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Walden University

College of Education

This is to certify that the doctoral study by

Tamara Miles Gantt

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2020

Abstract

The Association between Success Center Utilization and a Technical College's Student
Retention

by

Tamara Miles Gantt

MA, University of Alabama at Birmingham, 2000

BA, Jacksonville State University, 1997

Project Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

Walden University

April 2020

Abstract

This study was conducted to examine the association between the Student Success Center and student retention at a South Carolina technical college. Recognizing the low retention rates of technical colleges in South Carolina and nationally, the college opened a Student Success Center in 2012; however, an analysis of the center's effect on retention rates had not been conducted. With a better understanding of this relationship, the college can plan for future use of the center to strengthen retention. The key research question was focused on the association between Student Success Center attendance and student retention using an ex post facto design involving two dichotomous variables: attendance at the Student Success Center and retention over 3 years. A sample of 18,712 students was drawn from archival data maintained by the college to compare students who used the center and those who did not use the center, excluding transfer students and middle college students. Frequency percentage statistics were generated for the two dichotomous categorical variables in the study: center utilization and retention. Chi-square analysis with Yates correction was used to test for a significant association between the two variables. Findings showed evidence of a statistically significant association between center utilization and retention, $\chi^2 (1) = 162.23, p < 0.0001$, indicating that student engagement with the Student Success Center contributed to resiliency as reflected in student retention. Therefore, this study contributed to research on the association between student support services for community college students and student retention, encouraging social change by strengthening practical solutions to the challenges faced by these students.

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Dedication

This work is dedicated to the technical and community college students of South Carolina, who often face numerous challenges to their academic goals. May you find the support you need and keep your eye on the target. You can do this!

Acknowledgments

To my wonderful family: David, Jillian, and Dad, I appreciate the encouragement you have provided during the many months that I have been focused so intently on this work. You are more important to me than this work, but I know sometimes you must have wondered. I also appreciate the efforts of my original doctoral chair, Dr. Kerry Burner, my present chair, Dr. Stacy Wahl, and my Approved Member Methodologist, Dr. Carole Pearce. In addition, Dr. Richard Hammett, my URR, has been of considerable assistance. To my employers, I hope that this study is what you hoped it would be and that you find it worthy of the investment that it required. To my friend Tracey, who stepped in when I thought I couldn't finish: I don't know how to thank you in words, so please hear my heart.

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Section 1: The Problem

Introduction

This study was conducted to examine the association between utilization of the Student Success Center and retention of students at a South Carolina technical college to better allocate resources for the most viable programs at the college. Despite interventions to keep students enrolled and help them reach their academic goals, students' departure from the college continued to be a problem, and stakeholders continued to seek solutions. For instance, administrators sought to gain a better understanding of how students achieve and recognize their own empowerment in the academic environment as they advanced toward new careers or enhanced their current employment opportunities. This study addressed how student support initiatives were associated with student retention.

Definition of the Problem

The 16 state technical colleges in South Carolina have an average fall-to-fall semester student retention rate of 51.7%, as reported by the South Carolina Higher Education Statistical Abstract (Armour, 2017). Additionally, in 2018, South Carolina's technical colleges were ranked as 39th out of the 42 states that received a ranking, which was determined by retention, graduation rates, and post-graduation salary (Daprile, 2018). The South Carolina Commission on Higher Education also reported in 2017 that of an initial degree-seeking cohort of 437 full-time, first-time students at the study site entering in fall of 2013, only 12.6% graduated with a certificate, diploma, or degree

within 150% of the normal time for completion (Armour, 2017). However, the problem of low retention is not unique to South Carolina; the average fall-to-fall retention rate for all 2-year public institutions in the United States in 2013 was 58.2% (Snyder & Dillow, 2015). In 2017, the trend was slightly higher at 62.3% (National Center for Education Statistics, 2019). Comparatively, the full-time retention rate in all United States postsecondary institutions reported in 2017 was 75.4% (National Center for Education Statistics, 2019).

Part of the reason for retention may be that many first-time community college students are under-prepared for higher education or online course work (Travers, 2016). Grades, remedial courses, class preparation, student income, and parental educational achievements affect retention (Pruett & Absher, 2015). Additionally, the role of holistic systems in retaining students is important for students to develop social skills along with academic and career preparation to maximize the likelihood they will stay in college (Jennings, 2017). When students are unable to complete their degrees or other educational goals, they and their families may be devastated (Pruett & Absher, 2015). Thus, retention can have significant consequences, and colleges continue to work on how to best avoid losing students.

Rationale

Evidence of the Problem at the Local Level

According to the college's website, the college's mission is to provide relevant training and education in a flexible environment that promotes success and self-reliance and fosters economic development for the region. Serving many low-income students,

first generation students, and non-traditional students, college stakeholders sought to understand how best to prepare students with the learning and employment skills needed for career success, as noted by the vice president of Academic Affairs. Retention for this college from fall 2012-2013 was slightly above the state average, at 51.3%; from fall 2014-2015, the retention rate was reported as 50%; and from fall 2016-2017, the rate rose slightly to 52.38% (College Website, 2019). The state and the local area commission provide guidelines for the college's goals and responsibilities, expecting the college to create programs that prepare students for occupations in the community.

To ascertain local employment needs, the college has regularly examined the environment and the changing demographics of the two primary counties that it serves. For instance, as a 9-year recipient of Perkins funding, the college is expected to provide programs and activities for populations such as students with disabilities, those who are economically disadvantaged, those entering nontraditional fields, single parents and single pregnant women, displaced persons, and those who have limited English language proficiency (PCRN2018; Perkins Collaborative Resource Network, 2019; U.S. Department of Education, 2019). These activities include transportation, tutoring, and work-based experiences, as students need to have equal access to resources like career exploration, technology, counseling, and academic support (U.S. Department of Education, 2019). The college must also clearly indicate how it is preparing special populations for high-demand jobs in which they may expect higher wages and employ higher-level skills (U.S. Department of Education, 2019). Special population students must have equal access to career exploration, counseling, and development resources and

exposure to technology as well as educational resources along with advising and other types of academic support (U.S. Department of Education, 2019). The grants coordinator at the college stated that as a leader college in a national program called *Achieving the Dream*, the college subscribes to improved course completion rates, success in remediation, semester-to-semester persistence, and student completion of degrees or certificates.

Additionally, the strategic plan for 2012-2017 was focused on delivering student-centered services and programs that optimize intellectual growth and on creating an environment in which efficiency, effectiveness, and commitment are valued (College Website, 2019). One of the key goals was to develop, strengthen, and expand services and programs to increase retention. Based on information in college documents, the college set forth objectives for improving retention by using new research strategies to obtain data for better placement of students and more targeted ways of meeting student needs. Program directors were encouraged to continually monitor retention efforts and keep exploring options for increasing retention, including obtaining grant funding for specific activities.

To meet the challenges outlined in the strategic plan, in August of 2012, the college established a Student Success Center offering individualized personal, academic, and career counseling services, including retention counseling. When students go to the center, they are first greeted by a student worker and asked what service they are looking for (use of computer, tutoring, computer assistance, registration, Free Application for Federal Student Aid [FAFSA], career assessment, resume review, job search or job

coaching, and study skills assistance.) Students are provided with individual study skills coaching sessions and individual plans for academic success as needed. The center's most important work, according to an employee of the center, is providing a holistic support network for students that includes academic support/tutoring, computer resources, financial assistance via scholarships, and networking with community organizations such as South Carolina Help, a foreclosure prevention program.

The center opened in the fall of 2012. At that time, funding came from a Department of Labor grant primarily focused on employment, soft skills, computer programs for the workplace, and general resources for being successful at work. The staff discovered through this work that most barriers for students presented as life issues. Visiting students were tracked by student identification number and by the services they requested, including applications for financial assistance. Some of the applications indicated their issue with transportation or other financial difficulties. For example, often students could not afford books, childcare, transportation, and other necessities. The center started integrating assistance from community organizations and financial aid from the college foundation as well as other outside sources. Initial grant funding ended in the fall of 2014, and by then the center was partially funded by a new grant as well as by direct financial support from the college.

Given the many services provided by the center, the college expected to see improvement in student retention, but retention rates have remained consistent. The most recent retention rate reported by the state system for this college from fall 2012-2013 was slightly above the state average at 51.3%; from fall 2014-2015, the retention rate was

reported as 50%; and from fall 2016-2017, the rate rose slightly to 52.38% (College Website, 2019). However, it was unclear whether there was an association between the Student Success Center and individual student retention.

Evidence of the Problem from the Professional Literature

In 2020, research has indicated that 35% of new jobs will require a bachelor's degree, and 30% will require an associate degree or some college-level training (Carnevale, Smith, & Strohl, 2019). Meanwhile, state and federal governments have presented mixed messages about the types of training and education that should be developed and provided, at times emphasizing high-technology jobs and at others more traditional lower-skill labor (Grover & Miller, 2018). However, if students never begin college, or do not complete their college education, there will be a gap in skills.

Additionally, when students drop out, institutions incur costs beyond loss of revenue, especially when advisors and administrative staff have invested time helping those students (Wladis, Wladis, & Hachey, 2014). The problem is further complicated by a systemic failure of support for teachers and learners that undermines employment concerns as well as the efforts of students and society to rise above limitations (Hora, Benbow, & Oleson, 2016).

Although researchers often point to individual student characteristics, such as motivation and study habits, as key factors in retention, latent factors such as these are difficult for colleges to address (Wladis et al., 2014). The ongoing narrative regarding a skills gap also tends to minimize classroom issues and the need for a more balanced and comprehensive vision of addressing the challenges facing higher education (Hora, et al.,

2016). For instance, educational institutions often do not engage students in the individual constructive process of learning because they are focused on standardized learning outcomes (Cavicchi, 2017). Furthermore, higher education has become an accelerated pathway to a career, with employers laying out specific skill sets to fill the demand for jobs and expecting colleges to teach to these requirements (Lowry & Thomas-Anderson, 2017). But students need an environment where they can examine and address their uncertainties and over time construct and revise their learning (Cavicchi, 2017). The teacher or tutor in this environment is a co-investigator; as students gain trust in the process and the staff, they become more willing to be vulnerable and responsive to suggested methods of knowledge and skill building (Cavicchi, 2017). A centralized support center can provide this type of environment that addresses academic goals, social connections, short- and long-term commitment, and a developing interest in what students are learning.

Along with an investigative environment, students appreciate continuity and vibrant interaction as well as facilitation of learning that aligns with their aspirations (Cavicchi, 2017). Students' curiosity begins to evolve in an environment in which the academic mission is to explore several ways to approach a challenge and turn it into an opportunity for transformation. Further, it is important for students to experience some level of success, otherwise they may quickly become discouraged and drop out (Tinto, 2013). Students who are initially motivated to transfer to a 4-year university often delay or do not make the transition as their aspirations are lowered over time (Wang, Lee, &

Prevost, 2017). Therefore, it is important to provide targeted support during the first few years of college, and that is what the Student Success Center is designed to do.

Ideally, the college's efforts to support students are strengthened by familial support. Family encouragement and support is important to student success, especially holistic support (Quinn, Cornelius-White, MacGregor, & Uribe-Zarain, 2019). Additionally, although family contribute to a student's sense of power, they also contribute to his or her perceived load (Quinn et al., 2019). Students sometimes experience the demands their family puts on them as well as familial pride (Quinn et al., 2019). They feel both obligated and grateful to their families, aware that parents and others have made sacrifices so that they might pursue college (Borjian, 2018). This may be especially true of minority groups and other groups with special circumstances. In a study of undocumented first-generation students, participants repeatedly referred to the role of others in supporting their dream and claimed that their desire to achieve was a way of demonstrating their gratitude (Borjian, 2018). This is evidence that student success is a co-construction of individual effort and support systems.

Co-construction of learning provides a type of structural integrity that supports the goals and outcomes of a student support program. Transformative thinking and learning help students thrive and overcome obstacles to their persistence and retention (Cavicchi, 2017). The transformative work must be grounded in goals but exploratory for achieving them. These tasks are elements of a learning architecture, which requires an investment on the part of the college and its resources (Cavicchi, 2017). Higher education

institutions are under pressure to prove that their programs are viable and that they directly impact outcomes (Soria, Fransen, & Nackerud, 2013).

As a part of addressing whether programs are meeting standards, colleges evaluate programs. Program evaluation sometimes involves conflicts between the aims of different stakeholders, but a solid framework that balances institutional values and program support can lead to solutions to issues such as a need for better representation (Schweigert, 2007). Evaluation also requires setting up specific criteria by which stakeholders can measure a program's effectiveness (Schweigert, 2007). Incorporating student, administration, faculty, and staff perspectives can contribute to effective program evaluation and the development of stakeholder consensus regarding desirable outcomes of the curriculum, principles that should be followed, and necessary resources (Moore, 2018). Ideally, an educational program includes a common space that is liberating rather than confining (Cavicchi, 2017).

For the college under study to consolidate its level of commitment to the Student Success Center, it first needed to examine the association between center utilization and student retention. Interested stakeholders included college administrators, the state technical college system, students, future researchers, and the community of potential students and their families. The purpose of this study was to investigate the association between student participation in the Student Success Center and retention at the college to see whether there is a relationship between the center's support efforts and student retention.

Definition of Terms

The following definitions serve to inform this study:

Academic capital: Academic capital is formed from information transmitted to students by family and schools through social processes that contribute to understanding of how to navigate educational institutions and systems. It has also been described as an institutionalized form of cultural capital (Bourdieu, 1986; St. John, Hu, & Fisher, 2010; Zaichenko & Vinokurov, 2018).

Attrition: Attrition is the term used to describe the failure of students to reenroll at a college from one semester to the next or as the result of students withdrawing from or dropping out of college (McMahon, 2018).

Career capital: Career capital is the accumulated skills and knowledge associated with career readiness that students obtain during their college experience and an individual's intersection with work over time. Career is viewed as the path an individual pursues with work over time (Stuart, Rios-Aguilar, & Deil-Amen, 2014; Tempest & Coupland, 2017).

Graduate production rate: The graduate production rate is calculated as the unduplicated graduate headcount divided by the fall term unadjusted Full Time Enrollment. It is a measure that reflects the college's fulfillment of its workforce development mission (College Website, 2019).

Human capital: Human capital encompasses the skills collectively represented by the labor force due to an investment in individual education and training (Goldin, 2014).

Nontraditional student: A nontraditional student is typically defined as a student over the age of 24 who has work and family obligations and other concerns that could potentially interrupt completion of educational goals (National Center for Education Statistics, 2019.).

Persistence: Persistence is the term used to describe a student's ability to maintain enrollment in higher education from his or her admission to completion of a specified academic goal (Adrogué & de Fanelli, 2018). According to college documents, the formula for fall-to-spring persistence rates at the college under study is the number of spring term students who were also present in the fall term divided by the total credit students at the end of fall term minus students who graduated before spring term. The student success rate has decreased slightly each year, despite efforts to improve these numbers.

Retention: According to the director of the Office of Institutional Readiness, retention is an institution's ability to continuously enroll a student from admission to completion of a specified academic goal; the college under study considers retention as fall-to-fall enrollment for the period of 1 year.

Social capital: Social capital is the development of an individual's knowledge of social skills and awareness collected from a community (such as college) in which he or she developed relationships with others (Dukhan, Cameron, & Brenner, 2012; Maunder, Cunliffe, Galvin, Mjali, & Rogers, 2012).

Student success center attendance: Attendance is operationally defined by whether a student checked into the Student Success Center.

Student success rate: The student success rate is a cohort-based measure of graduation, tracking first-time freshmen (full time and part time) who complete college within 150% of time intended by the institution for program completion.

Tagging: Tagging is using a system of key words as a means of organization for searchable information. Tags provide clarification and consistency in naming activities involved in a process (Dennen, Bagdy, & Cates, 2018).

Traditional student: A traditional student is typically defined as a student between the ages of 18 and 24 with few work and family obligations or other concerns that could potentially interrupt completion of educational goals (National Center for Education Statistics, 2019).

Significance of Study

The vice president of Academic Affairs explained that many of the college's students face complex personal and academic challenges that contribute to attrition. A recent Office of Institutional Effectiveness report based on surveys of all degree/certificate-seeking undergraduate students (full- and part-time) entering the institution and attempting credits for the first time during the fall term indicated that organizational threats included the following: limited transportation for rural students, poor preparation for college, poor academic progress, risk of losing financial aid, and decreases in retention and success (College Document, 2014, 2019). Additionally, half of the students who attend the college must take a developmental level English, reading, and/or math course, and the number of students who successfully complete these courses is not as high as desired (College Document, 2014, 2019). Further, according to college

documents, for the years 2011-2014, and 2015-2018, the success rates for these courses ranged from 49% to 78%, with the lowest scores being in English and reading (College Document, 2014, 2019). In addition, the graduate production rate for the college was low, consistently just over 21% for the same years. Despite efforts to increase persistence rates, the number of students who entered in fall and persisted to spring remained consistent as well, at the 50th percentile of desired performance as noted in the state system guidelines.

The college was particularly interested in the trajectory of students from developmental studies to credit bearing courses. This population is one of those that was targeted by the services of the Student Success Center, which provides intensive support in the form of remedial tutoring, computer resources, and academic counseling. According to the director of the Student Success Center, most students who visited the center had one or more of three primary concerns: passing a test, writing a paper, or passing a course. In addition, the graduate production rate for the college was low, consistently just over 21% for the same years (College Document, 2015). Despite efforts to increase persistence rates, the number of students who entered in fall and persisted to spring remained consistent as well, at the 50th percentile of desired performance as noted in the state system guidelines (College Document, 2015, 2019). Other concerns noted by the director of Student Services included relationship problems, parenting challenges, instructor relations, and financial problems in general. Some students were facing more than one of these problems and needed a holistic and comprehensive approach to change. To best serve students who are often confronted with personal, financial, and academic

challenges (Jobs for the Future, 2015), colleges must provide a broad variety of resources that are well-coordinated. The college under study determined that one primary location devoted to developing students' personal, academic, and career abilities was needed, and established such a location in 2012 called the Academic Success and Career Center (known as ASCC). The name was changed to the Student Success Center in 2014.

The Student Success Center was intended to provide a high-quality environment in which students could learn collaboratively and find comprehensive support for achieving academic and personal objectives as well as overcoming a variety of barriers. The goal for career counseling was to increase student success and persistence to graduation and to better prepare students for the workplace by emphasizing professional skills. By centralizing services, the college expected better resource utilization and common training for all tutors across the campus. The Student Success Center is situated in a large existing computer lab at the center of the campus, in the same building as registration and other student services, the canteen (lunchroom area), and the college president's office. The building is one that students visit often and is an ideal location for student success initiatives. The space included an office and a reception area as well as many tables and computers for student use and tutorials.

Perception of the career counseling services provided at the center was positive given the high job placement rate for graduating students; however, the college had not determined a correlation between career counseling and retention. Because career counseling is provided via the center, determining the association between student utilization of the center and retention would better determine the effectiveness of career

counseling services. Therefore, this study and its results related to the relationship between Student Success Center attendance and retention are significant, leading to the recommendation for policy change that may help address student challenges.

Research Question

The purpose of this study was to investigate the association between student participation in the Student Success Center and retention at one college to see whether there is a relationship between the center's support efforts and student retention. Given the need to better prioritize student support initiatives related to improving retention at this college, the following research question guided this study:

Research question: What is the association between Student Success Center attendance and student retention at this college?

H_0 : There is no association between Student Success Center attendance and student retention at this college.

H_a : There is an association between Student Success Center attendance and student retention at this college.

Review of the Literature

To determine what strategies and interventions work best to improve student retention rates, I searched for recent studies into this phenomenon and organized them by prominent themes. Searching the Walden University library databases, especially the education databases, with the terms *student retention*, *college retention*, *community college*, and *technical college* and combinations of these terms resulted in identification of several retention themes, which led to additional searches using the terms *retention*,

career capital, academic capital, and social capital. From the initial research emerged a composite of the types of capital that college students need to support their completion and educational goal attainment. Sources are timely (within five years of publication) except for seminal works.

Theoretical Framework

Stuart et al.'s (2014) model of student persistence at community colleges served as the framework for this study. The model emphasizes students' frequent consideration of the economic value of their credential when deciding whether to stay in college. They try to determine costs and whether they have the skills that it will take to obtain the credential (Stuart et al., 2014). When considering their skills, they may overlook the importance of developing social and academic capital, which are profitable and convert to career and economic capital. Further, drawing on the work of Tinto (1999), Stuart et al. characterized the costs and benefits of college as pecuniary, psychic, and opportunity-based and when students perceive the costs as outweighing the benefits, they often drop out. This is a concern for colleges because freshman retention significantly influences their academic reputation and their financial viability (Tinto, 1999).

As they consider the costs and benefits of staying enrolled, students' decision-making processes and goals may be modified as a result of positive and negative college experiences and as a result of changes to their own perceptions of the time and effort it will take to complete the goals (Stuart et al., 2014). For instance, career counseling and exploration can be combined with academic and personal counseling to improve retention (Stuart et al.). Ultimately, the framework established by Stuart et al. supports the effort to

clarify the role of the Student Success Center as a college retention intervention that provides a combination of services targeting the complex personal and academic challenges of community college students. The framework shaped the research question for this study by highlighting the connection between student participation in effective support relationships on campus and academic success characterized by retention.

Another consideration as part of the framework was the types of capital that students acquire over time, including social capital (Mauder et al., 2012; Polatcan & Balci, 2019) and other forms of capital as defined by Bourdieu ((Bourdieu, 1986). For example, the development of social skills and awareness is social capital (Mauder et al., 2012). which is formed and improved through trust, communication, cooperation, and adaptation as well as the sharing of ideas (Polatcan & Balci, 2019). The development of these feelings and habits requires labor and time, the costs that are a trade-off for immediate and eventual profits (Bourdieu, 1986). All forms of capital, including academic and social capital, are rooted in economic capital that is disguised and transformed (Bourdieu, 1986). The economic pay-off is greater with longer investment, for example, in sociability (Bourdieu, 1986). The advantages of creating social capital extend to learning that occurs beyond higher education.

Social Capital

Social capital is characterized as the accumulation of helpful social resources, behaviors, and attributes that students develop over time to succeed (Wong, 2018). Examples include cooperation, facilitation, networking, and relational exchange (Fearon, Nachmias, McLaughlin, & Jackson, 2018); a sense of belonging, sensitivity to others, and

trust (Ryan & Junker, 2019); and flexibility, debriefing, and other communication skills (Helens-Hart, 2019). Social capital can also be categorized into dimensions of access and mobilization to explore what social opportunities and relationships are available to students and how well they mobilize those resources (Ashtiani & Feliciano, 2018). Further, social capital has been categorized into four primary types: personal support social capital, prestige and education related social capital, personal skills social capital, and political/financial skills capital (Brändle & Häuberer, 2015). Social capital is co-constructed (Lofthouse, 2018), and depending on student background and opportunities, a good foundation may or may not have been built by the time a student enters college.

Measurement of social capital can be problematic (Ryan & Junker, 2019). No scale exists to measure social capital, so researching the relationship between socioeconomics and social capital also presents a challenge (Holtkamp & Weaver, 2018). Additionally, certain aspects of social capital, referred to as structural aspects, are more tangible than others; it is possible to measure a person's social network by size, but it is more problematic to measure that person's subjective appraisal of his or her social relations, referred to as cognitive aspects (Ahlborg, Svedberg, Nyholm, Morgan, & Nygren, 2019).

Researchers are still investigating the impact on low-income and other vulnerable students when they can access and mobilize various types of social capital in the educational environment compared to their middle- and higher-income classmates (Ashtiani & Feliciano, 2018). Many students have described being motivated by support from and interaction with family and friends, peers, tutors, faculty, and others in their

direct and indirect educational environment (Wong, 2018). For example, Brändle and Häuberer (2015) found that nontraditional students access on average more social capital in three of these areas, the exception being personal support social capital. Some students are also more comfortable in sharing their need for personal support compared to those who may experience apprehension and distrust (Helens-Hart, 2019), so it is important for vulnerable students to be in an environment where they can begin to express their needs (Lofthouse, 2018). These findings underscore Tinto's (1993) perspective on the importance of social integration to college success, as strengthening relationships and networking can help students remain in college and be successful. This may be particularly important for young men, who are enrolling in lower numbers than young women, as gender differences in relation to college enrollment can be traced back to social capital (Klevan, Weinberg, & Middleton, 2016). Additionally, community college students arrive with diverse social capital they have acquired via their families and their locale and begin a new opportunity to accumulate social capital in the new environment of college (Chen & Starobin, 2019).

To address social capital and the challenge of retention, colleges can build better interventions that increase a student's likelihood of success throughout life, which they call lifetime retention (De Freitas et al., 2015). Counselors may inquire about students' academic and career intentions and both sponsor and encourage participation in social activities to develop social capital in these students. Students who have adapted to the college climate and curriculum with adequate and developing social capital are then better prepared to accumulate academic and career capital. For older students, the

building of social capital through online networking including social media may be especially important as contemporary careers encourage mobility practices and global interaction (Tempest & Coupland, 2017). However, older students may also find technology distracting even as they benefit from its greater-enabled personalized engagement and learning (Wilkerson, Andrews, Shaban, Laina, & Gravel, 2016). Technology should be closely aligned with academic goals and guided by faculty and other college professionals. Teachers should also be involved in the design and selection of technologies that best address users' needs, contributing to their social and academic capital (Tondeur, van Braak, Ertmer, & Ottenbreit-Leftwich, 2017).

Academic Capital

A second primary theme in the literature related to retention is academic capital, which is a term closely related to cultural capital. In fact, Bourdieu (1986) claimed that it is a byproduct of cultural capital, formed from information transmitted to students by family and schools. Cultural capital refers to the pre-existing knowledge and behaviors required to negotiate the academic setting (Dukhan et al., 2012; Rudick, Valdivia, Hudachek, Specker, & Goodboy, 2019). Another term, human capital, has been used to reference skills and knowledge outcomes of education and training, so there is some overlap in the literature with these terms. For example, Knipprath and De Rick (2015) measured human capital in a study of 1,657 participants in their 20s who were transitioning from school to work by the highest educational qualification obtained and found that young people who obtain a college degree are twice as likely to participate in job-related learning than those without a degree; this measurement seemed to

complement the definition of academic capital. Additionally, the Bureau of Labor Statistics (2015) revealed that not only do workers with higher education degrees earn significantly more money on average than those who do not, but they also experience lower rates of unemployment. Thus, academic capital is closely related to career capital.

Similarly, academic capital is connected to social capital. St. John et al. (2010) proposed that academic capital is derived from social processes that contribute to families' understanding of how to navigate educational institutions and systems. They outlined helpful social processes for students, including easing concerns about money, providing support networks and quality information, promoting useful relationships, and encouraging personal empowerment (St. John et al., 2010). Intervention programs must be comprehensive—that is, programs should address not only financial and academic dimensions but social dimensions to improve the likelihood of college success (St. John et al.) For instance, first-generation students enrolled in a program described having complex financial needs because they felt spousal pressure to have an income while attending school, and sometimes they needed to depend on financial help from friends and other sources (Quinn et al., 2019). Thus, financial considerations of first-generation students also involve social processes that they and their families need to know how to navigate successfully. Social processes within the academic environment that can contribute to academic capital include interactions with support program staff (Quinn et al., 2019).

Edgerton, Roberts, and Peter's (2013) findings indicated that educational systems often place students in lower socioeconomic (SE) classes at a disadvantage by rewarding

the competencies of students in the higher socioeconomic groups, who may have a greater perception of their possibilities and a more complete habitus toward learning. Students from lower SE backgrounds may have come to college with a more limited vocabulary and ability to express themselves verbally and in writing than their higher SE peers, for example, and these limitations may hurt them in the classroom affecting their ability to acquire academic capital at the same rate as others (Troyer & Borovsky, 2017). Maximizing student and staff interaction through regular contact and intrusive advising can be helpful, and students especially appreciate it when there is an open-door policy for office hours (Quinn et al., 2019). Each contact is an opportunity to build academic capital through social processes. Research has shown that obstacles for first-year students include limited personal interaction with faculty, limited academic support, and limited study skills (Turner & Thompson, 2014). Additionally, students are often surprised and disappointed by their poor academic performance on early college assessments (Chandler & Potter, 2012), which is common because community colleges often employ open enrollment policies that means admitting many students who are inadequately prepared (Mertes & Hoover, 2014). Therefore, students must be guided in preparation for assessments while also addressing confidence and commitment (Chandler & Potter, 2012; Villano, Harrison, Lynch, & Chen, 2018). This may be particularly important for first-generation college students, community college students, and women of color who are in science, technology, engineering, and math (STEM) programs (Wang et al., 2017). Quinn et al. (2019) encouraged professional development activities for faculty and staff regarding positive interaction with first-generation college students. This kind of training

can be critical if faculty and staff have not had a similar background (Wang et al.) But a supportive relationship can be a confidence-builder, and, in such a relationship, students can gain ground in their attempt from faculty and staff, who can help students develop academic capital. Wang et al. (2017) emphasized access to viable support mechanisms that can help students toward completion of their 2-year college goals and/or transfer.

A combination of behavior and environments drive achievement, and all stakeholders contribute in both areas (Hatch, 2017). Advisors, for example, help students gain momentum toward achieving transfer goals by working closely with students and providing specific guidance (Wang et al., 2017). However, offering adequate support is helpful only if a student desires that support, and attempting to balance desired and received support can be a challenge. Students may respond negatively if they are pushed to receive support they do not perceive as necessary (Rankin, Paisley, Mulla, & Tomeny, 2018). Interventions depend partly on student willingness to engage with course materials and actively seek connections to their own experiences (Kosovich, Hulleman, Phelps, & Lee, 2019). Informed interventions that are psychologically based and include goal orientation, awareness of stereotype threat, fixed versus growth mindset, and the development of grit can help address this challenge with willingness (Hoyert, Ballard, & O'Dell, 2019). Further, motivation and attitude has improved when students developed oral communications skills, so even friendly conversation and feedback can trigger positive change (McLaren, 2019). For example, Lofthouse (2018) studied a focus group of six coaches at Leeds Beckett University in which participants engaged in conversation framed by a specific theme or question

related to doings, sayings, and relatings (what was happening in the physical space, in the semantic space, and in the social space.) The sayings included language used by the coaches to describe the contexts of the coaching and the coaching practices. The researcher identified broad themes and observed whether the conversation diverged from those themes throughout the sequence of conversations. The sequencing method allowed participants to co-construct, transform, and reinforce the themes as they filtered from one conversation to the next in a process of dialogue, learning, and changing (Lofthouse, 2018).

Conversations were conducted in a communal environment, meaning that other people were present in an educational space and sometimes listening, to best re-create typical settings in which students engage with others rather than an artificially quiet setting. As such, tensions and complexities might naturally arise, and the coaches would need to adjust to distractions. The sayings and relatings might be modified according to context, and the researcher could observe how context influences coaching (Lofthouse, 2018) in a formative process. She later shared her observations with the coaches to allow feedback and reflection and noted overlaps in how they described their experiences. Of the three elements (doings, sayings, and relatings), she found that the coach). The participants emphasized relatings in their responsive narrative and expressed a greater sense of inclusion as the conversations continued and terminology was reinforced (Lofthouse, 2018).

Communication support is especially important for students of a lower socioeconomic status. Educational systems often place students in lower socioeconomic

classes at a disadvantage by rewarding the competencies of students in the higher socioeconomic groups, who may have a greater perception of their possibilities and a more complete habitus toward learning (Edgerton et al., 2013). For instance, students from lower socioeconomic backgrounds may have come to college with a more limited ability to express themselves verbally and in writing than their higher socioeconomic peers, which may affect their ability to acquire academic capital at the same rate as others (Troyer & Borovsky, 2017). The effects may have longevity because academic capital directly impacts earnings throughout life.

The best retention strategies assist students with both nonacademic factors and academic factors, helping them to build support networks and to prioritize their activities for optimization (Jeffreys, 2014). For instance, Sandoval-Lucero, Maes, and Klingsmith (2014) found that being a role model to children or other family members was participants' primary motivation for attending college. However, a supportive campus environment is important in a student's academic and social development, often measured by a student's feelings about the organization. Sandoval-Lucero et al. (2014) also reported that assistance has to go beyond initial motivation (Woods, Price, & Crosby, 2019). Assistance from helpful staff regarding academic processes can be central to students' ability to stay in college and be successful (Sandoval-Lucero et al., 2014). Institutional support for staff, tutors, and students helps maximize the effect of an intervention, and specific interventions can be further enhanced by other support strategies (Chandler & Potter, 2012; Garriott & Nisle, 2018). For example, students should be exposed to the job opportunities that their education prepares them for and the

reality of the workplace environment (Jeffreys, 2014). Additionally, reflective practices help students to evaluate specific academic circumstances and their beliefs about motivation and learning as well as increase understanding of academic processes and contexts (Chandler & Potter, 2012; Yu & Chiu, 2019). Furthermore, the learning community can be extended to include membership in professional associations and events and other enrichment programs (Jeffreys, 2014), which goes beyond traditional academic and social capital enrichment activities and may contribute to career capital.

Career Capital

A third theme in the literature related to retention is career capital. For colleges and communities, positive social change results from graduating a greater number of students with career capital—those who are prepared to meet the needs of prospective employers in the region and beyond. Many students are eager to escape from poverty by earning a college education and obtaining work that is fulfilling. They also value social responsibility and want to give back to family and community (Borjian, 2018). Student success can be improved through increased student support services on the part of students, faculty, and administration (Tinto, 2013). For example, in 2012, an initiative called Reclaiming the American Dream, sponsored by the American Association of Community Colleges, encouraged 2-year colleges to create a 21st century college experience that targets the needs of a new generation of young people as well as nontraditional students who are entering or re-entering college for a variety of reasons, often related to employment (Guth, 2017; Schanker & Taylor, 2012).

For women, completion of a degree is even more significant. Maguire, Starobin, Laanan, and Friedel (2012) found that although male students over 25 often benefit from having some level of college education even when they do not receive a credential, this is not the case for women, who generally need an associate degree to see a significant rise in earnings. Carnevale, Smith, and Gulish (2018) noted the limited ability for women to gain traction in the labor market without an associate or bachelor's degree: a certificate rarely provides a satisfactory or even adequate wage. It is important that women strengthen their technological skills in order to be better prepared for the demands of the modern workplace and to receive better earnings (Kaikkonen & Quarles, 2018). Although these studies focused on educational outcomes, others emphasized the development of social capital and, in turn, greater confidence and achievement. Working closely with other students helps women develop a greater perception of their own competence (Hilts, Part, & Bernacki, 2018). Aljrawil (2017) observed that female participants in a study involving the use of Google documents for collaboration in the classroom expressed greater satisfaction with the level of personal interaction and with instruction from making this one technological adjustment. The needs of female students are important to consider, but other researchers have chosen to examine the impact of higher education on the careers of traditional versus nontraditional students.

Fogg, Harrington, and Khatiwada (2019) noted that employers are impressed by degrees and certificates to the extent that those achievements are associated with applicable skills, so an improved skill set for those with years of work experience may carry greater weight. Sensitivity to the changing career needs of students at different life

cycles is critical as part of a college's claim to be diverse and inclusive; students without such support may feel demotivated and may under-perform (Kirk, 2016). Mertes and Hoover (2014) indicated that students who were enrolled in occupational programs had the highest retention rates. Jobs for the Future (2015) noted that 17 percent of American young people aged 16-24 are neither working nor in school; this is approximately six million people, many of whom cycle through a series of minimum-wage jobs and do not envision greater opportunities for themselves. Strategies for reaching this population and for keeping them in college once they enter include targeted instruction through a variety of delivery methods, contextualization, and comprehensive support. It is important to make the connection between academic content and the workplace, actually providing opportunities for students to engage with employers when possible and even linking college programs to external programs (Jones, O'Connor, & Boag, 2018; Schanker & Taylor, 2012). Undergraduates need guidance in deciding whether a career choice is meaningful and likely to provide coherence as the job progresses over time, allowing growth and a change in roles but grounded in the kind of work that continues to satisfy (Ramsey, Pang, Ho, & Chan, 2016).

Career counseling should be specifically targeted in regard to gender, age, and financial need (Maguire et al., 2012; Wong & Mohd Rasdi, 2019), with the following goals: to enable students to feel more certain about their future occupation, more satisfied with their current occupation, and more confident about the process of starting and building a career (Miller, Osborn, Sampson, Peterson, & Reardon, 2018). The effort to successfully align college and career involves consideration of demographic data and

academic qualifications (D'Amico, Rios-Aguilar, Salas, & Conche, 2012; Dickmann et al., 2018). Miller et al. (2018) found that although both students in lower and upper divisions significantly benefitted from career counseling in terms of career decision-making, first and second year-students experienced greater gains. D'Amico et al. (2012) also observed that students who relied on college networking rather than on their families in consideration of available jobs were associated with more successful college-career alignment.

Stuart et al. (2014) went on to develop the model that is used as the framework for my study. Building on Tinto's theory that social and academic integration via student engagement leads to greater persistence, the framework considers students' socio-academic exchanges with other students and professionals in regard to career planning as an important part of the integration and engagement process (Evans, McFarland, Rios-Aguilar, & Deil-Amen, 2016; Stuart et al., 2014). The benefits of social support, and the extent to which students are able to achieve their academic and career goals, may depend on whether they are able to take advantage of available resources (Rankin et al., 2018). It is critical that community and technical colleges address the skill gaps in the American labor market by expanding community partnerships, building career pathways, and connecting programs to the needs of the labor market (Schanker & Taylor, 2012).

Limitations to Retention Studies

One criticism of studies that have attempted to show a relationship between success centers and retention is that they have failed to consider other motivating factors. For example, it is possible that students who attend the centers are more motivated to

begin with and thus more likely to be successful (Sujatha & Kavitha, 2018). A second consideration is the prior skill level of students who attend the centers. Students who are doing well in a course are less likely to utilize the services of the centers (Warner, Neater, Clark, & Lee, 2018). However, a quantitative study of 12,124 students by Wurtz (2015) controlled for prior skill level and self-selection. Data used in the study included time spent by students in the centers and which specific class sections students were receiving help for, plus their primary reason for visiting the Center. In addition, the study used grade point average (GPA) as a control for prior skill level (Wurtz, 2015). Results indicated that center participation rate by section and prior GPA were predictors of persistence; students were two times more likely to persist in their studies if they attended the center even when prior GPA and self-motivation was high (Wurtz, 2015). The college where the study was conducted expressed an interest in strengthening services to students in developmental classes, which constituted the majority of students enrolled. Wurtz (2015) serves as an example of how student success centers can improve the successful completion of courses, which may lead to improved retention rates. Such centers are examples of the protective factors described by Cotton, Nash, and Kneale (2017) as countermeasures to individual and social risk factors.

Implications for Positive Social Change

The results of this study contributed to an overall program evaluation for the Student Success Center. It was presented as part of a program evaluation transmitted as a white paper to the college's top administration and to the director of the Student Success Center to assist with program prioritization. Although the study was limited, it is

important for at least three reasons: a) the president of the college requested a straightforward, quantitative study of the relationship between the Student Success Center and retention, b) it contributed to a culture of ongoing assessment across campus, including academic support services, and c) it provided a foundation for future mixed-method and qualitative studies of the center. The college had been working with an assessment specialist to build a culture of assessment on the campus, and this study provided an early, yet important, step for the college to work towards a full program evaluation. Ongoing assessment of non-academic programs such as success centers and other academic support services is an important part of developing a culture of assessment across campus, and this may be particularly true for non-traditional students (Pang, Garrett, Wrench, & Perrett, 2018). Assessment of support services must recognize the personal adversities and stressful events that individuals encounter along their educational journey as well as the factors that may increase their resilience, and then focus on what is within the college's control to effect institutional and social change (Pang et al., 2018). My study of the relationship between success center attendance and retention demonstrated the importance of providing targeted services that promote resilience.

Summary

Section I of this document presented evidence of the problem at the local level and from professional literature as well as key definitions and research questions employed; it also clarified the doctoral project study's significance. The literature review examined previous and ongoing strategies to improve retention, organized by major

themes. The conclusion of Section I considered implications for the study and briefly summarized the section content before transitioning to Section II, which concerns methodology and design. Local, state, and national concerns about low retention at two-year colleges compel specific action in regard to meeting the needs of students who are underprepared to be competitive in today's workforce. The college's strategic plan included fostering academic support and career development services to meet the needs of the community. Measuring the success of the college's student support services and their unique contribution to improving retention was vital to the institution's effort to prioritize programs. Evidence from the professional literature indicated that support services should be linked to the academic mission and should help students experience momentum toward success, a key factor in retention. The study's conceptual framework emphasized the connection between academic support services and career preparation in keeping students in college. Existing literature related to retention strategies and interventions addressed primary types of capital needed for success. To investigate the association between Student Success Center attendance and student retention, a correlation study was employed.

Section 2: The Methodology

Introduction

My study was focused on how student support initiatives, such as the college's Student Success Center, may contribute to efforts to retain students. The study helped to determine whether the college's archival data on center attendance is related to retention. Although the college maintains data related to student activities and retention, it had not investigated the relationship through a theoretical lens that combines social, academic, and career objectives. My study provides a basis with quantitative data that may encourage future studies on the social or academic aspects of the work in the Student Success Center using qualitative or mixed methods. With further research, a more informed college may move toward effective change. Additionally, foundational knowledge can encourage further collaboration between faculty and staff on research projects (Kezar & Lester, 2009). The results of my study may help to create faculty interest in working more closely with the Student Success Center and with related research projects.

In this section I present and justify the research design for my study and describe its components, including type, population, setting and sample, quantitative data collection and analysis, ethical considerations, and potential limitations. A quantitative design with secondary analysis was chosen to maximize methodological, theoretical, ethical, and social benefits. Secondary analysis opens opportunities for novice researchers to have access to available data independent of additional obtrusive data collection measures (Smith, 2008). The analyses of secondary data can take many forms but are

generally part of an effort to understand trends over time or to establish causal relationships or correlations (Levac & Denis, 2019). Although there were inconsistencies in the archival data, this only indicated that additional variables and relationships must be considered, which can be useful for constructing more complex research scenarios. The design was also pragmatic because I attempted to solve a real-world problem identified in educational practice. The anonymity and privacy of individual student participants in my study were protected, and students were not inconvenienced.

Quantitative Research Design and Approach

I developed and used an ex post facto correlation design involving two dichotomous variables: (a) attendance at the Student Success Center (students either attended or did not attend), and (b) retention over a 3-year period (students were retained or were not retained). The need to better understand the relationship between the college's student retention in terms of support service participation was best investigated using a correlation study to determine whether there was a statistically significant association between the two variables. A retrospective, nonexperimental, quantitative study using data over a span of 3 years can indicate potentially significant shifts in the perceived strength and direction of relationship between these variables from year to year. Because there were many other factors involved in whether students were retained, no direct causal claim can be made about the center's impact on retention. The information used in this study included Student Success Center attendance and student retention rate obtained from the college's Office of Institutional Effectiveness. No other information pertaining to students' enrollment at the college was included in this study.

My research findings provide a foundation for future measures and research in ongoing efforts to improve student support services and retention. Simon and Goes (2012) characterized ex post facto research as a practical substitute for experimental research when variables are not easily manipulated. For example, archival researchers at a 2-year Midwestern college examined placement scores from 2012-2016 to discover what the data revealed about placement methods and their relationship to student success (Nastal, 2019). Additionally, archival data can help determine which areas of concern are worthy of further exploration via individual surveys, interviews, and other in-depth approaches to research. For example, D'Eon and Trinder (2014) conducted a correlation study of group self-assessment versus group performance on tests and suggested further research into specific circumstances and conditions that exist in group self-assessment to better inform program evaluators and other decision makers. Being informed can help institutions commit to guaranteeing equity as they foster systemic or programmatic changes to reach underserved students (Fox, Thrill, & Keist, 2018).

Previous research supports the use of a correlational design with archival data to examine student success. For example, Clay (2014) conducted a correlation study on freshmen reenrollment at a small Southern 4-year college and found a statistically significant relationship between use of Facebook and social integration and befriending faculty on Facebook and academic integration; however, students' time spent on Facebook did not appear to be related to their re-enrollment. Additionally, using archival data, Van der Sluis, May, Locke, and Hill (2013) determined whether there was an association between Academic Success Center attendance and progression and

attainment, finding a positive association between these factors, especially for lower socioeconomic students. Other research using archival data showed the importance of personal factors (self-efficacy, attention to study, time management, communication, emotional components, and social involvement) in predicting student success (Aydin, 2017). Further, Swecker, Fifolt, and Searby (2013) used historical data and multiple logistic regression and found that the number of meetings with an advisor significantly predicted students' level of retention (Swecker et al., 2013): statistics for retention improved by 13%.

Similarly, Hamman (2016) studied freshman students placed on academic probation and their academic recovery rates, along with demographic information including age, ethnicity, and status at admission (conditional or regular). Historical data for these studies was retrieved from student academic information stored in the registration system and from an electronic tracking system, similar to the archival data used in my study. Students at the college under study were not required to use the Success Center's services, so it was not possible to control or manipulate this variable. Thus, an ex post facto correlational study was the method that best fit the research question for this study. Additionally, the college now has a theoretical framework from which the experimental research can be extended. My research findings provide a foundation for future measures and research in ongoing efforts to improve student support services and retention.

Setting and Sample

The setting for this study was a public, open-enrollment technical college in the southern United States. The college provides programs designed to prepare students for specific lines of work including but not limited to nursing, industrial technology, childhood education, and business. Approximately 2,500 students are enrolled at the college in any given year (College Website, 2019). There were no recruited participants in this ex-post facto study because of the archival nature of the data being analyzed. Data were received in de-identified form from the study site (the college's Office of Institutional Effectiveness). Archival data stored by the college was available and relevant to the research questions in my study as the data contained both enrollment and retention records, GPA and other academic records, demographic information, and usage of the Student Success Center. The study included data sets related to all students enrolled in the college in fall, spring, and summer semesters 2013, 2014, and 2015, with the exception of noncredit students, middle college students (dual-enrolled high school and college students), and transfer students. Therefore, the sampling process involved a census approach where participants were drawn from archival data. This type of study did not require that I obtain permission from participants to collect or use the de-identified data.

All students at this college have equal access to the Student Success Center, so eligibility for the sample was straightforward. Average enrollment at this college is approximately 2,500 students, so the sample size depended on the exact number of students enrolled at the college during the 3-year time period for which archived data

were obtained. Data sets included all students who used the center and all students who did not use the center, excluding transfer students and middle college students (those dually enrolled in high school and college). The center provides a variety of services including academic tutoring for specific courses, individual academic success plans, access to computers, career planning services, study skills workshops, classroom visits, and networking with community agencies. Not all students participate in every available service.

The scope of the current study extended only to the general use of the center and its services according to specific individual needs; however, even broad exposure to the center provided ready access to further resources beyond those originally desired. Students do not always know what to ask for to resolve a problem. For instance, students are better able to identify learning issues in the presence of a tutor, which helps them discover what their exact needs are (Al-Shaibani et al., 2003). Thus, a center that provides a democratic, inclusive environment supports the goals of both faculty and students and connects to the college's mission. Fawcett and Schultz (2008) delineated four primary reasons to use archival data in research: availability, relevancy, low costs in time and resources, and amount of possible information. Archival data stored by the college was readily available and immediately relevant to the research questions in my study as the data contained both enrollment and retention records, GPA and other academic records, demographic information, and usage of the Student Success Center. This type of study did not require that I obtain permission from participants to collect or use the non-identified data. Archival data for this study included approximately 2,000

students per calendar semester (fall, spring, and summer) over a three-year period, for a total of approximately 18,000 students. (Lape, 2019).

Data Collection

Archival data related to the identified variables and maintained by the college was cross-referenced and analyzed using chi-square analysis. Frequency percentage statistics were conducted on the two dichotomous categorical variables in the study, center utilization and retention. Chi-square analysis with the Yates correction was used to test for a significant association between the two variables. The anonymity of participants was retained through nonidentifying labels (Student 1, Student 2, or another description in numeric form for characteristics of the sample). Data for this population was made available to me from the Office of Institutional Effectiveness, which is charged with the function of obtaining and maintaining data at the college.

Instrumentation and Materials

I collected retrospective data from the Office of Institutional Effectiveness, and the Statistical Package for the Social Sciences (SPSS) statistical software was used for data analysis. A measurement of habits and performance over time using archival data can further understanding of an organization's successes and failures (Lueg, Schmaltz, & Tomkus, 2019). Archival data is material with intrinsic or research value that is generally housed in an institution as special collections of documents, records, print and computer files, audio, video, and historic artifacts (Maune, Marino, & Hurley, 2013). Archival research provides a historical context that contributes to a study's setting and meaning (Maune et al., 2013) and cannot be changed (at least not ethically), so it is reliable as long

as the integrity of the materials is maintained. Using existing data sets includes benefits like effective reduction of threats to internal validity such as the possibility of not having access to needed information or having a limited amount of data (Shultz, Hoffman, & Reiter-Palmon, 2001). Although the archival data used in my study was accessible and reliable, there was no guarantee that it was completely error-free; however, it was well maintained and demonstrated a sufficient record of student attendance at the Success Center and retention rates as well as GPA. When transferred to statistical software, the data became usable for calculating relationships between variables.

SPSS is a popular analytic tool in social science and education research; with its features a researcher can perform descriptive and bivariate statistics calculations to generate reports with relative ease (Boston College, 2015). For the purposes of this study, SPSS allowed me to analyze archival data using specific inferential tests needed to determine relationships between variables. Chi-square is used to determine whether two categorical variables are related or independent by looking at the rate at which values of each increase or decrease in a period of measurement. Tables and charts were prepared from the results of these tests and are available in the Appendix of this study.

Procedures and Processes for Data Collection

Collected data were analyzed using archival records from ongoing management information systems maintained by the college. The data were transferred into statistical software (SPSS) for analysis after verifying that it was in a usable format that SPSS supports such as comma-delimited data (Kent State University, 2019). The data were entered into an Excel format to fit the SPSS requirements. To gain access to confidential,

protected student records, I first obtained written permission from the vice president of Academic Affairs. Once permission was granted, I consulted with the Office of Institutional Effectiveness and the director of the Student Success Center to obtain passwords to access the data. Only college administrators had access to my data and the analysis, which are protected with encrypted passwords.

The data collection period was extended for several months because archival data was not electronically accessible as was expected; I had to hire an employee of the college (known as the “data coach”) to input the archived print data into a digital format for analytical purposes. Data collection and analysis took approximately six months. Once the data were digitized, the analysis took approximately one month. Chi-square analysis with the Yates correction was used to test for a significant association between the two variables. Analyses were conducted using SPSS Version 25. This study incorporated two dichotomous categorical variables: center utilization and retention. Categorical variables allow a researcher to categorize activities or behaviors without assigning rank or numerical value; in this case, the categories are indicators of student behaviors and reflected if they attend the Student Success Center, and if they were retained over a 3-year period.

Role of the Researcher

As the researcher, I was responsible for gaining access to confidential, protected student records and obtaining written permission from the vice president of Academic Affairs to use these archival records. The records helped determine whether a correlation existed between Student Success Center usage and student retention rate at the college.

Once permission was granted, I consulted with the Office of Institutional Effectiveness to obtain passwords to access the data. I also sought help from a graduate student specializing in data analysis using SPSS software. With the support of the graduate student, I was able to analyze data results, which helped form the basis of my project study. However, upon discovering some flaws in the original statistical approach, I consulted with a second statistician, who helped me provide clearer results.

Data Analysis

Frequency percentage statistics were conducted on the two dichotomous categorical variables in the study, center utilization and retention. Chi-square analysis with the Yates correction was used to test for a significant association between the two variables. Unadjusted odds ratios with 95% confidence intervals (CIs) were calculated as a measure of strength of association between the two variables. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25. The chi-square analysis findings showed evidence of a statistically significant association between center utilization and retention, $X^2(1) = 162.23, p < 0.0001$. Participants that utilized the center had 2.48 times higher odds of retention versus participants that did not utilize the center (95% CI 2.15-2.86).

Cross tabulation analysis with a contingency table was the appropriate analytical choice for this study because of the dichotomous nature of the variables (Aprameya, 2016). There were no specific eligibility requirements for this study as participants were pre-existing, not chosen. Exclusion criteria for this study included anyone not enrolled at the college as well as transfer students, noncredit students, and Middle College students

(those dually enrolled in high school and in college). No recruitment was required for this study as it used statistical analysis of archival data from the college. Additionally, to ensure a statistical test has power, the researcher must perform special analyses prior to running the experiment to calculate how large a sample is required (Awasthi, 2000). When conducting evaluations, researchers usually design studies so that there will be sufficient statistical power to detect at least the smallest meaningful effect for the program under study (Porter, 2018).

Because the current study was nonexperimental (based on archival data), the sample size was pre-existing. In archival studies, researchers who examine effect sizes along with statistical significance may identify practically significant effects (Barnes, Dang, Leavitt, Guarana, & Uhlmann, 2015). Archival studies allow the opportunity for researchers to evaluate a population in ways often impossible in experimental research. Over time, even small effects may produce a considerable impact (Barnes et al., 2015). Based on these references, the current study's sample size of approximately 2,500 students each semester over a span of three years allowed for sufficiently powerful statistical results. I examined variables that I hoped would provide insight into what factors may contribute to student successes or failures and thus retention. Coladarci, Willett, and Allen (2013), who were interested in whether participation in a tutoring program was related to retention, also considered whether a tutoring program had an impact on term GPA rather than student average in particular courses because many skills adopted via tutoring should apply to all courses.

Students who receive external motivation, help believing in themselves, and help organizing and implementing effective actions for success have reported greater satisfaction with college and renewed commitment to completion (Peck, Stefaniak, & Shah, 2018). By examining retention at the study site as it may relate to student utilization of the Student Success Center, we may help to identify effective responses to the problem of low retention. Inferential statistics is commonly used with administrative data thought of as a census – data collected from individuals in a college; researchers use p-values to indicate statistical and practical significance (Gibbs, Shafer, & Miles, 2017). The variables for this study are presented in descriptive data tables that contain rows and columns which compare the behavior of Center visit and retention. These descriptive statistics helped to determine whether there was a statistically significant association between the observed variables.

Data Analysis Results

Tables provided in this study may enable researchers to reorganize or add data to make other inferences, one of the extended uses of what may appear to be simple designs (Treiman, 2014). Canfield, Bruine de Bruin, and Wong-Parodi (2017) noted that recipients of information related to their household use of energy were better able to both appreciate and understand the weight of their decisions and habits when provided with tables along with narrative or other graphical formats. As recommended by Treiman (2014), tables in my study are described in terms of the resultant data's implications regarding the idea being tested. They are described briefly in numbers and then in conclusions drawn from those numbers. Treiman (2014) emphasized the ability (in

quantitative data reporting) to transform variables into forms that express theoretical concepts.

The frequencies and percentages for each variable in the analysis are presented in Table 1. This table shows that among the sample, 961 students (5.1%) utilized the success center over a 3-year period. The chi-square analysis findings showed evidence of a statistically significant association between center utilization and retention, $\chi^2 (1) = 162.23, p < 0.0001$. Participants that utilized the center had 2.48 times higher odds of retention versus participants that did not utilize the center (95% CI 2.15-2.86). Table 2 shows the cross-tabulation of the two variables. Among the total sample of students (18,712 students) 9,664 students (51.6%) were retained, and 9,048 students (48.4%) withdrew over the 3-year period. Figure 1 presents the rates of retention based on center utilization.

Table 1

Frequency and Percentage Statistics

Variable	Level	Frequency (%)
Center Utilization	Yes	961 (5.1%)
	No	17751 (94.9%)
Retention	Yes	9664 (51.6%)
	No	9048 (48.4%)

Table 2

Cross-Tabulation

Variables	Retention	No Retention
Center Utilization	689 (71.7%)	272 (28.3%)
No Center Utilization	8975 (60.6%)	8776 (49.4%)

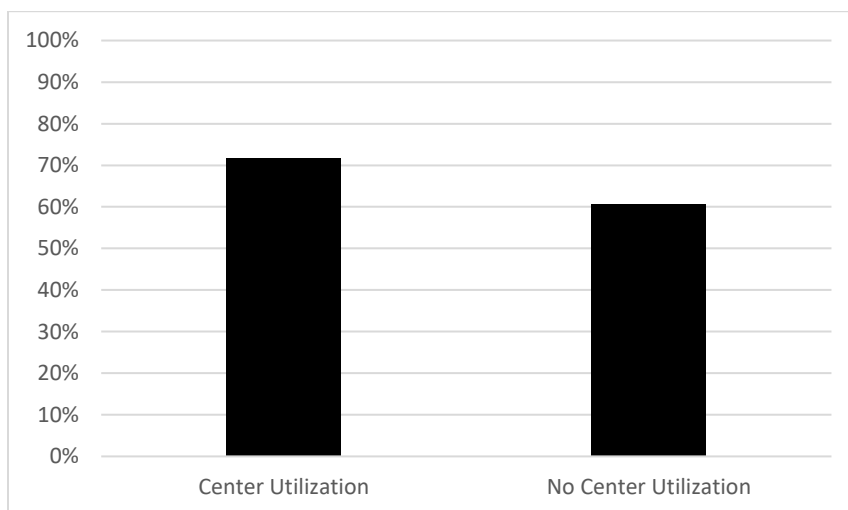


Figure 1. Bar chart of retention (%) by center utilization.

As the results indicate, the college's continuing support and funding for the Student Success Center is important as a means of serving students and helping them meet their academic, social, and career goals.

Assumptions, Limitations, Scope, and Delimitations

Smelser and Reed (2012) explained that historical (archival) data, which are created from experiential flow, are bound up in context and influenced by a variety of causes, interactions, and relationships: therefore, attempts to interpret that data are imperfect. Archival research is a kind of excavation, which requires assessing and describing at each layer of the dig (Parilla, Morgan, & Fidler, 2017). At best, non-experimental researchers determine plausibility of their findings considering the presence of certain variables that may contribute to an outcome. The primary limitation to the current study was that it involved one small technical college; findings specific to one college cannot be generalized to all technical college students in the state or national

population; however, they may provide insight into possible ways to improve retention. Another limitation is in the type of data, which is related to retention and Student Success Center attendance only. Many other factors may contribute to student retention, and colleges must strive to meet a variety of student needs. Hassel et al. (2015) emphasized the importance of meeting the needs of students who are underprepared for college in a variety of ways (beyond the scope of a single study). They also insisted that two-year college faculty must be part of any such conversation about students, as those best placed to witness student limitations in the classroom and on a regular basis.

Although the immediate focus of this correlational study was attendance and retention, there were underlying assumptions involved that may serve future studies. The Student Success Center attempts to address weaknesses in precollege academic and personal preparation; it is also placed in an organizational context that encourages personal engagement, empowerment, and transformation, and it is an out-of-class experience that is still closely connected to curricular and classroom experiences as well as career preparation. This study contributes to existing research into the association between student support services for community college students and student retention. It serves as exploratory research that may help to determine what further research is needed. Tinto (2015) suggested that data related to program impact may validate the distribution of resources that are going toward specific programs; it may indicate that such resources are an investment outweighing program costs to the institution.

The scope of my study encompassed students at one technical college and their use of specific support services within a period of three years. Simon and Goes (2012)

explained that studies conducted within a period of time are a “snapshot” of what is happening in that environment during that interval; in other words, conditions of the environment are likely to influence findings. In fact, studies are couched in historical and social context, amid ideologies and power relationships, values and perspectives (Tusting, 2018). The narrative here is incomplete. This study did not extend to services that the college provides outside of the Student Success Center or that students may seek out on their own, beyond what the college provides. The study was exclusively quantitative; it did not include qualitative measures of investigation such as interviews, observations, focus groups, or any kind of direct participation from participants. It did not ask why students used the Student Success Center or why they did not, or how the college might go about increasing usage of the Center. These questions remain to be investigated in future studies.

The results of this study help to address positive social change by improving the college’s understanding of the potential impact of its Center. If administration can clearly see how the Center is correlated with retention, the college can prepare marketing materials with this information. Students, administration, community members, and other interested parties may be more confident in the Center and more willing to invest in its offerings. The college can analyze the results and attempt to improve the Center’s approach to various tasks and to meeting student needs. The problem of low retention cannot be reduced to one cause; neither can the solution be a one-shot, all-inclusive program that meets the needs of every student. The vision that colleges have for improving retention must be a living vision, in that it depends on deepening and ongoing

understanding of factors in a complex environment. The vision of the college under study is to “engage, empower, transform” (College Website, 2019). My quantitative study was part of an effort to engage the issue of retention so that the college is more empowered to equip students for transformation.

Protection of Participants’ Rights

Collection of data for this study was obtained from archival records related to enrollment, GPA and other academic information, demographic information, and Student Success Center attendance. There were no identified participants for this ex-post facto study. Rather, data sets were received in de-identified form and stored at the college on secure computers provided by the college and maintained and accessible only by or through a limited number of administrators. I had access to this data under controlled circumstances through the use of an encrypted password. Data collected from the Office of Institutional Effectiveness employed student identification numbers only in my private documentation. Documents that are made public, published, and distributed, do not include the student identification number but instead utilize coding such as Participant 1, Participant 2, et cetera. All data is stored on my assigned college laptop with EPS-data encryption for a period of five years. Anyone involved in data collection that may encounter private identifying information will sign a confidentiality agreement. Because I used archival data to analyze the results of the study, no informed consent was required from participants.

Conclusion

The quantitative design for this study maximized the methodological benefit of looking for an association between variables that occur naturally in an educational setting rather than conducting an obtrusive experiment (Shultz et al., 2001; Simon & Goes, 2012). Rivard (2019) pointed out that today's encounter with archival records usually involves a digital medium, from a Google search for location or information about holdings, to uses of a digital catalogue, or direct access to a digital archive. I was fortunate to have access to the archival data for this study through the digital records held at the primary site although there were some complications with Student Success Center records that required adjustment to my study's timeline. The study was grounded in theory related to academic, social, and career capital introduced in Section I (Stuart et al., 2014). Student Success Center participation, the grouping variable of the study, attempted to address the needs of students that help to develop these types of capital and to keep students in college (College Website, 2019). The design was ethically sound; it depended on institutional data that was entered, maintained, and securely stored by college staff and administrators. Security measures were followed during all stages of the study to protect the integrity of the data and to guard participants' privacy.

Observer/researcher biases were reduced in this design because all data was archival. Social benefits of this study include greater understanding of the relationship between what is perceived to be an important student service program and the desired outcome of improved retention. These benefits will be local, in context; students, faculty, staff, and administration may better know how to invest their time and resources in

regard to successful outcomes. Other colleges in the state technical system and across the nation may be interested in what the data revealed.

This study compliments other quantitative studies at colleges that have looked at possible factors that may strengthen student retention (Ammigan, 2019; Swecker et al., 2013; Van der Sluis et al., 2013). The perfect solution to low retention continues to elude researchers, but with each effort to assess key support services and programs within specific environments stakeholders may come closer to the target of determining where to invest resources (Fawcett & Schultz, 2008; Maune et al., 2013; Woods et al., 2019). Frequency percentage statistics were used to produce tables and charts with commentary that transform variables into theoretical concepts (Treiman, 2014), and a project study evaluation, which included a white paper was produced and provided to stakeholders. Although statistics can seem cold, Ross and Shelton (2019) observed that the modern global community depends now more than ever on citizens who can use mathematics as a tool of social criticism and change. The related project consisted of an evaluation of the Student Success Center's relationship to student retention as indicated by statistical findings. Section 3 outlines the project in detail and describes the end product, connecting it to theoretical concepts and to data analysis that seeks to investigate those concepts. The project and product together attempt to clarify the results of a test of ideas (Treiman, 2014), which makes research into practice worthwhile. My research has emphasized tagging, or placing a label on meaningful actions, as an educational and organizational tool in the Student Success Center. Tagging as outlined in this project may be a good way

to bring my research and innovation together for best practice as well as to meet specific student needs identified in the literature review.

Section 3: The Project

Introduction

In Section 3, I describe my project including an overview, a brief literature review, and the goals and rationale of the proposed policy change to strengthen student services in the Student Success Center. The problem that this white paper approaches is low retention at a technical college as it is addressed by the college's Student Success Center. Although some factors remain outside of the college's control, administrators continue to seek ways to best address retention on campus and through campus resources. Insight into current operations is included to illustrate the challenge outlined. The purpose of my project is to share the findings from my study and to recommend a policy change to further enhance the college's student success center attendance and its student success rates. The policy change may improve the effectiveness of tracking data at the center so that visitor needs and expectations along with staff responses are delineated at different stages.

The purpose of my study was to examine whether there was a relationship between Student Success Center attendance and student retention at the college. Given the positive results, I recommend a policy change related to the Center's point of entry to take maximum advantage of the opportunity to clarify student needs and set the stage for an ongoing relationship. A first goal of the proposed policy change is to help college administrators understand how tagging can provide a simplified, shared language for student success between students, staff, and tutors. A second goal of the proposed policy change is to emphasize for administrators and other stakeholders the types of capital

(academic, social, and career capital) being developed within the school's Student Success Center. When all parties are invested in strategic development of one or more of these types of capital, the center may provide better services for students in the future. Students will feel better understood, and they and their tutors will have clearer short and long-term goals with more definitive outcomes.

To better understand the role of policy changes in affecting educational outcomes, I reviewed literature regarding the importance of academic policy changes and enhancing student success rates. Using Walden University's library, I searched the following terms: *white paper, tagging, policy implementation, tutor confidence, intake policies, program outcomes, record-keeping, online vs. paper, data mining, responsible reporting, and the role of technology*. Following the brief literature review in this section, I include a more detailed policy change and its proposed implications.

Rationale

The rationale for this policy paper is that research can motivate and inform change in institutional and program policies (Holloway, Reed, Imbrie, & Reid, 2014). When colleges are focused on recruitment and retention, they may lose focus on a student's transition from being admitted to being successful at key processes that form the bridge to retention (Holloway et al., 2014). However, career training in colleges can help students learn to meet industry expectations, including a strong focus on soft skills (Lakes & Donovan, 2018). Preparation begins early for high school students dually enrolled in college, following a sequence of courses to meet the industry standard in the form of a certificate or other credential. At the study site, there is a 5-year focus on

developing soft skills and measurement of these skills occurs in capstone courses. At graduation, if a student has achieved the desired scores, he or she receives a certificate of workplace readiness. From the point of admission, students are made aware of the college's quality enhancement plan related to soft skills, and they are engaged regarding these skills in nearly all courses across the curriculum. This early emphasis on soft skills aligns with Holloway et al. (2014) in taking the position that admission policies can have a dramatic impact on student perceptions of the level of support provided going forward (Holloway et al., 2014). For instance, the study site's larger vision of workplace readiness for all students encourages Student Success Center accountability for identifying weaknesses in social integration.

Another important aspect to address in the policy change is that there is an unconscious bias of admission procedures and policies that keeps the traditional middle-class White standards in place, which may not meet the needs of minority students (Bhopal, 2018). Admission to the Student Success Center is a pivotal point of adjustment and an opportunity to clarify the long-term role of support services. The college under study is currently implementing a pilot study with faculty using tagging to create common language for a community of practice (CoP), which under the Student Success Center would help redistribute power. Power analysis is a process of viewing how groups are limited by race and socioeconomic status and how to overcome inequalities and disadvantages for these groups (Bhopal, 2018). One of the ways to restore power to an underrepresented group is to increase the opportunity to be heard by the larger community and its systems, including its educational systems. The study site has a

demographic of students in lower socioeconomic and minority groups, so it is important for their needs to be expressed. But colleges do not need to develop new innovations to provide more comprehensive support to this demographic (Hrabowski & Henderson, 2017). Instead, support can integrate the types of capital development identified in the policy proposal provided in Appendix A as academic, social, and career development capital (see Hrabowski & Henderson, 2017). The types of support include community-building practices that incorporate social integration and professional development in learning environments.

As a part of supporting students, tagging can be one way to create a shared language for student success. Tagging is the new indexing, which is used for subject cataloguing and providing a semi controlled but democratic vocabulary that is accessible to a greater number of people (Jørgensen, Stvilia, & Shusheng, 2014). Tagging is useful for organization and identification, and it supports information literacy (Dennen et al., 2018). There are dual benefits of tagging for students: connecting purpose to course content (original taggers) and accessing relevant content tagged by peers (Dennen et al., 2018). Evidential tags help students see what others have seen and how they made sense of learning materials. Primarily, tagging allows students to contribute to the development of a folksonomy—the collective intelligence of folks who contribute their unique tags (Bruhn & Syn, 2018)—and a shared sense of responsibility for learning (Dennen et al., 2018). In field experiments related to semantics and shared language, students consistently applied more general tags but over time began to apply

more specific tags due to social mechanisms and shared artifacts that influenced individual choice of categories in tagging.

Dennen et al. (2018) tested six groups of students' tagging of course materials for accuracy and noted the students' preferred approaches (dictionary-based or freestyle). After one training session in using tag dictionaries or freestyle tagging, most students allowed to choose their methods achieved a high degree of accuracy in tagging. Rates of accuracy fell when students were required to use the dictionary-based approach. Ley and Seitlinger (2015) discussed the implications for educational settings, using the term *cognitive ecology* to describe the growth and entanglement of other factors such as (Ley & Seitlinger, 2015). These factors relate to trust and the quality and design of the learning environment in which tagging is employed. Tagging is useful for organization and identification, and it supports information literacy (Dennen et al., 2018). The Student Success Center at the study site is designed as an open-access, safe environment for all students to express their social, academic, and career concerns. Research has also shown that students prefer freestyle tagging, which has led to higher accuracy in tagging (Dennen et al., 2018).

Tagging can also help address potential disadvantages that minorities face during admission. Intergroup biases manifest as prejudice, stereotyping, and discrimination toward those differentiated from a perceived norm, including minorities and refugees (Alves, Koch, & Unkelbach, 2018). The biases result from existing groups' shared attributes and sensitivity toward difference, which may put minorities at a disadvantage (Alves et al., 2018). For example, the entry point for the Student Success Center is a point

at which minorities are at risk for negative evaluation based on intergroup biases. Thus, collaborative tagging may be used to support diverse expression (Bruhn & Syn, 2018). A basic shared vocabulary may help when students are asked at the Student Success Center to describe their need for service in order to categorize those needs in the most beneficial way.

Further, tagged categories connect one action to a broader set of actions and allow for more comprehensive reflection and analysis (Mellow, Woolis, Klages-Bombich, & Restler, 2015). Research has shown that faculty members found tagging helpful in identifying strengths and weaknesses in their approach to teaching and invited reflection on ways to improve. It may be challenging at first to recognize the usefulness of basic tags, but they provide a broad context from which new expressions may arise that reflect personal variations and interpretations (Bruhn & Syn, 2018). This is how the basic tagging services in the Student Success Center may work, enriching over time a deeper recognition of diversity and inclusion.

Tags are also increasingly being used to describe content on websites; often these are user-contributed and can be used for searching desired materials but may also be used for ontological data mining and for the creation of future materials that target specific needs and interests (Stvilia, Jørgensen, & Wu, 2012). A knowledge map can be created by using an ontology technique involving automatic tagging that provides questions related to the knowledge unit (Sun, Zhu, Xiao, Xiao, & Wei, 2019). These questions allow students to reflect on what they have learned and how well they are able to relay and extend their learning. For example, self-reflection can help encourage social justice

in the learning environment, because student awareness of their own needs and expectations means they may be able to communicate their circumstances or needs and face new opportunities (Welton, Harris, LaLonde, & Moyer, 2015). Tagging can be part of this effort, though there are still challenges with limited control, inconsistent practices, and poor handling of sensitive topics because tagging is unrestricted (Benoit & Munson, 2018). However, the potential benefits may outweigh the risks. Self-reflection, vulnerability, growth, and change in educational practices are tools of freedom, which include the freedom to make mistakes (Welton et al., 2015).

Tagging seems to increase user confidence that what is sought after is obtainable and is geared toward individuals within a greater community (Stvilia et al., 2012). It is important for educators to be aware of existing hierarchical processes and use opportunities to engage in dialogue that is both strategic and democratic (Welton et al., 2015). Tagging is low-cost and generative, two features prized by academia. However, for tagging to be useful and trusted, some consistency in syntax is necessary. Tags can be specific to groups with special purposes or goals to be attained over an extended period. For instance, Twitter's hashtags allows literacy researchers, students, teachers, and others to follow literacy practices of users (Gleason, 2018). At the college under study, tags can be used to designate the types of capital needed by students and developed at the Student Success Center.

Review of the Literature

My study addressed the problem of low retention at a technical college, which the administrators at the college and at the state technical college system want to address. In

2012, the college opened a Student Success Center to partially address this problem, but administrators did not know at that time if the center is associated with higher retention. The results of my correlation study helped to understand the association between Student Success Center attendance and retention, which may reduce a gap in practice and invite further research into levels of participation in the center and attainment of student and college goals. The chi-square analysis findings from this study showed evidence of a statistically significant association between student success center utilization and student retention. This suggests that when students utilize the success center, they are more likely to be retained.

The proposed policy change suggesting the implementation of tagging at the Student Success Center is an idea that emerged from the results of this study as a means of deepening student points of contact. The goal was to further strengthen the center's services by clarifying with students the short and long-range goals for their visit or visits, helping all parties to tag specific outcomes within the greater outcomes of building academic, career, and social capital. Because the services of the Student Success Center contribute to academic, social, and career capital, my white paper includes the suggestion that the college emphasize these priorities through a system of digital tagging at the point of entry. A quick primary tag upon arrival allows broad digital tracking of services, and subtags entered during, or at the end of service, allows for greater awareness of specific needs and ways to meet those needs.

Policy Change for Social Change

When a college adjusts its mission, it must often make changes in its policies and procedures in different programs to support the mission (Martinez, 2018). For example, in a study at Arden Community College (a pseudonym), the college made changes to student services after the decision was made to offer a baccalaureate degree. Results indicated significant changes to four areas including (a) advising, (b) support services, (c) financial services, and (d) student activities. Some services were expanded, new initiatives were developed, and new policies were implemented, which were primarily instigated by junior faculty with limited financial resources (Martinez, 2018).

As a part of making policy changes, accountability and governance that rise within educational networks involve more diverse and dynamic connections between individuals across campus (Mason, 2016). The complex relationship web among individuals who work in proximity or far apart can be difficult to negotiate from the outside, but these individuals can influence each other's response to change. At the college under study, a pilot CoP involved members from various departments such as health science, automotive, English, psychology, and business, and several of the members had rarely interacted with others in the group. However, being assigned to small groups with people outside of specialties gives a unique opportunity to appreciate the different work that is accomplished in each area and the diverse approaches to inviting success within the classroom and beyond. Additionally, because faculty at this college also serve as academic advisors, an exploration of individual methods of advising, including success coaching, was assessed.

Another challenge with policy change is the various components of an educational system, including its faculty, staff, students, curriculum, governing policies, and financial concerns within reinforcing structures that can keep it static (Mason, 2016). For example, in Martinez's (2018) study, the college began to use intrusive advising rather than waiting for students to seek advising, and it developed an early-alert system as well as first-year experience courses taught by faculty, and expanded academic tutoring for all students with a special emphasis on those enrolled in developmental classes. To address financial needs of students, the college also began holding financial aid fairs and reviewed its aid packages. To address their social needs, campus activities were expanded and focused more intently on student involvement with non-academic activities (Martinez, 2018). Change requires intentionality and new behaviors on the part of at least a few members of the organization who are persistent and capable of reaching those resistant to new ideas and policies. Before people are willing to adjust to change, they must see that a problem exists.

Other challenges may include an increase in the need for safety and behavior awareness (Martinez, 2018). New initiatives may require significant collaboration, coordination, and unity of purpose, and colleges making these kinds of adjustments should plan the implementation process carefully to reduce confusion and resistance (Martinez, 2018). However, policy provision can help overcome barriers to student opportunities and improve access by serving as an enabling conversion factor (Gale & Molla, 2015), though the development of new policies as a negotiated process (Knudson, 2019). An effective educational policy, framed from a problem, envisions and declares

the most desirable outcome and does not hide its motivations or intentions (Gale & Molla, 2015). It is important that this type of policy compile various interests in a final product that represents keyholders' interests (Knudson, 2019). Additionally, this type of policy may reduce marginalization and differences between less advantaged students and those with greater privilege, making it a means of social change.

As an example of a college that implemented a policy change, the strategic plan for the college under study (academic years 2012- 2017) was focused on delivering student-centered services and programs that optimize intellectual growth and creating an environment in which efficiency, effectiveness, and commitment are valued. One of the key goals was to develop, strengthen, and expand services and programs to increase retention, which worked with the college's vision for students. It also works well within the CoP framework, which emphasizes caring and building community as strategies for creating success. Frenk, Hunter, and Lapp (2015) noted the transformative power of personal, caring interactions with students in developing leadership attributes in the students themselves so that they become change agents. In a study of college students struggling with psychological problems, participants emphasized their wish for more meaningful personal interactions with faculty, support service staff, and peers (Warren & Schwitzer, 2018). Deepening the educational experience for students and for practitioners at various points of interaction creates a shared sense of learning and of ownership for change (Frenk et al., 2015).

The college set forth objectives for improving retention by using new research strategies to obtain data for better placement of students and more targeted ways of

meeting student needs (College Document, 2014). The college's current intake procedures at the Student Success Center are as follows: The student is greeted by a student worker and asked what service he or she is looking for (use of computer, tutoring, computer assistance, registration, FAFSA, career assessment, resume review, job search or job coaching, and study skills assistance). Students are provided with individual study skills coaching sessions and Individual Plans for Academic Success as needed. The director explained that the Center's most important work is providing a holistic support network for students: one that includes academic support/tutoring, computer resources, financial assistance via scholarships, and networking with community organizations such as SC Help, a foreclosure prevention program. Implementing a policy change to include tagging services may strengthen the services provided while increasing utilization of the center and retention rates. As Frenk et al. (2015) observed, making such changes demonstrates leadership and communication skills as well as innovation and the ability to transfer knowledge into proactive policies.

Means of Policy Recommendation: A White Paper

A white paper can have a variety of purposes such as raising a question or indicating a gap in service that needs addressing. Above all, it must present a solution to a business problem within a specific territory, one that has been outlined in the first section of the document (Campbell & Naidoo, 2017). Malone and Wright (2017) challenged the traditional view of white papers that kept them tied closely to government papers. Today's version of the marketing white paper has little in common with the earlier model or with contemporary government models, which were not designed to market new

technologies but to explain policies or to present classified reports of findings by scientists' and computer scientists' research. The marketing white paper can be a type of social action report addressing a social need through distributed text and visual elements that provide information and focus on the user (Malone & Wright, 2017).

Frenk et al. (2015) noted the need for an experiential script that asks stakeholders to become immersed in the humanitarian vision and action plan of an organization. Readers also need to grasp the complexities of that organization's environment (Ghazzawi, Byungku, & Yeri, 2019). The solution offered by this white paper is a policy change in intake procedures at the Student Success Center. The recommended change in procedures is a kind of mediation, a pragmatic service intended to bridge a gap in communication in a rhetorical context (Malone & Wright, 2017). The community and technical colleges of South Carolina have long faced low retention across the board, as outlined in my study. One goal for the policy change is to create interest in a new solution to a longstanding problem for which other solutions have been attempted without significant success.

The white paper is intended to address the possibility of a communication gap through the implementation of tagging services in the student success center. Ten Hoeve, Castelein, Jansen, and Roodbol (2017) studied primary reasons for attrition and retention in a population of nursing students. In their preparations for structured interviews with participants, the researchers acknowledged that it was critical to be able to identify with the participants' terminology. To be able to listen well and understand, as well as to communicate clearly, all parties must share key terms in regard to an existing problem.

Upfront tagging of primary needs and sub-tagging of specific needs may lend a new clarity and vision to the challenge of addressing broad and specific student needs. Graff-Ermeling, Ermeling, and Gallimore (2015) suggested that organizations desiring communication changes provide leaders and coaches with specific language that invites elaboration in response. Ten Hoeve et al. (2017) conducted interviews with nursing students and the following primary codes related to retention were established:

considered stopping; never considered stopping; stopped. Each primary code was sub-coded with negative factors and positive factors related to academic training and environment that influenced the decision whether to stop or continue. Among the reasons given for attrition were dissatisfaction with the program, lack of support, feeling stressed and unprepared for tasks, problems achieving academic goals, problems working in a group, and lack of confidence in their abilities. Similarly, reasons given for continuing studies included satisfaction with the program, plenty of support, and learning perseverance. Each of these concerns falls within the three major kinds of capital outlined in my proposal: academic, career, and social capital. An attempt to retain such students would ideally include a means of addressing each type.

Graff-Ermeling et al. (2015) emphasized that clarity in word choice can determine whether appropriate actions are taken. They proposed that organizational leaders foster a pattern of clear discourse by demonstrating such exchanges with strategic questions and requests for more information. A research culture committed to shared inquiry could improve educational practices and enhance communication and representation of all parties (Ion, Iftimescu, Proteasa, & Marin, 2019). A white paper is a means of presenting

research findings and advocating policy change in clear terminology. Willerton (2013) indicated its usefulness in professional settings, noting that writing a white paper is also an enjoyable learning experience that can strengthen institutional relationships. However, it is not without its challenges, including the perception by minority groups that it is too conventional (Winkler, 2017).

Winkler (2017) noted the need for resistant texts as a means of decolonizing planning. She perceived the white paper as part of a prevailing system of domination that must be disrupted. No strict signposts should be followed, rather a narrative can be interwoven with metaphor and modes of negotiation with traditional forms of writing and rhetorical moves (Winkler, 2017). Traditional rhetorical moves noted by Campbell and Naidoo (2017) included the identification of a business problem, establishment of credibility, one or more action prompts, and necessary disclaimers. White papers originated as a tool for generating information related to governmental policies along with background information and a rationale (Willerton, 2013), but they can be used to better clarify the role of researchers in the dissemination of knowledge (Ion et al., 2019).

More recently, white papers have been used for marketing, including the marketing of technical material for a lay audience, and evaluating a market for readiness. An example is Microsoft's white paper on India's readiness for artificial intelligence, which emphasized the benefits of technological advancements for a country that has made leaps in internet connectivity and has a forward-thinking government (Livemint, 2019). The paper outlined challenges for moving ahead with artificial intelligence, including the need for an ethical framework. Such white papers might be viewed as an

intermediary means of communication between academics and non-academics, and between computer experts and non-experts, because the language tends to be more straightforward than that of a scientific paper and can be employed for wide-ranging purposes. These purposes may include strategic planning and relaying recommendations for change in policy or procedure (Willerton, 2013). The continuity of policymaking to practice involves several factors that can facilitate or even hinder it (Ion et al., 2019).

A white paper prompts a researcher and writer to connect concepts with applications (Willerton, 2013) and problems with practical solutions. It can assist researchers in minimizing the communication gap between policy makers and practitioners as they search for connections and seek closer collaboration (Ion et al., 2019). As Frenk et al. (2015) explained, change within an organization should aspire to three levels of learning: informative, formative, and transformative. Researchers should adopt a more active role in making their work accessible and engage in the process of transferring findings to policymaking (Ion et al., 2019). My white paper invites these levels of learning because it provides information and a means of transforming communication in the Student Success Center so that each encounter with a student encourages formative assessment.

Increasing Stakeholder Buy-In

In a white paper related to investing in human capital in the American Association of Colleges of Pharmacy (AACCP), White et al. (2017) provide an example of how the Student Success Center at the college under study helps to develop human capital. Human capital is a term that generally represents all the skills and knowledge a

person develops over time. As a task force, White et al. (2017) were expected to identify diversification barriers to the development of human capital, to locate game-changers in related fields, and to offer strategies for improvement based on their findings. The task force was concerned with diversity and inclusion as primary driving factors in developing human capital (White et al., 2017). Diversity and inclusion are an important focus at the college under study as the majority of students are from low-income and minority groups. Faculty and staff are committed to helping these students develop the kinds of capital they need to be successful in college and throughout their lives. They need strategies for working through any differences that may arise in students' ways of thinking or for students' life circumstances that are unfamiliar.

Aloni (2013) emphasized preserving important differences at the outset but encouraging parties to become more open and flexible toward another's perspective, absorbing components from each culture as they develop tolerance and empathy. Ross-Yisrael (2019) noted the barriers that may arise in conversation when acceptance is disrupted. Personal biases and stereotypes that remain unidentified and unexamined can result in low engagement. White et al. (2017) agreed that meeting the needs of a diverse population is critical in reducing disparities at an organization. They were also interested in facilitating meaningful communication between that population and those who serve them to maximize the potential of the relationship. One recommendation was that the American Association of Colleges of Pharmacy study its data collection practices for underrepresented people and commit to intentional initiatives in diversification of human

capital. In the current proposal for policy change, the concept of human capital is categorized into three separate areas: social, academic, and career capital.

The focus on developing human capital has been challenged by some members of the academic community. Roberts-Mahoney, Means, and Garrison (2016), for example, raised some concerns about technologies designed to create personalized learning, learning that is data driven and part of a wider attempt to ensure students acquire a standardized set of specific skills rather than a broader education. They feared it is economics-based and reductive, emphasizing the development of human capital and a trained workforce and under-preparing students for the social and cultural contexts in which they live and work. As Aloni (2013) explained, knowledge that includes cultural depth, autonomy, and authenticity are central to the greatest educational experiences. To the extent that personalized learning is exclusive from these experiences, the learner may be underserved. Roberts-Mahoney et al. (2016) sought to show the contradictions built into personalized learning via technology and educational corporatization. They argued that data mining and algorithms are only part of the story and using the same approaches in schooling as social media and major distributors such as Amazon and Netflix do is akin to an ongoing feedback loop rather than true investment in the student as a whole person (Roberts-Mahoney et al., 2016).

These approaches minimize the role of the teacher, making him or her more of a facilitator and a servant to the technology. If one wants to empower students with a rich and multifaceted sense of humanity, the varied personal landscapes of culture that teachers bring to the educational experience must be maintained (Aloni, 2013). Roberts-

Mahoney et al. (2016) examined narratives from a larger study of Department of Education documents and reports, as well as advocacy organization reports, in respect to educational purpose, the educational role of data, the concept of teacher, and the concept of learning. They highlighted comparisons between education and business and the call to transfer technology practices from the latter to the former. In coding the documents according to the established themes, they actually performed the kind of data mining they seem to resist. Hurley (2015) challenged the concept of equality in adult education driven by the theory of human capital. He labeled as a panacea the attempt to promote inclusivity without a full understanding of what it means to be equal. Although many practitioners in education are guided by an ethos grounded in democratic, participative values, they operate within traditional structures and practices that are more rigid (Connolly, 2016).

Countermeasures for inequality that depend on individual empowerment rather than communal change are inadequate because people are only empowered within an existing social structure. They are not emancipated from their restrictions (Hurley, 2015). Liou and Rojas (2016) observed that teachers of various backgrounds can contribute to a discourse that blames students for failure and for their lack of social capital if they are not politically conscious. Their stereotyping behaviors may lead to lower expectations for students. When stakeholders help people only to find basic work rather than satisfying work and basic education instead of true self-development, Hurley (2015) argued, people do not achieve transformation in educational policies and practices.

Human capital in the form of skills and knowledge means that some people are left behind in the democratic system although it may be a participatory system. Ion et al. (2019) highlighted the challenges of transferring research findings to practical educational use. Policy making meets real people with expectations, needs, and perceptions, and often there is an insufficient connection between researchers and policy makers. The very idea of human capital is ensconced in the dominant culture and the state, which compel people to make their worth out of their knowledge and skill base, and their training to be workers in the grand economic scheme. The goal is to be competitive (Hurley, 2015), and issues of social justice become secondary.

Borjian (2018) noted that students who work diligently do so because they are motivated to enter careers that provide them both security and a chance to feel pride in their work. However, my study's focus on academic, social, and career capital invites a consideration of the full development of self rather than exclusively preparing students for their role in the economic system. As the college responds more holistically to the needs of students from all backgrounds, it is better able to incorporate standards of inclusion. Others have found tagging to be a democratic process, and data mined to be a true reflection of the examined community. As tagging becomes a standard practice in the Student Success Center, the resulting data will help the college better examine the student community and its needs while empowering individual students.

The Implementation of Tagging

One primary use of tagging is scaffolding, a pedagogical method of ushering students through various processes that lead to a desired outcome. Gobert, Sao Pedro,

Baker, Toto, and Montalvo (2012) conducted data mining from student tagging as a means of automated assessment that may drive scaffolding. They noted that tagging is useful for identifying subtasks that are required in learning a new skill and emphasized the importance of examining the primary and subtasks revealed through tagging with pedagogical theory. It is an automated, systematic means of monitoring students' performance (Agrusti, Bonavolontà, & Mezzini, 2019). The approach is consistent with the pilot project CoP at the college under study, which involves faculty members documenting their classroom teaching experiences according to what they see as most important. They use technological tools to identify, then highlight, teaching and learning processes and artifacts via such tags as Feedback, Assessment, Time on Task, Scaffolding, Connections, Caring, and Higher Order Thinking (Mellow et al., 2015). The creators of this approach, Mellow et al. (2015), demonstrated how tagging is a reflective process rooted in scientific inquiry that creates deeper understanding of teaching practices. Assessment of student learning that involves tagging is strengthened by considering other factors such as amount of time learners spent on reading content and on their emotional responses during studying (Kardan, Sani, & Modaberi, 2016).

The tags employed in the CoP are categorized under five primary goals: Creating a Supportive Classroom Environment, Creating a Varied Classroom Environment, Creating a Challenging Classroom Environment, Creating an Organized Classroom Environment, and Evaluating Student Work. Individual tags under these broad categories include such terms as *Community Building*, *Transition to College*, *Collaboration*, *Self-Reflection*, and *Formative and Summative Assessment*. One of the individual tags is

Scaffolding, a descriptor for providing activities that move students from basic levels of work to more sophisticated levels. As student knowledge and abilities grow, the scaffolding is drawn back and eventually removed. It would be practical to transfer the method of tagging activities to the Student Success Center, where the three primary goals are Developing Academic Capital, Developing Social Capital, and Developing Career Capital, and individual tags can reflect the more specific tasks under each goal. Success Center tags would include similar tags as those provided above (Community Building, Transition to College, Scaffolding, etc.) as well as others referenced by Mellow et al. (2015). Each successive visit, each tagged goal and activity, each outcome is a means of scaffolding in itself. Social interaction and peer dialogue in the center can also help to scaffold students emotionally and cognitively (To & Liu, 2018).

A second strength of tagging is assessment. Gobert et al. (2012) demonstrated that formative and summative assessment can employ the learning concepts described by tagging. As teachers measure student progress, they can use assessment tagging to better understand and explain how students are learning material and reaching desired outcomes. Kardan et al. (2016) recommended a method of assessment they coined as TagAssessment, which examines learners' tags as compared to expert tags to estimate how well students have understood the tagged content and the relevance of selected tags. Students can improve their pedagogical proficiency through practice, and through reflection on their teaching habits and skills (Mellow et al., 2015). They adjust their behaviors as needed within a trajectory of mastery. Measurement of understanding and

mastery can be assessed by a technological tool that computes the semantic distance between the learner tags and standard/expert tags (Kardan et al., 2016).

Gobert et al. (2012) noted that students' study habits and the tagging behaviors employed are situated within an environment of inquiry and assessment. Unfortunately, the method of assessment described by Kardan et al. (2016) has a limited application because much educational content has not been tagged by experts, and the process of expert tagging can be costly and time consuming. The Student Success Center at the college under study operates as an environment in which students seek answers to problems and challenges, and staff seek the best possible solutions to address student needs and expectations. Assessment of the efficacy of the Student Success Center itself is complex but may benefit from the additional data provided by tagging at key points of interaction. In a qualitative study at a London university by Fernando (2018), students were guided through stages of writing while making the processes explicit via an online scaffolding platform. Students reflected on their learning at each stage and provided a formative self-assessment. With the help of a tutor, they also learned to characterize their challenges with each stage, noting these challenges in the online self-assessment. Fernando (2018) analyzed the data set with two considerations: (a) how well students were able to achieve the desired goal of creating a well-developed written argument, and (b) the students' level of engagement with the processes (i.e. their ability to articulate what was required at each stage, using accurate terminology and descriptors (tags) such as outlining, note-taking, highlighting, and organization). Students also responded to questionnaires and interview questions about the scaffolding process. Results showed that

students felt reassured and safe during the steps of the online formative assessment and felt that they were better able to gauge the quality of their writing as they proceeded through the steps.

A third use for tagging is more accurate interpretation of student needs and preferences. Shinae, Gudmunson, Griesdorn, and Gong-Soog (2016) studied data from intake surveys completed by 554 student visitors to the center for financial counseling at a Midwestern university. The surveys were primarily related to socio-demographic characteristics including race, gender, age, student loan debt and other debt, and employment, but also allowed students an opportunity to state preferences about face-to-face counseling compared to telephone or e-mail counseling (Shinae et al., 2016). The goal was to identify what financial situations had compelled students to seek assistance at the center, what level of stress students were experiencing, and what relationship may have existed between sociodemographic factors and financial situation/stress. The results of the study indicated that an intake survey helps to clarify whether a student needs single-issue focused counseling or more comprehensive financial counseling. A clear and early diagnosis of student needs was part of a deep listening process that led to more strategic counseling. The researchers also noted that reducing financial pressures by addressing related behaviors allows students to focus to a greater degree on academics (Shinae et al., 2016).

Colleges should be consistently aware that poverty affects students' social capital, educational background, and understanding of career options, all of which are known to have roles in determining whether students are successful in meeting their goals (Van

Zyl, 2016). The college under study has a similar opportunity in the Student Success Center, where deep listening during intake procedures may reveal clues to a student's hopes and expectations for his or her visit. Taking a little extra time with a student at the outset will indicate sincere interest and patience on the part of staff and provide reassurance that the Center is a safe and welcoming environment. It will also set the stage for inclusiveness, which is another potential positive outcome from tagging services.

Inclusiveness depends on openness to difference and an attitude of seeking to understand another's needs. The Student Success Center has an opportunity to sponsor what Pstross, Talmage, Peterson, and Knopf (2017) described as a transformative moment. It can employ appreciative inquiry to invite trust and create cohesion at the moment of entry (Pstross et al., 2017). Appreciative inquiry has been part of recent advising initiatives at the college under study, so it is again a natural extension to make in the center. Inquiry must be followed by deep listening and clear understanding in order for it to be transformative. Tagging is a means of quick accountability for the transformative moment because it is both a record and a commitment. The various initiatives: Community of Practice, Coaching/Advising, and the Student Success Center are all related to the college's greater vision of transformation for students. Therefore, students need to encounter transformative moments throughout the campus at key points of interaction with faculty and staff, including tutors.

Duncombe (2017) examined the intake process for clients seeking community health counseling to identify areas of vulnerability and disadvantage. She noted in the resulting paper that participants' voices were privileged, inviting service providers to

consider greater participation of clients in determining the course of services at intake. Inviting clients to participate on a deeper level may contribute to their feelings of empowerment. As Abraham (2014) indicated, power is an arguable term, one that is uncomfortable for many people in education to discuss, but not discussing it does not make power disparities go away. Quality service should take into consideration possible disparities, including student perceptions in this regard, and should address weaknesses informed by these perceptions (Sardar, Amjad, & Ali, 2016). The Student Success Center is a place of empowerment, and it is critical for staff to underscore the invitation to empower and transform that occurs when a student takes the initiative to enter its doors. Tagging can be part of a system of empowerment. Hagtvedt and Patrick (2014) described empowerment as a perception of personal strength and control that ideally helps motivate one's pursuit of a goal. When a student works toward a goal (such as visiting the Student Success Center), he or she should feel some sense of control in the new activity. The entry point is a good place to confirm that feeling and promote further motivation.

Duncombe (2017) featured qualitative responses from intake staff regarding the characteristics of a good intake process to identify vulnerabilities. Vulnerabilities can include, for example, students' perceptions of their ability to find friends and feel that they belong, and their experiences of academic or financial pressure (Van Zyl, 2016). Pilot interviews provided primary themes for analysis and involved not only those seeking services and reception staff but also those professionals who made initial referrals for service (Duncombe, 2017). Results showed that although all system participants (clients, receptionists, and professional counselors) expressed concern about

client vulnerability, the intake process sometimes failed to identify points of vulnerability. Participants indicated that a more participatory design at client intake might improve services and help clients feel more empowered. Similarly, the problem of vulnerability or unequal power distribution can occur at the Student Success Center despite the concerns of staff, and tagging is one kind of participatory, empowering design.

Diaz, Cochran, and Karlin (2016) listed five forms of power often employed in the educational environment: coercive, expert, legitimate, referent, and reward power. Expert power is related to intellectual knowledge; teachers have accumulated knowledge that gives them this form of power, which many students recognize as valid and positive. Coercive power concerns the potential for punishment, which is nearly always experienced as negative (Diaz et al., 2016). Legitimate power comes from the assigned educational role itself. Students generally do not see legitimate power as threatening. Referent power concerns a student's positive feelings about the person of authority because of perceived similarities or affinities. Finally, reward power is considered the ability of the person in the authoritative role to provide or assign positive benefits to a student, including psychological and relational rewards such as encouragement and motivation (Diaz et al., 2016). Given these several kinds of power imparted to those in authority, students may feel to some degree, powerless. Therefore, it is important to return a sense of power to the student and to help him or her increase feelings of empowerment.

Student empowerment is a central concern of the college study site, as expressed in its vision statement as “Engage. Empower. Transform” (College Website, 2019). This vision can be instituted at various points of student service including the Student Success Center. At the Center, initial tagging would occur at entry (by staff) and at the conclusion of an activity to construct tagging, described by Gobert et al. (2012), as both top-down and bottom-up. Tagging is both a cognitive and cultural process of extracting characteristics and framing them in approachable, simplified language (Hu, Lin, Han, & Li, 2018). Although a student may enter the Center requesting a specific type of help, during the tutorial session other concerns may arise that are equally important but had not initially been tagged. The student will have an opportunity to adjust the tagging services provided. As a result, new tags may be documented, and the student is empowered in an all-around democratic activity. Subtags might include such terms as *English paper*, *grammar*, *resume*, *interviewing*, *speechwriting*, *persuasive writing*, *social media*, *critical thinking*, and et cetera. This practice will correspond to the CoP pilot study currently underway involving tagging of classroom practices by faculty members as they prepare for class and as they reflect on what they and their students did in class.

Once mined, the resulting data may better prepare both staff and students for work in the center and for performance assessment. If students are also interviewed or surveyed in regard to the new habits at intake, the college will have an even greater awareness of student perceptions of the Student Success Center. Tagging can serve as a facilitation skill for tutors as well as intake staff. Matthew-Maich et al. (2016) studied student perceptions of effectiveness in problem-based tutoring. Resulting data was organized into

five themes: preparation, client- centeredness, passion, professionalism, and capability. For students, tutor preparation and capability were evidenced when the tutor was able to answer questions quickly and thoroughly.

Students also valued social skills and facilitation skills; one participant observed, for example, that tutors who know a student's circumstances beyond the immediate problem are more motivating. Aloni (2013) described such processes as humanizing, inviting empowerment with awareness and validation of self-worth, reduction of prejudices, and respectful and tolerant dialogue. Empowering dialogues enable both participants to engage in meaningful growth and learning. A trigger for dialogue, tagging can be holistic or analytic and may help to create common threads between people of different ages and educational levels (Hu et al., 2018).

Tagging also has a role in determining what resources are necessary and where budgeting should be targeted. As an example, Shinae et al. (2016) used data mining to gather information about the most common student needs, which allowed researchers to make recommendations about how best to spend resources in preparing for student success. Similarly, data mining at the college under study may help to inform stakeholders of the benefits of tagging services in the Student Success Center and help them decide how best to meet student needs to improve retention.

Matthew-Maich et al. (2016) indicated that programs must invest in holistic staff preparedness for problem-based tutorials. Tagging can inform instruction as well as the design of skill assessments (Gobert et al., 2012). There is some risk of attentional bias, and tagging may be influenced by habits of personal expression and motivation (Hu et al.,

2018). Breaking down the skills and subskills and observing the auto-scaffolding, as described by Gobert et al. (2012), may help staff both generalize and personalize their guidance more effectively. These strategies should also help minimize what Hu et al. (2018) referred to as opinion mining. What may seem obvious to the tutor may not be obvious to the student, and a regular re-orientation to the desired outcomes is useful. Tutors in the Student Success Center can re-introduce broad and specific outcomes as needed by using the tags provided at entry point. Tagging encourages analysis and measurement of tasks; for example, if a tutor tags an activity as “critical thinking,” he or she can follow up by indicating how the activity invited and measured substantive critical thinking.

Lin and Xie (2017) conducted a posttest only control group experimental design study in which thirty-two pre-service teachers (divided into six teams) at a northwestern American university used blogging and tagclouds to guide group discussion. In their research-based team blogs, the students were required to choose at least five tag words. From the collected tags, researchers formed tagclouds that were not visible to students. Three groups of students were then provided with the tagclouds produced by their own group and those produced by the other groups to see where lapses may have been made in tagging for their own group. Each group shared and compared its findings during the discussion period. They were also assigned questions that invited clarifying and negotiating skills as well as co-constructing and preparing a group statement. This kind of co-constructing experience uses dialogue based on mutual interest and helps the group to advance to a greater understanding of themselves and others (Aloni, 2013).

Pedagogically, tagging approaches individual as well as collective purposes (Dennen et al., 2018). If tutors at the Student Success Center refer to their students' initial tagging of desired outcomes and ask for a student's evaluation of progress, they will have an opportunity for meaningful dialogue and advancement toward goals. They can set up a concept map toward learning.

Lin and Xie (2017) examined participant-created concept maps along with group tagclouds and individual blog tags for evidence of knowledge construction. The study included a control group that visited and revisited all groups' blog sites and summarized and compared the blogs and tags. The control group did not receive tagclouds and did not follow-up with group discussion. Results indicated that group discussions anchored in tagclouds exhibited enhanced learning as demonstrated in their concept maps (Lin & Xie, 2017). The Student Success Center at the college under study encourages student interaction and has some rooms dedicated to group work. Tagging practices could be extended to these study groups with some guidance from tutors and other Center staff.

Xie and Lin (2016) studied thirty-nine students divided into six teams, each of which prepared a research-based team blog for five consecutive weeks and was required to tag aspects of the blog writing. In this experimental design, half of the groups received instructor suggestions for tagging, and the other half created their own tags. Results indicated that both free-tagging and instructor-guided tagging produced positive results: the free-tagging groups tended to think more deeply about aspects of their writing (thus deepening the learning process); the instructor-guided groups were more likely to stay on task with fewer distractions. As Aloni (2013) indicated, shared methods and points of

emphasis allow empowering dialogues with a central backbone. Tagging was described by Ha, Han, Lee, and Kim (2017) as being an explicit, directive activity linked to social capital, in that it encourages reciprocity and clear communication, behaviors central to social expectations.

Gobert et al. (2012) referred to tagging as a ground truth that helps build models of learning and assessment in the digital and human environments. It is a means of cooperation and bridging that is both useful and easy to use (Hu et al., 2018). Aloni (2013) noted that true education includes dialogue that respects and empowers the student while cultivating in him or her the desire for something better. Tagging can generate as many questions as answers for students; it can be used to develop personal maps of a student's strengths and weaknesses in knowledge, and to help determine what learning materials are suitable going forward (Sun et al., 2019). Tagging is a type of coding that can be constructed in real time and utilized within the prepared or expanded curriculum, an act of inquiry and exploration used to describe learning behaviors and features of an activity (Gobert et al., 2012). Students in the Student Success Center are encouraged to ask questions but may need assistance in formulating their questions and seeing how the answers fit into the larger goal. Reinforcement or re-evaluation of the agreed-upon tags can help make important connections in the student's memory and comprehension.

The role of tagging in learning development has been examined by Xie and Lin (2016), who noted that the aggregation of tags mimics the construction of semantic memory, which involves interconnected nodes. In their study, tag-clouds (visual representations of keywords depending on word frequency, created by computer

software) were created from keywords employed by groups in their tagging process. These tag-clouds indicated the frequency of keyword use among the group and thus their habits of thinking about their blog writing. Similarly, Gobert et al. (2012) noted that machine algorithms may identify frequent combinations and predict behaviors, and Xu, Wang, Peng, and Wu (2019) applied such algorithms to test the efficacy of predicting academic performance by studying Internet usage among college students. At the least, information is generated through tagging, and it may be investigated and interpreted using pedagogical theories such as those explored in *Taking College Seriously*, a model which incorporates tagging of activities in support of a framework of success. The white paper addresses aspects of tagging and its role in prompting student success by bringing attention to social, academic, and career capital as it relates to admission policies.

Project Description

This section includes an overview of the white paper, key stakeholders, barriers to implementation, and successful implementation.

White Paper Report for Positive Change

The white paper's introduction establishes a territory, a rural technical college, and a gap in services within that territory. Campbell and Naidoo (2017) explained that it is critical to create an early context for a proposal to draw the interest of an audience. I illustrate the action with informative graphics, such as data charts also noted as a feature of most white papers in the study conducted by Campbell and Naidoo (2017). Xie and Lin (2016) studied tagging and tag clouds as mechanisms for inviting reflection by students. They found that instructor support in the tagging process provided focus, but

also that independent (free) tagging by students tended to invite deeper learning processes, so there was a role for both guided and spontaneous tagging. These external research findings are important to the white paper because tagging in the Student Success Center is used to support the students' awareness of short and long-term payoffs of their work when they are invited to participate.

Smart (2017) explored scaffolded cognition, in which various elements are seen to play an important role in the development of certain kinds of cognitive capability. The concept of scaffolded cognition relates directly to the CoP methodology employed in a pilot study at the college under study and will apply to the tagging procedure recommended as a policy change for the Student Success Center. Xie and Lin (2016) examined tag clouds as a group cognitive activity. Tagclouds demonstrate coherent tagging behaviors across a group and can be used as part of the technique of scaffolding, a bridging activity for students between their existing knowledge and their developing knowledge (Xie & Lin, 2016). The white paper further explains the connection between tagging, scaffolding, and communications among students, faculty, and staff when used at the Student Success Center.

Potential Resources and Existing Supports

Key stakeholders and main resources for this project include the Student Success Center Director and staff, college administration, faculty, information technology staff, and students, as well as leaders in the state technical system. All persons involved in this process serve a vital role in implementation and successful completion of this policy change. Students themselves are part of the solution to the problem of low retention as

they clarify their challenges and recognize their role in the dynamics of the educational system (Frenk et al., Hunter, & Lapp, 2015). When there are multiple stakeholders, and new technologies are being adopted by an organization, the complexity of the project may increase, and it is important to be both efficient and flexible as the work unfolds (Lee, Lee, & Ham, 2017). Graff-Ermeling et al. (2015) emphasized the role of all principal players in leading and facilitating projects. From writing to planning to implementation, all participants are part of a thoughtful process. Kujala, Heikkinen, and Lehtimäki (2012) noted the importance of strategic stakeholder relationships in getting a successful project off the ground. Over time, as stakeholders successfully communicate, greater integration of values and behaviors allow the project to progress more smoothly (Lee et al., 2017). Stakeholders have ethical interests in the communities in which they are invested. Their values and expectations must be considered. The stakeholders include the director of the Student Success Center, the vice president of academic affairs, the college president, and the South Carolina State Technical System.

The Director of the Student Success Center, who plays a primary role in the success of this project by working with the information technology staff and a CoP faculty advisor to create an efficient, easy-to-use tagging system for student visits. Output from this system should be suitable for data mining and reporting that will continually inform the director and other stakeholders of outcomes going forward. The director will also oversee center staff implementation of the program.

Additionally, the vice president of Academic Affairs is pivotal to the success of this project by encouraging faculty and staff to support the tagging of services in the

Student Success Center. Tagging of activities is already familiar to faculty who participated in the Community of Practice. The vice president's support may also be needed in terms of financial resources, training events/workshops, and equipment or software. The college president also initiated the CoP with faculty, so his support in transferring the tagging procedures used in the CoP to the Student Success Center will be invaluable. He is also an important liaison to the state technical system administrators in lending legitimacy to the project.

Finally, the South Carolina State Technical System oversees the college and has a vested interest in its successful retention of students through a variety of means including the work of the Student Success Center. This project intends to further strengthen that work and the center's positive impact on retention. Furthermore, the state is keenly interested in growing a student workforce that will contribute to a sound state economy. Economic benefits often provide a central point of agreement between parties when there is conflict or resistance related to a project (Kujala et al., 2012). Like most of the American labor market, The South Carolina Technical College System depends on developing and strengthening the expanding construction, transportation, healthcare, and information technology sectors (Decker, 2019). The state needs graduates who are suited for these sectors.

A white paper proposing a policy change was presented to all stakeholders. Gefen, Gefen, and Carmel (2015) demonstrated that investor responses to project proposals are generally more positive when the project description is thorough, and the project is expected to be in place long-term. A description that is too brief can give the

impression that the project is limited in scope and in impact; it can also lead to misunderstandings. Projects that involve software and other technology-based tools often include unexpected problems in the implementation phase, so investors tend to anticipate these interruptions. That may partially explain why longer-term technology-based projects tend to have more weight with investors. Similarly, more detailed projects are more likely to be fully funded (Gefen et al., 2015), as are innovative projects that combine sub-disciplines and employ relevant data and statistical methods (Franssen, Scholten, Hessels, & de Rijcke, 2018). The implication of uncertainty on the part of stakeholders is best handled through a carefully developed project description that is adequately detailed and anticipates problems. As Frenk et al. (2015) explained, change within an organization's culture affects how its members perceive their own identity. Also, member response and adjustment appear to be related to magnitude of change, so unless there is a major shift in expectations for daily work, people tend to adjust reasonably well in a short period of time (Yang, Choi, & Lee, 2018). As stakeholders see positive changes from a policy change, they will be inspired to continue their efforts to increase student retention. They will see themselves as change-makers.

Potential Barriers

Potential barriers to the successful implementation of this project may involve initial resistance on the part of center staff or other stakeholders, as well as time or money constraints.

Initial resistance. The first barrier to successful implementation of the project is initial resistance on the part of center staff or other stakeholders. Initial resistance involves questioning or challenging the new initiative, such as wondering if it will be short-lived, or if the site can financially sustain the new initiative. Overcoming initial resistance requires cooperation and joint value creation from all parties, even those who may seem to be on the margin (Kujala et al., 2012). The principle of common good is the foundation upon which the project is implemented. Social welfare is a natural concern for community and technical colleges, which serve a student body characterized by low income and a demonstrated need for academic, social, and career support. Taylor, Ford, Riley, Powers, and Lederle (2017) explained that top leadership must initiate the need for change. Leaders help determine the agencies readiness and ability to initiate and sustain any new initiatives. Actions are driven by fears and hopes; this is how social change happens.

Time constraints. A second barrier to successful implementation of this project includes time constraints. Many faculty and staff already feel overwhelmed by their duties and hesitate to accept new responsibilities. To minimize this concern, stakeholders in the project must see the possibilities for local development of resources and potential positive outcomes. One approach to skepticism is identifying what Snyder (2017) called psychic rewards that appear to be threatened by the initiative and exploring these in conversation. If the initiative involves a commitment to new actions, it is important for actions to be tied to positive concepts that everyone can appreciate and would like to support. The study site has undertaken several previous initiatives

that proved to be short-lived. Snyder (2017) noted the tendency toward skepticism among some veteran employees based upon prior experience with failed initiatives. Other veterans have the perception that the status quo is working well enough. Most are not entirely cynical or negative, however, and do not wish to undermine new initiatives. The project at the study site is based on a vision of student success aided by greater clarification and sensitivity toward student needs which stakeholders should support.

Monetary constraints. The last major barrier to successful implementation of the project is administrators' concern about monetary constraints. State technical colleges are accountable for a specific budget, and implementation of a new initiative can place financial strains on that budget. Chan (2017) encouraged the use of existing technology when implementing new initiatives, as it reduces the costs associated with doing so. For implementation of the proposed policy change, there are little to no costs associated. The college is already utilizing the CoP practices, which can easily be expanded and utilized in the Student Success Center. Tagging itself requires only a minimal adjustment to existing software. When the college is able to minimize the costs associated with using tagging services in the Student Success Center, stakeholders are more likely to support the initiative and its goals.

Implementation of the Project

Training and implementation of the project can be completed within one or two semesters. Initial changes or installation of software or equipment will be made first, then training will be provided via workshops, followed by a beta-testing of the system in the Student Success Center. Implementation of this project requires an adjustment to check-

in practices in the Student Success Center using database software that has been installed or upgraded by Information Technology staff. Center staff are trained related to tagging by a CoP faculty member, using materials from *Taking College Teaching Seriously*. Upon entry, when students state their reason for a visit, or the type of help they are seeking, the reception staff tags the student's primary need as academic, social, or career related in the check-in database. Graff-Ermeling et al. (2015) observed that staff often see themselves as purveyors of advice and may not see the chance to facilitate clearer communication by asking students questions. After the initial inquiry, Success Center staff may discover that a student has multiple needs. This is a critical point because staff may become frustrated by the added relational time, the technological requirements, and the increased emphasis on data collection (Snyder, 2017).

Leaders should anticipate this frustration and employ proactive strategies to facilitate implementation and help staff navigate the required terminology and technology such as those outlined in my white paper. In the case of multiple needs, staff will enter successive tags. Amendment to the tags can be made during or at the completion of a student session as needed to provide further insight. Graff-Ermeling et al. (2015) emphasized the potential to unpack vague descriptions of need so that the resulting plan of action is directly beneficial, and tagging can be a means of unpacking and predicting. Xu et al., (2019) demonstrated that the predictive procedure of machine learning techniques can help improve educational management in universities and colleges. Successive tagging upon further visits may also reveal vital sequences in the tutoring process (scaffolding) and more fully address student needs as they are revealed. A critical

component of the project also occurs when the resulting data is mined, and CoP reflection occurs, so training in this area is also provided by the CoP faculty member. Reflection in CoP is usually achieved through simple highlighting of important activities that occur in a teaching or tutoring session. Tutors/center staff consider their narratives, materials, and session artifacts related to student learning when highlighting and then tagging the session accurately for maximum effectiveness. Because college faculty volunteer hours of service in the Center, they are able to make use of CoP practices there as well as in their own classrooms.

Project Evaluation Plan

My white paper includes a policy change which guides the implementation of tagging services in the Student Success Center. An academic policy change recommendation is written for a specific educational organization or system, usually in response to a question the organization is pondering. For this purpose, a white paper can be both informative and persuasive, but information takes precedence over persuasive techniques in a format known as the soft sell (Campbell & Naidoo, 2017). My white paper proposes a change in Student Success Center admission procedures to better clarify student needs to respond more effectively and improve retention. Evaluation of policy changes related to Student Success Center check in occurs after the initial implementation. Stakeholders will determine the effectiveness of the policy change for check-in procedures via reflections posted in the Community of Practice discussion board following current CoP guidelines. Additionally, stakeholders will meet monthly to discuss any changes needed. This interim evaluation method determines if standards are

being met and sets agendas for future needs. Lawless et al. (2018) examined the role of context in discovering why and how well a particular intervention works. Failure may not be due to the program itself but to external influences.

Power relations and administrative layers may have an impact, for example, or newly established routines may be interrupted. Some degree of adaptability is key to the success of interventions (Lawless et al., 2018). This can be especially true when we are looking at long-term measurement of outcomes, for which it may be helpful to identify progress indicators in the interim. Data collection can be designed to allow evaluation at various stages. Key activities can be examined through the lens of the data sources (Lawless et al., 2018). The achievement of specific outcomes can be measured against expectations while the evaluator also analyzes contributing factors.

My white paper specifically outlines long-term evaluation criteria including the re-evaluation of student retention after two years of policy change implementation. The evaluation will also examine the role of tagging in services provided through the Student Success Center as it relates to retention. The white paper serves as a guideline for evaluation at each point. In addition to the white paper's criteria for formative and summative assessment, it provides the following benefits:

- Demonstrates evidence-based research that supports tagging as a means of creating shared language.
- Increases knowledge of tagging procedures.
- Elaborates on the importance of point of entry procedures in maximizing services provided.

- Provides research-backed reasons for implementing policy change.
- Provides awareness of how often specific types of capital are acknowledged and targeted.

Key stakeholders in this project include the Student Success Center Director and staff, college administration, faculty, Information Technology staff, and students, as well as leaders in the state technical system. All persons involved in this process serve a vital role in implementation and successful completion of this policy change.

Project Implications

This project features a holistic view of students already described in the proposal as low-income with a demonstrated need for social, academic, and career capital to maximize their potential in the community as citizens and members of a vital workforce. Although the Student Success Center has always sought to serve the needs of students, it has not had a systematic and consistent means of tagging services or a data mining procedure that could inform stakeholders of the specific ways that student visitors are developing types of capital. The transfer of an already existing Community of Practice system of tagging activities and reflection to the Student Success Center is part of the larger campus effort to create Workforce Ready graduates and also be sensitive to students' academic and social challenges. Social change at the grassroots level of the college may extend beyond this campus to other community and technical colleges in the Technical College System and across the nation as diversity and inclusion continue to take precedence in campus operations. When all stakeholders see students as individuals developing the kinds of capital needed to thrive after graduation, they will have greater

confidence in the college's impact in the region and beyond. The continuing puzzle of low retention invites creative thinking and innovative approaches to student support. The results of my study indicated that when we can get students to the Center, their likelihood of being retained is greater over a period of time. Therefore, it is critical to maximize student visits to the Center to address multiple causes of low retention. My white paper proposing a policy change is a fundamental component of the effort to achieve social change.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

Project Strengths

The greatest strength of my project may be its close alliance to the college's existing faculty CoP and Student Success Center. As the results of my study indicated, Student Success Center attendance has a positive influence on student retention, and the center is a central location for retention efforts on campus. Any student support organization may be vulnerable to gaps in service, places where perception does not meet expectation (Saleem, Hussain, & Ahmad, 2017). However, research and policy changes can help address these gaps (Thomas & McCormick, 2017), which this project helps to accomplish.

My own roles as a doctoral candidate, faculty member, Student Success Center tutor, CoP coach, and chapter advisor for Phi Theta Kappa also contribute to the strengths within this project because I am able to represent the different sides of the gap and to effect change that provides continuity between these groups. My current position as the program coordinator for the Presidential Scholars Program also strengthens my role in the project because I am closely guiding a group of 20 young people through their first year of college and witnessing their challenges and successes. They are from various socioeconomic and educational backgrounds, and some are first generation college students who need more guidance in considering their short-and-long-term goals and learning to stay the course when they feel like giving up. First generation college students are less likely to successfully reach their academic goals; they take fewer classes and earn

lower grades (O' Bryant & Schaffzin, 2017). It is important for them to have confidence that they can complete tasks, but they must also have the desire to complete them (Kosovich et al., 2019). Thus, colleges need to provide academic and social support to this population, and my project was dedicated to that principle.

As a doctoral candidate researcher who studied the correlation between Success Center attendance and student retention, I also provided the background, development, and results of this study as well as the years of classroom knowledge and skills I developed in the doctoral program, including methods of transformation in American higher education. I have learned about motivation, values, and discourse in the higher education community. I have studied programs that worked and those that did not meet expectations. I have developed an understanding of state-level and campus-level decision making, cooperative relationships, planning, and the measurement of productivity and outcomes for programs. Thus, I am able to navigate the concerns of various academic departments and student services. Further, I have been able to respond to the unique demands of the institution that employs me, given my 14 years of employment as an instructor of English, Humanities, and College Skills, writing center director, cooperative learning workshop leader, Achieving the Dream program member, service learning coordinator, and vice president of the faculty council. I have developed a keen understanding of the importance of academic accessibility for all students, including first-generation students. Student expectancy for success is linked to self-efficacy as well as the perception of academic tasks as meaningful or relevant (Kosovich et al., 2019). My recommended policy change responds to these appeals.

The study site attempts to reach students at all levels in the Student Success Center. I have looked closely at the role of the community college in the broad base of higher education and its importance in enrolling underprivileged and underprepared students. I am aware of the necessity for increased student contact as a means of overcoming the many challenges community college students face. As noted by O' Bryant and Schaffzin (2017), an admission process for students should feature guidance and relationship-building to build social capital at the outset. As demonstrated, student motivation depends on expectancy of success combined with the subjective value assigned to academic tasks (Kosovich et al., 2019). We may fail to see beyond the initial college admissions process to the many smaller points of admittance on the campus. My doctoral education at Walden has significantly emphasized public good and social change, and these now drive my interests and ambitions toward policy change.

Another strength to my project was the setting itself. The Student Success Center provides a learning environment and an orientation to successful college behaviors that build academic, social, and career capital. It is an environment that advocates the kind of deep approach to learning described as part of a learning paradigm with intrinsic rewards (see Tagg, 2014). Two-year college students with low motivation and relatively weak content knowledge may benefit particularly from activities that involve reflection on learning experiences (Kosovich et al., 2019). The center is a key point for such reflection and may coordinate with other programs, initiatives, and departments.

My project was also a tool for coordination. It was an opportunity for clearer communication, deeper analysis, problem solving, interaction, and identification of

specific student needs. It also invited more precise matching of tutorial skills with these needs. Part of student social and academic development is the ability to recognize, understand, and use academic language (O' Bryant & Schaffzin, 2017). Although tagging appears to employ simple, straightforward terms, it is a language within the context of academic language; it is a means of developing academic literacy and can be a means of both formative and summative assessment. The project contributed to academic language fluency and supported overall program assessment. Though its strengths supported its implementation, it was not without limitations.

Project Limitations

The project will require some degree of monitoring and coordination on the part of staff, and not every student enrolled will attend the center and benefit from the specific tagging services and matched tutoring. It is a gateway experience, and some students will not come on their own; they will need an invitation and regular encouragement to attend. Success Center staff will need to listen to students' concerns to take full advantage of the tagging service. Further, efforts to reduce gaps are complex and are not always successful (Thomas & McCormick, 2017). It may also be a limitation to focus on the development of the various types of human capital and exclude alternative approaches that do not address fairness of opportunities and politically-based assumptions about policies and programs (St. John, 2017).

Recommendations for Alternative Approaches

Because one of the reasons faculty and staff may not get involved in a new initiative is that they already feel overwhelmed, it was important for the proposed project

to be straightforward, easily implemented, and clearly meaningful. For example, Auten, Glauner, Lefoe, and Henry (2016) described how librarians at South Piedmont Community College inspired faculty to collaborate more deeply with them to shape student research skills and appreciate all that the library has to offer by creating a presentation that demonstrated both the significance of student needs in this area and the flexibility of faculty participation in supporting their efforts. The result was greater participation on the part of several faculty members (about 42% of faculty) throughout the next year (Auten et al., 2016).

An alternative approach is to emphasize flexibility in practice and allow tutors (both faculty tutors and center staff) to choose whether to participate or to use their own unique tags when identifying or addressing a need. Faculty and staff can produce a net effect as resources are combined across disciplines to meet individual student needs and maximize individual capabilities even on a smaller scale. They can contribute to student development through interaction with people whose interventions can make or break success (O'Bryant & Schaffzin, 2017). As the project goes forward into additional semesters, the current faculty CoP can be a vehicle for interested members to share their learned experiences of tagging, reflection, sharing, and journaling in the Student Success Center. Student involvement in this project can be determined by who has the most disproportionate need. Sailor, McCart, and Choi (2018) suggested that those with such needs, atypical learners, deserve equally disproportionate resources, and that this philosophy should translate to policy. The project was tailored to atypical learners, students on academic probation, students in developmental classes, and students with

other issues that complicate their academic, social, or career progress. The idea was to focus on potential capabilities rather than existing deficits (Sailor et al., 2018).

Scholarship, Project Development and Evaluation, and Leadership and Change

Research for this project included scholarly articles related to the unique needs of community and technical college students and to the clearer identification of those needs to respond more effectively and more promptly through programmatic, structured interventions. Goals included better organization and delivery of support services. Sailor, et al. (2018) emphasized greater equity and inclusion of atypical learners. It also helped to develop greater career awareness in students, exploring their strengths and interests as well as their values in relation to potential careers (Hoyert et al., 2019). Engagement measures and interventions must consider multiple interdependent factors in building career capital (Hatch, 2017) for vulnerable students. Learning programs of various kinds, including orientations, tutoring, workshops, writing and math centers, and mentoring can provide academic assistance and help address anxiety and other barriers to success (Liang, Jones, & Robles-Pina, 2018). Community colleges face the ongoing task of designing and improving practices that reach many students, even with limited resources (Hatch, 2017). The key may lie in the interconnectedness of these practices. Choo (2018) sought to combine human capabilities theory with cosmopolitan capacities theory, which focuses on interconnectedness and strong navigation of the 21st century global environment. She argued for greater ethics and engagement training. Sensitivity to needs is the primary focus of each of these articles, and they helped to shape my project by

keeping me aware of the ultimate goal: retaining students by recognizing the potential hiding behind the problem.

My project developed from a desire to see and understand, and to serve, one that I believe the college and the Student Success Center are equally committed to. We have a student body sometimes characterized by its limitations rather than its potential, and when we make this mistake, we double the social injustices students have already experienced (Brown, 2017). Students facing multiple hurdles need interconnected family, school, and community support systems; sheer determination on the part of students may not be enough to carry them through to the completion of their academic, social, and career goals (Borjian, 2018). Student support services can intervene at strategic times, helping students overcome daunting challenges and their related anxiety through positive reinforcement (Liang, et al., 2018). My appeal, then, with this project, was that we listen deeply and respond carefully, and tagging can help us begin that process.

Brown (2017) indicated that teachers are often underprepared to empathize with students who are disadvantaged; they have not had sensitivity training, nor are they necessarily aware of the challenges students are facing. Many of us have not, in fact, developed enough human capital to be as humane as we might be to those who are different but not so different from ourselves (Brown, 2017). If we would evaluate this project, we must measure the change not only in our students, but in ourselves. Leadership requires vision, and to have vision, we cannot be blinded by distractions. Social change begins with sensitivity to the other. This is an experiment worthy of our attention, and it is the heart of my project. No capital means as much as human capital;

no machine, no network, no software can achieve what simple human kindness and clarity can achieve.

Reflection on Importance of the Work

In this study, I hoped to determine whether there was a correlation between Student Success Center attendance and student retention at Orangeburg-Calhoun Technical College to strengthen the college's ability to respond to student needs. Better understanding of the kinds of services that help students develop academic, social, and career skills is meaningful for planning how best to spend money, time, and effort in supporting a student services program. All stakeholders can feel more confident in a program because they have information to support the efficacy of services offered. My findings and the related project provided a foundation for further quantitative and qualitative studies into how the Student Success Center prepares students for not only academic success but for a successful life long-term. More immediately, the project provided a unique opportunity to identify and clarify student needs at point of entry through a process of tagging, thus lending early confidence to the service seeker and the service giver.

O'Bryant and Schaffzin (2017) noted how successful, clear communication in a service area of campus can prepare students for better communication in the classroom. The tagging project establishes a means of monitoring not only staff receptivity to student needs but students' ability to fully articulate their needs. My work on this study and project have given me greater insight into my own abilities as a researcher, faculty member, program coordinator, and tutor; it has also proven to me that student success

depends on clear communication between students and other parties critical to their persistence and retention, and my own ability to communicate well has improved with this writing. With this document, I extend an invitation to the scholarly conversation about what colleges can do to keep students until the point of strategic exit they desire, a conversation that inspires social change.

Implications, Applications, and Directions for Future Research

One of the most important implications for my project is that it will continuously encourage faculty, staff, and student engagement as it relates to students' academic needs. When everyone is clearer about his or her hopes and expectations, it is easier to measure outcomes. Caspersen, Smeby, and Aamodt (2017) explained that a student's awareness of the specific (graded) outcome of an exam or a class is not as useful as his or her personal understanding and assessment of learning criteria and broader outcomes. When staff can understand student needs, they can more quickly and effectively respond with targeted program resources, helping students develop their methods of social, academic, and career assessment. Tagging is a beginning practice toward clarity of goal-setting and measurable outcomes. The proposed policy change has the potential to create shared language among faculty, staff, and students in the Student Success Center, following the model already in place in the faculty CoP. The CoP encourages frequent meetings and discussions regarding student engagement and best practices, while enhancing the existing communication network on campus. Overall, the goal for this policy change is to maximize shared communications that will effectively address student retention. Research related to best practices for retaining students is continually

developing. The college should maintain flexibility in its best practices as future researchers contribute additional ways to best serve students. The proposed policy change allows administration to adjust to developing research and consider ways it can use tagging and other means of shared language to continue to strategically serve all students.

Conclusion

This research study emerged from the context of persisting and assistance seeking within higher educational settings. The issue which served as a model for this study was whether the use of the Student Success Center improved retention rates. The literature demonstrates best practices which help to achieve the overarching goal of improving retention rates at a technical college. Overall research indicates collaborative communications among faculty, students, and staff as demonstrated in the CoP are a significant means of employing best practices. Additionally, researchers addressed different types of capital (academic, career, and social capital) that contribute to student success. Overall, the bottom line for current best practices indicated here is that better faculty and staff communication with students regarding their needs contributes to the efficacy of services offered at the Student Success Center. Additionally, faculty and staff are able to adjust practices, including tagging services, as further research into the curriculum of student success centers reveals new considerations regarding community college retention. A new educational policy that strengthens awareness of student needs and attempts to respond effectively to them can be a significant means of accomplishing institutional and social change.

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Appendix: The Project

Point of Entry Tagging in the Student Success Center: An Extension of Community of Practice at Orangeburg Calhoun Technical College

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Executive Summary

Problem

Community and technical colleges continually face the challenge of retaining students to graduation. Administrators seek innovative approaches to engaging students and helping them overcome barriers to success. What is the most strategic point of contact for students requesting assistance? Many colleges rely on specialized student services including student success centers/academic support/tutoring to meet student needs. How can the Student Success Center maximize the point of entry for students who are often hesitant to express their confusion and unmet needs?

Point of Entry Communication

This project's aim is to encourage faculty, staff, and student engagement as it relates to the students' needs. When everyone is clear about his or her hopes and expectations, it is easier to measure outcomes. When staff can understand student needs, they can more quickly and effectively respond with targeted program resources. At the point of entry in the Student Success Center, when students are initially looking for help, they sometimes fail to disclose the whole problem they are facing or do not fully understand the problem themselves and are unable to articulate it. Center staff have a vital opportunity to guide a student in clarifying his or her needs at this point. If implemented, the proposed policy change will provide staff and students with a means of communicating through tagging.

Policy Change

The purpose is to develop shared language for communication between students, faculty, and staff at the point of entry to the Student Success Center to improve retention rates. The goal is to assist Student Success Center staff in achieving effective communication with students in an effort to better accommodate their needs. To maintain best practices for improving retention via the college's existing Community of Practice standards.

Summary of Results, Conclusions, and Recommendations

Summary

Data analysis revealed a significant but small linear relationship between student retention rates and their use of the Student Success Center. Data collection and analysis included archival data regarding attendance at the Student Success Center and retention rates over a three-year period.

Conclusions

The analysis process showed Student Success Center attendance was significantly and weakly correlated with retention rates. Findings suggest that greater participation in the Center may result in better fall-to-fall retention.

Recommendations

Based on the study's findings and best practices from the literature, I recommend implementing a policy change aimed at improving communication at the point of entry to the Student Success Center. This policy change includes tagging services as a means of effective communication, following the Community of Practice model already in place at

the college. Implementation will help students and staff clarify needs to improve retention rates.

Background

Problem and Supporting Literature

The 16 state technical colleges in South Carolina have an average fall-to-fall semester student retention rate of 51.7%, as reported by the South Carolina Higher Education Statistical Abstract (Armour, 2017). For this reason, retention continues to be an important concern of the system colleges. However, the problem of low retention is not unique to this state. The average fall-to-fall retention rate for all two-year public institutions in the United States in 2013 was 58.2% (Snyder & Dillow, 2015). In 2017, the trend was slightly higher at 62.3% (National Center for Education Statistics, 2019). Comparatively, the full-time retention rate in all United States' postsecondary institutions reported in 2017 was 75.4% (National Center for Education Statistics, 2019).

The study conducted focused on low retention at one of the South Carolina technical colleges, an open-admissions institution located in a rural area of the state. Specifically, the study investigated the association between the Student Success Center and retention at this college. Many first-time community college students are under-prepared for higher education or online course work (Travers, 2016). Pruett and Absher (2015) found that grades, remedial courses, class preparation, student income, and parental educational achievements affect retention. Jennings (2017) emphasized the role of holistic systems in retaining students. It is important for students to develop social

skills along with academic and career preparation to maximize the likelihood they will stay in college (Jennings, 2017). When students are unable to complete their degrees or other educational goals, they and their families may be devastated (Pruett & Absher, 2015). Retention, then, is of great consequence, and colleges continue to grapple with how to best avoid losing students.

According to Tinto (2013), momentum is critical to keeping students in college; without experiencing some early level of success, they may quickly become discouraged and drop out. Students who are initially motivated to transfer to a four-year university often delay or fail to make the transition as their aspirations are lowered over time (Wang, Lee, & Prevost, 2017). Therefore, it is important to provide targeted support during the first few years of college, and that is what the Student Success Center is designed to do. In order for the college to determine its level of commitment to the Student Success Center, it first needed to examine the correlation between Center utilization and student retention, creating a baseline research study. The study's primary purpose was to present findings in regard to whether a correlation existed between Center utilization and student retention.

Tagging services: A strategy to enhance student communications. Admission to the Student Success Center is a pivotal point of adjustment and an opportunity to clarify the long-term role of support services. The college is currently implementing a pilot study with faculty in using tagging as a means of creating common language for a CoP. Therefore, it makes sense to support this effort in other areas of campus, and no area is more strategic or convenient than the Student Success Center for creating a

common language that helps to redistribute power. One of the ways to restore power to an underrepresented group is to increase the opportunity to be heard and for its members' needs to be clearly and openly expressed.

Policy change: Point of entry tagging services in the student success

center. Mellow, Woolis, Klages-Bombich, and Restler (2015) described how tagged categories connect one action to a broader set of actions and allow for more comprehensive reflection and analysis. In their study, interviewed faculty members noted that tagging helped them identify strengths and weaknesses in their approach to teaching and invited reflection on ways to improve. Bruhn and Syn (2018) referenced the term folksonomy as the collective intelligence of folks who contribute their unique tags. He observed that it may be challenging at first to recognize the usefulness of basic tags, but that they provide a broad context from which new expressions may arise that reflect personal variations and interpretations. This is how the basic tagging services in the Student Success Center may work, enriching over time a deeper recognition of diversity and inclusion.

Jørgensen et al. (2014) noted the increasing use of tags in describing content on websites; often these are user-contributed and can be employed for searching desired materials but also for ontological data mining and for the creation of future materials that target specific needs and interests. In this instance, implementation of tagging services will invite future research. This research can identify specific categories of student need, (shown by tags), which better determine use of the center and retention rates. Welton, Harris, La Londe, and Moyer (2015) indicated the importance of self- reflection in social

justice, particularly in the educational environment. Being keenly aware of one's needs and expectations makes it less likely that a person will be passive in the face of new opportunities. Greater consciousness creates greater likelihood of being able to communicate the reality of one's circumstances, both personal and sociopolitical. Self-reflection, vulnerability, growth, and change in educational practices are tools of freedom (Welton et al., 2015).

Tagging seems to increase user confidence that what is sought after is obtainable and is geared toward individuals within a greater community (Jørgensen, Stvilia, & Shusheng, 2014). As educators, we should avoid naiveté to existing hierarchical processes and use every possible strategic opportunity to engage in dialogue that is both strategic and democratic (Welton et al., 2015) Implementation of tagging services in the Student Success Center will allow students to experience their needs being acknowledged and met; therefore by word of mouth peer-to-peer use of the Center grows. Tagging is also low-cost and generative, two features prized by academia. However, for tagging to be useful and trusted, some consistency in syntax is necessary. Tagging is the new indexing. It is a means of subject cataloguing and a means of providing a semi-controlled but democratic vocabulary that is accessible to a greater number of people (Jørgensen et al., 2014). In this instance, faculty and staff will implement current Community of Practice methods and tags. Tags can be specific to groups with special purposes or goals to be attained over an extended period. At the college, tags can be used to designate types of capital needed by students and developed at the Student Success Center or beyond.

Overview of the Study and Summary of Findings

Purpose and Rationale of the Study

Student empowerment is a central concern of Orangeburg-Calhoun Technical College, as expressed in its vision statement: Engage. Empower. Transform. This vision can be instituted at various points of student service including the Student Success Center. At the Center, initial tagging would occur at entry and at the conclusion of an activity to construct tagging described by Gobert, Sao Pedro, Baker, Toto, and Montalvo (2012) as both top-down and bottom-up. Although a student may enter the Center requesting a specific type of help, during the tutorial session other concerns may arise that are equally important but had not initially been tagged. The student or tutor will have an opportunity to adjust the tagging services provided. As a result, new tags may be documented, and the student is empowered in an all-around democratic activity. Once mined, the data may better prepare both staff and students for work in the center and for performance assessment and retention rate.

Role of the Researcher

As the researcher, I was responsible for gaining access to confidential, protected student records and obtaining written permission from the vice president of Academic Affairs to use these archival records. The records helped determine if a correlation existed between Student Success Center usage and student retention rate at the college. Once permission was granted, I consulted with the Office of Institutional Effectiveness and the director of the Student Success Center to obtain passwords to access the data. I also sought help from a graduate student specializing in data analysis using SPSS

software. With the support of the graduate student, I was able to properly analyze data results, which helped form the basis of my project study.

Study Design

This was an ex post facto correlation design involving two dichotomous variables: attendance at the Student Success Center and retention over a three-year period. A retrospective non-experimental quantitative study using data over a span of three years indicated significant shifts in the perceived strength and direction of relationship between these variables. In addition to determining whether there appeared to be a statistically significant relationship between Center attendance and retention, the college has a list of students who attended. It was possible to break the information down further into which classes these students were taking, their financial and academic statuses, how often they attended the Center, which specific activities they engaged in there, and other combinations of information. This information, however, was not used in the current study, but may provide insight into future research.

The information used in this study included Student Success Center attendance and student retention rate. This information was obtained from the college's Office of Institutional Effectiveness, the Registrar's office, and Student Success Center records. All other information pertaining to students' enrollment at the college was not used in this study. A correlation study helped to determine whether there was a statistically significant association between the variables to strengthen the college's understanding of the relationship and generate additional questions about how best to utilize the Center so that student needs are fully addressed, and retention might be increased. Simon and Goes

(2012) characterized ex post facto research as a practical substitute for experimental research when variables are not easily manipulated. Students at the college under study are generally not required to use the services of the Student Success Center, thus it is not possible to control whether they do or not for the purposes of experimentation. An ex post facto correlation study, then, was the method that best fit the research questions in examining the association between the variables.

Study Participants

The setting for this study was a public, open-enrollment technical college in the southern United States. The college provides programs designed to prepare students for specific lines of work including but not limited to nursing, industrial technology, childhood education, and business. Approximately 2,500 students are enrolled at the college in any given year (College Website, 2019). There are no participants per se in ex post facto studies because of the archival nature of the data being analyzed. Data were received in de-identified form from the study site. The study included data sets related to all students enrolled in the college in fall semesters 2013, 2014, and 2015 excepting non-credit students, Middle College students, and transfer students; therefore, the sample was a census. Participants were pre-existing, not chosen, as they were drawn from archival data. All students at this college have equal access to the Student Success Center, so eligibility for the sample was straightforward. Average enrollment at this college is approximately 2,500 students. The sample size depended on the exact number of students enrolled at the college during the time period for which archived data was obtained. Data sets included all students who used the Center and all students who did not use the Center

excluding transfer students and Middle College students, because transfer students plan to leave the college to complete their studies at a four- year institution. Therefore, the college does not expect to retain these students. The center provides a variety of services including academic tutoring for specific courses, individual academic success plans, access to computers, career planning services, study skills workshops, classroom visits, and networking with community agencies. Not all students will participate in every available service. The study did not include specific student needs; it featured only use of the Center and retention rate.

Research Questions

Given the need to better prioritize student support initiatives related to improving retention at this college, the following research question guides this study:

RQ1. What is the association between Student Success Center attendance and student retention at this college?"

The null hypothesis for this study is:

H01. There is no association between Student Success Center attendance and student retention at this college.

The alternate hypothesis for this study is:

Ha1. There is an association between Student Success Center attendance and student retention at this college.

Data Collection and Analysis

Frequency percentage statistics were conducted on the two dichotomous categorical variables in the study, center utilization and retention. Chi-square analysis

with the Yates correction was used to test for a significant association between the two variables. Unadjusted odds ratios (OR) with 95% confidence intervals (95% CI) were calculated as a measure of strength of association between the two variables. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25 (Armonk, NY: IBM Corp.) The frequencies and percentages for each variable in the analysis are presented in Table 1. The chi-square analysis findings showed evidence of a statistically significant association between center utilization and retention, $\chi^2(1) = 162.23, p < 0.0001$. Participants that utilized the center had 2.48 times higher odds of retention versus participants that did not utilize the center (95% CI 2.15-2.86). Table 2 shows the cross-tabulation of the two variables. Figure 1 presents the rates of retention based on center utilization.

Recommendations

Data analysis revealed a direct correlation between student retention rates and the use of the Student Success Center. Based on these findings and an extensive literature review, I recommend a policy change that will improve communication at the point of entry to the Center. The question undergirding this recommendation is whether improving communication at point of entry via tagging services will invite repeat visits and new student visits due to positive word of mouth within peer to peer interactions.

Implementation Plan

Training and implementation of the project can be completed within one or two semesters. Initial changes or installation of software or equipment will be made first, then

training will be provided via workshops, followed by first use of the system in the Student Success Center.

Implementation of this project requires an adjustment to check-in practices in the Student Success Center using database software that has been installed or upgraded by Information Technology staff. Center staff are trained related to tagging by a CoP faculty member, using materials from *Taking College Teaching Seriously*. Upon entry, when students state their reason for a visit, or the type of help they are seeking, the reception staff tags the student's primary need as academic, social, or career-related in the check-in database. After the initial inquiry, Success Center staff may discover that a student has multiple needs. In the case of multiple needs, staff will enter successive tags. Amendment to the tags can be made during or at the completion of a student session as needed to provide further insight. Successive tagging upon further visits may also reveal vital sequences in the tutoring process (scaffolding) and more fully address student needs as they are revealed. A critical component of the project also occurs when the resulting data is mined, and CoP reflection occurs, so training in this area is also provided by the CoP faculty member. Reflection in CoP is usually achieved through simple highlighting of important activities that occur in a teaching or tutoring session. Tutors/center staff consider their narratives, materials, and session artifacts related to student learning when highlighting and then tagging the session accurately for maximum effectiveness. Because college faculty do volunteer hours of service in the Center, they are able to make use of CoP practices there as well as in their own classrooms.

Key Stakeholders

Key stakeholders and main resources for this project include the Student Success Center Director and staff, college administration, faculty, Information Technology staff, and students, as well as leaders in the state technical system. All persons involved in this process serve a vital role in implementation and successful completion of this policy change. Students themselves are part of the solution to the problem of low retention as they clarify their challenges and recognize their role in the dynamics of the educational system (Frenk, Hunter, & Lapp, 2015). A white paper proposing a policy change is presented to all stakeholders.

Director of the student success center. The Director of the Student Success Center will play a primary role in the success of this project by working with the Information Technology staff and a CoP faculty advisor to create an efficient, easy-to-use tagging system for student visits. Output from this system should be suitable for data mining and reporting that will continually inform the director and other stakeholders of outcomes going forward. The director will also oversee center staff implementation of the program.

Vice president of academic affairs. The vice president of academic affairs will be pivotal to the success of this project by encouraging faculty and staff to support tagging of services in the Student Success Center. Tagging of activities is already familiar to faculty who participated in the Community of Practice. Additionally, the vice president's support may also be needed in terms of financial resources, training events/workshops, and equipment or software.

The college president. The College President initiated the CoP with faculty, so his support in transferring the tagging procedures used in the CoP to the Student Success Center will be invaluable. He is also an important connection to the state technical system administrators in lending legitimacy to the project.

The South Carolina state technical system. The South Carolina State Technical System oversees the college and has a vested interest in its successful retention of students through a variety of means including the work of the Student Success Center. This project intends to further strengthen that work and the center's positive impact on retention. Furthermore, the state is keenly interested in growing a student workforce that will contribute to a sound state economy. Economic benefits often provide a central point of agreement between parties when there is conflict or resistance related to a project (Kujala, Heikkinen, & Lehtimäki, 2012).

Barriers to Successful Implementation

Barriers to the successful implementation of this project may involve initial resistance on the part of center staff or other stakeholders, and time or money constraints.

Initial resistance. The first barrier to successful implementation of the project is initial resistance on the part of center staff or other stakeholders. Initial resistance involves questioning or challenging the new initiative, such as wondering if it will be short-lived, or if the site can financially sustain the new initiative. Overcoming initial resistance requires cooperation and joint value creation from all parties, even those who may seem to be on the margin (Kujala et al., 2012). Leaders help determine the agencies

readiness and ability to initiate and sustain new initiatives. Actions are driven by fears and hopes; this is how social change happens.

Time constraints. A second barrier to successful implementation of this project includes time constraints. Many faculty and staff already feel overwhelmed by their duties and hesitate to accept new responsibilities. To minimize this concern, stakeholders in the project must see the possibilities for local development of resources and potential positive outcomes. One approach to skepticism is identifying what Snyder (2017) calls psychic rewards that appear to be threatened by the initiative and exploring these in conversation. This initiative involves a commitment to new actions, and it is important for actions to be tied to positive concepts that everyone can appreciate and would like to support. The study site has undertaken several previous initiatives that proved to be short-lived. This project is based on a vision of student success aided by greater clarification and sensitivity toward student needs which stakeholders should support.

Monetary constraints. The last possible barrier to successful implementation of the project is administrators' concern about monetary constraints. State technical colleges are accountable for a specific budget, and implementation of a new initiative can place financial strains on that budget. Implementation of this policy change requires little to no costs. The college is already utilizing the CoP practices, which can easily be expanded and utilized in the Student Success Center. Tagging itself requires only a minimal adjustment to existing software. As the college is able to minimize the costs associated with using tagging services in the Student Success Center, stakeholders are more likely to support the initiative and its goals.

Project implications. This proposal outlines an attempt to identify and tag/track student needs to improve retention. When staff and students (as well as administration) more fully understand student needs, they can better ensure students will feel supported and will return to the center for further support until they achieve their goals.

Additionally, staff are able to provide evidence of those needs via consistent tagging and record-keeping. The resulting data will illustrate whether changes were beneficial, but that requires a separate study. One of the most important implications for my project is that it will continuously encourage faculty, staff, and student engagement as it relates to students' academic needs. When everyone is clearer about his or her hopes and expectations, it is easier to measure outcomes. When staff can understand student needs, they can more quickly and effectively respond with targeted program resources, helping students develop their methods of social, academic, and career assessment. Tagging is a beginning practice toward clarity of goal-setting and measurable outcomes. The policy change has the potential to create shared language among faculty, staff, and students in the Student Success Center, following the model already in place in the faculty CoP. The CoP encourages frequent meetings and discussions regarding student engagement and best practices, while enhancing the existing communication network on campus. Overall, the goal for this policy change is to maximize shared communications that will effectively address student retention. Research related to best practices for retaining students is continually developing. The college should maintain flexibility in its best practices as future researchers contribute additional ways to best serve students. The policy change allows administration to adjust to developing research and consider ways it

can use tagging and other means of shared language to continue to strategically serve all students.

Conclusion

This research study emerged from the context of learning and communications within higher educational settings. The issue which served as a model for this study was whether the use of the Student Success Center improved retention rates. The literature demonstrates best practices which help to achieve the overarching goal of improving retention rates at a technical college. Overall research indicates collaborative communications among faculty, students, and staff as demonstrated in the CoP are a significant means of employing best practices. Additionally, researchers addressed different types of capital (academic, career, and social capital) that contribute to student success. Overall, the bottom line for current best practices indicated here is that better faculty and staff communication with students regarding their needs contributes to the efficacy of services offered at the Student Success Center. Additionally, faculty and staff may adjust practices, including tagging services, as further research into the curriculum of student success centers reveals new considerations regarding community college retention.

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Table 1

Frequency and Percentage Statistics

Variable	Level	Frequency (%)
Center Utilization	Yes	961 (5.1%)
	No	17751 (94.9%)
Retention	Yes	9664 (51.6%)
	No	9048 (48.4%)

The frequency table (Table 1) above shows the rate of student success center utilization. The study included a sample of 18,712 students. This table shows that among the sample, 961 students (5.1%) utilized the success center over a three-year period.

Table 2

Cross-Tabulation

Variables	Retention	No Retention
Center Utilization	689 (71.7%)	272 (28.3%)
No Center Utilization	8975 (60.6%)	8776 (49.4%)

Table 2 presents the results of my cross tabulation analysis showing the rate of retention according to student success center utilization. Among the students who visited the student success center, 689 students (71.7%) were retained and 272 students (28.3%) withdrew. Of the students who did not visit the student success center, 8,975 students (50.6%) were retained and 8,776 students (49.4%) withdrew. Among the total sample of students (18,712 students) 9,664 students (51.6%) were retained, and 9,048 students (48.4%) withdrew over the 3-year period.

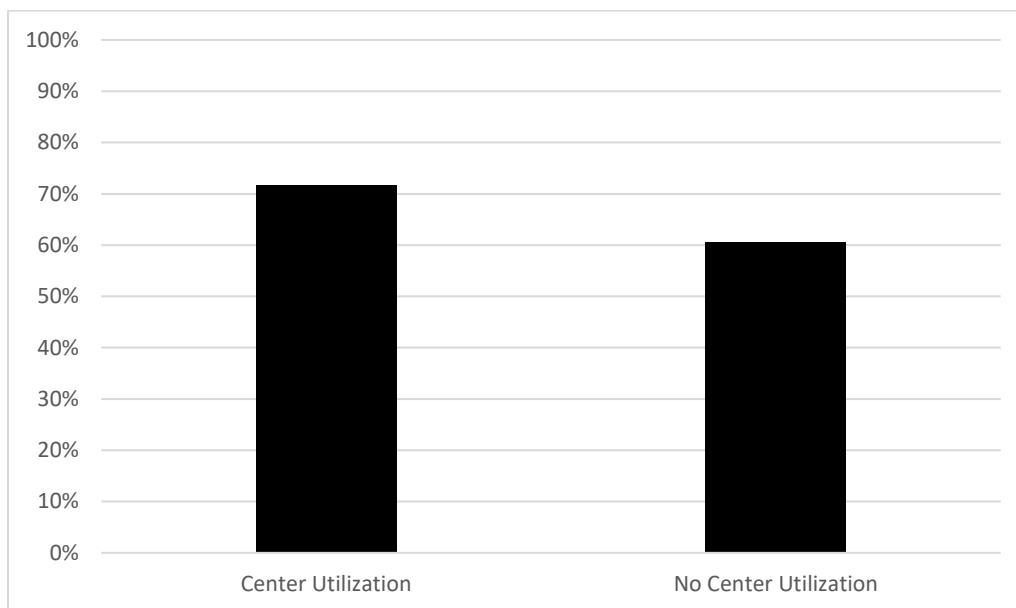


Figure 1. Bar chart showing retention percentage by center utilization.

As the results indicate, the college's continuing support and funding for the Student Success Center is important as a means of serving students and helping them meet their academic, social, and career goals.