly influenced the transition and persistence of first-year students.

Tinto (1975) was the initial researcher to outline a thorough longitudinal model that associated the academic and social environments of institutions with student persistence over time. The concept of integration and interaction among students and others affiliated with the institution, along with the phases of transition through the first year of college, was fundamental to the model (Tinto, 2006b). Tinto's interactionalist model of student departure was based on Durkheim's theory of suicide. When people integrate into society adequately, either by sharing values with a group or acquiring support through friendship, they are less likely to commit suicide (Tinto, 1975). While Tinto did not advocate making direct analogies between suicide and failure to persist in college, he did see both as examples of voluntary withdrawal from an identified population. Tinto believed that an absence of integration into, or commitment to, the college social system would lead to an increased chance of dropping out.

Tinto (1993) emphasized that postenrollment experiences matter more than preenrollment intentions and achievements. Two main pillars of Tinto's theory are that (a) institutions play an important role in student persistence and achievement, and (b) the formal and informal interactions in social and academic environments significantly influence a student's decision to stay or leave.

Using the work of anthropologist Arnold Van Gennep, Tinto (1988) identified three stages of passage in the career of a college student: separation, transition, and incorporation. Students disassociate themselves from membership in communities with which they identified prior to college during the separation stage. While admitting this physical and social separation can be stressful, Tinto (1993) clarified that individuals who

fail to detach from their past, or effectively cope with homesickness, will fail to persist at higher rates than those who successfully navigate the separation stage.

The transition stage marks the period of time between former associations and aspirational relations with present communities (Tinto, 1988). The transition to college may be increasingly difficult for students from backgrounds significantly different from that of higher education (Tinto, 1993). Students from underrepresented groups, nontraditional students, and students who come from a lower socioeconomic setting may find the transition to college more difficult (Tinto, 1993). Students from rural areas and first-generation students may also struggle during the transition stage (Tinto, 1993).

The third stage, incorporation, takes place when the student passes through the stages of separation and transition and becomes integrated into the community of the institution (Tinto, 1988). Tinto offered that a student who could successfully navigate all three of these stages was likely to persist (Tinto, 1988).

While some students will struggle more than others, all students will experience some degree of difficulty transitioning to college (Tinto, 1993). Through a synthesis of extensive retention research, Tinto (1993) identified goals, commitments, institutional experiences, integration, and high school outcomes as factors that influence retention for the individual student.

Tinto (2006a) also identified five institutional strategies for increasing persistence, particularly during the first year: (a) Institutions should strive to make shared learning the standard, not the exception; (b) academic and social support should be linked to, not isolated from, the curriculum and student efforts to gain mastery of the

curriculum; (c) student learning must be assessed and feedback provided frequently; (d) considering that the majority of higher education faculty are not trained to teach, institutions must take faculty development seriously; and (e) lastly, faculty innovation in curriculum and pedagogy should be incentivized.

Although Tinto's (1975, 1993) student integration model has been widely used in postsecondary retention research, it is not free of criticism. One such criticism is that the model only considers the collegiate environment and neglects the outside world (Melguizo, 2011). Another critique of the model is that, due to its focus on the traditional student, it may not be the strongest model available, given the diversity of students now engaged in the postsecondary environment (Melguizo, 2011; Tierney, 1999). Tierney (1999) identified Tinto's theory as flawed because Tierney felt the theory encourages students to participate in a type of "cultural suicide" (p. 82) by suggesting historically underrepresented students must "assimilate into the cultural mainstream and abandon their ethnic identities to succeed on predominantly White campuses" (p. 80) rather than affirm who they are. Tinto's framework was also faulted for not considering a historical perspective regarding ethnic oppression and racial discrimination (Tierney, 1999).

Tinto (1982) acknowledged some shortcomings of his theory. Identified weaknesses that pertain to the first-year higher education environment included not giving enough emphasis to the role finances play in postsecondary persistence, not differentiating between behaviors that lead to transferring to different institutions versus behaviors that result in permanent withdrawal, and failing to emphasize signficant

differences in the opportunity for academic preparedness that influence the experiences of students of different gender, race/ethncicity, and social status backgrounds.

Tinto (2006b) acknowledged that the study and practice of retention has changed exponentially since the origination of the student integration model. In its early stages, the model was not as applicable to the experience of students in nontraditional environments or with differences such as gender, race, ethnicity, income, and sexual orientation (Tinto, 2006b). Understanding of students with differing backgrounds has increased along with appreciation for the variety of cultural, economic, social, and institutional forces that influence student retention (Tinto, 2012).

Tinto (1975, 1993, 2012) reasoned that misalignment among student and institutional interests, needs, and wants can factor into students' decisions to leave an institution. In more recent versions of his theory, Tinto asserted that individuals who do not fit well within the whole institution may still become integrated with a group of friends, specific members of the faculty, a student organization, and/or other supportive environments. These types of individual connections may make up for an absence of fit with the overall institutional environment (Bowman & Denson, 2014). Working on campus, for example, allows students to gain the financial support they need while also being engaged with others on campus (Tinto, 2012).

The most perilous year in the retention dilemma is the inaugural year (Siegel, 2011). The evidence remains clear that social and academic engagement matters, especially during the critical first year of college (Tinto, 2012), which made Tinto's theory applicable for exploring whether OCE is related to student retention at McGee

University. Tinto's theory of student integration was used in this study to identify variables of interest in examining the role the institiuon plays in student retention. It was also helpful in interpreting the results of this study, which may provide insight into formal and informal interactions that influence retention.

**Review of the Broader Problem**

Regardless of dramatic economic changes and significant investments in higher education over the last several decades, the percentage of Americans with a postsecondary degree or credential has increased only slightly compared to levels of completion in 1970 (U.S. Department of Education, 2011). Nearly three quarters of young adults enroll in some form of postsecondary education, with fewer than half earning any credential within 6 years of their initial enrollment (U.S. Department of Education, 2011).

When students depart from college early, they fail to capitalize on the opportunity to learn and the benefits that go along with increased knowledge and skills (Siegel, 2011). As the volume of financial resources available for higher education has diminished, institutions and states have focused on increasing retention and graduation rates at postsecondary institutions (Tinto, 2012). The U.S. Department of Education (2011) established a national goal to increase the number of Americans with some form of postsecondary credential by 50% nationwide by the year 2020.

The 6-year graduation rate for all students enrolled in 4-year institutions, who began pursuing a bachelor's degree in Fall 2010, was 60% (McFarland et al., 2018). The graduation rate varied according to the degree of selectivity employed by institutions via

their admissions standards. Six-year graduation rates were highest at the most selective institutions and lowest at open institutions (McFarland et al., 2018). In 2016, approximately two thirds of students attending institutions with open admissions policies failed to graduate within 6 years of enrollment (McFarland et al., 2018).

In a qualitative study exploring the opinions and perceptions of currently and formerly enrolled millennial students, Turner and Thompson (2014) reported that the first year of college is particularly critical to persistence and retention in higher education. The first year of college is the base upon which the comprehensive college experience is constructed (Siegel, 2011). Most likely, the beliefs, observations, and behaviors students develop in the first year will influence the entirety of their college experience. Siegel (2011) asserted, “It is critical that institutions take the first year seriously and channel significant resources to curricular and cocurricular structures and academic support services that directly impact first-year students” (p. 11). Low rates of retention are concerning for individuals unable to meet career and educational objectives, institutions interested in their own success as well as the success of their students, and society as a whole due to the ways an educated citizenry contributes to the social good (Alarcon & Edwards, 2013; Barnett, 2011).

**Retention and Individuals**

Postsecondary degree attainment is a vital step in gaining beneficial long-term occupational and economic outcomes (Hout, 2012; Kena et al., 2016), family stability (Hout, 2012), and increased social mobility (Hout, 2012; Wells & Lynch, 2012; Wolniak et al., 2012). Failing to earn a degree increases the chances for unemployment and lower

earnings (Kena et al., 2015). In general, college graduates also save more money, work in better conditions, are healthier, and have longer life expectancies than people who only receive a high school diploma (Habley et al., 2012).

There are both earnings and employment gaps between those who have completed postsecondary training and those who have not (U.S. Department of Education, 2011). In 2014, annual earnings were approximately 40% higher for young adults who had attained a bachelor's degree or higher than they were for individuals who only completed high school (Kena et al., 2015). Lifetime earnings for wage earners with college degrees are estimated to be significantly higher than those without a college degree (Alarcon & Edwards, 2013; Oreopoulos & Petronijevic, 2013). Abel and Deitz (2014) stated, "Despite entering the labor force at a later age, workers with a bachelor's degree on average earn well over $1 million more than high school graduates during their working lives" (p. 4). Additionally, those attaining postsecondary degrees are employed at significantly higher rates than those who only finish high school (Oreopoulos & Petronijevic, 2013). In 2017, the unemployment rate for people age 25 to 34 who had a bachelor's or higher degree was 3% compared to 7% for those earning their highest academic credential in high school (McFarland et al., 2018).

These gaps are expected to endure in the future and there are strong indications that individuals who possess higher skill attainment will be needed to meet the demands of the job market (U.S. Department of Education, 2011). In turn, it is expected that individuals earning postsecondary credentials will continue being employed at higher

rates and earning more money than those who have not secured a college degree (U.S. Department of Education, 2011).

There are also health benefits of higher educational attainment (Hout, 2012; Krueger, Tran, Hummer, & Chang, 2015). The difference in mortality rates between adults in the United States with low and high levels of education is analogous to deaths that can be ascribed to being a current smoker instead of a former smoker (Krueger et al., 2015). Reasons why people with higher levels of formal education live longer than individuals with lower levels of education include "higher income and social status, enhanced cognitive development, superior adherence to medical treatments, healthier behaviors, and improved social connections and psychological wellbeing" (Krueger et al., 2015, p. 8). Thus, policies that increase education could also increase the lifespans of greater numbers of people (Hout, 2012; Krueger et al., 2015).

**Retention and Society**

The value of increasing retention accrues not only to individuals and employers (U.S. Department of Education, 2011), but to society as well (Hout, 2012; Weddle-West & Bingham, 2010). College educated citizens pay more taxes, rely less on public assistance, paticipate in civic engagement, give to charity, and reduce health care costs (Ma, Pender, & Welch, 2016).

People who complete 4-year degrees earn significantly more income than those who do not (Abel & Deitz, 2014; Hout, 2012, Oreopoulos & Petronijevic, 2013; Weddle-West & Bingham, 2010). Higher earnings lead to increased tax revenues benefitting local, state, and federal governments (U.S. Department of Education, 2011).

College completion affects the quality of life for the entire society because society relies on tax revenue to support the infrastructure of the country (Weddle-West & Bingham, 2010). On average, a 4-year college graduate is responsible for generating $5,900 more in annual tax revenue than someone with only a high school diploma. Over a lifetime, this difference generally represents an additional $177,000 in tax revenue paid by a 4-year college graduate compared to a citizen who obtains only a high school diploma (U.S. Department of Education, 2011).

Level of income has an influence on crime rates, educational attainment, innovation, creativity, health and well-being, and other factors (Weddle-West & Bingham, 2010). Citizens who earn degrees benefit society through higher levels of productivity, incomes that lead to amplified consumption, stable family lives that correspond with less need for government support, lower occurrences of lawbreaking, increased giving to charities, and contributions made through civic engagement and community service (Habley et al., 2012; Hout, 2012). Educated citizens are also less likely to engage in behavior that is considered harmful to the communities in which they live (Barnett, 2011).

The country needs more college graduates to meet workforce trends (Habley et al., 2012). In general economic terms, decreases in the percentage of young people with postsecondary degrees represents a threat to the U.S. economy (Schneider, 2010). Increasing the number of college graduates should be a fundamental goal in workforce and economic development plans (U.S. Department of Education, 2011).

The amount of state and federal assistance awarded to students who do not persist also represents extensive investment losses in higher education (O'Keeffe, 2013). In the most recent study addressing the financial cost of college attrition on taxpayers, Schenier (2010) indicated that in the 2003 academic year, approximately $510 million in state and federal grants were awarded to students who did not return for a second year at the same 4-year college. The 5-year total cost of first-year attrition for the years 2003-2008 was $9.1 billion. These losses represent assistance given to institutions via state subsidies as well as state and federal grants awarded directly to individual students (Schneider, 2010).

**Retention and Institutions**

Student attrition affects the financial stability of universities (Habley et al., 2012; O'Keeffe, 2013). Unrealized tuition, increased recruitment costs, and institutional resources lost through investments in tuition discounts are all examples of the adverse effects of low persistence rates on institutions (Habley et al., 2012). In the most recent comprehensive study addressing the financial cost of college attrition on institutions, Raisman (2013) determined that the 1,669 institutions included in the study, lost $16.5 billion collectively in lost revenue for the 2010 to 2011 academic years due to students leaving the institutions before finishing their programs of study.

Low retention rates translate into the need for universities to replace students who leave, which requires the use of resources that could be used somewhere else (Alarcon & Edwards, 2013). Retention rates also factor into university rankings (Alarcon & Edwards, 2013) and accreditation (Higher Learning Commission, 2016) which affect the reputation of the institution.

## Student Characteristics Affecting Retention

**Gender.** Greater percentages of females enroll in postsecondary education institutions than males. In 2016, 44% of 18- to 24-year-old females were enrolled in higher education institutions (McFarland et al., 2018). Of males aged 18 to 24, 39% were enrolled. This pattern was observed for Whites, Blacks, Hispanics, American Indians, and persons of two or more races.

In addition to comprising a smaller percentage of the total number of higher education students, males persist and are retained at lower levels than their female counterparts. Overall, a lower percentage of male (57%) than female (63%) students who began their postsecondary education during Fall 2010 had attained a bachelor's degree by June, 2016 (McFarland et al., 2018).

**Living on campus.** It is generally accepted that students living on campus have advantages over students who do not live on campus (Astin, 1993; Pascarella & Terenzini, 2005; Tinto, 1993). Students who live on campus have higher persistence and graduations rates (Tinto, 1993) and are more satisfied with their college experience (Astin, 1993). However, many of the studies that support these findings have been conducted on campuses with high numbers of residential students (Gianoutsos & Rosser, 2014).

Living and working off campus restricts the amount of time available for low-income, first-generation students to become engaged on campus (Engle & Tinto, 2008). Alfano and Eduljee (2013) reported that a much lower percentage of commuter students felt as if they were a part of the campus community compared to students residing on

campus. Both groups reported a desire to become more engaged in school-sponsored activities; however two thirds of commuter students reported not being engaged in any such activities (Alfano & Eduljee, 2013). This is important because students who perceive themselves as not connecting with the institution, or worse, feeling at odds with institutional social and academic culture, may withdraw due to a feeling that continuing would not be in their best interests (Tinto, 1993).

However, in a study of 2,639 18- to 24-year old first-time first-year residential and commuter students at a large, public, research, commuter university, Gianoutsos and Rosser (2014) found there were no differences between residential and commuter students on measures such as GPA, retention, and academic standing. Because student enrollments continue to evolve nationally, and institutions, especially those with large numbers of commuter students, continue to enroll increasingly diversified populations, there is a need for additional research that examines the ever-changing multifaceted characteristics of students (Gianoutsos & Rosser, 2014).

**Academic preparedness.** Differences in ability (Tinto, 2012) and grades (Pascarella & Terenzini, 2005) significantly affect student retention and degree completion. It is widely accepted that high school GPAs and standardized test scores tend to be strong predictors of college student success (Gianoutsos & Rosser, 2014). However, high school grades may be the most significant predictor of collegiate academic success (Gianoutsos & Rosser, 2014).

Examination of data from 192 4-year postsecondary institutions that use ACT scores in their admissions process suggested that high school GPA is more useful in

predicting student success than admission test scores in situations involving low selectivity in admissions, such as open access institutions. ACT composite scores are better predictors of student success at more selective schools (Sawyer, 2013).

In a longitudinal study of 189,612 students representing 50 institutions, ACT composite scores and high school GPAs were found to be highly correlated with first-year academic performance (Westrick et al., 2015). First-year academic performance surfaced as the best-predictor of second- and third-year retention, strongly influencing persistence. In an investigation of the relationship between cumulative high school GPA, education, and earnings, French, Homer, Popovici, and Robins (2015) presented high school GPA as a significant positive predictor of educational attainment and earnings in adulthood. Quantitative analysis of data from the National Logitudinal Survey of Adolescent Health resulted in an estimation that a one grade point increase in high school GPA doubles the chances of completing college. This is true for both men and women (French et al., 2015).

**Characteristics of Students at Risk**

Although the number of students enrolling in postsecondary institutions has increased over the last several decades, students completing various levels of degree attainment differ on a number of characteristics (Kena et al., 2015). Significant gaps remain in terms of access to and success in higher education in the United States, particularly for low SES, racial and ethnic minority, and first-generation students (Engle & Tinto, 2008).

**Low SES.** Low SES is a key factor that places students at risk of noncompletion (O'Keeffe, 2013). In 2013, 80% of high school graduates from families with high levels of financial resources enrolled in college, compared to only 49% of students from families with low levels of financial resources (Kena et al., 2015). There is a gap in college completion rates between high- and low-income students, especially at 4-year institutions (Kena et al., 2015; Tinto, 2012). Only 14% of low SES students attained a bachelor's degree or higher within 8 years of graduating from high school (Kena et al., 2015). Tinto (2012) noted that when analyzing data regarding institutional graduation rates at 4-year institutions based on student ability, there were "too few first-generation and low SES students of middle-high or high ability to be included in the data" (p. 131). This clearly illustrates the association between social status and precollege academic preparedness (Tinto, 2012).

In a study of 6,383 students from 422 institutions who began their postsecondary education in 1996, Chen and St. John (2011) found students at different SES levels demonstrated significant differences in persistence rates at the institutions in which students first enrolled. Students with high-SES had a 55% better chance of persisting than did their low-SES peers (Chen & St. John, 2011). The 4-year college completion rates of low-SES students trail behind students with greater amounts of financial resoures because many low-SES students enter college academically underprepared and fail to find the support they need to succeed (Engstrom & Tinto, 2008).

Bozick (2007) studied 10,614 individuals who were first-year students during the 1995 to 1996 academic year to investigate the effect of economic resources on for-pay

work experiences and living arrangements of first-year college students. Bozick reported that students from low-income families were more likely to work and to live at home as a method of reducing school-related expenses during the first year of college. While these cost-saving strategies were intended to help students find success, in some cases, these decisions impeded the students' chances of continuing into the second year. For example, students who worked more than 20 hours per week and lived at home ran a greater risk of leaving school in the first year than did students who lived on campus and worked fewer than 20 hours per week (Bozick, 2007).

The fact that barriers to college enrollment have been reduced over the years has not necessarily translated into higher completion rates (Tinto, 2012). Data from the NCES indicate that while an estimated 60% of high-income students who begin postsecondary education will earn their 4-year degrees within 8 years of completing high school, only about 14% of low-income students will do so (Kena et al., 2015).

Low-income students encounter a variety of challenges related to finances as well as a number of other commitments competing for their time and energy (Pierce, 2016). Access to higher education without appropriate support mehcanisms in place will not close the gap in 4-year college completion rates between low-income and high income students (Engstrom & Tinto, 2008). To close the gap, institutions must include low-income students as fully-valued members of the learning community by providing them with support that turns access into success (Engstrom & Tinto, 2008; Tinto, 2012).

**First-generation.** Colleges and universities in the United States have admitted increasing quantities of first-generation students (Stephens, Fryberg, Markus, Johnson, &

Covarrubias, 2012). Compared to non-first-generation students, first-generation students tend to struggle academically. First-generation students receive Pell grants, enroll in fewer numbers of hours, have lower GPAs, work more hours for pay, and persist at lower rates than non-first-generation students (Savoca, 2016).

Similar to the gap found between high- and low-income students, there is a gap in college completion rates between first-generation and non-first-generation students (Tinto, 2012; Wolniak et al., 2012). First-generation students have been found to have significantly lower family incomes and different sources of college funding than students from non-first-generation families (Mehta, Newbold, & O'Rourke, 2011). First-generation college students do not succeed at the same rates as non-first-generation college students. This is true even after controlling for income and ability (Tinto, 2012; Wolniak et al., 2012).

While studying 58,000 students from six research universities, Stebleton and Soria (2012) used nonparametric bootstrapping to analyze differences between first-generation and non-first-generation students. The findings indicate that first-generation students must navigate cognitive and noncognitive factors that negatively affect their academic success more often than non-first-generation students (Stebleton & Soria, 2012).

First-generation students may encounter a cultural mismatch between the backgrounds they come from and the norms, ideas, and practices they encounter within the colleges and universities they attend (Stephens et al., 2012). Due to family and work demands, first-generation students (Kuh, 2008), along with low-income students (Engle

& Tinto, 2008), are less likely than their non-first-generation peers to be engaged in practices that have been shown to be advantageous for a wide variety of college students. Students who come from families with members who have found success in college tend to study in groups, interact with faculty members and peers, participate in extracurricular activities, and use support services at higher levels than first-generation students (Engle & Tinto, 2008).

In a study employing data from the Educational Longitudinal Study of 2002 to investigate aspects of SES that are most influential in delaying college entry, Wells and Lynch (2012) used a series of logistic regression analyses to identify factors that may result in first-generation students experiencing disadvantages in their transition to college. Considering that first-generation students delay college enrollment more often than non-first-generation students, they are less likely to be surrounded by their peers. Not being surrounded by peers may be an additional barrier because of the effect peers have on a student's setting (Wells & Lynch, 2012). Astin (1993) observed interaction with peer groups to be the most influential of all involvement areas leading to college success.

Limited amounts of parental financial support may affect the persistence of first-generation students (Sparkman, Maulding, & Roberts, 2012). Low levels of parental financial support result in students working to support their educational endeavors. In addition to financial resources, families have the potential to provide a variety of other forms of support. The lack of this type of holistic support affects the ability of students to persist in college.

When parents and family without college degrees form the primary support structure of students in college, there is a lack of experience surrounding the student that may lead to insufficient levels of emotional support or a lack of understanding of the commitment necessary for a student to persist in college. (Sparkman et al., 2012). Students facing these additional challenges may choose to cease their formal education or take lighter academic loads as they search for the resources they need to continue (Sparkman et al., 2012).

In their study of 452 students conducted at a mid-sized southwestern state university, Mehta et al. (2011) reported first-generation students were more likely to work more than 20 hours per week than non-first-generation students. The researchers also found first-generation students to be less involved, have less social and financial support, report lower levels of social and academic satisfaction, and achieve lower GPAs. These students also did not show a preference for active coping strategies (Mehta et al., 2011). First-generation students experienced significantly higher levels of stress related to finances and also were significantly more concerned that they would not have enough time available to be successful (Mehta et al., 2011).

**Racial and ethnic minority status.** Students from racial and ethnic minority backgrounds have been identified as being at risk of noncompletion (O'Keeffe, 2013). There is an increasingly urgent need to enhance the recruitment, persistence, and graduation rates of racial and ethnic minority students. In 2009, the Obama administration engaged the American public about reversing the decline in educational

attainment by proposing that by 2020, the United States should lead the world in the number of college educated individuals (Weddle-West & Bingham, 2010).

Over the course of the last 40 years the percentage of American college students from traditionally underrepresented groups has increased. In 1976, students who were Hispanic, Asian/Pacific Islander, Black, and American Indian/Alaska Native combined to make up only 16% of the students enrolled in degree-granting postsecondary institutions during the fall semester (Snyder et al., 2018). By 2015, the percentage of these racial and ethnic minority students had increased to nearly 40% (Table 2).

Table 2

*Percentage of Students Enrolled Nationally Based on Race/Ethnicity*

| Race/ethnicity | 1976 | 2015 |
|---|---|---|
| Asian/Pacific Islander | 2% | 7% |
| White | 84% | 58% |
| Nonresident alien | - | 5% |
| American Indian/Alaska Native | <1% | <1% |
| Black | 10% | 14% |
| Hispanic | 4% | 17% |

*Note.* (Snyder, de Brey, & Dillow, 2018)

Even though the percentage of racial and ethnic minority students has increased, there are still disproportionately lower numbers of students of color who earn their degrees (Table 3) at all levels of the American educational system, including higher education (Weddle-West & Bingham, 2010). College completion rates are highest for Asians and Whites, and lowest among Blacks, Hispanics, and American Indians/Alaska

Natives (Ross et al., 2012). These same group patterns were observed in the attainment of any type of postsecondary degree (i.e., certificate, associate, or bachelor's).

Table 3

*National Completion Rates Based on Race/Ethnicity*

| Race/ethnicity | Percentage of population aged 25-29 who have earned a bachelor's degree [a] | 6-year graduation rates for FTFT bachelor's degree seeking students [b] |
|---|---|---|
| Asian/Pacific Islander | 63% | 68% |
| Whites | 43% | 61% |
| Two or more races | 30% | 52% |
| American Indian/Alaska Native | 15% | 37% |
| Blacks | 21% | 38% |
| Hispanics | 16% | 49% |

*Note.* [a](McFarland et al., 2018), [b](Snyder, de Brey & Dillow, 2018).

Like completion rates, enrollment rates differ across racial and ethnic groups (Table 4). According to Ross et al. (2012), the racial and ethnic group with the highest percentage of 18- to 24-year olds enrolled as college or graduate school students in 2010 was Asians followed by Whites and persons of two or more races. Lower percentages of Native Hawaiians/Pacific Islanders, Blacks, Hispanics, American Indians, and Alaska Natives enrolled in postsecondary educational institutions (Ross et al., 2012).

Table 4

*Enrollment Rates of Students Aged 18 to 24 Based on Race/Ethnicity*

| Race/ethnicity | Percentage |
|---|---|
| Asian | 58% |
| White | 42% |
| Two or more races | 42% |
| Native Hawaiians/Pacific Islander | 21% |
| Black | 36% |
| Hispanic | 39% |
| American Indian/Alaska Native | 19% |

*Note*. (McFarland et al., 2018)

College students begin their higher education experiences at all different levels of academic preparedness. Racial and ethnic minority students tend to have college entrance credentials that lag behind those of White students (Weddle-West & Bingham, 2010). Less academically prepared students fail to persist more often than better-prepared students.

All three of these at-risk populations, students from low SES backgrounds (Pike, Kuh, & Massa-McKinley, 2008), racial and ethnic minority students (Pascarella & Terenzini, 2005), and first-generation students (Bozick, 2007; Tinto, 2012) have been shown to have higher attrition rates than their peers. Leaders at all levels must work to enhance the recruitment, retention, and completion rates of at-risk students via comprehensive holistic strategies (Weddle-West & Bingham, 2010). To confront the demanding work of influencing institutional practice so students at risk benefit, leaders

must make every effort to better conceptualize ways to effectively integrate all types of students into the higher education environment (Tinto, 2006b).

**Engagement and Retention**

What students do while attending college has a significant effect on whether they persist or not. Astin (1993), via his involvement theory, argued that increases in cocurricular engagement and peer interaction would support student integration into the institutional culture, ultimately positively influencing persistence. Students who engage by putting time and effort into their studies and other activities increase their chances of achieving success (Kuh, Kinzie, Schuh, & Whitt, 2010). Institutions that allocate resources and structure themselves in ways that encourage engagement in learning opportunities and taking advantage of services foster student success. Students failing to connect to the institution in meaningful ways risk leaving school prematurely, before the full benefits of their postsecondary experience can be realized. Conversely, individuals who successfully connect with and feel supported by the institution, understand institutional culture, and feel engaged in their curricular and cocurricular pursuits are more likely to persist (Siegel, 2011).

Feeling connected to the institution and adapting to campus cultural norms is critical for college success and retention, particularly for at-risk students (O'Keeffe, 2013). However, cultivating these meaningful relationships can be difficult, especially for students who are from backgrounds that result in them being less familiar with the higher education environment (O'Keeffe, 2013). For Tinto (1993), simply connecting with others was not enough. Emphasis was placed on quality interactions that made students

feel welcomed, not marginalized or threatened. Relationships developed between students and key members of the university community can ensure that students do not leave the institution prior to completion.

Multiple studies have indicated social and academic integration and involvement are keys to student persistence (Barnett, 2011; Chen & St. John, 2011; Tinto, 1993; Wolniak et al., 2012). Social integration results from personal connections and day-to-day interactions while intellectual integration comes from embracing a set of common shared academic values (Melguizo, 2011). According to Pike et al. (2008), "Helping first-year students become engaged in activities that encourage active and collaborative learning and foster positive interactions between students and faculty members can be very beneficial to students' academic success" (p. 578). Therefore, practitioners should pay more attention to students with poor social or academic integration in an attempt to increase retention (Chen & St. John, 2011).

To better understand the relationship between student learning and college persistence, Wolniak et al. (2012) studied 2,439 full-time undergraduates who attended one of 16 institutions participating in the Wabash National Study of Liberal Arts Education. Wolniak et al. (2012) found that positive peer interactions and spending time participating in cocurricular activities increased the likelihood of persistence, especially in the first year of college. Students develop via their interface with educationally purposeful undertakings; institutions have the capacity to create and design these activities in ways that attract student interest (Watson, 2014). Spady (1970) considered an

environment to be conducive to successful integration when institutions develop programs, policies, and opportunities that balance academic and social experiences.

Of students who had recently graduated from high school and began their postsecondary education in 2003 to 2004, only 35% reported that they sometimes or often participated in school clubs and 28% reported having informal contact with faculty members during their first year of college (Ross et al., 2012). Among this same group of students, "lower percentages of Hispanics (28%) and Blacks (31%) than Whites (36%), students of two or more races (40%), and Asians (46%) reported that they had participated in school clubs during their first year of college" (Ross et al., 2012, p. 196). Hispanics also reported meeting with academic advisors during their first year of college at lower rates than other racial/ethnic groups. Elaborating on Tinto's interactionalist theory of student departure in a study of 333 community college students, Barnett (2011) stated that validation from faculty members was a strong predictor of a feeling of academic integration, which influences a student's intent to persist.

Analysis of data from the National Survey of Student Engagement ($n$ = 9,371) revealed that students from historically underrepresented groups did not feel as connected to the institution and their peers as did students from majority groups (Ribera, Miller, & Dumford, 2017). Similarly, results of a study of self-identified working-class students suggested that social class is a significant predictor of lower levels of engagement and sense of belonging on college campuses for low SES students, even when gender, race, and levels of parental education were taken into account (Soria & Bultmann, 2014). Lower-levels of social integration are faced by working class students due to

commitments that limit the amount of time they spend on campus and a lack of financial resources, therefore reducing their opportunity for social interaction (Rubin & Wright, 2017). First- and second-generation Hispanic students reported similar struggles related to finances and adapting to the university setting (Kouyoumdjian, Guzman, Garcia, & Talavera-Bustillos, 2017).

Recognizing the importance of a sense of belonging, while at the same time welcoming diversity, is critical to student success and retention (O'Keeffe, 2013). Comprehensive integration into the institution will be challenging to achieve if students feel that they must compromise who they are before they can become part the campus community. Institutions with inflexible campus cultures that fail to recognize the diversity of the student body will experience difficulties with student attrition (O'Keeffe, 2013). Postsecondary institutions must build welcoming environments where care and acceptance are cornerstones if they hope to improve student retention (O'Keeffe, 2013).

**Barriers to engagement.** Success in college is related to the quality and regularity of involvement in the college experience (Astin, 1993). Therefore, activities that lure students away from campus can be detrimental to learning if they cause students to have less time and energy to engage on campus.

There are a variety of pressures students face during their inaugural year of college that, if not navigated effectively, can make engagement difficult. “Environmental stressors students face in their first year of college include academic demands, time constraints, fear of failure, financial difficulties, and changes in social activities” (Alarcon & Edwards, 2013, p. 135). In their study of millennial students and the obstacles

they face when transitioning to college, Turner and Thompson (2014) named both lack of interactive relationships between students and instructors as well as inadequate academic support services as themes that negatively influenced the transition to college.

Between fiscal years 2008 and 2013, tuition and fee revenues "per full-time equivalent student increased by 17% at public institutions" (Kena et al., 2015, p. 218). The fact that the amount of financial aid available to students has not kept pace with increases in tuition has created additional barriers for college students (Engle & Tinto, 2008; Siegel, 2011). Chen and St. John (2011) suggested that the shift in responsibility for funding higher education, from government assistance to the individual, is related to student persistence. When a deficit exists between the cost of education and available financial resources, persistence and retention are negatively affected (Pascarella & Terenzini, 2005).

As a higher proportion of postsecondary education costs have shifted away from public sources of support and onto individual students, increased levels of part-time student employment have been noted (Hall, 2010; Lang, 2012). Engle and Tinto (2008) stated, "Due largely to a lack of resources, low-income, first-generation students are more likely to live and work off-campus and to take classes part time while working full time" (p. 3). Low SES students are more likely than more affluent students to work to cover expenses associated with their education, which in some cases, can decrease the likelihood of their continuing into the second year (Bozick, 2007).

Although students working while going to college is very common, estimates of exactly how many students work and how much time students spend working vary (Lang,

2012). The number of hours students spend working appears to be trending upwards while the number of hours spent studying outside normal teaching hours and hours spent in recreational activities seem to be decreasing (Hall, 2010). Universities would be wise to become familiar with the growing demands felt by full-time students due to part-time work and move to implement procedures to assist working students.

**Student employment.** A large number of students work for pay while attending college. Not only are more students working, they are working more hours than in previous decades (Frock, 2015; Logan, Hughes, & Logan, 2016; Neill, 2015). Working for pay has become common practice for today's college students (Fede, Gorman, & Cimini, 2018; Marland & Dearlove, 2013).

According to the NCES, 43% of full-time and 78% of part-time undergraduate students were employed in 2015 (McFarland et al., 2017). In total, 19% of all postsecondary students reported working 35 or more hours per week, 31% worked 20 to 34 hours per week, and 21% worked fewer than 20 hours per week. While the number of hours all students report working each week varies from the data provided for only full-time students, there were no measurable differences in the percentages of full- or part-time students who were employed in 2010 and those employed in 2015 (McFarland et al., 2017).

In comparison to the data provided for all students, NCES figures show that approximately 43% of 16 to 24-year-old full-time college students were employed in October 2015 (McFarland et al., 2017). Ten percent reported working 35 or more hours

per week, with 17% working between 20 and 34 hours per week. Only 8% of full-time students worked less than 20 hours per week.

Thousands of first-year and fourth-year college students are asked about the amount of time they spent working on and off campus via the annual NSSE. NSSE respondents report working at lower levels than those reported by the NCES. NSSE (2018) results indicated that 21% of first-year students reported working on campus, while 34% worked off campus. Of the first-year students who reported working on campus, only 9% reported working more than 20 hours per week on campus. In contrast, 34% of first-year students who reported working off campus indicated they worked more than 20 hours. However, the NSSE results do not provide information about the number of students who worked both on and off campus or the aggregate number of hours survey respondents worked each week.

The level of undergraduate student employment varies according to students' gender and race/ethnicity (Ross et al., 2012). Overall, females report working at higher rates than males. The percentage of White, Black, and Asian male students who were employed in 2010 was lower than the corresponding percentage of White, Black, and Asian female students, respectively. Among Hispanics, Native Hawaiians/Pacific Islanders, American Indians, and students of two or more races, employment rates did not vary significantly based on gender (Ross et al., 2012).

Students often reference a variety of reasons for working while going to school, many of which could be categorized as financial (Hall, 2010). The increasing cost of tuition associated with earning a college education is often cited as a significant reason

for why students work (Neill, 2015; Wu & Chen, 2013). The economic value of Federal Pell Grants has not increased at the same rate as the growing costs of college attendance (Perna, 2015). As college costs escalate, more students find working while in school necessary (Marland & Dearlove, 2013; Martinez, Bilges, Shabazz, Miller, & Morote, 2012). Nearly a third of students who began their postsecondary education during the 2003-2004 academic year and left without completing a degree or certificate cited financial reasons as a cause for their departure (Ross et al., 2012).

Students choose to work for an assortment of reasons. Alfano and Eduljee (2013) surveyed 108 undergraduate students attending a private college in the Northeast to investigate "differences in working while in college, levels of involvement, and academic performance between students who live on campus and students who commute to campus" (p. 334). For both groups of students, paying bills/rent, paying tuition, and obtaining spending money were the top reasons given for working while going to college.

Similar results were found by Lang (2012), who used NSSE data from a sample of 794 FTFT and senior students, to study the differences between students working on campus and those working off campus. Included in the list of reasons why students worked was increased college tuition costs, decreases in college subsidies, an increase in the desire to be financially independent, and a reduction in the number of parents willing to foster the dependency of their children.

Working for primarily financial reasons has academic implications. In their study examining the effect of work on academic achievement, Wenz and Yu (2010) found that students whose primary motivation for working was financial earned lower grades than

students who worked to learn skills related to their desired profession. However, students who worked for financial reasons earned higher grades than students simply wanting general work experience.

There are differences in opinion regarding the role employment plays in the success of students. Working while going to school can have both negative and positive effects on students (Darolia, 2014). According to Astin (1993), full-time and part-time employment are associated with lower GPA. Wenz and Yu (2010) found that, in general, working while in school had a negative effect on student performance, but Watson (2014) found that students who worked on campus did better academically than their peers who worked off campus. Considering grades are related to the persistence of first-year students, higher education professionals dedicated to student success must be attentive to factors that influence grades in college (Pike et al., 2008).

How much students work makes a difference. Working a large number of hours has been negatively associated with college success, while working fewer hours has been linked to positive academic outcomes (Huie et al., 2014; Theune, 2015). Students working more than 20 hours per week are less likely to persist than those who work less (Hovdhaugen, 2015; Logan et al., 2016). Generally, students working off campus 20 or more hours per week have GPAs that are relatively lower than students working fewer hours.

In their study of 591 first-year college students at a large and ethnically diverse mid-Atlantic state university, Huie et al. (2014) reported that the number of hours worked was negatively associated with academic performance. As the number of hours increased,

students' GPAs decreased. Working more than 20 hours per week has been shown to be detrimental to academic success, particularly for first-year students (Pike et al., 2008).

While Lang (2012) did not find any difference in grades based on employment status or the number of hours worked each week, students working off campus worked more hours per week than those working exclusively on campus. Lang also noted that the more hours students worked off campus, the less likely they were to spend time socializing. Tinto (1993) cautioned that the effect of employment on the totality of the postsecondary endeavor can be substantial if it puts time constraints on studying and interacting with other members of the educational community. Huie et al. (2014) suggested that it might be best for students not to work at all or work the fewest number of hours possible during their early years of college. Rethinking the role work plays in student learning and engagement could be beneficial (Perna, 2010).

Logan et al. (2016) stated that students should be discouraged from working off campus for more than 20 hours per week during their first 2 years of school. Working more than 15 to 20 hours per week has been associated with low student persistence (Perna, 2010; Pike et al., 2008). In contrast, Pike et al. (2008) stated, "Conversely, working 20 hours or fewer on campus can be positively related to student success because it is related to greater levels of participation in active and collaborative learning activities and positive interactions between students and faculty members" (p.579). It appears, however, that working is a responsibility met by many students and the recommendation that students limit the number of hours they work per week is no longer a realistic possibility for numerous undergraduate students (Perna, 2010).

In an Italian study examining the effect of work on the academic progression of first-year students in higher education, Triventi (2014) analyzed data from the Eurostudent survey. Multivariate regression analysis of the data showed working an average of 35 hours per week while in college had a negative effect on academic progression. The Eurostudent survey is conducted in 3-year intervals in several European countries as a way of monitoring the characteristics of college students. Triventi found that students working a less intense schedule had progression rates similar to nonworking students.

Considering time is a limited resource, time students expend working for pay may substitute for time that could be spent studying, socializing, relaxing, or engaging in cocurricular activities (Darolia, 2014). This trade-off can have an adverse effect on academic performance, social integration, or student health and wellness. Darolia (2014) reported that as the number of hours students worked increased, the number of credit hours completed decreased.

When analyzing the effect employment has on dropout rates, Hovdhaugen (2015) reported that undergraduate students who work full time while also enrolled in college full time are less likely to graduate than students working part-time or not at all. Mounsey, Vandehey, and Diekhoff (2013) studied 110 working and nonworking students and found working students had more stress and anxiety and fewer safeguards than nonworking students. In a qualitative study exploring how low SES, first-generation, White college students experienced their social class during college, participants reported

feeling overextended and overwhelmed during college mostly due to the need to balance work and academics (Martin, 2015).

It seems where students work is as important as the quantity of hours spent working (Astin, 1993). There appears to be a difference between working on campus and working off campus. There are benefits linked to OCE, including increased rates of retention (Bozick, 2007; Kulm & Cramer, 2006; Pascarella & Terenzini, 2005; Pike et al., 2008; Watson, 2014). Students working on campus have been found to earn higher GPAs than their peers who work off-campus (Watson, 2014). While some studies indicate no significant differences in GPA between working and nonworking students (Huie et al., 2014; Mounsey et al., 2013), students who work on campus earn better grades during their first semester than students who work off campus (Huie et al., 2014).

Based on nearly three decades of data from the Cooperative Institutional Research Program, a national longitudinal study of the American higher education system, Astin (1993) determined that there was a modest positive relationship between students' academic performance and working part time on campus. Pascarella and Terenzini (2005) noted a positive link between academic achievement and degree attainment with part-time OCE. Using a nationally representative sample of first-year college students to explore the effects of paid work and living expenses on persistence, Bozick (2007) found that students living on campus and working less than 20 hours per week had a greater chance of persisting that did students who lived off campus and worked more than 20 hours per week. Working a moderate number of hours on campus is related to persistence

and retention benefits that are not realized at the same level by students who do not work at all or work an extreme number of hours (Watson, 2014).

However, it is important to recognize that differences in GPA between students employed on and off campus must be interpreted with great care because the possibility exists that on-campus employers may give academic merit greater priority in their hiring processes than do off-campus employers (Huie et al., 2014). With that said, designing OCE opportunities, especially for FTFT students, may be a mechanism that can be used to increase retention. Activities and events specifically focused on freshmen have been cited as great enablers of students continuing after the first year of college (Turner & Thompson, 2014) and OCE environments allow students to interact in ways that connect them to the institution (Perna, 2010; Watson, 2014).

College students who worked on-campus engaged in cocurricular and social activities at higher rates and reported having more affirming educational and social experiences than students who worked off campus (Lang, 2012). Lang also found that grades, time spent preparing for class, involvement in cocurricular activities or time spent socializing and relaxing were not negatively affected by the number of hours students worked on campus. However, students who worked off campus were found to spend less time socializing compared to students who worked on campus (Lang, 2012).

Watson (2014) found that when students felt challenged by their work and viewed their work as meaningful, they considered it to be central to their college experience. This finding is congruent with Tinto's (1993) definition of integration as it relates to identifying with the campus community and commitment to the institutional culture.

OCE opportunities may afford students more convenient access to academic support services and the ability to work in settings applicable to their field of study or career aspirations (Huie et al., 2014). Findings that students who work on campus performed better academically than those who worked off campus may suggest that universities may be well served by creating more OCE opportunities (Huie et al., 2014).

## Implications

One of the many demands that college students struggle to meet is work. Waston (2014) was of the opinion that, "Studying student employment in the context of student development can be important to understanding and developing mitigating factors related to student attrition" (pp. 2-3). Colleges that implement a developmental approach to OCE create the potential for enhancing student learning and experiences (Perna, 2010; Watson, 2014). In their study on college retention initiatives that meet the needs of millennial students, Turner and Thompson (2014) identified the provision of ongoing training to critical support units as a way to increase care for students and effectiveness.

Because student employment is often approached primarily as a work setting rather than an environment that encourages student development and engagement, opportunities for student growth and development in these employment settings most often used by students with limited resources can be overlooked (Watson, 2014). Many faculty members and staff members who supervise student employees may not readily make the connection between OCE and student success. OCE can positively influence student development and academic and social integration (Watson, 2014). Proper supervision can impact students' sense of mattering and total satisfaction with their

college experience. Failing to capitalize on the influence of OCE is a missed opportunity for boosting personal growth and professional development with minimal impact to the university budget (Watson, 2014). A project that complements this study is a set of policy recommendations related to OCE serving as a tool to increase retention.

Examining whether OCE can provide similar benefits as other strategies designed to increase retention is an important path for future study (Fede, Gorman, & Cimini, 2018). The findings of this study support professional education practice at McGee University by providing a better understanding of the role OCE plays in the retention of FTFT students. Increased knowledge of the relationship between OCE and retention will benefit everyone interested in making decisions that increase the retention of FTFT students.

## Summary

It could be argued that the retention of college students has been one of the issues most studied by postsecondary researchers (Siegel, 2011). While knowledge about student retention and the multifaceted atmosphere of student persistence has increased over the last several decades, it is a journey still in its relative infancy (Tinto, 2006b). Many institutions have not yet been successful in capitalizing on this gain in knowledge (Tinto, 2006b) as demonstrated by the relatively unchanged national rates of student retention and graduation (ACT, 2015). The reasons college students fail to persist remain less than fully understood, as do the remedies that may exist to address the issue of low retention.

The relationship between retention and OCE is an important area of study because of the possible implications the results may have for large numbers of college students and the institutions they attend. Considering many students who work while going to school are from populations that are the most at-risk of failing to persist (Pascarella & Terenzini, 2005), furthering the understanding of what challenges and sustains college students is valuable (Watson, 2014).

## Section 2: The Methodology

In this section, I describe the quantitative research design and approach for this study of the retention of FTFT freshmen enrolling in the fall semester. The rationale for selecting the research design and approach is discussed. Also included in this section is a description of the students whose archival data were used and an explanation of how these students' data were selected. Criteria for the primary predictor variable of interest, OCE, and secondary predictor variables included in the study are identified. Additionally, I review methods of data retrieval and analysis along with threats to data quality.

### Research Design and Approach

Quantitative research, characterized by the use of numerical data to answer research questions, is grounded in the scientific realism philosophical framework (Lodico, Spaulding, & Voegtle, 2010). A large proportion of quantitative educational research is considered nonexperimental because the variables cannot be manipulated (Johnson, 2001). One type of nonexperimental research is correlational research. The purpose of correlational research is to determine if two or more variables are associated in a way such that differences in one variable are related to differences in another variable in an organized way (Lodico et al., 2010). The two primary types of correlational research designs are explanatory and prediction (Creswell, 2012).

Researchers use prediction research designs to anticipate or forecast a future behavior or phenomenon (Creswell, 2012; Johnson, 2001; Lodico et al., 2010). Prediction designs are used to examine correlations between variables with the aim of finding one or

more variables that can forecast an outcome or criterion measured at a later point in time (Creswell, 2012; Lodico et al., 2010).

Retrospective research is conducted by looking backward in time. Normally, researchers start by identifying a criterion variable that has already occurred and then move backward further in time to locate data on predictor variables that may help to explain differences on the criterion variable (see Johnson, 2001).

In this study, a nonexperimental retrospective prediction research design was used to determine if OCE and student characteristics of first-generation, low SES, racial and ethnic minority status, gender, living on campus, and academic preparedness were related to the retention of FTFT students enrolling in several fall semesters at McGee University. Each of the predictor variables has been identified by Tinto (2012) as a factor affecting the retention of college students. First generation students are retained at lower rates than non-first-generation students. Low SES students are retained at lower rates than middle or high SES students. Asian and White students are retained at higher rates than students of other races/ethnicities. Women are retained at higher levels than men. Students living on campus are retained at higher rates than students who live off campus and academically prepared students are retained at higher rates than academically unprepared students.

The retrospective prediction research design was derived logically from the problem. Examining the relationship between multiple predictor variables and the criterion variable was essential to answering the research question and developing strategies to improve retention. Considering the primary objective of this study was to

predict the criterion variable, without regard to cause and effect, a retrospective prediction design was appropriate for this study because both the predictor variables and criterion variable had already occurred, and therefore were not modifiable for experimental manipulation (see Johnson, 2001).

## Setting and Sample

McGee University is a midsized, public, 4-year, open-admissions institution located in the Midwest. As reported by the director of institutional research, the average high school GPA for the nearly 3,500 first-time freshmen, not strictly FTFT, was approximately 3.4 on a 4-point scale for students beginning at McGee in fall semesters 2013, 2014, and 2015. The average ACT composite score for the same groups of students was 22, which is at the 63rd percentile nationally (ACT, 2017a). Approximately 40% of students enrolled at McGee University received Pell grants, and women comprised 60% of the student population during this same time period.

Students classified as racial and ethnic minority students comprised 22% of the entire student population in Fall 2013, 23% in Fall 2014, and 24% in Fall 2015. During the application process, students self-reported ethnicity/race using categories established by the federal government. Institutions are required to collect these data from students using a two-question format. The first question asked whether the respondent is Hispanic or Latino. The second question asked the respondent to select one or more from the following five categories: American Indian or Alaska Native, Asian, Black, Native Hawaiian or Other Pacific Islander, and White.

For this study, students at McGee who reported a category other than White were counted as racial and ethnic minority students. Over 80% of McGee students provided information on their ethnicity/race in Fall 2013, Fall 2014, and Fall 2015. The percentage of minorities was calculated based on the students for whom ethnicity/race was known.

Archival data, collected in the course of McGee University's normal business processes, were used to conduct this study. The data, extracted for this study by university data analysts, were de-identified student records for individuals who were FTFT students at McGee University in Fall 2013, Fall 2014, and Fall 2015. The data were de-identified by institutional research staff members at McGee University.

Census sampling was the method used to select the sample; data for all individuals who were FTFT students in Fall 2013, Fall 2014, and Fall 2015 were included in the study. Census sampling is a technique used when it is realistic to gather data on an entire population due to the relatively small size of that population (Lodico et al., 2010).

According to the director of institutional research at McGee University, there were 779, 753, and 757 FTFT students in the Fall 2013, 2014, and 2015 semesters, respectively. Of those, the students employed on campus at any point during their first year totaled 470. Therefore, the entire sample for this study was 2,289 FTFT students, incuding 470 students who were employed on campus.

## Data Collection

Authorization to conduct research was obtained through the Institutional Review Boards (IRBs) of Walden University and McGee University. Prior to submitting a McGee University IRB application, I completed training related to protecting human

research participants provided through the National Institute of Health and six McGee University IRB on-line training modules. Approval to conduct research from the Walden University IRB accompanied my McGee University IRB application. Upon IRB approval, the archival data set used in this study was requested and retrieved from the student records of McGee University.

In this study, the primary predictor variables of interest were OCE, first-generation, low SES, and racial and ethnic minority status. Other predictor variables were gender, living on campus, and academic preparedness. The predictor variables were measured by information available via McGee University's student information system.

Students who received a paycheck from the university were considered employed on campus. Students with an affirmative response to the application question, "Are you the first member of your family to attend college?" were considered first-generation students. Students who received financial aid via Pell grants were considered as having low SES. Racial and ethnic minority students were considered to be any student who did not exclusively select White when answering application questions about race and ethnicity. The dichotomous predictor variable gender was measured as male or female and the information was collected as part of the application process. Students who had a housing contract in the fall semester were considered as living on campus. Academic preparedness was measured by high school GPA and converted to a 4-point ordinal scale where 1 = 1.00 to 1.99, 2 = 2.00 to 2.99, 3 = 3.00 to 3.99, and 4 = 4.00 to 5.00. Grouping students into categories based on their high school GPA was done with the intention of making the results easier to understand by showing differences between groups.

The criterion variable for this study was student retention, measured by retained or not retained to the second year. More specifically, retention was measured by fall enrollment status in the second year, based on the 20th-day census.

## Data Analysis

To determine if the multiple predictor variables were predictive of the dichotomous criterion variable, a binary logistic regression was the appropriate method of inferential analysis (see Kleinbaum, Kupper, Nizam, & Muller, 2008). The general purpose of a binary logistic regression analysis is to conclude how one or more predictor variables are related to the likelihood of one of two possible outcomes (Kleinbaum et al., 2008). Logistical regression, through the use of correlation coefficients that compare the effects of the predictor variables and extraneous variables on the criterion variable, can also be used to control extraneous variables (Lodico et al., 2010).

By analyzing the data, I intended to discover the answer to the following question: To what extent can retention to the second year be predicted by each of the following student characteristics: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness?

## Assumptions, Limitations, Scope, and Delimitations

In this study, I focused on determining if OCE, and student demographic characteristics of first-generation, low SES, and racial and ethnic minority status can predict the retention of incoming FTFT students enrolling in the fall semester. I assumed that data provided by the institution relating to the variables in this study were accurate because the data were retrieved from students' official university records.

The predictor variables could not be manipulated in this study nor participants randomly assigned to groups; therefore, the use of the retrospective prediction design prevented me from concluding with certainty what effect the predictor variables had on the criterion variable (see Johnson, 2001).

Another limitation of the study is that the dichotomous predictor variable employed on-campus did not account for the duration of the employment, the number of hours worked, or if the student was also employed off campus. Additionally, I do not know if students who did not work on campus were employed off campus.

Similarly, the dichotomous criterion variable of retention did not indicate how many credits the student earned, knowledge learned, or attainment of skills needed for success beyond the first year. The dichotomous criterion variable gender does not account for students who may not conform to traditional dichotomous gender norms.

It is possible that the question used to determine first generation status did not yield the most accurate results. To determine first generation status, students entering the institution in Fall 2013 and 2014 were asked, "Are you the first member of your family to attend college?" Students who answered "Yes" were considered first-generation students. However, this question did not provide a clear understanding of which members of the family the student considered when answering the question, nor the highest education level completed by the parents. In an attempt to gain clarity, the question was changed in Fall 2015 to, "Which best describes the level of education attained by your parents? Select one." Students answering "Both parents have a high school diploma or less" and "One or both parents have some college experience but neither have attained a bachelor's

degree" were categorized as first-generation students. However, it is estimated that only half of Fall 2015 incoming students received the new question. Students who did not receive the revised question answered the same question as those students entering the institution in Fall 2013 and 2014.

Cleaning the data revealed that there were a number of data points missing. Only cases that did not have missing data were included in the study. Missing cases for the predictor variables first-generation, racial and ethnic minority, and academic preparedness reduced the total number of cases included in the analysis by 30%.

The scope of this study was limited to FTFT students at one public, 4-year, open access institution in the Midwest. Therefore, results of this study may not be generalizable to the larger population.

A delimitation of the study was the decision not to include students' status as collegiate athletes among the predictor variables. The decision to include only full-time students, rather than all incoming students, and converting the academic predictor variable from an interval to ordinal scale were also delimitations.

## Protection of Participant's Rights

Approval to conduct this study was requested and received from the IRBs of Walden University (Approval # 08-28-17-0410017) and McGee University. Both Walden University and McGee University require all researchers to obtain IRB approval before research can be conducted. The IRB approval to conduct research indicates the potential benefits of the study outweigh the potential risks of the study.

Quantitative analyses of de-identified archival data were conducted; therefore there was no need to obtain informed consent. All data will be stored in a personal password-protected environment for 5 years after the conclusion of the study.

## Data Analysis Results

### Data Cleaning

After the data were obtained, steps were completed to clean the dataset. Descriptive statistics were reviewed to check for missing data. There were a total of 2,289 cases in the data set. A review of the predictor variables employed on campus, low SES, gender, living on campus, and the dependent variable, retained, revealed no missing data. However, there were missing cases noted for the predictor variables first-generation (187), racial and ethnic minority (553), and academic preparedness (99). A total of 707 (30%) missing cases reduced the total number of cases included in the analysis from 2,289 to 1,582. Frequencies of the six dichotomous predictor variables used in the study, employed on campus, first generation, low SES, racial and ethnic minority, living on campus, and gender are presented in Table 5. Frequencies of the ordinal variable academic preparedness are displayed in Table 6.

Table 5

*Frequencies of the Dichotomous Predictor Variables*

| Variable | *f* (Yes) | % Yes | *f* (No) | % No |
|---|---|---|---|---|
| Employed on campus | 335 | 21% | 1,247 | 79% |
| First generation | 419 | 26% | 1,163 | 74% |
| Low SES | 635 | 40% | 947 | 60% |
| Racial and ethnic minority | 387 | 24% | 1,195 | 76% |
| Living on campus | 758 | 48% | 824 | 52% |
| Gender (male) | 667 | 42% | 915 | 58% |

Table 6

*Frequencies of Academic Preparedness*

| | Converted GPA Scores | | | | |
|---|---|---|---|---|---|
| | 1.00–1.99 | 2.00–2.99 | 3.00–3.99 | 4.00–5.00 | Total |
| Frequency | 43 | 387 | 938 | 214 | 1582 |
| Percent | 2.7 | 24.5 | 59.3 | 13.5 | 100 |

**Statistical Assumptions**

Seven assumptions were considered to ensure the data could be effectively analyzed using binary logistic regression. The first assumption is that there is only one dichotomous criterion variable (King, 2011). The dependent variable in this study, retention, is consistent with the first assumption because there are only two outcomes, retained or not retained.

The second assumption is that one or more predictor variables can be measured on either a continuous or a nominal scale. There is no requirement that predictor variables be measured on an interval scale (Schumacker, 2015). All but one of the predictor variables in this study, OCE, first generation, low SES, racial and ethnic minority, gender, and living on campus, were measured on a nominal scale. Academic preparedness, as measured by high school GPA, was represented by a 4-point ordinal scale.

The third assumption is that there should be independence of errors, meaning the categories of the dependent variable and all independent variables should be separate from one another (Stoltzfus, 2011). There is no relationship between the categories of the dependent variable retention. In this study, students were either retained or not retained, not both. The same is true for each of the dichotomous predictor variables in this study. Similarly, each student could only be placed into one of four categories for academic preparedness based upon their high school GPA. Therefore, the standard for the third assumption was met.

The fourth assumption is that there is an adequate number of cases for each predictor variable (Stoltzfus, 2011). The criteria for the fourth assumption were met because the number of events per predictor variable were as follows: 335 employed on campus, 419 first-generation, 635 low SES, 387 racial and ethnic minority, 758 living on campus, 667 gender (male). The events per predictor variable in this study were considerably more than the recommended minium number needed to provide reliable results (Vittinghoff & McCulloch, 2007).

Assumption 5 is that there needs to be a linear relationship between the logit for any continuous predictor variables and the logit transformation of the criterion variable (Stoltzfus, 2011). There were no continuous predictor variables in this study, therefore the fifth assumption was met. The sixth assumption is that the data must not show multicollinearity (Stoltzfus, 2011). Multicollinearity occurs when there is high correlation between two or more predictor variables when predicting a dependent variable (Schumacker, 2015). Predictor variables that are highly correlated should not be included in the same study (Stoltzfus, 2011). Multicollinearity was tested for each of the predictor variables by conducting a logistic regression. Multicollinearity was not shown for the predictor variables as all variance inflation factors (VIFs) were just slightly over 1.0, which means the predictor variables were not highly correlated and the criteria for the sixth assumption were met.

The seventh and final assumption is that there should be no strongly influential outliers (Stoltzfus, 2011). All 37 cases with studentized residual values greater than 2.5 were inspected. None of these students were retained to the second year. Of the 37 cases, 28 were employed on campus, five identified as first-generation, 10 were low SES, five identified as racial or ethnic minority, 26 were females, 29 lived on campus, and all were in Groups 3 or 4 for academic preparedness indicating GPAs of 3.00 or above. An important aspect of Tinto's (1993, 2012) theory is that student departure is as much a reflection of the institution as it is the individual student. Tinto (1975, 1993, 2012) reasoned that misalignment among student and institutional interests, needs, and wants

can factor into students' decisions to leave an institution. Therefore, upon inspection, the decsion was made not to remove any of the cases from the analysis.

**Binary Logistic Regression**

Having ensured that the statistical assumptions were met, a binary logistic regression analysis was conducted investigating to what extent retention to the second year was predicted by each of the following student characteristics: OCE, first generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness. The Hosmer-Lemeshow goodness of fit test was not significant ($p = .150$) indicating the model was a good fit for the data. The logistic regression model was statistically significant, $\chi^2(7) = 194.40$, $p < .001$. The model explained 16.3% (Nagelkerke $R^2$) of the variance in retention and correctly classified 72.2% of cases. Sensitivity, the percentage of cases having the observed characteristic (retention) that were correctly predicted by the model (Agresti, 1990), the true positives, was 91.2%. Specificity, the percentage of cases not having the observed characteristic that were correctly predicted by the model (Agresti, 1990), the true negatives, was 29.8%.

The positive predictive value (PPV) is the number of cases with the observed characteristic (i.e., retention) that are correctly predicted, compared to the total number of cases where retention was predicted. The negative predictive value (NPV) is the percentage of correctly predicted cases without the observed characteristic (i.e., not retained), compared to the total number of cases predicted not to be retained (Peat, 2011). For this model, PPV was 74.3% and NPV was 60.3%.

The model resulted in three predictor variables (first-generation, low SES, and racial and ethnic minority) not being statistically significant ($p > .05$); however, four predictor variables (OCE, gender, living on campus, and academic preparedness) were found to be significant (Table 7). The primary predictor variable of interest, OCE, was found to contribute significantly ($p < .001$) to the model in the logistic regression analysis. The estimated odds ratio, Exp(B) = 2.0, favored a positive relationship nearly two-fold for students who worked on campus. Students who worked on campus during their first year of college were nearly twice as likely to be retained as those students who did not work on campus. Gender was also found to contribute significantly ($p = .046$) to the model. The estimated odds ratio, Exp(B) = 1.27, favored a positive relationship of nearly 1.3 fold for male students who were 1.3 times more likely than female students to be retained. Living on campus was the third predictor variable found to contribute significantly ($p = .001$) to the logistic regression model. The estimated odds ratio, Exp(B) = 1.63, favored a positive relationship of more than one and one-half fold for students living on campus. Therefore, students who lived on campus were 1.6 times more likely to be retained than students who did not live on campus during their first year. Academic preparedness was the remaining predictor variable found to contribute significantly ($p = .000$) to the model in the logistic regression analysis. The estimated odds ratio, Exp(B) = 2.37, favored a positive relationship of more than two fold for every one unit increase of academic preparedness. Students who were more academically prepared, as measured by high school GPA, were nearly 2.4 times more likely to be retained than students who were less academically prepared.

Through a synthesis of extensive retention research, Tinto (1993) identified goals, commitments, institutional experiences, integration, and high school outcomes as factors that influence retention for the individual student. Tinto's (1993, 2012) theory of student departure is based upon the idea that engaging both socially and intellectually with the institution is essential if students are going to persist at an institution.

The finding that academic preparedness was determined to be a significant predictor or student retention in this study supports Tinto's theory. The finding that both living and working on campus during the first year were found to be significant predictors of retention also supports the portion of Tinto's (1993, 2012) theory emphasizing the importance of experiences taking place during college.

Table 7

*Logistic Regression Predicting Retention.*

| | | | | | | | 95% C.I. for Exp(B) | |
|---|---|---|---|---|---|---|---|---|
| Predictor | B | S.E. | Wald | *df* | *p* | Exp(B) | Lower | Upper |
| OCE | .69 | .17 | 16.75 | 1 | < .001 | 2.00 | 1.43 | 2.78 |
| First generation | -.18 | .13 | 1.95 | 1 | .163 | .83 | .64 | 1.08 |
| Low SES | -.18 | .12 | 2.23 | 1 | .136 | .83 | .66 | 1.06 |
| Racial and ethnic minority | -.06 | .14 | .20 | 1 | .656 | .94 | .72 | 1.23 |
| Gender (male) | .24 | .12 | 3.99 | 1 | .046 | 1.27 | 1.01 | 1.61 |
| Living on campus | .49 | .12 | 16.26 | 1 | < .001 | 1.63 | 1.28 | 2.06 |
| Academic preparedness | .86 | .10 | 80.03 | 1 | < .001 | 2.37 | 1.96 | 2.87 |
| Constant | -1.88 | .31 | 37.70 | 1 | < .001 | .15 | | |

*Note.* Gender is for males compared to females.

OCE was the primary predictor variable of interest in this study; therefore, two additional binary logistic regression analyses were conducted, for students who did work on campus and separately for those who did not work on campus during their first year of college. The purpose of these analyses was to determine the extent to which each of the other student characteristics—first generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness—predicted retention to the second year for each specific group.

**Students who did not work on campus.** In the model where the selected cases were students who did not work on campus, the Hosmer-Lemeshow goodness of fit was not significant ($p = .746$) indicating the model was a good fit for the data. The logistic

regression model was statistically significant, $\chi^2(6) = 140.61$, $p < .001$. The model explained 14.7% (Nagelkerke $R^2$) of the variance in retention and correctly classified 69% of the selected cases (not employed on campus) and 82.1% of unselected cases (employed on campus). For the selected cases, sensitivity was 87.9%, specificity was 33.7%, PPV was 71.2%, and NPV was 60.0%.

For the selected cases, students who did not work on campus, the model resulted in four not significant ($p > .05$) predictor variables (first-generation, low SES, racial and ethnic minority, and gender); however, two predictor variables (living on campus and academic preparedness) were found to be significant (Table 8). The predictor variable, living on campus, in the logistic regression analysis was found to contribute significantly ($p = .000$) to the model. The estimated odds ratio, Exp(B) = 1.81, favored a positive relationship nearly two-fold for students living on campus. Students who lived on campus, but did not work on campus, during their first year of college were nearly twice as likely to be retained as those students who did not live or work on campus. Academic preparedness in the logistic regression analysis was also found to contribute significantly ($p = .000$) to the model. The estimated odds ratio, Exp(B) = 2.40, favored a positive relationship over two-fold for every one unit increase of academic preparedness. Academic preparedness was a significant predictor of retention for students who did not work on campus during their first year of college.

The finding that academic preparedness and living on campus were significant predictors of retention for students who did not work on campus aligns with the theoretical foundation for this study. Academic preparedness would be what Tinto (1993,

2012) considered a precollege attribute. Living on campus is a postentrance experience that Tinto (1993, 2012) determined assists in the academic and social integration of students.

Table 8

*Logistic Regression Predicting Retention for Students Who Did Not Work on Campus*

| | | | | | | | 95% C.I. for Exp(B) | |
|---|---|---|---|---|---|---|---|---|
| Predictor | B | S.E. | Wald | *df* | *p* | Exp(B) | Lower | Upper |
| First generation | -.10 | .14 | .51 | 1 | .476 | .90 | .68 | 1.20 |
| Low SES | -.24 | .13 | 3.14 | 1 | .076 | .79 | .61 | 1.03 |
| Racial and ethnic minority | -.10 | .15 | .49 | 1 | .486 | .90 | .68 | 1.20 |
| Gender (male) | -.21 | .13 | 2.59 | 1 | .108 | .81 | .63 | 1.05 |
| Living on campus | .59 | .13 | 20.09 | 1 | < .001 | 1.81 | 1.39 | 2.34 |
| Academic preparedness | .87 | .10 | 71.15 | 1 | < .001 | 2.40 | 1.96 | 2.93 |
| Constant | -1.71 | .31 | 31.44 | 1 | < .001 | .18 | | |

*Note.* Gender is for males compared to females.

**Students who worked on campus.** In the model where the selected cases were students who worked on campus, the Hosmer-Lemeshow goodness of fit was not significant ($p$ = .473) indicating the model was a good fit for the data. The logistic regression model was not statistically significant, $\chi^2(6) = 12.54$, $p$ =.051. The model explained 6.3% (Nagelkerke $R^2$) of the variance in retention and correctly classified 84.2% of the selected cases (employed on campus) and 65.4% of unselected cases (not employed on campus). For the selected cases, sensitivity was 100%, specificity was 2.1%, PPV was 84.1% and NPV was 100.0%

For the selected cases, students who worked on campus, the model resulted in five predictor variables (first-generation, low SES, racial and ethnic minority, gender, and living on campus) that were not significant ($p > .05$); however, as would be expected, academic preparedness was found to contribute significantly ($p = .004$) to the model (Table 9). The estimated odds ratio, Exp(B) = 2.22, favored a positive relationship more than two-fold for every one unit increase of academic preparedness. Academic preparedness was a significant predictor of retention for students who worked on campus during their first year of college.

These findings align with the aspects of the theoretical foundation for this study related to the importance of precollege achievements. Additionally, Tinto's (1993, 2012) theory of student departure is based upon the idea that engaging both socially and intellectually with the institution is essential if students are going to persist at an institution. Tinto (2012) stated that working on campus allows students to become engaged on campus while also gaining the financial resources they need. This is congruent with the finding that OCE is a significant predictor of retention for FTFT students.

Table 9

*Logistic Regression Predicting Retention for Students Who Worked on Campus.*

| | | | | | | | 95% C.I. for Exp(B) | |
|---|---|---|---|---|---|---|---|---|
| Predictor | B | S.E. | Wald | *df* | *p* | Exp(B) | Lower | Upper |
| First generation | -.54 | .34 | 2.63 | 1 | .105 | .58 | .30 | 1.12 |
| Low SES | .03 | .33 | .01 | 1 | .930 | 1.03 | .54 | 1.95 |
| Racial and ethnic minority | .16 | .39 | .17 | 1 | .684 | 1.17 | .54 | 2.54 |
| Gender | -.28 | .35 | .67 | 1 | .413 | .75 | .38 | 1.48 |
| Living on campus | -.50 | .34 | .02 | 1 | .883 | .95 | .49 | 1.85 |
| Academic preparedness | .80 | .28 | 8.09 | 1 | .004 | 2.22 | 1.28 | 3.84 |
| Constant | -.41 | .90 | .21 | 1 | .647 | .66 | | |

*Note.* Gender compares males to females.

This study was conducted to determine if OCE was related to the retention of FTFT students to the second year. The following research question and hypotheses were addressed:

Research Question: To what extent is retention to the second year predicted by each of the following student characteristics: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness?

$H_0$: None of the following student characteristics is a significant predictor of retention to the second year: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness.

$H_1$: At least one of the following student characteristics is a significant predictor of retention to the second year: OCE, first-generation, low SES, racial and ethnic minority, gender, living on campus, and academic preparedness.

To explore this issue, I implemented a nonexperimental quantitative prediction research design. Each of the predictor variables in this study: OCE, first generation, low SES, racial and ethnic minority, gender, living on campus and academic preparedness had been previously identified as factors affecting the retention of college students (Tinto, 1993, 2012).

Tinto (1993, 2012) listed high school outcomes among the preentry attributes that affect student retention. The finding that academic preparedness was determined to be a significant predictor of student retention in all three binary logistic analyses performed in this study aligns with Tinto's theory. Tinto also emphasized the importance of experiences taking place during college as a means of integrating with the institution. The finding that both living and working on campus during the first year were found to be significant predictors of retention also supports Tinto's theory.

I performed three separate binary logistic regression analyses. When all predictor variables were included in the first analysis, first-generation, low SES, and racial and ethnic minority were not found to be significant predictors of retention. However, OCE, gender, and academic preparedness were identified as significant predictors of retention.

For the second logistic regression, I selected students who did not work on campus during their first year as the cases for analysis. For students who were not employed on campus, two predictor variables were identified as significant, living on

campus and academic preparedness. The third logistic regression focused on students who were employed on campus. Academic preparedness was the only significant predictor of retention for students who worked on campus during the first year.

As expected, academic preparedness was a significant indicator of retention for students in all three regression analyses. Gianoutsos and Rosser (2014) declared that high school grades may be the most significant predictor of collegiate academic success. However, although I found living on campus to be a significant predictor of retention for students who did not work on campus during their first year in college, it was not a significant predictor of retention for students who did work on campus.

Tinto (1993) emphasized that postenrollment experiences matter more than preenrollment intentions and achievements. Two main pillars of Tinto's theory are that (a) institutions play an important role in student persistence and achievement; and (b) the formal and informal interactions in social and academic environments significantly influence a student's decision to stay or leave (Tinto, 1993).

Considering that students living on campus have been found to have advantages over students who do not live on campus (Astin, 1993; Pascarella & Terenzini, 2005; Tinto, 1993), the finding that living on campus was not a predictor of retention for students who worked on campus is noteworthy.

Many of the studies that support the positive influence of living on campus have been conducted on campuses with high numbers of residential students (Gianoutsos & Rosser, 2014). Considering many students from traditionally hard to retain groups may not be able to live on campus due to financial or family issues (Pierce, 2016), this finding

could have positive social change implications if it leads to more students from these groups integrating with the institution by working on campus. Bozick (2007), Kulm and Cramer (2006), Pascarella and Terenzini (2005), Pike et al. (2008) and Watson (2014) all reported benefits linked to OCE, including increased rates of retention.

Based on the results of this study and information from the literature review, I developed a white paper with policy recommendations that will be shared with a variety of stakeholders. The recommendations focus on the need to create a system designed to make incoming first-year students, especially those who may not be living on campus, aware of OCE opportunities. The policy recommendations include the production and dissemination of information these students can use to navigate the employment application as well as the interview processes. The policy recommendations also focus on making those staff members charged with hiring student employees aware of the role OCE plays in the retention of first-year students.

# Section 3: The Project

Data analyses from this study indicated that OCE was a significant predictor of the retention of FTFT students. In this section, the selection of a white paper as the project genre is supported, and a description of the project and its goals are provided. A literature review was conducted that focused on the practical use of white papers as a means to introduce, promote, and justify policy recommendations as well as research on ways OCE may be used to increase retention. Ultimately, a white paper with policy recommendations, intended to be shared with stakeholders at a variety of levels within the institution, was created (Appendix A).

## Description and Goals

The goal of the white paper with policy recommendations is to educate stakeholders throughout the university about using OCE as a tool to retain students. The project goals are as follows:

1. Provide a background of the existing problem.

2. Present a summary of the study and findings.

2. Present evidence from literature that supports recommendations

4. Outline recommendations, linked to the evidence, for the intended audience.

## Rationale

With 38% of first-year students not returning for their second year at their starting institution (National Student Clearinghouse Research Center, 2018) and with national completion rates only rising slightly and equity gaps remaining (Martin, 2017; Sweat, Jones, Han, & Wolfgram, 2013), retaining FTFT students is a problem the higher

education community needs to address (Huie et al., 2014). The study findings that OCE was a significant predictor of retention for FTFT students suggest that OCE may be an effective tool for increasing retention. Effective communication and implementation strategies are crucial to mobilizing the full potential of OCE related to retention.

I have chosen to use a white paper to help stakeholders realize the potential value of OCE as a means for improving retention. White papers are a mechanism used to make available to constituents beneficial information and ideas that readers can use to better understand issues, solve problems, or perform better professionally (Pershing, 2015). Additionally, white papers have become common in a variety of professional environments (Willerton, 2012). A white paper is an appropriate strategy because authors of white papers use facts and logical arguments to recommend and endorse solutions to a specific problem (see Pershing, 2015).

## Review of the Literature

The literature review for this project provides information on white papers and how this approach with policy recommendations can be used to appropriately address the problem of retaining FTFT students. Included in this review of literature is information about the history, purpose, format, and benefits of white papers. The literature review supports the utilization of best practices to increase the retention of FTFT students.

I searched for peer-reviewed journal articles and studies using Google Scholar, ERIC, Education Source, ProQuest Central, and EBSCO. The list of searched terms included *white papers*, *on-campus employment*, *campus employment*, *student employment*, *integration*, *engagement*, and *retention*. The information presented is

primarily from sources published within 5 years of the completion of this study. There was a lack of scholarly articles written about white papers, so an Internet search was conducted to identify additional sources.

## White Paper History

It is commonly accepted that the white paper originated in England for the purposes of delivering governmental policy data (Willerton, 2012). These governmental reports are influential and educational in nature (Sakamuro, Stolley, & Hyde, 2018). Early government white papers were also described as position papers often filled in large-part with statistics, strategies, assessments, and approximations (Malone & Wright, 2018). While white papers are still used in government to explain public policy and present information on a variety of topics, the term *white paper* eventually started being applied to other nongovernmental types of works as well (Malone & Wright, 2018; Willerton, 2012). Marketing white papers has become common, especially for the purposes of technical promotion in high-tech industries (Malone & Wright, 2018; Willerton, 2012).

## Purpose of White Papers

Authors of white papers use facts and logic persuasively to recommend and endorse certain solutions to specific problems (Pershing, 2015; Sakamuro et al., 2018). White paper content includes helpful ideas and information that can be used to better understand issues, solve problems, or enhance job performance (Pershing, 2015). In an attempt to completely inform the target audience on a precise topic, expert knowledge is combined with research findings to argue for a specific solution or recommendation

(Cullen, 2018). This provides the reader(s) with an opportunity to make an informed decision on how best to solve a problem (Cullen, 2018).

White papers are commonly used in an assortment of industries and situations, for a variety of reasons (Naidoo & Campbell, 2014; Willerton, 2012). Political white papers regularly include background information and, at times, a formal statement of the government's reasoning (Willerton, 2012). The two primary functions of many technical and marketing white papers are to educate and persuade (Mattern, 2013). When used in the commercial setting, white papers have the potential to sway the decision-making processes of clients (Sakamuro et al., 2018).

It is common for companies to produce white papers as a way of marketing technologically advanced products and services (Naidoo & Campbell, 2014). Technology based white papers are used to produce interest and sales by educating the reader about innovations and technological advancements available for implementation (Malone & Wright, 2018). In general, white papers are used to help explain specific business approaches to constituents (Willerton, 2012).

**White Paper Format**

White paper authors often use a problem followed by solution format, making use of well-known facts and reasonable arguments (Pershing, 2015). For example, this format might include beginning the white paper with an abstract or short executive summary, stating the problem, providing background, and laying out a solution, followed by a conclusion and references (Cullen, 2018; Sakamuro et al., 2018). Another alternative is to begin by stating the problem, then providing evidence that the problem exists,

recognizing additional challenges, and offering a basic solution, followed by a specific solution (Mattern, 2013). One final, yet similar, formatting option identified by Malone and Wright (2018) is to identify the problem, suggest a solution, exert influence through education, provide a detailed description of the solution, compare the benefits of the solution with other options, and support assertions with data. Ultimately, much of the guidance available to help people learn to write white papers is based upon personal experience rather than an absolute set of formatting rules (Naidoo & Campbell, 2014).

Beyond formatting, Naidoo and Campbell (2014) made several recommendations to assist white paper authors. It is important to perform additional research and cite the sources used. Additionally, informative graphics can be an effective way to support the content of the white paper. Keeping the target audience in mind when making vocabulary decisions, including choosing not to use jargon and acronyms, is also included among the design strategies used to help readers successfully navigate the content of the white paper (Naidoo & Campbell, 2014).

**White Paper Benefits**

White papers can be used to educate and influence readers through content that is enlightening (Mattern, 2013). Change can be promoted through the use of a white paper by educating stakeholders about the findings of research. Therefore, a white paper is an appropriate medium for addressing the problem of retention, reporting the findings of my study, and suggesting a policy recommendation regarding OCE as a strategy designed to increase retention.

## How Theory and Research Support the Content of the Project

The process of writing a white paper includes searching for supportive ideas and evidence that can be used to better understand issues and solve problems. My recommendation to position OCE as a means to increase student retention stemmed from the results of my study and my search for innovative solutions that can be used to increase student retention.

## Strategies to Increase the Retention of First-Time Full-Time Students

Improving college completion, especially for low SES and first-generation students, is a significant challenge that needs to be solved for the benefit of individuals, the national economy, as well as a civil society (Martin, 2017; Perna, 2015). Included in the completion challenge facing higher education, is the retention of first-year students (Turner & Thompson, 2014).

## Engagement Through Mentorship

The first year of college is extremely important because it establishes a pattern for student success that will affect the rest of a student's college experience (Ribera et al., 2017). Research on student success over many years has indicated that academic and social integration are keys to success (Astin, 1984, 1993; Bean, 1982; Tinto, 1993, 2012). Tinto's (1993) interactionalist theory of student departure, upon which this study was based, stresses the importance of students integrating socially as well as academically. Sweat et al. (2013) further described this integration by stating,

> We define engagement as a set of experiences and perceptions that bring students and institutions into greater alignment, such that this is a match between student

> goals and institutional expectations; this requires the provision of opportunities to participate in activities that result in an increased student commitment to learning and pursuing a degree. (p. 3)

Thus, integration is entrenched in the concept of engagement (Sweat et al., 2013).

To promote higher rates of retention, it is important for students, especially those from groups who have historically experienced lower completion rates, to develop foundational relationships with faculty members, staff members, and other students that foster a sense of belonging early in their college careers (Ribera et al., 2017). Relationships with friends, teachers, and mentors are an essential component of a student's collegiate experience (Chambliss & Takacs, 2014). The most significant relationships students have are those that include meaningful personal and professional connections that last longer than one course or semester (Chambliss & Takacs, 2014). Having a significant relationship with a mentor is one of the most important predictors of student engagement and integration with an institution (Sweat et al., 2013). These meaningful relationships serve as a network that results in students feeling more connected to campus (Chambliss & Takacs, 2014).

Some opportunities designed to promote meaningful relationship building are easier to find than others, working in favor of certain types of students and against others (Chambliss & Takacs, 2014). Often, interactions that cultivate meaningful interactions occur face-to-face following formal programming related to shared interests like student organizations, sports, and music (Chambliss & Takacs, 2014). All students need to be

connected to these important opportunities (Chambliss & Takacs, 2014), but not all students have the time and resources necessary.

**High-Impact Practices**

High-impact practices (HIPs) are a set of interventions, first referred to by George Kuh when introducing the 2006 NSSE annual report, that nurture student learning and persistence (Kuh et al., 2017). What makes HIPs influential is that they encourage student engagement in meaningful experiences while at the same time making the campus environment seem more manageable and personable (Kuh et al., 2017). Included in the list of HIPs are first-year seminars and experiences, common intellectual experiences, learning communities, writing- and inquiry-intensive courses, collaborative assignments and projects, undergraduate research, diversity/study away/global learning, service-learning/community-based learning, internships and field experiences, capstone courses and projects, and ePortfolio (Kuh et al., 2017). Participation in HIPs, especially for students from historically underrepresented groups, has been associated with a variety of positive outcomes (Kuh et al., 2017).

From a random survey of 268 undergraduate students, Sweat et al. (2013) concluded that HIPs were effective mechanisms for increasing engagement levels and contributed to higher levels of retention and graduation, particularly for students who traditionally experience higher levels of attrition. Additionally, positive associations have been found between HIPs and the sense of belonging developed in first-year students (Ribera et al., 2017).

Although colleges are providing favorable environments for engagement, and despite their positive effect on student success, participation in HIPS remains inequitable with generally only a small subgroup of high-achieving students having access (Martin, 2017). Often those who could benefit most, including first-generation, low-income, transfer, Black, and Hispanic students, are the least likely to participate in HIPs (Kuh et al., 2017; Martin, 2017). Students of color and students with fewer financial resources are more likely to maintain social connections away from campus than their White peers (Chambliss & Takacs, 2014).

Students' need to support themselves financially results in students spending more time off campus, limiting involvement on campus (Martinez et al., 2012). Students who work large numbers of hours have less time to engage in student organizations and other activities outside of the classroom designed to promote the development of positive college outcomes (Martin, 2015). Conversely, students who work on campus increase their chances of connecting with faculty members and staff members, which has been positively associated with higher levels of student engagement, connectedness to campus, and degree attainment (Kuh, 2008).

HIPs should be considered when exploring ways to improve student engagement (Ribera et al., 2017). The current list of HIPs is likely to evolve and expand with OCE being a candidate for inclusion in the next generation of HIPS (Kuh et al., 2017).

**Engagement Through On-Campus Employment**

During the first 2 years of college, students should be discouraged from working more than 20 hours per week in off-campus jobs (Logan et al., 2016). Off-campus jobs

pull students away from campus while on-campus jobs have the potential to funnel students towards activities that deepen engagement (Fede et al., 2018).

Working on campus is positively associated with college outcomes, including skill development and retention (Athas, Oaks, & Kennedy-Phillps, 2013; Mitchell & Kay, 2013). However, despite the large numbers of students working, not much is known about the effects working has on student outcomes when compared to other avenues for experiential education (Fede et al., 2018; Sarreal & LePeau, 2018).

Working while studying can have both positive and negative outcomes (Creed, French, & Hood, 2015). Baert, Marx, Neyt, Van Belle, and Van Casteren, (2018) reported a negative relationship between academic performance and hours worked for students who were more oriented towards work than school. The University of Texas at Brownsville has a student body that is 93% Hispanic. Staff there noticed that students who worked 20 hours a week or more off campus identified themselves as workers more than as students. This resulted in students taking fewer classes and having lower completion rates. The Student Employment Initiative (SEI) was created to help students stay enrolled and graduate on time. As part of the SEI, students applied for campus positions associated with their academic majors. Employment supervisors received training that allowed them to serve as role models for mostly first-generation Hispanic college students. Working part time has become a critical component for selected students to stay in college and graduate on time (Stern, 2014).

In a qualitative study exploring how White, low-income, first-generation students experienced their social class during college, Martin (2015) found that students felt

overextended and overwhelmed due to the requirements of academics combined with the necessity of working. The number of hours students worked, particularly low SES students, affected how they experienced college (Martin, 2015). Students who work long hours may question whether they belong in the college environment due to being isolated socially (Martin, 2015).

In a study conducted to assess the outcomes associated with part-time student employment within a student affairs division at a large midwest university, students reporting a greater sense of belonging also reported higher levels of skills and traits associated with student success (Athas et al., 2013). A benefit of on-campus positions is that they seemed to offer more flexibility, making it easier for students to fit in work with classes (Martin, 2015). Working on campus also increased students' awareness of beneficial resources (Benjamin & McDevitt, 2018).

LaGuradia Community College implemented a program that uses students as technology mentors for faculty. The Student Technology Mentor (STM) program has provided rewards to the student mentors as well as the institution. Students involved with the STM program experienced higher retention and higher graduation rates than non-STM students of equal qualifications (Corso & Devine, 2013).

Colleges and universities looking to use OCE as a resource to facilitate student success are encouraged to consider whether institutional needs are being prioritized higher than student outcomes in regard to how OCE opportunities are operationalized (McClellan, Creager, & Savoca, 2018). In an effort to increase retention, supervisors should be encouraged to prioritize the development of positive relationships with student

employees that create a sense of belonging and increased engagement (McClellan et al., 2018).

## Project Description

In the white paper, I summarize the findings of my study and make policy recommendations designed to modify the current student employment program at the study site. If implemented, the recommendations will allow incoming students, especially low SES, first-generation, and racial and ethnic minority students, as well as those who may not be living on campus, to become more readily aware of employment opportunities that exist on campus. The policy recommendations include a review of student employee positions to determine those that are first-year friendly, meaning they are a good fit for first-year students, and the production and dissemination of information first-year students can use to identify opportunities, submit applications, as well as navigate the interview process. The recommendations also focus on making those charged with hiring and supervising student employees aware of the role OCE can play in the retention of first-year students. Finally, exploring ways to make student employment wages competitive with wages paid by off-campus employment opportunities is recommended.

The white paper with policy recommendations will be shared with a variety of stakeholders. The most prominent stakeholders include the university president, vice presidents for academic affairs, administration, and student life, and the executive director for enrollment management. The whitepaper will also be shared with the student employment coordinator.

**Needed Resources and Existing Supports**

Energy, expertise, time, and money are resources needed to make the project successful. Considerable energy and expertise are needed to establish the criteria used to determine if a position is first-year-friendly. The review of existing student employment positions will be time consuming. Financial resources, as well as time, energy, and expertise will be needed to produce the promotional materials required to increase awareness of OCE opportunities and the training materials needed to ensure effectiveness. Additional financial resources may be needed to increase pay for student employees if funds currently dedicated for OCE cannot be reallocated to fully accomplish the goals outlined in the project.

An existing support staff member for the project is the student employment coordinator. The role of the coordinator is to assist students in finding part-time jobs on and off campus to help offset educational expenses. If possible, the coordinator assists students in finding career-related work experiences. The student employment coordinator is responsible for ensuring university-wide compliance with student employment policies and procedures and also recommends and implements revisions to the policies and procedures. Finally, the student employment coordinator assists students in understanding their job responsibilities and commitments.

To fulfill the duties of the position, the student employment coordinator reviews all job descriptions, titles, and classifications. This person also prepares reports related to student employment and assists departments with their efforts to comply with regulations and policies by monitoring payroll and employment records. The coordinator is aware of

this study and has provided information, which has informed the recommendations presented in the white paper and will be instrumental to the implementation of these recommendations.

An additional existing resource is a newly formed committee focused on student employment on campus. The committee is comprised of representatives from campus units that employ the majority of students on campus including student life, residential living, memorial union, financial aid, student media, university bookstore, learning in the community, and library. The committee serves as a mechanism to share concerns and suggest improvements related to student employment.

**Potential Barriers**

Potential barriers to the policy recommendations include lack of funding and administrative support. Due to human and financial resources being stretched, possibly further than they have ever been before, there may not be new financial or additional human resources available to support the recommendations put forth in the white paper. In order to produce the suggested promotional materials and increase hourly rates of pay to make on-campus positions competitive with off-campus positions, it may be necessary to reallocate existing resources.

There is a chance that the review of current student employment positions may result in a number of first-year-friendly positions that is too low to meet the demand of students wanting to work on campus during their first-year. The lack of job availability may be the result of a list of duties that are not suitable for first-year students. Another factor to consider is that as more students are retained to the second year, there will be

fewer positions available because students working on campus the first year may want to continue working on campus during their second year and beyond.

Ensuring that there are enough positions available for students, especially during times students are available to work, is another important consideration. Many campus offices are only open between the hours of 8:00 am and 5:00 pm. It will be important that there are hours available to work on campus that support students' desire and necessity to work at night and on weekends.

**Potential Solutions to Barriers**

To overcome the potential barrier of lack of funding and administrative support, it will be important to educate and engage administrators in a way that builds support for the initiative. Administrative support of the recommendations is necessary to ensure there is enough buy-in to foster collaboration and resource sharing.

If the review of current student employment positions results in an insufficient number of first-year-friendly positions for students wanting to work on campus during their first-year, the option of adjusting position descriptions and job duties in a way that results in the position becoming first-year-friendly could be explored. Another possibility is to work with supervisors of positions that do not initially qualify as first-year-friendly to create training curriculums that would allow FTFT students to be placed in more complex positions. As more students are retained in their OCE positions, the creation of a system to connect current student employees with new positions that relate to their academic and career goals could be investigated. The goal is to ensure that there are enough positions available for FTFT students on an on-going basis.

To ensure there are enough positions available for students during times students are available to work, departments could be encouraged to explore the possibility of expanding service hours through the utilization of student employees. Expanding service hours will not only benefit student employees, it will benefit members of the campus community who are not able to access campus resources during traditional work hours.

## Proposal for Implementation

Table 10

*Timetable for Implementation*

| Task | Month/year of implementation |
|---|---|
| Existing positions review | April-May, 2019 |
| Increase student wages | April-June, 2019 |
| First-year-friendly graphic | April, 2019 |
| Role of campus employment presentation | April, 2019 |
| Promotional materials | April-May, 2019 |
| Implementation plan: Promotional materials | June, 2019 |

The university is currently implementing a new policy that will require FTFT students to live on campus during their first year. The implementation timeline outlined in Table 9 is designed to complement the rollout of the new live-on campus requirement. The requirement to live on campus will go into effect during the Fall 2019 semester. There are sure to be some students who feel they are better suited to live off campus. Those students will be allowed to apply for a housing exemption. Information about OCE opportunities should be sent directly to students applying for exemptions because they

plan to live with immediate family while attending school and/or those who would experience a financial hardship due to living on campus.

### Roles and Responsibilities

My role is to share the recommendations I have made based upon a comprehensive review of literature related to retention and student employment and the results of this study via the white paper. I will also be responsible for answering questions posed by stakeholders.

It will be the responsibility of the university president, vice presidents for academic affairs, administration, and student life, as well as the executive director for enrollment management to read the white paper. This group will also be charged with actively engaging in a discussion about the recommendations. The student employment coordinator may be responsible for leading the effort to implement any recommendations that are accepted.

## Project Evaluation Plan

Evaluation processes are embedded with principles that inform and guide decision-making, thereby indicating where attention should be focused (Patton, 2017). The project can be evaluated using a goal-based method of evaluation. Goal-based evaluation places emphasis on setting goals to increase effectiveness (Patton, 2017). This type of evaluation is appropriate because goal-based evaluation is used to evaluate if predetermined goals were met (Lodico et al., 2010). The goals of the project were to provide a background of the existing problem, present a summary of the data analysis and study findings, present evidence from the literature and research that support the

recommendations, and outline the recommendations for the intended audience. The project outcome can be measured by reviewing the content of the white paper and determining if the policy recommendations are implemented. Recommendations include reviewing existing campus employment positions, increasing student wages, creating a first-year-friendly graphic identifier, creating a presentation about the role OCE can play in retention, creating material used to promote OCE opportunities, and implementing the use of the newly created promotional materials.

## Project Implications

Too many students who begin college do not finish. Large numbers of students are failing to persist beyond the first year (ACT, 2017b; McFarland et al., 2018). This is particularly true for first-generation, low SES, and racial and ethnic minority students (Martin, 2017; Perna, 2015). Increasing the retention rates of first-year students is important for individuals, society, and institutions (Alarcon & Edwards, 2013; Barnett, 2011).

Student engagement is a key indicator of student success (Astin, 1984, 1993; Bean, 1982; Tinto, 1993, 2012) and it is important for students to establish mentoring relationships on campus early in their college career (Ribera et al., 2017). The fact that large numbers of students are working while studying is a barrier to student engagement (Martin, 2015). Based on a review of the literature and the results of this study, OCE can be positioned to help increase the retention of first-year students.

Institutions are searching for affordable strategies that are designed to help students succeed, while at the same time creating positive social change that is

advantageous to society and the institution. With renewed intentionality and purpose, OCE will become an innovative student success strategy available to large numbers of students, not just those on the margins. Individuals, society, and the institution will benefit from the positive social change created by retaining more FTFT students who eventually persist to graduation and become productive members of their communities.

# Section 4: Reflections and Conclusions

In this section, I discuss the strengths and limitations of the project in addressing the problem of increasing the retention of FTFT students and describe ways the problem could be addressed differently by recommending alternative approaches that could have been taken. I also reflect on my personal growth as a scholar, practitioner, and project developer. The importance of the work and implications for future research is addressed.

## Project Strengths and Limitations

I was interested in exploring the possibility of positioning OCE opportunities as an effective method of increasing the retention of FTFT students, especially first-generation, low SES, and racial and ethnic minority students. After performing a comprehensive review of the literature and analyzing the data from the study, I decided that writing a white paper would be the best way to present my recommendations.

A strength of the white paper, which will be presented to key members of the executive staff at the research site as well as the student employment coordinator, is that it serves as a mechanism to combine recent literature and study findings to provide context to both the problem and the recommendations. The white paper will be used to educate primary stakeholders about the results of my study, which revealed OCE to be a significant predictor of FTFT student retention at the local site. The white paper will also be used to influence readers by creating awareness of factors identified through a review of literature that affect retention and serving as a mechanism for providing recommendations to help mitigate some of those factors.

White papers can be used to educate, influence, and promote change through content that is enlightening (Mattern, 2013). Another strength of the white paper is that education of stakeholders may stimulate discussions regarding current campus employment practices as well as the possibility of getting more return on existing investments in campus employment by implementing the recommendations put forth.

Bringing a variety of issues to light by sharing the white paper with key members of the executive staff is an advantage because this group has the power to accept or reject the recommendations and control the human and fiscal resources needed for implementation. Distributing the white paper to the student employment coordinator is a strength because, if the recommendations are accepted, this is the person who will most likely be charged with implementation.

A limitation of using a white paper to share the results of this study and recommendations is that the primary stakeholders may not have the time available to read the paper. If the white paper fails to catch the attention of the intended audience due to topic, title, length, or other factor(s), it may not be read in its entirety. The discussion that takes place as a result of the white paper will not be as robust if stakeholders fail to read the entire paper. This places implementation of the recommendations at risk.

Another limitation is that secondary stakeholders, whose support will be needed at the grass-roots level to implement the recommendations, may not be sufficiently invested in the topic or the recommendations due to interest and/or capacity to read the white paper. The lack of interest or capacity may be related to factors such as not having the time available to tackle another project or initiative. The lack of interest or capacity may

also pertain to the lack of financial resources needed to implement the recommendations fully.

White papers can be an effective way to share information and influence, but they do not readily allow for a two-way exchange of information. Without following up with, and soliciting feedback from stakeholders, there is a risk that the white paper may not produce the intended results. Sharing information among stakeholders in a way that allows for conversation may be a better way to address factors related and unrelated to the white paper itself that need to be addressed before the project can be successful.

## Recommendations for Alternative Approaches

Participation in HIPs, especially for students from traditionally hard-to-retain groups, has been associated with a variety of positive outcomes (Kuh et al., 2017). The use of HIPS could be an alternate approach to increasing the retention of FTFT students. First-year seminars and experiences as well as learning communities are two HIPs currently offered at McGee University in which the majority of participants are FTFT students. A number of FTFT students also participate in service learning/community-based learning at McGee. These HIPS could be reviewed to determine how many students from historically hard to retain groups are taking advantage of, and thriving in, these programs. Strategies to break down barriers that prevent more FTFT students from taking advantage of HIPS and/or receiving the greatest possible benefit from participating, could be identified. Recommendations for improvements, modifications, and expansion could be made. In addition, the possibility of adding other HIPS designed to benefit students in their first-year could have been explored.

Another factor affecting the retention of FTFT students may be that students enrolling in the institution are not prepared to meet the requirements of higher education. This may relate to students' cognitive and noncognitive abilities that affect student success. Cognitive abilities are traditionally assessed through ACT scores and high school GPAs as part of the admission process. Therefore, using a mechanism such as the College Learning Effectiveness Inventory (Kim, Newton, Downey, & Benton, 2010) to identify noncognitive factors related to student success and creating a process for using the outcomes as an intervention strategy for at-risk students may be another alternative solution to the problem. Noncognitive factors assed via the College Learning Effectiveness Inventory include academic self-efficacy, organization and attention to study, stress and time press, involvement with college activity, emotional satisfaction, and class communication (Kim et al., 2010).

**Scholarship, Project Development and Evaluation, and Leadership and Change**

I have always considered myself as more practitioner than scholar. Over the course of my doctoral journey, I believe that I have made great strides as a scholar. I have gained the ability to read and review information more critically. Through the literature reviews I have completed, I learned where to gain access to peer-reviewed information that can either support ideas or offer alternative opinions to be considered.

The necessity to immerse myself in understanding and using APA style has provided me the ability to better present ideas through citing previous research. Equally important to this immersion is the improvement in my ability to consume information,

which includes the ability to dig deeper into complex issues and ideas by reviewing the source materials authors use to make their points.

My development as a scholar has provided me with skills and information to become a better practitioner. A noticeable difference is that after completing my doctoral journey, I find myself listening, absorbing, and working to consider alternative possibilities at greater levels before acting than I did before beginning this adventure.

I would be remiss if I did not reflect briefly on the challenges of completing a terminal degree. Due to an ever-increasing number of professional responsibilities and commitments, as well as the importance of my family to me, completing my course of study has been extremely challenging. Before I began working to earn my doctorate, I often wondered how so many people could be ABD (all but dissertation). If I were not such a persistent person driven by the social change implications of my study and career trajectory, it would have been easy to give up at several points throughout the process. As I am nearing completion, it seems the national debates over the value of higher education and the impact of overwhelming levels of student loan debt rage on. I find myself hoping the investment of time and resources I have made will be worth it. However, reflecting on my own challenges, hesitancies, and fears has made me even more passionate about helping those who have not had, or do not have, access to the resources they need to succeed.

## Reflection on Importance of the Work

The importance of the work was one of the primary factors that has allowed me to complete this study and project. One of the primary reasons I chose Walden University

was due to the emphasis placed on producing deliverables that can be used to facilitate positive social change.

Students are facing a number of barriers that make completing college difficult. Included among these challenges is the need to work while studying. It appears that working while in college has become the rule, rather than the exception to the rule. I am hopeful that my study will allow faculty members, staff members, administrators, and students to view student employment as an opportunity that supports student success and all the benefits that come from a more educated society, rather than simply a challenge that needs to be overcome.

## Implications, Applications, and Directions for Future Research

This study and white paper should lead to a greater understanding of some of the noncognitive challenges students, especially students from traditionally hard-to-retain groups, face when navigating the college experience. It is important to understand the varying demands students who work encounter on their educational journeys (Jacobsen & Shuyler, 2013).

Implementing the recommendations outlined in the white paper may allow the study site, as well as other colleges and universities, to use existing resources more efficiently. If postsecondary institutions are going to be successful in the future, ways to make better use of existing resources will be required. Being more intentional regarding OCE is a way to leverage resources in a way that will lead to the retention of more FTFT students.

Several opportunities for future research have been revealed through this study. Researching the sources of stress students who work face may indicate information that can be used to adjust campus employment structures to support student success without sacrificing productivity (Jacobsen & Shuyler, 2013). Another opportunity is to study whether OCE can provide meaningful learning experiences that connect with the academic and professional interests of students, similar to those available via internships and community engagement (Fede et al., 2018). Also, studying the possibility of structuring current and future HIPs in a way that results in more students being able to participate in them is a worthy avenue for future study (Kuh et al., 2017; Martin, 2017).

## Conclusion

If the United States and its citizens are going to prosper in the future, access to postsecondary education environments that cultivate learning and personal development for students of diverse backgrounds must be a priority (Kuh et al., 2017). Working while studying appears to be a widespread phenomenon compelled by necessity. Without significant changes to higher education funding sources like scholarships and grants, the student employment phenomenon will become a permanent feature in the higher education environment (Marland & Dearlove, 2013). Campus employment has a role to play in retaining students in higher education (Mitchell & Kay, 2013). It is time for universities to assist students in managing these dual roles (Marland & Dearlove, 2013).

A goal of this research was to determine if OCE was related to the retention for FTFT students. Study results revealed that OCE is a strong predictor of student retention at McGee University. Considering the number of college students working while

studying, as well as the challenges colleges and universities are facing due to increased expectations and decreasing resources, stakeholders at all levels should be encouraged to explore the possibility of structuring OCE opportunities in ways that support student success. I believe the policy recommendations made via the white paper will result in the retention of more FTFT students, especially those from groups that prior research indicated are traditionally hard-to-retain. Use of OCE as an intentional retention strategy has the power to produce positive social change by moving individual students, groups of people, and the institution toward a more optimistic future.

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Appendix A: Project

# Innovative Solution via an Existing Resource:

# Using On-Campus Employment to Increase Student Retention

Joel Bluml, MA

## Introduction

This white paper discusses how on-campus employment (OCE) can be more intentionally used to increase the retention of first-year students at a medium-sized, regional, open-access institution in the Midwest that will be called McGee University. Special emphasis is placed on strategies designed to reach low-income, first-generation, and racial and ethnic minority students.

A study was conducted to determine if OCE and student characteristics of first-generation, low socio-economic status (SES), and racial and ethnic minority status related to the retention of first-time full-time (FTFT) students. Additional student characteristics of gender, living on campus, and academic preparedness were included in the study as secondary variables of interest. The recommendations put forth were based on the findings of this study as well as an extensive review of the literature regarding retention, engagement, and student employment.

## The Problem

Improving college completion, especially for low SES and first-generation students, is a significant challenge that needs to be solved for the benefit of individuals, the national economy, as well as a civil society (Martin, 2017; Perna, 2015). Included in the completion challenge facing higher education, is the retention of first-year students (Turner & Thompson, 2014). As the number of individuals entering college has increased (Snyder & Dillow, 2015) and continues to grow (McFarland et al., 2018), the percentage of students leaving the institution in which they initially enrolled remains highest in the first year.

Nationally, between 19% (McFarland et al., 2018) and 30% (ACT, 2017) of first-year postsecondary students who enroll in public 4-year institutions fail to persist to the second year of college. Additionally, 44% of FTFT students enrolled in public 4-year open, or less selective, institutions during Fall 2015 failed to return to the same institution for Fall 2016 (ACT, 2017). At McGee University, approximately 30% of FTFT students fail to return for their second year of study.

| Retention of FTFT McGee University Students | | | | | |
|---|---|---|---|---|---|
| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| 66.7% | 64.5% | 65.5% | 68.4% | 71.9% | 72.7% |

***Note.*** **director institutional research McGee University (personal communication, January 29, 2019).**

When students depart from college early, they fail to capitalize on the opportunity to learn and the benefits that go along with accumulating increased knowledge and skills (Siegel, 2011). College degree completion has become essential to individual economic success (Alarcon & Edwards, 2013; Hout, 2012; Oreopoulos & Petronijevic, 2013; Wells & Lynch, 2012; Wolniak, Mayhew, & Engberg, 2012) and a societal necessity (Barnett, 2011; Habley, Bloom, & Robbins, 2012; Hout, 2012). Individuals who complete their degree are employed at higher rates, with higher salaries and better benefits (Alarcon & Edwards, 2013; Kena et al., 2016). In general, college graduates save more money, work in better conditions, are healthier, and have longer life expectancies than people who only receive a high school diploma (Habley et al., 2012).

Society, as a whole, benefits from an educated citizenry (Barnett, 2011). A sampling of the public benefits of higher education include: increased proceeds from taxes, higher production levels, greater consumption, less dependence on government funded programs, lower rates of crime, more charitable giving, and higher levels of community engagement (Habley et al., 2012). Additionally, educated citizens are less likely to take part in behavior detrimental to the common good (Barnett, 2011). Finally, the country needs more college graduates to meet workforce trends (Habley et al., 2012). It is projected that more than half of all new jobs will require some sort of postsecondary certificate or degree (U.S. Department of Education, 2011).


Low persistence rates also affect institutions negatively (Alarcon & Edwards, 2013; Turner & Thompson, 2014). Unrealized tuition, increased recruitment costs, and institutional resources lost through investments in tuition discounts, and decreases in university rankings are examples of the adverse effects of low persistence rates on institutions (Alarcon & Edwards, 2013; Habley et al., 2012). Retaining first-year students is particularly critical for institutional success (Turner & Thompson, 2014).

**Students at Risk**

Three populations likely to see lower than average retention rates include students who are classified as low SES or low-income (Chen & St. John, 2011; Tinto, 2012),

racial and ethnic minority (Engle & Tinto, 2008; Tinto, 2012; Watson, 2014), and first-generation students (Chen & St. John, 2011; Tinto, 2012). Efforts to increase retention rates are particularly important for these students (Kena et al., 2015).

There is a gap in college completion rates between high- and low-income students, especially at 4-year institutions (Kena et al., 2015; Tinto, 2012). According to the National Center for Education Statistics Longitudinal Study of 2002, only 14% of low SES students attained a bachelor's degree or higher within 8 years of graduating from high school (Kena et al., 2015).

Similar to the gap found between high- and low-income students, there is a gap in college completion rates between first-generation and non-first-generation students (Tinto, 2012; Wolniak, Mayhew, & Engberg, 2012). This is true even after controlling for income and ability (Tinto, 2012; Wolniak et al., 2012).

The completion gap also applies to racial and ethnic minority students. Over the course of the last 40 years, the percentage of U.S. college students from traditionally underrepresented groups has increased (Snyder & Dillow, 2015). However, though the percentage of racial and ethnic minority students has increased, there are still disproportionately lower numbers of students of color who earn their degrees (Table 1) at all levels of the U.S. educational system, including higher education (Weddle-West & Bingham, 2010).

Table 1

*Degree Holders and Completion Rates Based on Race/Ethnicity*

| Race/ethnicity | Percent aged 25-29 who earned a bachelor's degree [a] | 6-year graduation rates for FTFT bachelor's degree seeking students [b] |
|---|---|---|
| Asian/Pacific Islander | 63% | 70% |
| White | 43% | 63% |
| Two or more races | 30% | 67% |
| American Indian/Alaska Native | 15% | 40% |
| Black | 21% | 40% |
| Hispanic | 16% | 52% |

*Note.* [a](McFarland et al., 2018), [b](Snyder & Dillow, 2015).

While tuition and fees are often shown at the top of the list of challenges at-risk students face, there are additional obstacles these students must overcome. Expenses not covered by financial aid such as course materials and commuting costs are hurdles that must be navigated. These students also need to divide their time between competing interests like school, family, and working to care for family (Pierce, 2016).

Social class may be another barrier because students with less means may not have the time or resources to navigate the same spaces, in the same way, where students connect as those students with more resources (Chambliss & Takacs, 2014). Formal on-boarding activities may create opportunities for all students to interact in certain ways, but those opportunities do not necessarily continue past the official efforts of the institution. Students who miss those early opportunities to connect may struggle to make

those connections later on. This can have on-going consequences considering the roles peers play in the selection of majors and classes (Chambliss & Takacs, 2014).

With 38% of first-year students not returning for their second year at their starting institution (National Student Clearinghouse Research Center, 2018) and with national completion rates only rising slightly and equity gaps remaining (Martin, 2017; Sweat, Jones, Han, & Wolfgram, 2013), retaining FTFT students is a problem the higher education community needs to address (Huie, Winsler, & Kitsantas, 2014). If the United States and its citizens are going to prosper in the future, access to postsecondary education environments that cultivate learning and personal development for students of diverse backgrounds must be a priority (Kuh, O'Donnell, & Schneider, 2017).

**Students Working While Studying**

A large number of students are working for pay while attending college. Not only are more students working, they are working more hours than in previous decades (Frock, 2015; Logan, Hughes, & Logan, 2016; Neill, 2015). Working for pay has become common practice for today's college students (Fede, Gorman, & Cimini, 2018; Marland & Dearlove, 2013). As college costs escalate, even more students find working while in school necessary (Marland & Dearlove, 2013; Martinez, Bilges, Shabazz, Miller, & Morote, 2012).

Considering many students do not have the option to forego working, it is imperative that a variety of university personnel offer support and direction to working students through mentorship, tutoring, and campus programs. These efforts will assist

with enrollment and retention of students at-risk of not persisting at college (Martinez et al., 2012).

**The Effects of Working**

Working students report significantly lower levels of overall financial well-being, higher financial stress, and are less confident about their ability to complete college compared to their peers who do not work (Mukherjee, McKinney, Hagedorn, Purnamasari, & Martinez, 2017).

How much students work makes a difference. Working a large number of hours has been negatively associated with college success, while working fewer hours has been linked to positive academic outcomes (Huie et al., 2014; Theune, 2015). Students working more than 20 hours per week are less likely to persist than those who work fewer hours (Hovdhaugen, 2015; Logan et al., 2016). Generally, students working off campus 20 or more hours per week have GPAs that are relatively lower than students working fewer hours.

There appears to be a difference between working on campus and working off campus. While there may be no significant differences in GPA between working and nonworking students (Huie et al., 2014; Mounsey, Vandehey, & Diekhoff, 2013), students who worked on campus earned better grades during their first semester than students who worked off campus (Huie et al., 2014). Working on campus is positively associated with college outcomes, including skill development and retention (Athas, Oaks, & Kennedy-Phillps, 2013; Mitchell & Kay, 2013). Some researchers have suggested that during the first 2 years of college, students should be discouraged from

working more than 20 hours per week in off-campus jobs (Logan et al., 2016). Off-campus jobs pull students away from campus while on-campus jobs have the potential to funnel students towards activities that deepen engagement (Fede et al., 2018).

**Engagement**

Years of research on student success have indicated academic and social integration are keys to success (Astin, 1984, 1993; Bean, 1982; Tinto, 1993, 2012). Integration is entrenched in the concept of engagement (Sweat et al., 2013). As a variety of stakeholders continue to focus on increasing college completion rates, student engagement remains a positive predictor for achieving a college degree (Price & Tovar, 2014).

The first year of college is extremely important because it establishes a pattern for student success that will affect the rest of a student's college experience. It is crucial for students to develop a sense of belonging as they enter college. Students from historically underrepresented groups do not feel as connected to the institution and their peers as do students from majority groups (Ribera, Miller, & Dumford, 2017).

Similarly, results of a study of self-identified low SES students indicated social class was a significant predictor of lower levels of engagement and sense of belonging on college campuses, even when gender, race, and levels of parental education were taken into account (Soria & Bultmann, 2014). Lower-levels of social integration are experienced by low SES students due to commitments that limit the amount of time they spend on campus and a lack of financial resources, therefore reducing their opportunity for social interaction (Rubin & Wright, 2017). First- and second-generation Hispanic

students have reported similar struggles related to finances and adapting to the university setting (Kouyoumdjian, Guzman, Garcia, & Talavera-Bustillos, 2017).

To promote higher rates of retention, it is important for students, especially those from groups that historically have experienced lower completion rates, to develop foundational relationships with faculty members, staff members, and other students that foster a sense of belonging early in their college careers (Ribera et al., 2017). Relations with friends, teachers, and mentors are an essential component of a student's collegiate experience (Chambliss & Takacs, 2014). The most significant relationships students have are those that include meaningful personal and professional connections that last longer than one course or semester (Chambliss & Takacs, 2014). Having a significant relationship with a mentor is one of the most important predictors of student engagement and integration with an institution (Sweat et al., 2013). These meaningful relations serve as a network that results in students feeling more connected to campus (Chambliss & Takacs, 2014).

Some opportunities designed to promote meaningful relationship building are easier to find than others, working in favor of certain types of students and against others (Chambliss & Takacs, 2014). Often, interactions that cultivate meaningful interactions occur face-to-face following formal programming related to shared interests like student organizations, sports, and music (Chambliss & Takacs, 2014). All students need to be connected to these important opportunities (Chambliss & Takacs, 2014), but not all students have the time and resources necessary.

## High Impact Practices

High-impact practices (HIPs) are a set of interventions, first referred to by George Kuh when introducing the 2006 National Survey of Student Engagement annual report, that nurture student learning and persistence (Kuh et al., 2017). What makes HIPs influential is that they encourage student engagement in meaningful experiences while at the same time making the campus environment seem more manageable and personable (Kuh et al., 2017). Included in the list of HIPs are first-year seminars and experiences, common intellectual experiences, learning communities, writing- and inquiry-intensive courses, collaborative assignments and projects, undergraduate research, diversity/study away/global learning, service-learning/community-based learning, interns and field experiences, capstone courses and projects, and ePortfolio (Kuh et al., 2017). Participation in HIPs, especially for students from historically underrepresented groups, is associated with a variety of positive outcomes (Kuh et al., 2017).

In a random survey of 268 undergraduate students, Sweat et al. (2013) concluded that HIPs are effective mechanisms for increasing engagement levels and contributed to higher levels of retention and graduation, particularly for students who traditionally experience higher levels of attrition. Additionally, positive associations have been found between HIPs and the sense of belonging developed in first-year students (Ribera et al., 2017).

Although colleges are providing favorable environments for engagement, and despite their positive effect on student success, participation in HIPs remains inequitable, with generally only a small subgroup of high-achieving students having access (Martin,

2017). Often those who could benefit most, including first-generation, low-income, transfer, Black, and Hispanic students, are the least likely to participate in HIPs (Kuh et al., 2017; Martin, 2017).

HIPs should be considered when exploring ways to improve student engagement (Ribera et al., 2017). The current list of HIPs is likely to evolve and expand with OCE being a candidate for inclusion in the next generation of HIPs (Kuh et al., 2017). This is important because many students are not able to participate in HIPs because they need to work (Fede et al., 2018). Additionally, students of color and students with fewer financial resources are more likely to maintain social connections away from campus than their White peers (Chambliss & Takacs, 2014).

Faculty members, staff members, and administrators who employ students should consider the extent to which campus jobs could be structured to include elements of HIPs (Savoca, 2016). OCE may be a mechanism to connect students to resources designed to support their success.

## The Study

A nonexperimental quantitative retrospective prediction research design was used to determine if on-campus student employment and student characteristics of first-generation, low SES, racial and ethnic minority status, gender, living on campus, and academic preparedness were related to the retention of FTFT students enrolling in the fall semester at McGee University. The sample included a total 2,289 FTFT students enrolled in the Fall 2013, 2014, and 2015 semesters. Of those, the students employed on campus at any point during their first year totaled 470. Due to missing cases noted for the

predictor variables first-generation (187), racial and ethnic minority (553), and academic preparedness (99), a total of 707 (30%) missing cases reduced the total number of cases included in the analyses from 2,289 to 1,582.

**Results**

Three separate binary logistic regression analyses were performed as part of this study. The first analysis included all the predictor variables. When all predictor variables were included in the model, first-generation, low SES, and racial and ethnic minority status were not found to be significant predictors of retention. However, OCE, gender, and academic preparedness were identified as significant predictors of retention.

For the second logistic regression, students who did not work on campus during their first year were selected as the cases for analysis. For students who were not employed on campus, two predictor variables were identified as significant, living on campus and academic preparedness.

The third logistic regression focused on students who were employed on campus. Academic preparedness was the only significant predictor of retention for students who worked on campus during the first year. This finding is interesting because although living on campus was found to be a significant predictor of retention for students who did not work on campus during their first year in college, it was not a significant predictor of retention for students who did work on campus. This is important because the factors that result in students needing to work may also limit students' ability to live on campus, making it more difficult for them to engage with the institution. Figure 1 depicts the increased likelihood of retention of students who were employed on campus, students

who were not employed on campus, and all FTFT students in the study for each of the three significant predictors, academic preparation, living on campus, and working on campus.

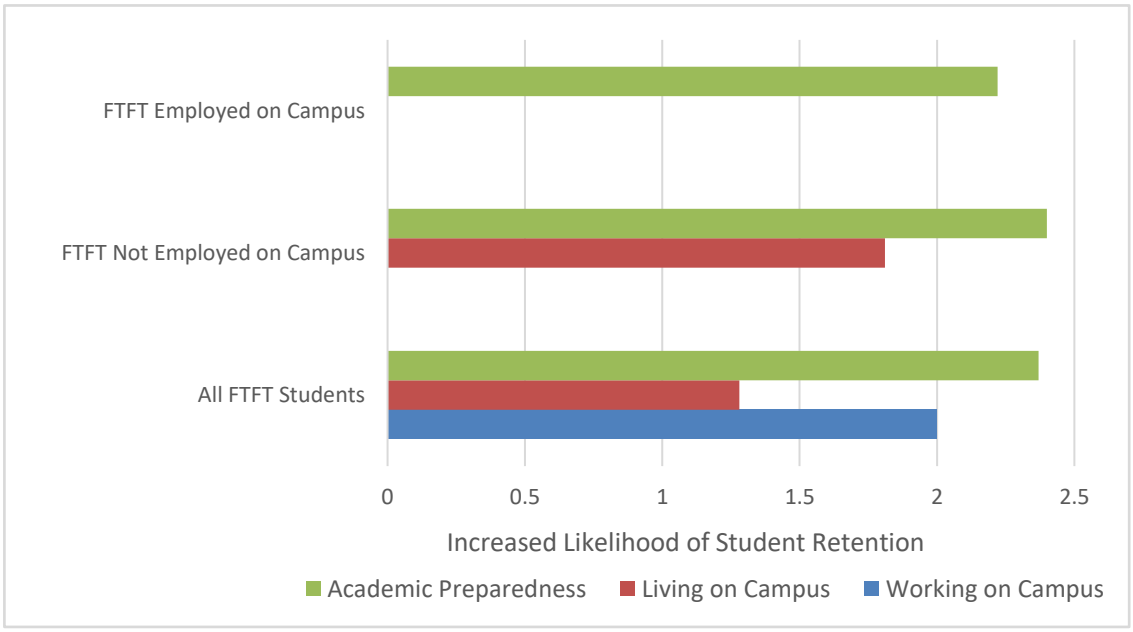


Figure 1. Significant predictors of retention for FTFT students

**The Benefits of Working on Campus**

Students' need to support themselves financially results in students spending more time off campus, limiting their involvement on campus (Martinez et al., 2012). Students who work large numbers of hours have less time to engage in student organizations and other activities outside of

STUDENTS WHO WORK ON CAMPUS HAVE A BETTER CHANCE OF BECOMING ENGAGED ON CAMPUS. BECOMING ENGAGED ON CAMPUS IS IMPORTANT FOR STUDENT SUCCESS!

GEORGE KUH

the classroom designed to promote the development of positive college outcomes (Martin, 2015). Conversely, students who work on-campus increase their chances of interacting with faculty members and staff members, which has been positively associated with higher levels of student engagement, connectedness to campus, and degree attainment (Kuh G. D., 2008). Working on campus eases the burden of commuting to off-campus jobs (Stern, 2014), which provides students with more time to engage in activities complementary to student success.

Results from a study about student development at a large midwestern university indicated that campus employment can provide settings in which students can apply knowledge, acquire proficiencies, and form solid foundations for the future (Athas et al., 2013). Working on campus provides students with convenient access to academic support services as well as work settings applicable to their field of study and complementary to their career goals (Huie et al., 2014).

**On-Campus Employment as a Retention Strategy**

Working while studying appears to be a widespread phenomenon compelled by necessity; it is time for universities to assist students in managing these dual roles (Marland & Dearlove, 2013). Campus employment has a role to play in retaining students in higher education (Mitchell & Kay, 2013). Allowing students to earn money while working on campus helps to reduce the total costs associated with college. Easing the financial burden students face helps to facilitate college completion (Mukherjee et al., 2017).

Students who work on campus can be encouraged to make decisions that are in their best interests and avoid making decisions that will negatively affect their college experience. Considering students should be discouraged from working more than 20 hours per week during their first 2 years of college (Logan et al., 2016), campus employment supervisors can have conversations with students about the importance of balancing work with studying, engaging in campus activities, and socializing.

Based on the results of this study and what is known from the literature, I am recommending that student employment practices on campus be modified in a way that results in first-year students, especially those who may not be living on campus, becoming more aware of OCE opportunities. I am also recommending the development of training materials focused on making those charged with hiring and supervising student employees aware of the role OCE plays in the retention of first-year students.

**Being Intentional about On-Campus Employment Works**

The LaGuradia Community College Student Technology Mentor (STM) initiative, a program that uses students as technology mentors for faculty, serves as an example of campus employment done well. The STM program has resulted in successful outcomes for the student mentors as well as the institution. Students in the STM program experienced higher retention and higher graduation rates than non-STM students of equal qualifications (Corso & Devine, 2013).

The University of Texas at Brownsville has a student body that is 93% Hispanic. Staff members there noticed that students who worked 20 hours a week or more off campus identified themselves as workers more than as students which resulted in students

taking fewer classes and having lower completion rates. The Student Employment Initiative (SEI) was created to help students stay enrolled and graduate on time. As part of the SEI, students apply for campus positions associated with their academic majors. Employment supervisors receive training that allows them to serve as role models for the mostly first-generation Hispanic college students. Working part time has become a critical component for selected students to stay in college and graduate on time (Stern, 2014).

### Mentorship

Mentorships, especially those that last longer than one term and entail meaningful personal and professional connections, are valuable to students (Chambliss & Takacs, 2014). Interpersonal interactions and relationships, especially those that take place face-to-face influence the choices students make in college (Chambliss & Takacs, 2014). OCE can be a catalyst for mentorship because students can make connections to mentors through employment for multiple semesters. Mentors can be faculty members and staff members as well as other students. It is important that student employee supervisors be encouraged and supported as potential mentors (Frock, 2015; McClellan, Creager, & Savoca, 2018).

## The Solution

To increase the retention of FTFT students, it is important to employ more students on campus. According to the student employment coordinator, there are currently positions available at the university that are going unfilled (personal

communication, September 26, 2018). This indicates that the capacity already exists to employ more students.

In the recommendations listed below, I propose the more efficient use of university resources dedicated to employing students and meeting the demands of units employing students. Implementation will prove to be an innovative strategy that better uses existing resources and will result in the retention of more students.

Additionally, beginning in the Fall 2019 semester, all FTFT students will be required to live on campus unless they apply for, and are granted, an exemption. Exemptions may be granted to students already living close to campus or who face financial and family circumstances that make living on campus a challenge. It can be anticipated that many of those requesting exemptions may benefit from connecting to campus via student employment. The recommendations presented here align with the new live-on requirement policy.

**Recommendation 1: First-Year-Friendly Positions**

All student employment positions should be reviewed and a determination should be made if they are a good fit for first-year students. Units should be encouraged to create opportunities suitable for first-year students. Those positions found to be a good fit for first- year students should be labeled *First-Year-Friendly*. A graphic identifier that makes First-Year-Friendly positions easily identifiable should be created and used in promotional materials.

**Recommendation 2: Promotional Materials**

Materials promoting student employment opportunities and their value should be developed. These materials should be produced using quality materials and formatted in ways that resemble other resources used by the university to recruit new students. Materials must be produced in formats that can be shared electronically as well as via hard copy.

**Recommendation 3: Targeted Promotion**

The possibility of working on campus should be promoted during the recruitment and on-boarding process. Students who qualify for a Pell grant, qualify for federal work-study, self-identify as first-generation or racial and ethnic minority students, or indicate they will not be living on campus should be sent information about student employment directly. Additionally, the student employment materials discussed in the first policy recommendation should be shared with high school guidance counselors, especially those who work in schools that serve large numbers of low-income, first-generation, and racial and ethnic minority students.

**Recommendation 4: Educating Stakeholders**

A presentation regarding the role student employment can play in student success should be developed. The presentation should be recorded so it can be viewed online by high school guidance counselors, parents, and other stakeholders. Attending this presentation, in person or online, should be required for all employees who supervise students. Federal work-study funds should not be released to departments without a

trained representative. Student employment supervisors who attend the presentation should be recognized for their efforts.

**Recommendation 5: Increasing Student Wages**

The university should discover ways to increase student employee wages so they are competitive with off-campus employment opportunities. Using existing resources more efficiently, the possibility of identifying new sources of funds, and potential changes to the minimum wage are all factors that should be considered and explored.

## Conclusion

Too many students who begin college do not finish. Large numbers of students are failing to persist beyond the first year. Increasing the retention rates of first-year students is important for individuals, society, and institutions.

Student engagement is a key indicator of student success. Many colleges and universities have made significant investments in initiatives to increase levels of engagement. This is particularly challenging because many institutions are already struggling to meet demands during a time when resources and budgets are shrinking or being stretched farther than ever before. Unfortunately, not enough students have the opportunity to participate in these programs.

The fact that large numbers of students are working while studying is a barrier to student engagement. Based on a review of the literature and the results of this study, on-campus student employment can be positioned to help increase the retention of first-year students.

Institutions are searching for affordable strategies designed to help students succeed. With renewed intentionality and purpose, McGee University can be on the leading edge by using student employment as an innovative student success strategy available to large numbers of students, not just those on the margins.

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